Investigating structural obstacles for social sustainability in mining-induced resettlements

The case of Kalumbila in Zambia

Josefine Sjöberg
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A typical two-room house with an extension and a kitchen garden in Kalumbila North – March, 2019 (Photo by author).

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Content

Abstract ........................................................................................................................................ iv
Summary ......................................................................................................................................... v
List of Figures ................................................................................................................................ vi
List of Tables ................................................................................................................................... vii
Glossary .......................................................................................................................................... viii

1. Introduction ................................................................................................................................ 1
   1.1. Background – mining, impacts, development and increasing demands ............................. 1
   1.2. Mining in Zambia .................................................................................................................. 2
   1.2.1. Land rights in Zambia ....................................................................................................... 2
   1.2.2. The Kalumbila resettlement program ............................................................................. 3
   1.3. Research gap and rationale of the study ............................................................................. 6
   1.4. Objective .............................................................................................................................. 6
   1.5. Research questions .............................................................................................................. 6

2. Analytical framework ................................................................................................................. 7
   2.1. Framework for Strategic Sustainable Development .......................................................... 7
   2.2. A Strategic Approach to Social Sustainability ................................................................. 8
      2.2.1. Limitations of the model ................................................................................................. 9

3. Methodology .......................................................................................................................... 10
   3.1. Research Design .................................................................................................................. 10
   3.2. Data collection ..................................................................................................................... 10
      3.2.1. Documents .................................................................................................................. 10
      3.2.2. Interviews .................................................................................................................... 11
   3.3. Ethical considerations ......................................................................................................... 12
   3.4. Limits and delimitations of the methods ........................................................................... 13

4. Results ....................................................................................................................................... 14
   4.1. The Social System ............................................................................................................... 14
   4.2. Structure development ....................................................................................................... 15
      4.2.1. Mapping the resettlements ........................................................................................... 15
      4.2.2. Document analysis ....................................................................................................... 15
      4.2.3. Identified issues in relation to the SSP:s .................................................................... 16
   4.3. Main study groups .............................................................................................................. 19
      4.3.1. Southern Resettlement ................................................................................................. 19
      4.3.2. Northern Resettlement ............................................................................................... 27
   4.4. Key respondent – Trident Foundation ............................................................................. 36
   4.5. Key respondent – Chief Musele ....................................................................................... 39
   4.6. Key respondent – ZEMA .................................................................................................. 41

5. Discussion ................................................................................................................................... 42
   5.1. SSP1 – Health ..................................................................................................................... 42
      5.1.1. Access to healthcare .................................................................................................... 43
5.1.2. Injury frequency ................................................................. 44
5.1.3. Alcohol consumption........................................................... 44
5.1.4. Diet .............................................................................. 45
5.2. SSP2 – Influence .................................................................. 45
  5.2.1. Influence in resettlement process ........................................ 46
  5.2.2. Influence in quality of life .................................................... 47
  5.2.3. Perception of justice system ................................................. 47
5.3. SSP3 – Competence ............................................................... 48
  5.3.1. Perception of work skills ..................................................... 48
  5.3.2. Sufficient education .......................................................... 48
  5.3.3. Ability to increase competence ............................................ 49
5.4. SSP4 – Impartiality ................................................................. 50
  5.4.1. Perceived discrimination ..................................................... 50
  5.4.2. Gender equality ............................................................... 51
  5.4.3. Relationship with other resettled ........................................ 51
  5.4.4. Relationship with non-locals .............................................. 51
5.5. SSP5 – Meaning-making ......................................................... 52
  5.5.1. Spiritual satisfaction .......................................................... 52
  5.5.2. Marriage and partners ....................................................... 53
  5.5.3. Future dreams and plans .................................................... 53
5.6. Backcasting for Social Sustainability ...................................... 53
  5.6.1. Critical issues to social sustainability ..................................... 54
  5.6.2. Intermediate issues to social sustainability ......................... 55
6. Conclusion ............................................................................. 56
  6.1. Evaluation of the SASS model ................................................ 57
  6.2. Future studies ..................................................................... 58
7. Acknowledgements .................................................................. 59
8. References .............................................................................. 60
Appendixes .................................................................................. 63
Investigating structural obstacles for social sustainability in mining-induced resettlements
– The case of Kalumbila in Zambia

JOSEFINE SJÖBERG


Abstract:

Mining-induced resettlements, and local impacts from mining activities, are often associated with a variety of negative outcomes. At the same time, there is a notable growth of ethical guidelines for businesses and an increasing incorporation of international best practices within corporate operations. A resettlement of displaced villages within the Kalumbila area in Zambia was carried out by a multinational mining corporation, which reportedly invested heavily into the creation of an ethically sound resettlement procedure. Yet, a number of issues connected to this resettlement have been continuously reported after its implementation. This study has aimed to investigate two main themes relating to the resettlement in Kalumbila. First, a comparative examination was done in order to explore differences and similarities in terms of social sustainability between two different resettlement communities in the area. Second, the current status of social sustainability was explored within the two resettlements by applying an analytical framework for strategic social sustainability. The methods consisted mainly of primary research through interviews in the studied area, but was also complemented with qualitative text analysis when suitable. The findings indicated both similarities and differences between the two resettlements in terms of social sustainability-related issues, which were identified through the application of universal social sustainability principles. Policy recommendations were also derived by conducting a backcasting procedure in the analysis of the findings. The study found that there is a presence of the mining company in almost every issue identified within this study. This presence has both positive and negative characteristics. It was concluded that future studies should keep this nuanced view in mind, as well as the complex interrelations in the studied system. As such, it was argued that policy implementors ought to investigate targeted issues with suitable analytical tools before taking any action in order to not create new problems elsewhere within the social system.

Keywords: Sustainable Development, Framework for Strategic Sustainable Development, Social Sustainability, Resettlement, Mining, Zambia

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Investigating structural obstacles for social sustainability in mining-induced resettlements
– The case of Kalumbila in Zambia

JOSEFINE SJÖBERG


Summary:

The technological advancement of the world is driven by the extraction of valuable minerals from the earth. Mining has been fundamental for the development and societal progress of the human race since pre-historic times. Today, there is an ever-increasing awareness of the impacts from mining on the environment, and also how people may be negatively affected by such operations. In those cases where there are human societies already inhabiting the mineral-rich areas required for mining operations, mining may impact these communities by causing involuntary displacements. Today, however, there are often attempts to lessen the negative impacts of such displacements. This has also been the case for a mining project in the Kalumbila area in northern Zambia, where a newly established copper mine has resulted in the resettlement of pre-existing communities into new areas. Despite large ambitions for this resettlement, various issues from the within the area have been reported. This has called for a new framework to form the basis for analysis of the social and environmental changes made when a new mine is established in an area. This paper has applied a variant of such a framework, the FSSD (Framework for Strategic Sustainable Development) to the resettlements within the Kalumbila area. Due to the complex social dynamics of the situation examined here, and the limited scope of the study, only the social branch of the FSSD model has been used. The data collection consisted mainly of interviews, but was also complemented with findings from qualitative text analysis. The study looked at differences and similarities between two different resettlements in the area, but also the current status of social sustainability in those communities. The findings pointed to both similarities and differences between the two studied resettlements in terms of social sustainability. Policy recommendations were derived by applying certain tools from the analytical model. The study found that there is a presence of the company in almost every issue having been identified within this study. This presence has both positive and negative characteristics. It was concluded that future studies should keep this nuanced view in mind, as well as the complex interrelations within the studied system. As such, it was argued that policy implementors ought to investigate targeted issues with suitable analytical tools before taking any action in order to not create new problems elsewhere within the social system.

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List of Figures

Fig. 1. Solwezi district, Zambia ................................................................. 3
Fig. 2. Kalumbila area .............................................................................. 5
Fig. 3. FSSD levels.................................................................................. 8
Fig. 4. The social system ....................................................................... 14
Fig. 5. The legal system .......................................................................... 17
Fig. 6. Health for Shinengene ................................................................. 21
Fig. 7. Influence for Shinengene ............................................................... 23
Fig. 8. Competence for Shinengene ......................................................... 24
Fig. 9. Impartiality for Shinengene ............................................................ 26
Fig. 10. Meaning-making for Shinengene ................................................ 27
Fig. 11. Health for Kalumbila North ......................................................... 30
Fig. 12. Influence for Kalumbila North ..................................................... 31
Fig. 13. Competence for Kalumbila North ............................................... 32
Fig. 14. Impartiality for Kalumbila North ................................................ 34
Fig. 15. Meaning-making for Kalumbila North ......................................... 35
Fig. 16. SSP coded ................................................................................. 42
Fig. 17. SSP1 comparative ...................................................................... 42
Fig. 18. SSP2 comparative ...................................................................... 46
Fig. 19. SSP3 comparative ...................................................................... 48
Fig. 20. SSP4 comparative ...................................................................... 50
Fig. 21. SSP5 comparative ...................................................................... 52
List of Tables

Table 1. Guiding documents .......................................................................................................... 11
Table 2. Respondents overview ................................................................................................... 12
Table 3. Level of education .......................................................................................................... 18
Table 4. Critical issues to social sustainability ............................................................................. 54
Table 5. Intermediate issues to social sustainability ................................................................. 55
Glossary

- RAP – Resettlement Action Plan
- FQM – First Quantum Minerals
- FDI – Foreign Direct Investment
- CSR – Corporate Social Responsibility
- KMP – Kansanshi Mining PLC
- KML – Kalumbila Minerals Limited
- FSSD – Framework for strategic Sustainable Development
- SASS – Strategic Approach to Social Sustainability
- SDGs – Sustainable Development Goals
- NGO – Non Governmental Organisation
1. Introduction

The following section presents the overall setting of the study. First, a short background has been developed in order for the reader to gain a general idea of the topic. Following that, the rationale of the study is specified, along with the identified research gap. Lastly, the objective and research questions are presented.

1.1. Background – mining, impacts, development and increasing demands

A historical legacy of harmful impacts on both environment and people has resulted in persisting negative perceptions of the extractive industries (Hodge, 2014; Moran, et al., 2014). Simultaneously, the overall importance of mining in relation to human development seems to be clear. Historically, mining activities have resulted in mankind’s transition out of the stone age into the bronze and iron ages, with continuous dependencies on mining for technological and infrastructural development up until modern times (Dubiński, 2013; Carvalho, 2017). Mining activities have also advanced enormously in the last century, and the trend is expected to continue. Population growth, in combination with higher standards of living, have resulted in an ever-increasing global demand for mined resources (Norgate & Haque, 2010; McLellan, et al., 2012; Moran, et al., 2014; Carvalho, 2017; Hodgkinson & Smith, 2018). In addition, it is becoming increasingly difficult to open new mines in many high-income countries, due to high demands on environmental performance and a large competition and conflict of land. As a consequence, mining activities have been steadily relocated to more scarcely populated areas worldwide, or to low-income countries where national requirements or control for social and environmental protection may be lower (Carvalho, 2017).

Today, ore quality and availability at large are on a steady decline in many parts of the world. (McLellan, et al., 2012; Moran, et al., 2014; Henckens, et al., 2016). Even though the world inevitably moves towards higher rates of recycling, it is a wide known fact that recycling at its current capacity and technology cannot sustain our way of living (Norgate & Haque, 2010; Carvalho, 2017; Henckens, et al., 2019). Current assessments are clear that mining will remain an essential industry for the foreseeable future, enabling production in many other industries as well as providing fertilizers that most modern food production rely on (Henckens, et al., 2016; Carvalho, 2017). Mining for certain metals, such as cobalt and copper, is also needed in larger quantities for the transition to renewable energy and new “green technologies”, such as electric cars, solar panels and wind turbines (Grandell, et al., 2016; Sverdrup, et al., 2017).

Nonetheless, ecological concerns relating to climate change and environmental impacts bring forth a number of challenges for the future of the mining and metallurgy industries. First, the mining sector at large is regarded as one of the major emitters of greenhouse gases and thus considered to be a significant accelerator of climate change (Rüttinger & Sharma, 2016; Hodgkinson & Smith, 2018). The industry’s high emissions are largely due to energy intense production procedures as well as emissions from post-production commodities such as coal (Norgate & Haque, 2010; McLellan, et al., 2012; Rüttinger & Sharma, 2016). Second, the direct environmental impact of mines in their respective operating areas is also cause for concern. Release of heavy metals and toxic waste from the mining activities have the potential to severely pollute surrounding water bodies and land areas (Carvalho, 2017). Moreover, the geographic changes caused when clearing land for mines is connected to other negative environmental impacts, such as loss of biodiversity and degradation of sensitive ecosystems (Virah-Sawmy, et al., 2014; Barkemeyer, et al., 2015; Gallay, et al., 2018).

Lastly, social impacts of mining have gained increased attention during the last few decades in particular. New pressure and expectations are being placed on mining companies to take operational responsibility for the people impacted by their mining (Carvalho, 2017). Social issues may include displacement of communities, social unrest due to in-migration, loss of livelihoods, infringement on the rights of indigenous peoples, mine-induced health problems and unethical labour (Dashwood, 2012; Petrova & Marinova, 2013; Hodge, 2014). The “social license to operate” of mining companies may be seen as the corporate translation of social sustainability, which largely focuses on gaining legitimacy for mining activities in an area in order to gain acceptance for the operations – often focusing on the positive
social benefits, such as job opportunities, tax revenues and general development. In addition, globally adhered best practice-frameworks for ethical guidance in business conduct have been increasingly developed and voluntarily incorporated in extractive companies around the world (Moran, et al., 2014; Rüttinger & Sharma, 2016; Carvalho, 2017). See for example the ICMM and the Sustainable Development Goals (SDG’s), the White Paper on Responsible Mining or the Kimberly process. Frameworks and guidelines such as these indicate a desire for more ethical codes of conduct within the industry. Moreover, there has been a notable growth in various types of Corporate Social Responsibility (CSR) efforts from the extractive industries in recent times, further indicating a potential transformation of the industry’s general approach to sustainability in various forms (Dashwood, 2012).

To conclude, even though the mining industry continues to be important for several reasons, the social and environmental impacts and risks can be very apparent – especially in countries with weak state control. Although there are good examples of responsible mining to be found around the world, many associated social and environmental problems persistently remain. Therefore, it is important that the various challenges of the industry continue to be scrutinized and evaluated for positive change.

It is this conviction that lays the foundation for this study. This paper will contribute to the sustainability dialogue within the industry by focusing on social sustainability in host communities to mines, specifically with regards to mining-induced resettlements. It was deemed appropriate to narrow the study to a specific case in order to gain in-depth knowledge about the studied group. As such, a suitable choice was found in the area of Kalumbila in Zambia.

1.2. Mining in Zambia

Mining has a long history in Zambia. This is mainly due to the country’s large deposits of copper and emeralds, but also other resources. The mining industry continues to play an important role in the country’s economy even today, with most Foreign Direct Investments (FDI) being connected to the industry, as well as a large part of the total tax revenue (Chu & Phiri, 2015; The World Bank Group, 2016). Following an extensive mapping of the mining sector in Zambia in late 2015, the World Bank Group released a report in 2016 aimed to clarify the current state of the mining industry in Zambia from three different stakeholder perspectives: government, investors and civil society (The World Bank Group, 2016). Certain factors in need of improvement were identified by all three stakeholder groups - for example, the need to strengthen sector governance through openness and transparency as well as better functioning licencing processes. However, only the civil society stakeholders raised concerns for governance issues connected to poor management of social impacts from mining (ibid.). This indicates a potential gap between increasingly ambitious CSR practices and governmental regulations in Zambia (Gilberthorpe, et al., 2016) and actual outcomes from mining impacts. Recent findings even suggest that CSR efforts from the mining industry in Zambia are poorly integrated with national goals for development and that it is difficult to ensure the actual deliverance of the initiatives (Kesselring, 2018).

1.2.1. Land rights in Zambia

Many people’s livelihoods in Zambia depend entirely on access to land. This is due to a primary reliance on land for subsistence agriculture and livestock management, as well as access to natural resources from forests and water bodies (Chu & Phiri, 2015; The World Bank Group, 2016). In Zambia, land can be either customary or statutory (Chu & Phiri, 2015). Permits or tenures must be acquired through either formal authorities or from traditional leaders. The duality in these land laws has been criticized of creating ambiguity in cases where the two parallel legal systems clash, and also since holders of customary land generally are more subjected to land tenure insecurity than those under statutory land (Mushinge & Mulenga, 2016).

Recent intersectoral studies in Zambia also found that good practices for governance regarding natural resources and mineral rights were largely missing (The World Bank Group, 2016). In addition, large-scale land acquisitions from investors have increased within the country. This has led to a continuously increasing number of displacements among affected communities, accompanied with associated socio-economic impacts as their access to land may be at risk (Chu & Phiri, 2015).
In addition, Chu, et al., (2015) argue that revisions of resettlement practices are needed in Zambia, since the current trend of large-scale land acquisitions from foreign investors leads to a number of local and regional problems such as displacement, loss of livelihood and conflict. For instance, they found that the current state of national guidelines had an insufficient legal framework to ensure protection for the rights of the many people who depend on customary, informal or unregistered land (ibid.).

1.2.2. The Kalumbila resettlement program

First Quantum Minerals (FQM) is a multinational cooperation based in Canada. FQM currently owns and operates nine mines in five different continents. There are two large mines in the Zambian Copperbelt that are part of the FQM trademark– the Sentinel and Kansanshi mines (First Quantum Minerals Ltd, 2018a; 2018b). FQM is, through its subsidiary companies, the largest taxpayer in Zambia (Kesselring, 2018). The impact of the company’s activities in the country can be clearly seen, with large social and environmental changes being directly or indirectly connected to the Kansanshi and Sentinel mines within the Solwezi and Kalumbila districts. The most notable changes brought by these mines may be the physical transformation of the landscape as well as the various social and demographical changes resulting from massive in-migration to these areas as people have sought to benefit from the mining in different ways (Kesselring, 2018).

Resettlements, when local people are moved to live in another area, is not uncommon in mining contexts (Owen & Kemp, 2016; Pedro, 2017; Yang, et al., 2017; van der Ploeg & Vanclay, 2018). Generally, mining companies are often required to develop a resettlement program, often called Resettlement Action Plans (RAP), and submit it for approval by the national authorities before any action on the matter can be taken (ibid.). The mining operations of both Kansanshi and Sentinel have resulted in resettlements, the most recent being the Sentinel mine in the Kalumbila area, Solwezi district.

Fig. 1. provides an overview of the geographical setting of the Solwezi district.

![Map of Solwezi district, Zambia](image)

The Sentinel Mine in Kalumbila

The Sentinel copper mine is owned and operated by FQM’s subsidiary company, Kalumbila Minerals Limited (KML), which has a 100% ownership of the mine. Sentinel is a relatively young mine, albeit a massive one. Construction commenced in 2012 and the mine was active and fully operational by 2016. In 2018, the mine produced 223,656 tonnes of copper, a number which is expected to rise further to

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1 Descriptive image created with Google maps' public domain.
approximately 230,000 tonnes in 2019. The mine is currently estimated to be operational up until 2033 (First Quantum Minerals Ltd, 2018a). Due to the monetary size of its underlying investment of roughly 2bn USD, the mine can also be considered Zambia’s largest single infrastructure project to date (Asher, 2016).

FQM has gained much attention for the construction of the 200 million USD mine town “Kalumbila town”. Although the primary purpose for FQM may be to cater to the needs and well-being of the employees of KML, the town has been designed in order to ultimately develop independently from the mining activities, and therefore continue to develop well also after planned mine closure in 2033. The vision of the mining town has been to create a thriving and modern African town that is providing its citizens with a high quality of life in a sound environment whilst also attracting other private investors to the area (Asher, 2016; Collet, 2016). In a historical perspective, the bust-and-boom of industries like mines tend to generate “ghost towns” as the operations of a company eventually comes to an end in an area. In addition, company monopolies in terms of service provisions, land ownership, local governance interference and being the main source for economic activity also generate heavy dependencies in such towns (Littlewood, 2014). As such, the planned development for Kalumbila town is meant to target and resolve the socio-economic problems commonly associated with mining towns and their dependencies on the mine they developed around (Asher, 2016; Collet, 2016).

This study focused on a recent resettlement program in the Kalumbila area, which was initiated by KML and approved by the Zambian Environmental Management Authority (ZEMA) in 2013 (Gray, et al., 2015). An extensive process of collecting data about the community members and their assets was carried out by KML. Several meetings and workshops were held with the purpose of informing the local communities about the resettlement and to allow for questions to be asked. The feedback from the community dialogue was brought into the resettlement-processes’ RAP\(^2\) during these processes (Chu & Phiri, 2015). The displaced people were then moved from the areas needed for mining operations and subsequently resettled around the area of the newly constructed Kalumbila town, either in surrounding host communities or in the two newly constructed resettlement communities (Huggins & Lappeman, 2012; Chu & Phiri, 2015). At the time of the resettlement, there was no national resettlement policy in place\(^3\). But according to Gray, et al. (2015) an external auditor was hired by KML to ensure that the RAP aligned with Zambian law, company policy as well as international best practice. The audit had reportedly found that the RAP well exceeded international best practice (ibid.).

However, there have also been many problematic impacts associated with the resettlement. First, although the need of local subsistence farmers to have access to agricultural land was recognized and compensated for, other commodities were not as well accounted for according to a study by Kapesa et al., (2015.) Upon arrival, the mine had made a large land acquisition in the area. This resulted in the size of the community land being reduced from 950 km\(^2\) to roughly 332 km\(^2\), and may thus threaten local communities’ traditional livelihoods in the area since they are dependent on accessing surrounding natural resources. In addition, it was found that resource scarcity in the area may lead to future conflicts between the local people and the mining company, as well as between the local people and in-migrated people. In fact, signs of conflict had already appeared in the Kalumbila area, with clashes between “locals” and “newcomers” as competition of jobs within the mine created tensions (ibid.). Chu and Phiri (2015) and Chu, et al. (2015) also found that legislative ambiguities and shortcomings relating to land acquisitions have resulted in negative impacts on the local communities due to various misgivings from both KML, national and local government as well as the traditional leadership in the resettlement process. In addition, the issue of perceived local disagreements with the decisions of the traditional leaders put the issue of community participation in question since these are traditionally speaking on communities’ behalf (ibid.). Furthermore, Mis (2015) reports that there may be gender issues connected to the resettlement as well, e.g. the situation for certain dependants in households and the active involvement of women in participation processes. These issues may not have been understood or sufficiently targeted during the construction of the resettlement program due to the local cultural customs (ibid.). There have also been indications of conflicts in the Kalumbila area between the communities,

\(^2\) KML named their resettlement document Resettlement and Compensation Plan, but it will nonetheless be referred to the more common phrase of “RAP” in this paper.

\(^3\) Although, as of 2015 there is a new national resettlement policy in Zambia.
the local chief and KML, whereby most recently accusations of water pollution have been directed towards the company. After the involvement of national authorities in the matter, however, the situation seems to have been solved peacefully (The Sun Zambia, 2019).

Findings such as these indicate that despite a seemingly robust resettlement plan, there may be structural obstacles to a successful outcome of the resettlement process.

Figure 2 presents an overview of the Kalumbila area to visually describe the geographical setting of the resettlements with the most important villages and towns, areas and structures as well as the general surroundings.

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4 A descriptive overview of the Kalumbila area was created to display the most important structures, commodities and the general geography in the area. The sizes and shapes presented are meant to be indicative and illustrative, based on a variety of different interpretive maps of the area, and does not imply an exact replica of reality.
1.3. Research gap and rationale of the study

Although FQM reportedly invested heavily into creating a sound and sustainable resettlement for affected communities by the construction of the Sentinel mine (Huggins & Lappeman, 2012; Gray, et al., 2015), reports have also depicted discontent from within the resettlements (Chu & Phiri, 2015; Kapesa, et al., 2015; Mis, 2015; The Sun Zambia, 2019). It is therefore relevant to investigate if there are structural obstacles within the studied social system that are preventing people from attaining social sustainability within the resettlements.

1.4. Objective

The objective of the study is twofold. First, the study aims to contribute to the overall development of sustainability science, in particular with regards to social sustainability. This may be done by seeking to understand social sustainability within certain contexts of the mining industry, specifically the resettlement of displaced communities. In doing so, the long-term aim of the study is thus to contribute to the welfare and positive development for vulnerable people who live adjacent to large infrastructure projects such as mines.

1.5. Research questions

- What are the similarities or differences between the two resettlement communities in Kalumbila from a social sustainability perspective?
- How can the current status of the studied resettlements be understood within a framework for strategic social sustainability?
2. Analytical framework

This section will outline the chosen model to be used for analysis of the collected data. It was deemed necessary to apply an analytical tool that would allow for a sound understanding of potential obstacles to social sustainability within a specific context, whilst also being able to generate strategic solutions for the further development of the studied case. The social dimension of the Framework for Strategic Sustainable Development was considered to fill these requirements.

2.1. Framework for Strategic Sustainable Development

“Sustainable Development” is usually said to have gained its conceptual status in 1987 when it was mentioned in a report by the United Nations Commission on Environment and Development (Halle, et al., 2013). The report, known more commonly as the Brundtland report, defined sustainable development as the kind of development that meets the needs of the present without compromising the ability of future generations to meet their own needs (WCED, 1987). It is with this definition as a goal that the Framework for Strategic Sustainable Development (FSSD) was created (Broman & Robèrt, 2017). The idea of the framework was to enable any actor seeking to work towards sustainability to do so by having access to a comprehensive and strategically efficient tool. The framework is meant to be broad enough to be generally applicable, while at the same time being able to conclude narrow and context-specific analysis (ibid.).

Today there is a vast array of tools, models and frameworks aimed at enabling sustainability in various forms. But due to the great ambiguity among the concept of sustainable development, together with different practices from various types of sciences, the result is often one-sided and heavily influenced from one scientific perspective. The FSSD was developed with this in mind, relying on the most appropriate models and theories in order to create a conclusive framework for Sustainable Development-implementation. As such, the FSSD model has been built on commonly recognized sustainability-oriented models like systems thinking, resilience theory and scenario development. Over the three decades that the FSSD model has existed, it has been systematically tested and improved through theoretical modelling as well as validation through practical testing on a variety of fields. The FSSD can be seen as a part of sustainability science and has a built-in transdisciplinary lens. The FSSD consists of five levels, which are then contextually defined when applied in different situations (Broman & Robèrt, 2017; Missimer, et al., 2017a).

The systems level, based on systems thinking, depicts the overall organization or structure of the area of study. In short, it gives a simplified idea of the most important actors, events and their interrelations within the system. The success level addresses the goal to which the system will be steered towards, i.e. sustainable development. The next level consists of the guidelines that are developed to guide the actions towards the goal in a strategic and economically viable way. This level takes inspiration from scenario development in the way that it focuses on the ideal outcome (the desired scenario) and investigates how to transition from status quo to this new setting. This is done through so called “backcasting”, meaning that a step-by-step approach is applied from the goal to the current situation. Uniquely for the FSSD, the different steps (guidelines) are designed within the scope of boundary conditions built around universal sustainability principles. The actions level then outlines the actual activities that are initiated based on the guidelines. Lastly, the tools level contains all the instruments, theories, methods etc., that are deemed necessary in order to efficiently implement the desired actions. They are also used for an analysis of the entire level system, to consistently ensure that the applied actions work strategically towards the goal.
(Broman & Robèrt, 2017; Missimer, et al., 2017a; 2017b). Fig. 3 gives a visual presentation of the levels within the FSSD.

<table>
<thead>
<tr>
<th>Systems Level</th>
<th>Success Level</th>
<th>Strategic Guidelines Level</th>
<th>Actions Level</th>
<th>Tools Level</th>
</tr>
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**Fig. 3. FSSD levels**

Although the FSSD has proven its value and applicability in a multitude of cases, it has been found that the social sustainability part has been largely underdeveloped. The FSSD consisted of four sustainability principles in its original form; three for ecological sustainability and one for social sustainability (Missimer, et al., 2017a). However, social systems have been found to be far too complex to be sufficiently adhered within one social sustainability principle. This has left the framework vulnerable, as it is widely accepted that ecological sustainability is closely connected to the success rate of the social sustainability (ibid.). As such, a complementary part of the FSSD has been recently developed to improve the capacity of the framework to implement social sustainability (Broman & Robèrt, 2017; Missimer, et al., 2017a).

This study will apply this complementary section of the FSSD model in its analysis of the collected data.

### 2.2. A Strategic Approach to Social Sustainability

The chosen analytical tool for this study is thus the Strategic Approach to Social Sustainability (SASS) based on the FSSD model. It brings with it many advantages that are suitable for this type of study, but also some limitations.

In social sciences there are often calls for context specific or context dependent understanding. This has logical reasons, since human relations and social structures are complex by nature and can often only be properly understood when viewed with contextual lenses. At the same time, however, there is a need for broader tools that can be successfully applied also on social systems. The FSSD, including the SASS-part, has been designed to not be limited to context, whilst still enabling context specific analysis. The benefit of this is clear, the model is applicable to any social situation and can thus offer clear and strategic understanding on how to operate to reach social sustainability within any targeted context (Missimer, et al., 2017b).

Like the FSSD, the SASS model is based on systems thinking by considering human social systems to function like complex adaptive systems. The greatest benefit of this approach is that it enables an understanding of the different interrelations and functions of a system. As such, the solutions produced through systems analysis should not lead to new problems elsewhere. Through vast multidisciplinary literature reviews and rigorous testing, a science-based result was derived which identified five specific elements that seem to be essential for long-term resilience in social systems. These are diversity, self-organization, learning, trust and common meaning (Missimer, et al. 2017a; 2017b).

Further modelling identified the mechanisms that undermine these essential elements, i.e. by creating structural obstacles to people’s health, influence, competence, impartiality and meaning-making. These are referred to as the five universal social sustainability principles (SSP’s), and add to the original FSSD:s three ecological sustainability principles (ibid.). This principled definition through the SSP’s is
also how the concept of “social sustainability” is defined throughout this paper. Since this study is delimited to social sustainability, this study will only make use of the five social sustainability principles. Although, it should be underlined that social systems are nested within, and entirely depend upon, ecological systems. Changes in one system impacts the other, and no clear understanding of the overall sustainability can be fully understood by not taking both systems into account.

As defined by Missimer, et al. (2017a), a socially sustainable society does not entail structural obstacles to peoples’ ...

SSP1) ... health. The social conditions within the studied system should not expose people to systematic undermining of their health (e.g. injury or illness).

SSP2) ... influence. The social conditions within the studied system should not systematically prevent people from participating freely to shape their social system.

SSP3) ... competence. The social conditions within the studied system should not systematically prevent people from developing through learning or acquiring new competences.

SSP4) ... impartiality. The social conditions within the studied system should not systematically bring negative partial treatments to people.

SSP5) ... meaning-making. The social system must not remove abilities for people to find meaning, be it individually or commonly sought.

Through these principles and by the design of the model, the SASS can be considered broad enough to be applicable to a wide array of social situations, but at the same time offer tools leading to context-specific guidance when seeking to apply social sustainability. Additionally, it has been found that human creativity and innovation thrive when people operate within limitations. The principles thus also act as certain “catalysts” for spurring creative solutions since they mark the boundaries in which solutions must be found (2007b). All principles developed by Missimer et al. (ibid.) are formulated to allow backcasting from a socially sustainable future. This study will follow the first four levels of the FSSD, concluding the paper with a simplified backcasting section in order to produce certain suggestions and guidelines for future actions that may assist in achieving the desired outcome as defined by SSP’s. The last level, developing adequate tools, has been disregarded within this paper since it is aimed at actual implementation rather than empirical investigation.

2.2.1. Limitations of the model

The study will only make use of the social components of the FSSD, known here as the SASS. As such, an all-encompassing understanding of sustainability in the studied group will not be attained. In addition, it is possible that findings from applying the ecological SP’s would have impacted the findings of the social SP’s, but delimitations were deemed necessary due to logistical constraints, and the chosen focus of the study is specifically social sustainability. This makes the SASS model applicable in this particular case, although it is recognized that a more thorough understanding of sustainability would be gained by applying the whole of FSSD: combining ecological and social sustainability.

In addition, the SASS is a very young model in the sustainability field, and its authors have made it clear that for it to be further developed it now needs robust testing and evaluation. But seeing as it is one of the objectives of this study to contribute to the overall development of sustainability science it can be argued to be an appropriate choice to apply this promising model to the study. Any constraints of the model having been discovered during the study, are described and assessed in concluding remarks of the paper.
3. Methodology

This section outlines the different methods that have been applied in the study in order to gather data for analysis. The chosen research design have been clarified and specified. The data collection have consisted of interviews and qualitative text analysis. Ethical considerations that have been applied to the study are also described and argued for. Lastly, overall limits and delimitations of the study are defined.

3.1. Research Design

According to Esaiasson, et al. (2017), there is a need for researchers to clarify the chosen research design to the reader by specifying the exact type of empirical study that is being conducted. According to them, an empirical study is either descriptive or explanatory. If the study is explanatory, there is a “theory” somehow involved. If the explanatory study is not developing a theory, it can be either testing a theory or applying it to a specific case in order to understand that case from the “lenses” of the applied theory (ibid.). For this study, the research design is a mixture of the two latter cases. The aim of this study is first and foremost to apply a theory, the model for strategic social sustainability, to the case of the Kalumbila resettlement programme. However, the theory (or model in this case) is very new to the field and is thus in need of testing. Therefore, this study will also be automatically testing the strength of the model’s applicability in order to further the advancement of the model in some small way.

3.2. Data collection

The data has been gathered using qualitative methods from both primary and secondary sources. The secondary sources have been limited to findings from KML’s Resettlement and Compensation Plan as well as three guiding policies from FQM, due to a lack of availability of other public documents of interest to the study. The primary sources consist mainly of interviews with people from two resettled communities in the Kalumbila area. In addition, three different stakeholder groups were identified to have complementary knowledge of the main study group. These are the CSR-department of the mining company, the local royal establishment as well as the relevant national authorities. Four representatives from these groups have also been interviewed.

Furthermore, initial observations (here referred to as “mapping”) of the studied area were contributory to the design of the data collection since it aided the understanding of the local social system and the development of the interview sheets. As such, it has been applied as a tool to enhance the quality of the methods used.

3.2.1. Documents

According to Esaiasson, et al. (2017) the terminology around what qualifies as qualitative text analysis differ. Simply put, qualitative text analysis is carried out when the researcher is extracting the essential parts of a text, focusing on specific parts of the text as well as the overall context. In other words, the reader is looking for the meaning/reasoning/purpose behind a written text. There are also different types of qualitative text analysis. The most common is the systematic approach, which seeks to extract meaning from texts and present it systematically, often categorizing the essential parts of complex texts into simple categories to make the text’s important aspects comprehensible (ibid.).

For this study, qualitative text analysis has been applied to some extent to the documents as presented in Table 1. These four documents have been deemed essential complements to other measures taken and material gathered during the initial mappings of the studied area. By extracting relevant information from the texts and comparing it to local observations, they largely influenced the design of the interview sheets during the data collection. The RAP also guided the description of the resettlement process. The findings from the documents are therefore embedded into various parts of this study, i.e. the description of the resettlement process and the results from the primary sources.

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5 A theory is understood here to refer to an actual theory, but also conceptual frameworks and analytical models.
3.2.2. Interviews

Another qualitative method of gathering data is through interviews. The benefit of this method, in comparison to the quantitative method of surveys, is that respondents have more freedom of expression in their replies and there are opportunities for follow-up questions as well as clarifications. As such, the method is suitable for gaining deeper knowledge about a subject and it also allows for unexpected results to be found to a greater extent than surveys (Esaiasson, et al., 2017). Two different types of interviews were conducted: Focus group discussions as well as semi-structured individual interviews. These two types of interviews have different benefits.

Focus group discussions may allow for a more open environment for the respondents to speak freely, and as discussions evolve in-between respondents, unexpected information may be derived. The potential risks of focus group discussions are that certain respondents may dominate the discussion or that the social dimensions of the group render some respondents unwilling to speak their mind. In an attempt to diminish these risks, the focus group were divided by gender. The respondents were also clearly informed prior to the interview that all opinions were welcome and that potential differences within the group should be voiced and discussed.

Semi-structured individual interviews were deemed to be the most suitable choice for the more statistical understanding of the studied group, as their responses could be more easily quantified and structured. The interview questioned followed a number of inquiries developed in accordance with the analytical model. This helped to keep the interviews on track and focused, whereby complementary probing allowed for deeper understanding or clarifications when deemed necessary.

In the interview sheets, the guiding questions were first developed in accordance with the five social sustainability principles of the model: Health, Influence, Competence, Impartiality and Meaning-making. Some questions were specifically aimed at investigating these categories in relation to their resettlement, as there are certain problems that are often associated with areas around mine-sites and displacement-associated issues. Other questions were aimed at investigating their current situation more generally, sometimes after observing certain characteristics of the area while conducting initial mapping. During the mapping, the researcher visited the two chosen resettlement communities several times in order to observe the structural facilities available, and to organize respondents for upcoming interviews. The interview sheets can be found in Appendix A.

The mapping, individual interviews and focus group discussions with resettled people were carried out for a period of two weeks in March-April 2019. In order to triangulate the findings, individual interviews with four key respondents have also been carried out during the same period. In total, 40 people were interviewed. Spontaneous probing questions were asked during both the individual interviews as well as the focus group discussions in order to gain deeper knowledge and clarify ambiguities.

The main group of respondents came from two villages built by KML to host the resettled people. All respondents from this group were able to show documentation and ID-cards to assure that they had taken part in the resettlement and been compensated by KML. The resettled communities are either referred to as the Southern resettlement (a.k.a. Shinengene – south of Kalumbila town) or the Northern resettlement (a.k.a. Kalumbila North – adjacently located to Kalumbila town). 16 people were interviewed from the southern resettlement. This included nine individual interviews with four women

<table>
<thead>
<tr>
<th>Title</th>
<th>Year</th>
<th>Publisher</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compensation and Resettlement Plan</td>
<td>2012</td>
<td>Kalumbila Minerals Limited</td>
</tr>
<tr>
<td>Human Rights Policy</td>
<td>2017</td>
<td>First Quantum Minerals</td>
</tr>
<tr>
<td>Social Policy</td>
<td>2017</td>
<td>First Quantum Minerals</td>
</tr>
<tr>
<td>Sustainability Strategy</td>
<td>2017</td>
<td>First Quantum Minerals</td>
</tr>
</tbody>
</table>

Table 1. Guiding documents
and five men, as well as two gendered focus group discussions with four women and four men each. 20 people were interviewed from the northern resettlement. This included ten individual interviews with five women and five men, as well as two gendered focus group discussions with five men and five women. The summary can be seen below in Table 2. Another summary of the respondents can be found in Appendix B.

<table>
<thead>
<tr>
<th>Resettled:</th>
<th>Total:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>19</td>
</tr>
<tr>
<td>Female</td>
<td>17</td>
</tr>
<tr>
<td>Age (20-35)</td>
<td>13</td>
</tr>
<tr>
<td>Age (36-55)</td>
<td>17</td>
</tr>
<tr>
<td>Age (&gt;55)</td>
<td>6</td>
</tr>
<tr>
<td>Farmer</td>
<td>33</td>
</tr>
<tr>
<td>Employed worker</td>
<td>1</td>
</tr>
<tr>
<td>Informal worker in village</td>
<td>2</td>
</tr>
</tbody>
</table>

Table 2. Respondents overview

Moreover, individual interviews were carried out with four key respondents who had been identified as holders of important information relating to the studied group. A community relations officer from the Trident Foundation (FQML’s CSR-subsidiary in the area) was deemed to be a key respondent because of his deep involvement in both the resettlement and the current community development efforts being implemented in the resettlements. The local chief was identified as another key respondent due to his customary powers and involvement in both the resettlement process as well as the current community development initiatives. Lastly, two different respondents from Zambia Environmental Management Agency (ZEMA) were interviewed as they are a mine-inspecting authority and since they were believed to have complementary information about the resettlements from the perspective of a governmental agency.

After the data-collection, the interviews were transcribed in order to structure the findings and create a sound basis for analysis. Certain factors or issues that had been discovered during the interviews were identified as the most relevant in accordance to the analytical model. The findings from the main data group, the resettled, were clustered in different identified key issues under each respective SSP. Responses to different questions were divided into different statement-categories and counted in order to clearly see trends and gain clarity in each issue. The findings from the individual interviews were also further statistically interpreted in the discussion in order to enable a comparative analysis between the two resettlements. As such, no separate “method of coding” was applied in this study, but rather a qualitative extraction of the key findings from the individual interviews as guided by the analytical model.

3.3. Ethical considerations

There are several ethical aspects that have been taken into consideration in this study. One such aspect is the phenomena of researcher influence. Naturally, a scientific study should ideally be free of any such influence, and for a researcher to intentionally influence the gathered data is obviously both unscientific and immoral. In terms of indirect influence, however, it may be hard or even impossible to avoid entirely. In such cases, it must be transparently described instead. For this study, there may have been unintentional influence from the researcher when conducting interviews. Human interaction is not only verbal, and respondents may adapt answers to questions depending on an array of circumstantial factors.

However, it has been made clear from the start of each interview that all respondents have personal anonymity in this study, in the sense that they will not be named in relation to any information given. It was also underlined that their complete honest opinions and descriptions of events or issues are vital for

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6 One woman had already been interviewed individually and joined the focus group spontaneously after it had already started. She is the only respondent having been “interviewed twice”. 
the study. Moreover, the respondents were made to clearly understand that the interview would not result in any direct benefit or action regarding their situation. It was deemed important to make this clear since our presence in the resettled communities might have been mistaken to be connected to various types of community development work or personal benefits and thus influenced the answers.

Another aspect that needed to be ethically considered was that the study should be respectful towards cultural traditions and that the researcher ought to meet certain local expectations of behaviour. Seeing as the researcher in this case is a Swedish university student and that the respondents largely adhere from the Zambian countryside, there were certain obstacles to achieve this. Therefore, a local resident was hired to be a research assistant while the fieldwork was being carried out to help navigate the study through cultural barriers. The research assistant spoke the two most common languages in the area and had also attained some years of higher education conducted in English. He also assisted in translations when required.

3.4. Limits and delimitations of the methods

As for all studies, this paper has been delimited to suit the project’s timeframe and budget. There has also been limits connected to the chosen methods in some regards.

Since there is a two-pronged approach in the research design, whereas a study perhaps normally focuses on one (Esaiasson, et al., 2017), the theory development of this study must be regarded as modest. The main part of the paper is thus better described as theory testing.

Furthermore, the study has been adapted to logistical and practical limits as well. First, it was only possible to spend a little over two weeks in the field to gather all the primary data of the study. If the study had had more resources available, the number of respondents could have been higher. Second, only the two newly establish resettlement communities were chosen for the study. Some displaced people had been offered full monetary compensation instead of resettlement and thus moved to already established communities in the area. As such, it would have been interesting to include them in the study as well, perhaps in a comparative manner, if more time could have been spent in the area. Third, in most cases the interviews have been dependent on a translator. This should be accounted for as a weakness of the study since the data quality depends on the translator’s ability to correctly retell the information given by the respondents. To minimize the risk of false or lost data, several precautions were taken. These included going through the guiding questions with the research assistant prior to the interviews to make sure he understood them properly. When the respondents were probed for more information during the interviews, simple, clear and short questions were always asked when possible in order to minimise the risk of mistranslations. It would have been preferable and helpful to have had a second translator go through the recordings from the interviews during the transcribing process. This was not practically possible, however, due to the limited time in the field and the difficult task of finding an available second translator being fluent in the two local languages as well as English.

The study was also forced to adapt to a limit of low access to secondary material as well. The general lack of accessibility to public documents that could describe the studied area more scientifically was problematic, since it would have benefited the study in many ways. KML has been said to keep records of their own relating activities and assessments of the studied group, but these documents were not available publicly. When requesting the ZEMA for relevant documents, it was said that monitoring activities had been few, and documents to portray the monitoring even fewer. In addition, their webpage that supposedly allows free access to documents such as these were under maintenance during the time of the study, making online downloads of relevant documents impossible. Communicating to various people within the organization in attempts to gain access to the documents resulted in only receiving KML’s RAP as well as certain appendixes to their consensus methods. It would have strengthened the study if potential records of the studied group could have been accessed.

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7 Except for a small gift of the respondent’s choice, i.e. cooking oil, sugar or rice. This was deemed appropriate both for cultural reasons as well as moral reasons since the interviews took quite some time and some compensation was deemed fair.

8 Kaonde and Lunda.
4. Results

This section presents the findings in a structure conforming to the SASS model. As such, the interviews with the main study groups (the resettled communities) are presented in accordance with the five social sustainability principles as outlined above. In order to allow for certain comparisons between the two communities, the findings from each community are presented separately. Interviews with key respondents are also summarized in order to highlight the most important points in regards to the findings from the main study groups. Moreover, a systems map has been drawn in order to clearly display the studied system with the most relevant actors and their interactions with each other.

4.1. The Social System

The simplified social system as presented in Fig. 4 was derived from initial mapping of the area as well as from information gained during the interviews. It displays the most important actors as well as stocks of services and resources that were identified during the interviews, and their interrelated flows. The system is divided into three levels: Global, National and Local. The local level is restricted to the two studied communities. Because of the many similarities found within the social systems of the two resettled communities, they have not been individually depicted in this system map.

![Fig. 4. The social system](image-url)
4.2. Structure development

In order to develop a structure of the study that could sufficiently investigate social sustainability issues in accordance with the SASS, certain methods were initially applied to create a basic understanding of the social situation within the studied group. This was done first by mapping the area, including several visits to the two communities and the vicinity as well as through dialogues with people found there. In addition, the chosen documents were also analysed in order to find relevant information that could further the understanding of the company’s role in relation to the resettlements.

4.2.1. Mapping the resettlements

In Shinengene, the Southern resettlement, certain characteristics of the community were observed during initial mapping. Road conditions to Shinengene are poor, and meeting cars on the road only happened on a few occasions. On one occasion, three men on two bicycles were seen equipped to do farming, obviously on their way to their fields biking. However, due to the poor road conditions and the quality of the bike (having no breaks) an accident was observed as the bike carrying two men came fast from a slope and hit a pothole, causing both men to fall off into the bush on the side of the road. In the village itself, there seemed to be a very large amount of people idling at all times during the day. The only exception was found to be from morning to after lunch on Sunday’s, when most people seemingly attend church services. Moreover, small shops were selling, among other things, heavy liquor for 6 kwacha (approx. 0.5 USD) per bottle of 200 ml at the village centre. When asked about the sales of these bottles, the shop attendant declared that “That business is good”. Even though the area was always visited at day, there was an all-male crowd gathered outside the shops every time. Upon closer inspection, empty bottles of heavy liquor were found lying around the seating areas outside the shops. When driving and walking around in the village, broken bottles of the same type were also seen on the roads. A village clinic was also located and visited during the mapping. It was found to be without electricity, and with one nurse attending to around 15 waiting patients. Other buildings and structures found were, for example, several churches, one primary school, a large (but completely empty) marketplace, and a large water well under construction.

Initial mapping of Kalumbila North, the Northern resettlement, revealed both similarities and differences compared to Shinengene. The most apparent difference was the community centre area, which was clearly more lively and diverse than the one in the southern resettlement. Many different shops and food sales (including fish and meat) were observed, as well as leisure activities like a pool table place and bars. There appeared to be a higher level of alcohol consumption in Kalumbila North than in Shinengene, with several different gatherings of people (men) seen drinking during daytime around the community. Going by car around the village, there were two cases of near-accidents with visibly intoxicated people on the roadside. A clinic and a primary school were also found during the mapping, along with (at least) five different churches. Not as many people seemed to idle in Kalumbila North as in Shinengene, and large buses were occasionally seen going through town. General livelihood standards seemed somewhat higher in Kalumbila North. Quite a few houses had clearly been extended from the ones originally built by the mines, and there were also solar power panels on some houses. The road quality seemed slightly worse than in Shinengene, even though both were of the packed-soil type. After heavy rains, water downfall was seen creating large ponds on several places in the community. During the mapping for the Northern resettlement, the area around Kalumbila town was also inspected due to its vicinity to the resettlement. One place in particular was found to be of interest, a mine dam on the outskirts of the town. The dam had been created by KML as a consequence of a river being diverted from the mining area. Fish had been planted in the dam in order to create fishing opportunities both for the local population’s personal livelihood as well as leisure fishing for visitors to the area.

4.2.2. Document analysis

According to the company’s RAP, the resettlement project had been developed with sound planning and ethical guidelines, with the guiding principle that no displaced person should be worse off after the resettlement than he or she had been before (Huggins & Lappeman, 2012). Therefore, some comparative questions from before and after the resettlement were also added to the guiding questions.
Various policies for sound and ethical codes of conduct developed by FQM were also scrutinized in order to prepare for the main data collection. The Human Rights Policy state that the company adheres to a number of internationally recognised human rights such as the UN declaration of human rights as well as Guiding principles on business and human rights (First Quantum Minerals Ltd, 2017a). In addition, the policy state that the company should seek to understand its various impacts in the local contexts in which they operate. Then, through identifying concerns, the company aim to strive for reducing negative impacts and also enabling community benefits, e.g. through training, employment, health and education (ibid.). Some probing questions were therefore asked to respondents, when suitable, to learn of their experiences of the company – especially in regards to problem solving, presence in the community as well as their perceived influence in resettlement process.

FQM has also produced a Social Policy, much mimicking the commitments of the Human Rights policy in regards of respect and commitment to local communities. In addition, the policy mentions that the company seek to build capacity within the affected communities in order to allow for associated benefits (i.e. employment) directly or indirectly from the mine in their vicinity. The policy also mentions encouraging that goods and services for the mine operations are purchased from the local communities (First Quantum Minerals Ltd, 2017b). Moreover, FQM’s Sustainability Strategy highlights the envisioned outcome of the company in other matters such as transparency in its operations, fulfilling promises and obligations to stakeholders, enforcing a sound code of conduct for employees, etc. In addition, the policy clearly state that no people may be displaced through forceful means in order to advance project development. Instead, access to various resources should only be attained through negotiations with affected communities. Additionally, the strategy underlines the importance of community independence, and that the company should not take over governmental responsibilities in the area in which they operate (First Quantum Minerals Ltd, 2017c). These two documents have also been relied upon as background information during probing questions as well as some guiding questions in regards of the resettlement process and perceived trust for the company.

4.2.3. Identified issues in relation to the SSP:s

Through the mapping and document analysis, a structure for the study was finally developed with several identified social sustainability issues. In some cases, early findings from the interviews were brought into the structure of the study as well since they were found to be important but had not been initially identified or understood through the mapping or document analysis.

The structure has been divided into five sub-categories in accordance with the SSP:s. The sub-categories were then investigated during the interviews.

SSP1: Health

In terms of health, questions regarding service provision, alcohol consumption\(^9\) and frequency of injuries were asked in order to understand the respondents’ health situation, and how it is impacted by living in the resettlements, and by their socioeconomic situations. These questions were largely derived from mapping in the areas prior to the interviews, during which some patterns of behaviour were observed. Moreover, a pattern started to emerge during the first interviews when several of the respondents complained about their current diet, and how drastically it had changed after moving to the resettlement. This was deemed important to investigate as well and therefore added to the interview sheet.

SSP2: Influence

Certain issues in particular needed to be understood in order to assess to what extent the respondents perceived to have influence within their social system. First, it was considered important to investigate how they perceived to have had influence during the resettlement process. Second, emphasis was also placed on to what extent they currently perceive to have influence to sufficiently impact their lives.

\(^9\) Alcohol consumption was deemed to be appropriately investigated in relation to SSP1 – Health rather than other SSPs, e.g. when discussing leisure activities in SSP5. This is due to the negative impact of alcohol as a potential addiction both directly to the drinker, and indirectly to the dependants of the drinker.
Additionally, another aspect of individual influence was considered important to investigate, namely their ability to rely on a sound justice system in times of need.

Findings have depicted a two-pronged type justice system in place in both Shinengene and Kalumbila North. On the one side is the formal system containing the police force, formal courts and the inspecting governmental authorities. On the other side is the customary justice system, starting with village headmen and proceeding up to the local chief in the royal establishment and his traditional court. The local militia, or vigilante group, called “the Neighbourhood” should be categorized somewhere in-between these two systems since they can be called upon from both the police and the chief to make arrests. The system is depicted in Fig. 5.

![Diagram of the legal system]

**Fig. 5.** The legal system

One general finding from both groups, while discussing various topics, was that the respondents tended to indicate a heavy dependency on the mining company and relied on them for most things. Only occasionally was the government mentioned as a potential service provider in the same sense. When discussing trust for various actors and groups, however, most respondents in both resettlements declared that they mistrusted the mining company. When asked what the procedures were in case they had a problem with the company, the general response was that the community would gather and send representatives (headmen) to the CSR offices within Kalumbila town – with various degrees of perceived success.

When asked what would be needed for this relation to improve, the most reoccurring statements followed similar reasoning - that the company should start “fulfilling their promises” to the communities in order for trust to be re-established. One example of how the community-company dialogue had worked was found in the common statement that the houses in the resettlements were small and of poor quality. Most respondents indicated that this did not meet their expectations as the houses were not of a “standard” type, and thus not what had been negotiated and agreed upon during the resettlement process. After receiving the complaints, the mining company had supposedly built small extensions to the houses for a number of respondents. These extensions were frequently observed during mapping in both areas as well.
**SSP3: Competence**

In order to investigate respondents’ sense of competence, questions were asked about their work skills, their education level as well as their ability to seek further education or skills development if they so desired. None of the respondents from the individual interviews had been to higher education, and most had stopped studying after completing grade 5-9, see Table 3. The respondents in the focus group discussions were not asked for their education levels.

![Level of education graph](image)

**Table 3.** Level of education

**SSP4: Impartiality**

The mapping, previous studies and conversations with various people (e.g. locals around Kalumbila town) had indicated that discriminatory tendencies in the area could be connected to social friction between local and non-local or foreign workers, as well as gender discrimination. However, these issues were generally not brought forward from any of the respondents. It was therefore decided early on to add a guiding question to investigate the situation of gender equality in the communities. In terms of discrimination of local workers in favour of foreign workers and non-locals, it was decided to not add it as a guiding question because the proposed discrimination was supposedly taking place inside the mine workforce, which was beyond the scope of this study. Instead, guiding questions were asked to investigate the relationships between different groups within the communities, as well as the perceived relationships between important outside actors like the mine and the chief. The community relationships were made into two separate inquiries, one investigating relationships among the resettled and one investigating the relationship with potential newcomers.

The statements regarding relationships between the community and other actors within the social system (e.g. the police) has been described throughout the various issues when applicable, mainly in relation to potential bias or discrimination within the justice system. Both probing and guiding questions were designed for this purpose.

It was also deemed appropriate to allow for the respondents to get a very general question about perceived discrimination within the communities, in order to not allow for ‘researcher influence’ to guide how they viewed their situation.

**SSP5: Meaning-making**

Three initial topics were developed into questions in order to assess the status of the respondents’ access to mental wellbeing through various types of meaning-making factors. Another was added after the first few interviews. It should be noted that it is a complex matter to formulate questions in a manner that would do people’s individuality justice in this regard. However, four specific themes was deemed appropriate to investigate in this study.

First, initial mapping had showcased a large number of different churches in both communities. Religion, spiritual satisfaction and the ability to practice one’s faith was therefore added as a theme to
be investigated in the study. Second, the ability to find a partner was also considered to be an important aspect in this regard. During initial dialogues with the research assistant regarding traditional and local customs in the area, it was found that dowry traditions may be considered very important in the communities. This, in combination with low levels of income in the targeted area, was considered to qualify the topic for investigation. Third, initial mapping had indicated the existence of different leisure activities, especially in Kalumbila north which had a comparatively livelier community centre compared to Shinengene. It was considered important to understand if there were considerable differences in-between the two communities in this regard, and how people perceived the topic. Fourth, a guiding question was added to explore how the respondents thought about their future and what sentiments they connected to their hopes and plans. This question was considered to be an important complement to the other three since it was open for interpretation and could thus allow for more in-depth knowledge about how the respondents felt about their lives. The variety of answers gathered through this question has been divided to have been either optimistic or pessimistic, as this arguably can be an indicator in assessing SSP5 as well.

4.3. Main study groups

This section presents the findings from the respondents in the main study groups – the two resettlements. The findings from the individual interviews have been statistically visualized and are presented at the end of each respective section. As such, responses to certain issues were coded into two basic comparative stances. In those cases where respondents were not asked a specific question, or gave a response unrelated to what was asked, a third column has been created (= N.A.). Findings from focus group discussions have been added when relevant.

4.3.1. Southern Resettlement

Shinengene, the Southern Resettlement, is the more rural area out of the two sites developed into resettlements by the KML. The area was chosen to allow easy farming for the resettled, as well as independence from a host community. The majority of the resettled in Shinengene originated from Wanyinwa village, approximately 381 households out of 566 (Chu & Phiri, 2015). In this study, only one of the interviewed originated from another village. The interviews took place March 23-25 2019.

SSP1) Health

Most respondents in both individual interviews as well as focus groups ended up making comparisons between how life used to be before the resettlement, which seemed to be their point of departure in assessing their current situation. As such, it was discovered that they did not have a clinic in their previous residence, but now they have been provided one by KML (albeit staffed and equipped by the government).

Generally, the respondents appreciated the fact that they now had a clinic nearby. Despite this, however, most of them found that their overall access to health services had declined after being resettled to Shinengene. The perceived decline was usually explained by the fact that people used to have access to a busy road that passed adjacent to Wanyinwa. The traffic on the road both generated income as a type of “on-the-go” marketplace, and it also offered potential lifts that enabled people to go to larger and better clinics and hospitals in other villages and towns.

Most respondents were also critical of the health services in the local clinic, although the proximity and free access to medicine and care were appreciated. When probed for more information about what they were missing from the clinic, several points were repeatedly brought forward. The most common opinion was that the clinic is “too small” to cater to the needs of the many people of Shinengene: The

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10 In order to get a better flow and easier reading of the text, only the different responses to the identified issues have been described with the exact number of respondents. In other cases the statements can be understood the following way: “most” = all except 1-3 respondents, “many” = more than half but less than most, “some” = less than half but more than few, “few” = only 1-3 respondents. The range of 1-3 was determined by the size of the group, be it total respondents of a resettlement or number of participants in a focus group.
staff consists only of two nurses in a rotating shift. In addition, the lack of transport options in Shinengene make the people reliant on ambulances from outside towns and villages in emergencies. As it takes hours for the ambulance to arrive, if it even arrives at all, emergency medical transport was lifted as a major concern. The clinic is also poorly equipped, both in terms of medication available and in terms of services. There is, for example, no maternity ward. This, in combination with lack of transport, has led to women in the community having to rely on a group of elderly women when giving birth. Reportedly, these elderly women have no formal training, and payment in kind or in cash is required for their assistance. Medicine shortages were said to be frequent at the clinic. This was another major concern for the respondents, as most of them said they could not really afford transport fees to other governmental clinics to source for medicine. The respondents would also not generally buy medicine due to the transport issues as well as lack of funds. There were small shops inside the village selling painkillers that some respondents found affordable, however. In addition, reliance on traditional medicine was common in times of medicine shortages in the clinic. Both focus group discussions went in line with these statements as well.

The pre-interview mapping had given some insights in how people in the village travelled to their fields to farm. Due to those observations, it was deemed important to investigate the frequency of injuries in the area. Most respondents confirmed that injuries were common in the area. When probed for the type of injuries and how they would usually happen, the most common reply was that they happened when people travel in the bush or on the roads as they would go to their fields. The type of most common injuries were snakebites and broken bones, according to the respondents. One respondent, who works informally in the community as a traditional birth attendant, also mentioned that injuries from childbirth were very common. The male focus group emphasized the danger of very tall trees on their plots, something which they felt that the mine company should have dealt with for them before resettling them to the area. One woman in the female focus group also confirmed that injuries were common, especially snake bites and broken arms and legs. Many respondents said that they could seek out help with injuries in the clinic, and in times of medicine shortages, they would make use of African medicine, e.g. to extract snake poison.

Initial observations had indicated that there could be problems with alcohol consumption in the village. However, the responses from the individual interviews were mixed on the subject. In total, five out of nine respondents claimed alcohol was not a problem in the village. There was a gender difference noticed among these five respondents as well. The three female respondents claimed that there was no drinking whatsoever in the village due to lack of funds to spend on such, this was also the general conclusion in the female focus group discussion. The two male respondents, however, said that only very few people drank because most people’s religious faith keep them from doing so. As one man put it:

“Most people here are believers and they do not take beer. Some few people here may buy those strong liquors at the shop and take them home to drink. But we have never heard of any problems with drunkards, like beating the wife and children, or someone being drunk and misbehaving. Never.”

However, there were four respondents who thought that alcohol consumption indeed was a problem in their community. There were no gender differences in this group, consisting of two men and two women. Their explanations to the alcohol consumption consisted of one reoccurring argument from the respondents: People in Shinengene drink alcohol because they have nothing else to do. Indicating that alcohol consumption is largely connected to inactivity and unemployment. These respondents were also concerned about how alcohol impacted the health of the people drinking, as well as how “drunkards” behaved in the community. One woman explained the situation like this:

“At times people are drinking too much beer, and also mixing them with the very strong spirits and other chemicals. They then get so drunk that they cause us problems. They go around in the streets

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11 “Traditional medicine” or “African medicine” was reported to be a wide range of different herbs and roots.
12 The situation of local alcohol consumption was not discussed in the male focus group in Shinengene due to time constraints. Therefore, the insight from the female focus group is only meant to highlight the issue, but needed to be disregarded statistically in the study.
insulting, shouting and screaming which is not a good thing for the society and for the youth to do. They even brake bottles on the road and children without shoes step on those bottles and get injured.”

Another matter brought to attention when asking respondents about their health was a perceived drastic change in diet. In the individual interviews, all nine respondents firmly stated that their diet had deteriorated after being resettled to Shinengene. This statement was also brought forward in both focus groups. Before shifting to the resettlement, most respondents claimed to have frequently consumed fish, fruits, bush meat, mushrooms and meat from domestic animals. A few people also mentioned honey and caterpillars. A couple of people mentioned still going to collect natural resources like mushroom and fruits in the area around Shinengene, but most complained that the area is restricted on two fronts: On the one side to keep people out from the mining area, and on the other to keep people out of a reserved national forest under protection by rangers. To trespass into either area would be a criminal offence, according to them.

In Shinengene, the most common meal seemed to be cooking leaves from cassava and sweet potato into a mashed dish\(^\text{13}\) to be had together with starch food from maize or cassava. Other crops and vegetables could only be had for a limited amount of time during harvests. Problems of cultivating crops in the area was also brought forward, such as unfertile soil, lack of access to farming areas and land disputes. Lack of transport and access to a market was also highlighted as key issues in terms of diet. The female focus group claimed unitedly that this issue was a big challenge because of how restricted they were in accessing certain commodities and selling crops for income. In terms of meat and fish, the consumption for the resettled was said to be drastically reduced. No respondent mentioned fish as part of their diet in Shinengene, and only a few people kept small domestic animals like chicken and certain rodents. The male focus group explained that it is impossible to keep domestic animals like cows, pigs and goats in Shinengene because of the fenced surroundings: there is simply not enough vegetation to feed them.

When the respondents were probed as to why they would not go fishing in the dam that was created by the mining company, and in which the company has planted fish, they referred to the long distance to the dam and the lack of transport in the village. The current water quality was also brought up often during the interviews and the focus group discussions. The common thread among the respondents was that water quality is very poor in Shinengene and causing people to have different types of stomach illnesses, especially the children. However, this issue is currently being targeted by the mining company, which has undertaken a CSR project in the village by creating a large water well centrally located at the market place. The respondents were optimistic about this development, and hopeful that the mine company would also extend water pipes into all houses in the village.

Fig. 6 summarizes the findings of SSP1 – Health for Shinengene.

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\(^{13}\) Any mash of food or saucy dish that is had together with the starch food (usually maize- or cassava based) is referred to as “relish” among the locals.
SSP2) Influence:

Most respondents had strong negative feelings about the mining company, and when asked about their perceived influence during the resettlement, most people immediately went on to talk about the outcome of the resettlement rather than the initial process. Although, probing questions revealed that most people had in fact agreed willingly to the resettlement since they believed that a range of benefits would be provided to them when they did so as a part of their “resettlement package”. During the focus group discussions, also individuals voiced their opinions in the matter, except for two women in the female group. That made it clear that 11 out of the 16 people interviewed from Shinengene had somehow accepted their resettlement freely. They had done this because the resettlement had been perceived as beneficial and good according to their wishes. However, it is arguably not insignificant that three respondents from the two focus groups claimed that they had been outright forced to resettle in Shinengene despite initial attempts to reject it. One elderly woman said that “mine personnel” had come in to threaten the people who refused to resettle by saying that their mine had been approved already, and if they did not accept the resettlement package they would receive no compensation whatsoever. A similar statement was brought forward by two men in the male focus group.

When investigating how the outcome of the resettlement was perceived by the respondents in Shinengene and how they perceived that they could influence their current quality of life, the answers were solely negative. The most frequent statement in both the individual interviews as well as the focus groups was that the mine had failed to fulfil the majority of what has been promised in their resettlement package. Many people mentioned a certain type of support scheme that was supposed to have been made available to the resettled on a monthly basis for a period of five years. Descriptions of the support vary somewhat, but was conclusively said to have entailed food and finance provision. In addition, the lack of employment had left people deeply disappointed, as most had expected to be working for the mine. The commonly held perception was that KML would ensure work for “local people” in the mine. The overall sentiment among the respondents is a sense of resignation to dependency on the mine (and to some extent the government) for their welfare. This is due to the fact that sources for income generating activities are next to non-existent to the respondents in Shinengene. They feel cut off from other communities, with no viable means of transport. This also means that generating income from market activities is impossible, which was also clearly observed in the initial mapping of the area: The large marketplace structure in the village was always completely empty. Many respondents said that their crops often rotted in the fields during harvest season because they had no way of selling the surplus, apart from the occasional private contractor coming in to order crops. Lastly, the fact that large chunks of land around the community is restricted, the people’s reliance on natural resources is also not being met, according most respondents, thus increasing their dependency further.

Most respondents in the individual interviews said that they were generally happy with the justice system in place. Out of the seven people who answered like this, one said that it is only sometimes a good system but regretted that it could be expensive to have justice when having to pay for it, e.g. to the police. This was therefore interpreted as an overall negative view of the system. Similar statements about paying for justice were also found among other respondents, who explained that the police would ask for “fuel money” in order to make an arrest. As one man put it:

“If you don’t give them money for fuel, they will not take any action at all. They will just think that it is an irrelevant matter.”

However, this kind of statement was disagreed with by a number of respondents.

All respondents replied that their first course of action, in case they had a problem or a criminal case, was to seek out the headman of the village. The headman would then offer advice and counselling, and if need be also refer them onwards to either the police or to the chief. The trust for the village headman was perceived to be high, and about half of the respondents replied that they would even turn to the headman in case they had a problem within their families. In addition, a common stance was that it was also the best course of action to organise as a group led by the headman when seeking to communicate any problems to the mining company’s offices in Kalumbila town.
The trust for chief Musele was also high, and many people referred to him as their “father” or “elder”. Some people were probed for what they would do in case they happened to disagree with the chief. Mostly people replied that they would follow his decision anyway, and one even said that the chief just could not possibly fail in making a good decision. On the other hand, one person explained also that the chief had the right to remove subjects from his chiefdom in case they were to disagree with him. In addition, it was discovered that chief Musele is the judge in cases regarding “witchcraft” in his customary court. When asking one respondent from Shinengene for clarification as to why the matter of a supposed witchcraft-murder case was not brought to the police instead of the chief, he replied:

“The police would not accept it because there is no proof. But because the chief uses his spiritual eyes to see those people and identify if they are witches and wizards, it is very easy to know if they killed someone using witchcraft. The police would only belief proof or eye witnesses.”

When asked what type of punishment would follow after having been found guilty, it was explained that the penalty to those cases would be either whipping or penal servitude on the chief’s own farms.

The discussion in the male focus group largely mimicked the findings from the individual interviews, with their first course of action in case they had a problem would be to report it to the headman. They were happy with how the system functioned. When probed about what they would do if they disagreed with the headman or the chief, they referred to their culture and replied that they always follow their decisions. The topic was not discussed in-depth in the female focus group, but the faith they had in chief Musele became evident as they described how he tried to “protect them” from the mining company during the resettlement process.

Fig. 7 summarizes the findings of SSP2 – Influence for Shinengene.

SSP3) Competence:

When asked about their work skills, almost all respondents felt that they had good skills to do their work. Most of them referred to their farming skills, except for one respondent who works as a traditional birth attendant in the community. When asked about their level of education, however, seven out of nine respondents felt that they did not have enough education. Two respondents referred to their age and bodily conditions when asked how they felt about their education levels, and indicated that they now felt it was sufficient due to their circumstances. However, one of them admitted that he had wished for more education when he was younger.

All respondents replied that they desired to either continue developing the skills they had, or learn new skills. Around half of the respondents had received new skills from different programs initiated by the mine. The most common training was conservation farming, but adult learning centres were also mentioned as well as work-related skills from when the mine had employed people for short contracts doing various types of piecework. Around half of the respondents also responded that they wished to continue developing their education levels. When investigating their ability to increase education levels or develop their skills, the most common reply was that it was not possible for them to do it on their
own. Most people mentioned lack of funding or sponsorships, and some mentioned physical obstacles. One person said that he would continue to develop his farming skills on his own.

Many respondents connected their limitation to farming skills to their low levels of income as it was considered very difficult earn an income in Shinengene without “special” skills and higher education levels. But without funds or sponsorship, it was also not possible to increase skills or education levels. According to the respondents, farming had previously generated some income, but without access for market opportunities, most people in Shinengene only managed to grow crops for the own consumption. One male respondent made the following statement when discussing lack of skills and employment:

“... we are not even educated, so it is a very big challenge for us to find a job somewhere else. We are relying on this mine. They are the only ones who can give us employment. If they find that we are not educated, why can’t they give us a job where there is no need for education, like slashing14 or, sweeping [floors] or cleaning toilets or washing plates after lunch?”

This sentiment was also strongly brought forward in the female focus group. The respondents discussed how support should be given in order for people to be able to lift themselves out of poverty, something they currently felt was not possible for them to do due to the lack of income-generating activities. Also the male focus group reached this conclusion, and strongly believed that any type of monetary support would result in wisely planned and successful outcomes for the people in terms of improving their livelihoods. They also connected the problematic situation of the fenced surroundings to their declining ability to support their families on their own, since new areas to farm and forest resources is largely unavailable to them in Shinengene. Their fear of trespassing in search of these resources and ending up in prison was clearly evident.

On a positive note, people mentioned an appreciation for the primary school in Shinengene, constructed by the mining company, which had been a slight improvement from the one they had access to before the resettlement. Some also hopefully mentioned that they had been promised upgrades of the school to be a secondary from the mining company, and that the mining company was sponsoring some children’s school fees.

Fig. 8 summarizes the findings of SSP3 – Competence for Shinengene.

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14 = Cutting grass with a machete.
Impartiality:

There was a strong sense of perceived discrimination in Shinengene among the respondents. All respondents in the individual interviews reported cases of discrimination, and all referred to them as income-related. This sentiment was also brought forward in the female focus group. The discrimination seems to be of a class-type, whereas a local elite of community members with paid jobs regularly mistreat the economically lowest standing members of the community in various ways. In most cases, the description of the discrimination resembles bullying or harassment in many ways, such as mocking, name-calling and various humiliating behaviours towards the “lower class”. But also more serious accusations were brought forward against this group, e.g. occasionally refusing to pay for people’s piecework when commissioned. The male focus group complained that they were receiving discriminatory treatment from the other resettled living in the Northern resettlement on the basis of rumours that Shinengene is a stamping ground for witches and wizards. They also mentioned being mocked for living very rurally and far away from services found in towns.

On the topic of gender equality, six out of seven respondents in the individual interviews explained that women and men are not equal in Shinengene. When probed as to why it was like this, most people referred to the different gender roles. Men are seen to have the hardest and most difficult roles in the household, including bodily labour in the field and collecting different types of natural resources. Women on the other hand were seen to have “light duties” like cooking, childcare and mending the home. Many also stated that men are the head of the household, and that they could not be equal to women therefore. One man put it like this:

“... because the kind of work that men do is different from the kind of work that women do. According to our culture, the hardest jobs are done by us men. We are often the ones to go to farm while the woman just stays at home with the children. Also, us men are the head of the house, which the woman is not.”

One man differed from the mainstream opinion on the matter, however. He had seemingly changed his opinion on the matter as he had observed that an increasing number of women had now started doing traditionally male tasks. He said:

“To my surprise, we have ladies here who act like men! The jobs they do, they are men’s jobs.”

When investigating the relationships between different groups within the community, results were somewhat mixed. First, most of the respondents in the individual interviews reported that the relationship with other resettled people from different communities worked well and that they lived in “peace and harmony” together. A few had mixed feelings on the matter, saying that some people were good and others bad. On the topic of a non-resettled influx of people, about half of the respondents from the individual interviews claimed that they had not really seen a group of people like that moving to Shinengene. They, together with the male focus group, explained that their issue of transport as well as the bad reputation of Shinengene in terms of witchcraft activities were deterring people from moving there. The other half of the respondents from the individual interviews (apart from one) declared that also this relationship was functioning well within the community.

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The question was not added into the guiding questions for the two first respondents interviewed (female), and did not appear “on its own” during the discussion on discrimination.
Fig. 9 summarizes the findings of SSP4 – Impartiality for Shinengene.

![Chart showing the findings of SSP4 – Impartiality for Shinengene](image)

**Fig. 9. Impartiality for Shinengene**

**SSP5) Meaning-making:**

Since this section of the interview sheet were developed further after the first few interviews, lack of probing on the subject meant that a few respondents opinions on the subjects could not be asserted. They have been marked as “N.A.” in the concluding summary.

In regards of spiritual satisfaction, all respondents reported that they were of Christian faith. Only one of the respondents from the individual interviews said that she was missing something in order to practice her faith properly. When probed as to what she was missing, the reply was that the village church she belonged to was too poor in order to help the most destitute in the community. She included herself in this category and referred to her community work as a traditional birth attendant, which she was increasingly required to do for free because of lack of funds in the community. On the other hand, one man expressed great relief of the good services the church provided in terms of protection from witchcraft activities. In the focus groups, respondents continuously mentioned references of their Christian faith and declared content in that regard. However, the male focus group regretted that they lacked a morgue in the village, as well as a carpenter to make coffins. This made funeral arrangements a challenge, according to them.

Almost all respondents from the individual interviews found there to be no challenges or problems connected to marriage or wedding arrangements. Only one woman complained that it was very expensive to afford a wedding. Other opinions on the matter regarded enforcing HIV testing before marrying and expensive dowries, but they were not considered very big challenges. Many respondents mentioned that a man who wanted to marry must “come openly”, meaning that there were no problems as long as the marriage procedures happened according to the local customs and traditions.

As for the open-ended question about what kind of plans and dreams the respondents in the individual interviews envisioned for themselves, most replies were generally optimistic. They were also largely connected to spiritual and religious reasoning with phrases like continuing to “trust in God” and “live faithfully to God”. Others envisioned higher quality of life as well as positive personal development. Only one woman was outright pessimistic about the future, saying that there was no point in having a dream because of her low education level. The female focus group focused on being able to provide a good life with education for their children as well as having higher quality of life than the current status quo. However, the male focus group only raised pessimistic thoughts regarding future plans and hopes, which seemed strongly connected to their feeling of inadequacy in providing income.

In terms of leisure activities, the most common reply among the individual respondents was that people either stay at home doing nothing or doing housework. Other common activities were said to be different church activities as well as socializing with friends. A few people mentioned the football field by the church as well as going to the outskirts of the village to collect firewood. When probed for information about any perceived “bad” activities around the village, about half the respondents mentioned people
drinking alcohol and smoking dagga16, which in turn would cause problems of fighting and quarrelling. Some also mentioned insults and mocking, as well as witchcraft activities. One person mentioned prostitution as a result of poverty. Overall, people seemed satisfied with the status quo of leisure activities available apart from some exceptions. The high rates of inactivity in the community was frequently mentioned to be a problem, and was generally connected to lack of income generating activities. People were not generally looking to exchange “staying at home doing nothing” with different types of typical leisure activities, but would instead bring up employment, selling at the markets, improving skills or education. Some people also added that they would like to remove certain activities like witchcraft as well as alcohol and dagga consumption since they were seen to be causing problems.

Fig. 10 summarizes the findings of SSP5 – Meaning-making for Shinengene.

![Fig. 10. Meaning-making for Shinengene](image)

### 4.3.2. Northern Resettlement

The Northern Resettlement, Kalumbila North, is the second host site created by KML to resettle displaced people from the mine site. The location of Kalumbila North is in an adjacent area to Kalumbila town, providing access to a variety of small-town services and goods. The host site was designed to be a more urban alternative to Shinengene, specifically created with the perceived preferences of the many in-migrated people in mind, such as job seeking (Chu & Phiri, 2015). In this study, all individually interviewed respondents in Kalumbila North reported that they had been resettled from Wanyinwa. The interviews took place on March 26-28, 2019.

**SSP1) Health**

For almost all of the respondents from the individual interviews, access to health care services such as medical services and provision of medicine had improved after the resettlement. This was largely explained by the fact that they previously had to travel to other communities and towns to access free health care, but now they had a clinic inside the village. Discussions in the female focus group revealed a gratitude towards the mining company for having constructed a clinic within Kalumbila north in addition to the one in Shinengene. According to them, it had not been included in the initial resettlement agreement but added later through an initiative by the mining company. The male focus group also expressed appreciation of the perceived improvement of accessing health care services now that they had a clinic within the community.

For most respondents however, access to adequate health care services was still considered a big challenge because of the small size of the clinic, which was also stated in both focus groups. Many respondents reported of medicine shortages in the local clinic and how the services were poor due to

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16 “dagga” = the local name for marijuana.
insufficient staff as well as medical equipment. According to the respondents, most people are not able to buy medicine on their own. When there is a shortage in the clinics, they would usually just return home waiting, or use traditional medicine. One respondent stood out specifically among the rest since he was one a mine employee. Due to a health scheme that is arranged for all mine workers and their families, he was able to get medical services from the private clinic in Kalumbila town. For him, the greatest benefit of this was that the private clinic in town had much higher quality than the one within the community.

Almost all respondents from the individual interviews reported that it was common to see injuries within the community. The most commonly mentioned injuries were snakebites and broken bones. The injuries were said to happen most often when people go into the nearby bush to travel to their fields or to cut trees for charcoal. But they would also happen during actual farming and while doing various piecework because of the poor equipment used. The same statements were brought forward in the female focus group. After suffering an injury, most respondents claimed they would either turn to the clinic or use traditional practices.

All respondents from the individual interviews, and all but one from the focus groups, considered alcohol consumption to be a big problem in Kalumbila North. When probed as to why people are drinking so much in the community, answers varied. Some suggested that it was those with formal employment who enjoyed spending their salaries on alcohol. Others said that it was in general men who had only done piecework for the day who would spend their wage on alcohol. One elderly woman was outraged as she explained the situation:

“People are drinking! [...] At month’s end, they are really drinking so much that they are leaving their wives and children starving at home... Their whole money finishes into beer-drinking.”

One male respondent confirmed the existence of this kind of behaviour in the community but was also hopeful that the times had started to change as people became more sensitized on the dilemma of poverty and excessive alcohol consumption. In his words:

“... I was a drunkard, in fact. I used to drink too much. As soon as I got paid, my salary would be gone, I spent half of it on alcohol. So, I realized that this was not okay and that I had to stop it. Then I came up with this plan of building this big house and others have seen my progress and they are now stopping too.”

When the respondents were asked about how they perceived the quality of their diets, many ended up describing it in a comparative manner with how they used to live prior to the resettlement. Three out of ten respondents said that they had a good diet in Kalumbila North. For two of them, it was because they would manage to buy most things they want to eat due to income from employment. For the third respondent, he replied that he was enrolled in a farming program for growing a particular type of cassava. Through the benefits of this program, he manages to feed his large household of 15 people. For the remaining respondents, however, having a healthy diet was a great challenge and impacted their lives severely. Most respondents, also in both focus groups, complained over how expensive living was in Kalumbila North, and that they relied on purchasing almost everything they consumed apart from what they would grow in very small fields or kitchen gardens. Only a few people said that they had access to proper fields to grow crops from, either from their resettlement package or from getting new fields post-resettlement. The other respondents were probed as to why they would not use the fields given to them from the mines as a part of their resettlement package. The replies were mixed. About half of them said that the fields were very far away and that they could not manage to use their fields therefore, some had never even gone there. This was also the common statement in the male focus group. During discussions, one man said that he had in fact tried to go and use the farm given to him. But upon arriving to the area, he had found that other people who claimed to have ancestral ties to the land were settled on “his” field.

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17 In short, the scheme deducts a certain amount from the worker’s pay check every month, in exchange for medical care and medicine provision, if needed.

18 The respondent was currently constructing a large house on his plot to complement the smaller one provided for him during the resettlement. His new house also had solar power installed, and his standard of living appeared high compared to others in the communities.
The encountered had ended with the inhabitants of the field chasing him with axes. However, other respondents complained that they were never given fields and still waiting for their promised title deeds. Both of these sentiments were also brought forward in the female focus group, with some women not using them because of the distance and others claiming they never even received the promised fields to farm. One of the male respondents from the individual interviews happened to be a village headman in the community, and due to this position, he was able to shed light on the situation:

“We don’t farm from here, even though we were given fields to grow crops we can’t go there and use them. Because the chief refused us to start farming from there, he said that whoever is found farming from the farms given to us by the mines, they will be punished. [...] But the mine came here and picked everyone and gave everyone a farm each. But then the chief came in and said that no one should cultivate from those farms. So that secret of what transpired between the chief and the mine is not something for us people to know. When it happened, we protested. I am the headman, and we went to the chief in the palace, in the presence of the mine officials, to tell us the reasons why we were stopped from farming in those fields. But the chief did not want to disclose anything to us. [...] The mine representatives were there, they even promised the people of the northern resettlement area that the title deeds for our farms, they are ready. But as they were to distribute them the chief came to cancel everything and said ‘keep those title deeds, I do not want anyone to farm from there. These farms should be left the way they are’. As group leaders of this resettlement, we had no option. Because the chief himself has spoken and we must follow. This was a meeting from two years ago and we are still waiting in vain for those title deeds.”

Similar statements were also brought forward from other respondents. One woman explained how the chief had told them to not collect any farms from the mining company because they were “crooks”.

As a result of the issues connected to land allocation and farming, many respondents felt that getting a good variety of crops and vegetables for food was a big challenge. Many respondents said their diet consisted mostly of leaf-based relish and mashed cassava, similar to the descriptions of the diet in Shinengene. Another similarity to Shinengene was the drastic change in being able to access various natural resources, as perceived by the respondents in Kalumbila North. Like the respondents in Shinengene, most people in Kalumbila North said that they would previously rely on the surrounding forest for resources like mushroom, fish, bushmeat, honey, caterpillars and wood. When asked what they could collect in terms of natural resources in Kalumbila North, most people responded “nothing”, and explained that the area was very restricted, and that almost all commodities now had to be bought instead of gathered or grown by themselves. Some said that they could still collect mushroom and wood, although they feared trespassing. One man in the male focus group summarized the situation in the following way:

“We have restrictions everywhere here in this area, with fences in all directions. So, it is very difficult for us to change our diets from how they are now. Because we used to go into the forest hunting and we used to grow vegetables at home, together with bushmeat and mushroom. But we no longer go beyond those fences because of the laws of trespass, which is a serious crime in Zambia. They can sentence us to prison.”

Both focus groups also claimed that keeping domestic animals had been common before they resettled but was no longer possible because of the lack of grazing area to keep and sustain them. A few respondents from the individual interviews mentioned access to fish, but most did not. When probed as to why they would not go fish in the adjacent dam to improve their diet and livelihood, the individual respondents admitted that some few community members went there to fish but not all. This was explained by the fact that many people found it to be very challenging and dangerous to fish in the dam they now had access to. One man explained it like this:

“Now, it is difficult to fish. We used to fish in rivers and streams, not a lake like this. It is very dangerous! Only some people can swim, and you need to go on boats.”

In addition, many people from both individual interviews and focus groups complained about the water quality in the community and suggested that it was causing people to be ill. But many also said that this
was going to improve according to promises of assistance from the mine, and that they would even get water pipes drawn into their houses.

Fig. 11 summarizes the findings of SSP1 – Health for Kalumbila North.

![Fig. 11. Health for Kalumbila North](image)

**SSP2) Influence:**

Slightly more than half of the respondents from the individual interviews had initially accepted the resettlement and found it to be fair. Many were also slightly more optimistic for the arrival of more community development initiatives that were said to have been promised to them during the resettlement. One man summarized it in the following way:

“The agreement for us coming here, in fact, it was fair. We are happy, but we are still waiting for some of the promised thing like electricity and water pipes to the houses. From the looks of things, they have now started cutting trees for electricity poles. Things will really be better then.”

Four people strongly disagreed on the matter, however, arguing that they had been forced to accept the resettlement deal despite their wishes. One elderly widow had not wanted to leave due to her ancestral ties to the land, and had perceived her resettlement as involuntary. Another person said that the mine personnel had come to warn them that they were living too closely to where they were expanding the mine pit, and that they should allow themselves to be resettled with immediate effect for the sake of not being hurt by explosives. The other two respondents had changed their minds after hearing about discontent from early shifted people within the resettlements. But they referred to the diversion of the river as the reason why they felt forced to accept the resettlement deal in the end. As one man put it:

“After realising that they build these small houses for us, we who had not yet been shifted were told of that, and we refused to go. But what encouraged us to still go here, like we had first decided, was that we were scared. There were too many mosquitoes in there and we thought we would die. They closed a river to make a dam, and the water started to go towards Wanyinwa where we used to stay. All the boreholes were filling with water and water was ponding everywhere, which allowed mosquitoes to breed very rapidly.”

These kinds of statements were also found within both focus groups. Similar to the individual interviews, the respondents explained how the diversion of the river had caused large changes in the local geography, with water levels rising quickly close to their homes that they felt forced to accept the “offer” of safe resettlement in the end. The female focus group also explained how the chief had made it clear that he was against the resettlement entirely, but how the mining company had “tricked them” into resettling despite of their chief’s wishes. Another source for annoyance for many of the respondents was the perception of a promised support-scheme that was supposed to have lasted for five years after the resettlement, but which was never fulfilled. Descriptions of what the support was supposed to entail varied but many mentioned food, financial support and employment. The same statement was brought forward in the focus group discussions.

In terms of the perceived individual ability to influence the current quality of life, the results are once again mixed from the respondents from individual interviews. Six out of ten interviewees found that life
was hard for them, and they felt unable to influence their situation due to a number of reasons. Most often references as to why life was so hard for them in the resettlement were tied to the inability to source for income and provide for the families. These respondents complained about how the land issues kept them from being able to farm to any larger extent than bare minimum. They also felt fenced off from being able to access natural resources, apart from wood for making charcoal, to improve their livelihoods. Although the proximity of Kalumbila town as well as their own community centre offered a wide range of commodities and services, most felt that it was still inaccessible due to the lack of income. The most common way to make a living for this group consisted mainly of very small subsistence farming as well as the occasional income from piecework and charcoal making. Nonetheless, four out of ten respondents did enjoy influence on their current living within the resettlement and could positively impact their quality of life. Two of these respondents connected this empowerment to paid income being generated into their households. The other two respondents had success in their farming and managed to get funds by selling crops to private and public contractors.

All the respondents were positive about their local justice system, with large emphasis placed on the customary system. Many expressed deep respect and trust for the headmen, but especially for the chief. When probed as to what they would do if they disagreed with decisions from the chief, most would just reply that they would simply accept anything he decides. Some were probed for more information regarding “cases of witchcraft” as had been unrecovered during interviews in Shinengene, and respondents confirmed that the chief would be responsible to judge and punish those. Punishment would vary from meaningless tasks of levelling huge anthills, to work on the chief’s farming fields. Furthermore, much like in Shinengene, taking a case to the headman is often the first course of action taken among the respondents, even for family issues or mine-related concerns. From there, a case is usually solved with “peace and harmony” restored within the community. In other cases, the issue can be taken onwards in the justice system depending on the type. When discussing taking cases taken to the police, however, many of the respondents confirmed that it was indeed necessary to pay the police or pay for their fuel in order a cause of action to be taken. This was confirmed by the male focus group but denied in the female focus group. In case of arrests with assistance of the Neighbourhood, payments were also required. Both focus group discussions made similar statements in regards of the justice system.

Fig. 12 summarizes the findings of SSP2 – Influence for Kalumbila North.

**SSP3) Competence:**

Nine out of ten respondents in Kalumbila North felt confident about their skills in relation to their work, and all of them expressed a desire to still develop these skills or learn new skills. Many made references as to how that might help them to improve their livelihood and saw it as a means to escape poverty. In terms of education, seven out of ten respondents felt that their education level was insufficient. The same number of respondents also expressed a desire to increase their education levels. Two of the respondents did not have any interest in education and indicated that their current status was fine in that
regard. It should be noted, however, that neither of them had ever been to school and they both referred to their personal obstacles to receive adult education to explain their attitudes towards the subject. When asked what they would need in order to develop their skills and/or education, it became clear that most respondents felt unable to manage on their own. The only exception was one of the more large-scale farmers, who explained his plans of expanding his skills through investing his surplus income into more diverse farming as well as creating a small fishpond. As such, he would “teach himself” new farming- and business skills in that process. The remaining respondents, however, felt unable to invest in themselves in a similar manner. Many mentioned lacking sufficient funds, and explained how they needed “help”, “sponsorship” and “support” in order to increase education or skills.

Similar statements were also brought forward in the female focus group. All respondents in both focus groups showed interest in learning more skills and referred to how it would help them improve their quality of life through higher income and supporting their children’s access to education. In the male focus group, however, one major difference was that all respondents claimed to be satisfied with their current level of education. One man in the male focus group was frustrated by how his lack of education kept him from getting employment (from the mine company) and arguing how skills should be able to compensate for that:

“For me, I have not been to school at all. I don’t even know how it is there. But I have brains and skills of practical work and I can make a difference. But they say that they only want people who have gone to school, so what about us? Are we supposed to get no chance at all for work? They are supposed to be considering us, who never went to school, because we also have ways and means to make a difference.”

When discussing new skill development with all respondents, many had in fact been part of special training programs or projects after being resettled. In the majority of cases, the training had been arranged or sponsored by the mining company. Programs included vocational training like cleaning, mechanics and carpentry as well as conservational farming and other more narrow farming projects. Some also mentioned business training and mine-specific skills development through employment. Another statement repeatedly brought forward was appreciation for the mine to sponsor some children’s school fees continuously.

Fig. 13 summarizes the findings of SSP3 – Competence for Kalumbila North.
Impartiality:

Much like in Shinengene, a large part of the individual respondents claimed that there was discrimination within their community. When probed for more information about what that discrimination consisted of, it was most common for people to refer to impolite behaviour or even outright bullying with mocking comments and degrading behaviours towards certain groups. Five out of the seven people who had stated the presence of discrimination explained that it was of a class-based or socioeconomic type, with the poorer people being on the receiving end of the discrimination. This was also the general statement from the female focus group. As one man from the individual interviews explained the situation:

“The people who discriminate are the ones who have jobs, they come back home to the village after getting their salaries, with many shopping bags. Then they start insulting you: ‘you don’t work, see us we’ve been shopping, you’re just sitting there, you need to be doing piecework, not just sitting at home’. They laugh at us because we are jobless.”

Two respondents referred to the drunkards in town, and explained their degrading behaviour to be a result of alcohol and dagga consumption. Notably, two out of the three respondents who did not perceive any discrimination in Kalumbila North belonged to household of stable income through employment.

On the topic of gender equality, the replies were mixed with half of the respondents stating that men and women are equal. The other half of the respondents would rather refer to the different roles and perceived capacities of men and women to explain that they were not equal. The village headman clarified his reasoning on the topic in the following way:

“In the past, men and women were never equal. But these are modern days and we are equal. What a man can do, a woman can also do it. If a man got a degree, a woman can also get a degree. Looking at human rights, if a man got ten human rights then the woman also got ten human rights.”

When discussing gender equality within the focus groups, the statements were mixed. The female group first rejected the idea of quality between women and men, with reference to men being the head of the household. However, after discussing further, the women agreed that “there would be no head without a neck”, indicating the important position of women, despite different gender roles. In the male group, no common conclusion was reached. Some men firmly stated that men and women were not equal, with phrases like “women are not enough, men are men”. Other men in the group disagreed. One man even suggested a higher status for women over men, with reference to the current work of women within the community. He said:

“To my own opinion, I have seen that women are higher than men. Because women have that tendency of waking up early in the morning and go into the field to collect different types of vegetables that they take into the mining area to sell. So that by the end of the day, they have some money of their own. But for me, who is jobless, at the end of the day I have achieved nothing. So there is a big difference because us men we are just staying at home.”

A clear trend of positive perceptions was found when asking the respondents about the relationships of typical groups within the community. All of the respondents were positive towards in-migrants into the community, and all except one felt the same way about different resettled groups. In the male focus group, however, other statements were brought forward. The respondents in the group expressed a clear dislike for certain in-migrants to the community, whom they felt had come in to take their employment from the mines. Some suggested that this was even discriminatory behaviour from the mines. In addition, the men worried about how these in-migrant employees had been able to “impregnate” their wives, sisters and daughters due to their income-levels. In the female focus group, the general statement was that they only trusted and appreciated “those with good characters”.

33
SSP5) Meaning-making:

Much like in Shinengene, the spiritual satisfaction in Kalumbila North was perceived to be high. Only three out of the ten respondents indicated spiritual dissatisfaction. For two of them, it was connected to poverty and how the church was unable to aid the most vulnerable in the community as a result. For one, it was due to the fact that his branch of Christianity did not fit into one of the six churches in the community and it was said to be a struggle to invest in building one of their own. In both focus groups, all respondents claimed to be satisfied with their ability to practice their faith and said to miss nothing in that regard.

In terms of marriages in the community, all respondents stated that there were no difficulties connected to those procedures, although many added the prerequisite of “… as long as they come openly”. Probing indicated a strong tie to the cultural customs of asking for permission to marry and acting according to tradition in the procedure.

Most respondents felt optimistic when asked about their hopes and plans for the future. Their optimism seemed tied to their religious faith as well as their strive towards a higher quality of life through various means. Only one man felt pessimistic of the plans he had about investing in more training for himself, since his large number of dependents in the household made it difficult for him to spare any funds for his own personal development. In the focus groups, replies were somewhat mixed between optimism and pessimism regarding future plans, with the pessimism being rooted in feelings of disempowerment to works towards the plans and goals. There were also notable gendered differences in the discussions whereby the women tended to mention how they wished for education for their children in terms of welfare and independence for the children, and the men discussing how they sought education for their children in order to secure their own futures when they became old. One woman put it like this:

“My dream is to ensure that I build up a very good foundation for my children. So that in case I die, my children will not suffer or become street kids. They should always have what they are supposed to have.”

One man concluded differently, by saying:

“If God blesses me with money or I get sponsorship, I would like to use the land I have already and build a house there to put people for rent. So that I am able to get money to take my children to school as well. When they complete secondary education, I will put them through college and university so there is a really bright future for them. Because I believe that one day it will help me as well.”

A wide range of potential activities were found in both individual interviews and focus group discussions when sourcing for information regarding leisure in the community. The most common response was that people would stay at home resting or “doing nothing”. Other activities mentioned was gardening,
playing football or pool, doing small-scale businesses, housework as well as different church activities. When discussing perceived “bad” activities, some people mentioned alcohol and dagga consumption and other accompanying bad behaviours. A few also mentioned youth inactivity as a problem.

Fig. 15 summarizes the findings of SSP5 – Meaning-making for Kalumbila North

![Fig. 15. Meaning-making for Kalumbila North](image-url)
4.4. Key respondent – Trident Foundation

One in-depth interview was held with a Community Relations Coordinator (CRC) at the Trident Foundation on March 28, 2019. The foundation is a CSR-subsidiary of FQM located centrally in Kalumbila Town. The CRC had been personally involved in both the latter stages of the resettlement process as well as the current community development initiatives in the area.

When discussing the clinics and the schools within the resettlements, the CRC explained that they had decided to build one in each community in order to replace the existing school in Wanyinwa and to compensate for moving people further away from the clinics in nearby towns. This was meant to ensure that their access to these services would not have declined, but rather improved, post-resettlement. Upon completing construction, however, they were handed over to the government to run. As the CRC explained it:

“[…] and once that happens, once you finish the construction, you need to hand that facility over to the government. Because provision of education, and provision of health services, is a government responsibility. So, we hand that over to government and they are now essentially government properties, and the staffing in those units are coming from the government, and their salaries are paid by the government, and the drugs are provided by the government. Virtually everything is provided by the government.”

When probed about the many perceptions within the community that indicated expectations on the mining company to supply the clinic with more medicine, the CRC had some insights on the matter. He explained that the general assessment from the people within the communities was that there is a much greater sense of presence of the mining company there compared to the government. As such, when there is a problem associated to these facilities, the community reaction would generally be to ask the company for help in the matter. This help would also generally be granted, according to the CRC. But at the same time, providing assistance in these facilities is not an uncomplicated matter since permission from the government must be asked for each time. For example, providing medicine would be considered a criminal offence without governmental permission, according to the CRC. He did also reject the idea that people are confused as to who is really supposed to be running the clinic. According to him, the company has held over 100 public meetings on the matter, explaining the transfer of ownership to the community members. Yet, requests from the community members are still generally brought first to the mining company. The CRC explained this continuous trend with the inactivity and general absence of the government in the area.

As an addition to the governmental clinics the mining company built within the resettled communities, they also constructed a private clinic within Kalumbila town. The CRC explained how mine employees working for KML are under a certain health scheme, whereby a sum of money is deducted each month from the workers’ paycheck. In exchange, they have the right to free healthcare for themselves and their families. The sum deducted, and the range of health care services, differ according to what “level” of the scheme that the employee prefers. Other people may also make use of the services at the clinic, but the CRC admits that it would most likely be too expensive for most of the resettled people. From time to time, however, the mining company has an agreement with the government to run a medicine provision-project within the rural communities in the area. In addition, the lack of maternity wards in both clinics has now been identified as a need within the communities by the company. Although the company is now undertaking extensions of the clinics in that regard, the CRC was unsure of how much it would change the health-situation in the communities: “But the concern is: even after the maternity wing is done, is the government going to provide personnel?”

Furthermore, other facilities were constructed by the mining company within the resettlements in order to compensate for the ones lost in Wanyinwa. Seven churches had initially been built by the company in the southern resettlement, according to the CRC. In addition, several platforms for churches had also been established in the Northern resettlement upon identifying that as a community need there. The construction of the various churches had been done (or was still ongoing) independently by the community. When probed for information about plans for constructing a secondary school in the area, as had been suggested by some respondents, the CRC confirmed the plans. He firmly underlined, however, that education is the responsibility of the government, much like provision of healthcare. The
plans for constructing a secondary school had been developed after the government expressed a need for assistance in the matter, in which the company could be able to provide the infrastructure for the new school. Providing the children in more rural areas, such as Shinengene, with transport to the school and back home would then be a possible contribution from the company, according to the CRC. In addition, the company is in the finalizing stages of establishing a learning institute within one of the other communities in the area. The institute will offer skills development for (older) children such as literacy, computer skills and general agriculture, according to the CRC. Adult literacy programs had also been established by the mining company within seven different places in the area, one of them being the Northern resettlement. Other CSR-initiatives was to enable bus transfer to schools for some children and to provide them with lunch at school.

The CRC was also probed for information about the traditional justice system in the area, and how it had influenced the resettlement process. According to him, clashes with the chief had been plentiful. It had started already during the initial parts of the resettlement process, after the chief had consented to the mine acquiring a piece of customary land within his chieftainship. According to the chief’s demands, all the compensations should be handled through the royal establishment, i.e. his office. In concrete terms, this would have meant that all monetary support would have gone through the chief, for him to divide as he saw fit among his displaced subjects. According to the CRC, the idea was heavily objected to, both from the mining company as well as the soon-to-be displaced people. The resistance was largely founded on the understanding that every household’s compensation would be deducted to some extent in favour of the royal establishment. As a result of the company’s refusal to agree to the chief’s compensation plan, he became negative towards the resettlement entirely at that time, according to the CRC.

Another point on the subject of the chief was raised by the CRC. According to him, the chief and his royal court had been the sole authority in the area prior to the arrival of the mining company. Due to the large demographic changes in the area, the chief’s power has been gradually diminished, i.e. through the arrival of the mine as a powerful actor as well as formal authorities also being established there. By law, the chief and the local court only have formal power to judge in certain cases, such as with witchcraft. All criminal cases, however, must be taken to the formal courts and the police. The CRC also suggested that the chief may fear losing power over his people as they were resettled further away from him.

The CRC was also able to shed some light on the system of the community vigilante group, the Neighbourhood. In his words:

“It’s people in the community who are not even trained. They don’t understand the law, but because of the distance of some of the communities, it is possible for this kind of group to identify themselves as people who are ensuring that there is law and order. So the police use them as informants, and that is why they allow them to function. They are not really there to reinforce the law […] There are certain cases where people have been involved in some wrongdoing and the community has to rely on the Neighbourhood to ensure that the criminal is suppressed before the police arrives. So, in a way, the ‘neighbourhood of vigilantes’ have a role to play. But they’ve ended up being corrupt sometimes, because they often ask someone to pay a little money in order for them to do something.”

Village headmen, on the other hand, will generally aid the community members without asking for any type of payment, according to the CRC. He explained how the headmen often acts as mediators within their communities, striving toward local problem solving within the communities. If a case seems to be unsolvable locally however, the headman’s role is to refer them onwards to resolve the case.

The CRC also had several points to make on the issue of access to land for the resettled communities. According to him, they had identified a more severe need for land within Kalumbila North than within Shinengene following the resettlement. This was due to the fact that the people within Kalumbila North had mostly expected to be employed and therefore chosen the more urban option for resettlement, whereas a lot of people in Shinengene could still be expected to be able to access their previous farming areas. In Kalumbila North, the need for agricultural land became acute after the resettlement, as most people were failing to find employment. This was also during times of disagreement with the chief, causing a problematic situation to arise. The company felt the need to supply the resettled households
with farming fields. As such, farming fields of 4 ha each were created on the customary land that the chief had consented to providing to KML. The chief, however, had strongly objected to this action from the mine. He consequently forbade the resettled to make use of the fields as were being provided by the company and made various threats to deter people from going against his wishes on the matter. The CRC confirmed that he had even heard the chief openly threaten to “cut people’s heads off” during public meetings. He explained how people had been very scared as a result, and subsequently, only very few people had dared to make use of their fields. In addition, he believed that the people of Shinengene found the distance to these plots a challenge due to transportation and logistical difficulties.

The CRC did not agree that the resettlement communities were largely lacking access to natural resources. According to him, both communities were able to move out of the resettlements into open land despite certain some areas surrounding the communities being fenced off, partly due to mine boundaries and partly due to the presence of governmental protection areas for forest and wildlife. Although, the complaints were not new to him, and he explained that people had used to hunt in some part of the surrounding forest that was now allocated as a boundary area of the mine. In terms of access to the mine dam as a source for fish, he agreed that it was largely unavailable to the people of the southern resettlement due to the travel distance and the placements of the mine boundaries. The CRC claimed there had been no promise of any five-year scheme for provision of food, funds, payment of all school fees, etc. Only some vulnerable families had an ongoing provision of food due to their particular vulnerability. There had also been extensive training in conservation farming for the resettled people, according to him.

The CRC helped to provide a verbally described timeline of events leading up to the resettlement. According to him, before the resettlement, people in the area had lived in a very rural and traditional fashion, mainly being hunter-gatherers and subsistence farmers. Some were even living traditionally in huts as bushmen or in shacks on their cultivation fields. During this time, interactions with other people outside each village was seemingly rare. With the arrival of KML in 2011, the area had transformed rapidly, with a large influx of people with hopes of benefitting from the mine and the resettlement process. The surrounding communities became bustling towns, trading opportunities were created, and transport opportunities increased dramatically. According to the CRC, this description of life before resettlement is what people tend to refer to when they wish to describe their livelihood situation prior to the resettlement. As resettlements began in 2012, the company did not discriminate against those with ancestry there to those who were recently in-migrated. The compensation followed the same compensation structure for all displaced people. According to his own assessment, the CRC found it unlikely that people in general had less access to food in the resettlements than they had before, and also referred to new fast-growing crops being introduced into the resettlements.

In regards of water provision, the area had previously relied heavily on the Non-Governmental Organisation (NGO) World Vision for the creation of boreholes for the extraction of drinking water. The mining company has now supplemented these boreholes with new ones, but the high natural iron content of the water has been reacting with the materials of the pipes in the borehole, causing a reddish colour and metallic taste in the drinking water. The problem has been perceived to be the largest in Shinengene, where a new large borehole has been built and is near competition. However, when the mining company previously was faced with accusations of polluting the water in the area, the project came to halt since senior staff at the company argued it would be to admit guilt to continue with that project. Recently, however, the mine company and the traditional leadership could unite in agreement that there had been disinformation going out to the public, and the water projects are now ongoing once more. Water sample testing by the government confirmed normal to high levels of iron in the water, but found no evidence of pollution, according to the CRC.

The CRC also discussed how in 2015 there had been rising ethnical and social conflicts due to increasing clashes between locals and non-locals due to competition for work within the mines. One initiative that had been considered by the company had been to employ at least one person from each local household at the mine in order to ensure a reliable source for income for all of the resettled households. This was, however, deemed practically impossible to fully implement. At most, during the construction phase, around 65 % of the resettled households had a family member employed by the mine. This number had now dropped to around 20% according to the CRC.
4.5. Key respondent – Chief Musele

Chief Musele is the head of the royal establishment, the highest ranked local leader and the supreme ruler of the traditional court within his chiefdom. He was engaged into dialogue on two occasions during the fieldwork, one of which was a formal interview. The interview took place on March 29, 2019. There was no need for a translator during this interview.

The first dialogue was engaged upon first arriving in the area approximately two weeks prior to the interview, as local customs demand asking the chief for permission to carry out any form or activity within his chiefdom. This meeting was included in the initial mapping of the area and aimed to understand the role of the chief also through observations. The royal palace is located within the Musele village community and is surrounded by high walls. Outside the walls lies the traditional courtroom, where the chief on occasion act as judge. Before entering the palace to have an audience with the chief, custom demands paying a tribute\(^\text{19}\) to the chief, i.e. “showing respect”. There is also a kneeling ritual required while first entering the palace and later as entering the throne room. It was observed that these rituals and customs were very firmly anchored into the system, indicating strong ties to tradition within the royal establishment.

Chief Musele was asked why the respondents had indicated that they were not allowed to farm on the fields that had been allocated to them from the mine. The chief initiated his response by declaring that the mine company had no right to allocate land whatsoever, that right was limited to the chief only. So even if he had granted them access to certain land areas to mine minerals, he felt that he had not consented to the mine in turn giving away that land. He said:

“Whoever come to my chiefdom are my subjects, even the mine are my subjects. So, it is not possible for a subject to start selling or allocating land within the chief’s chiefdom. That land was grabbed from the people, the local communities living there, because they wanted to use it for the mine. […] We accepted them to use the land where the minerals are. That is the only land we can agree on them having.”

The chief also expressed concern that too much land had been “grabbed” by the mine and indicated that they had received surface rights for an area which had not been equivalent to the area they had intended to use for the actual mining. As such, his opinion on the matter was that the mine had in fact been granted more land that was appropriate, due to it being his role as the traditional leader to relocate people within his chiefdom, not the mine.

The chief went on to explain that he had urged the people to not accept any resettlement-deal with the mining company whilst he was still “engaged in dialogue” with them. After learning that people had still accepted the mining company’s resettlement package, he had reasoned that his responsibility for their welfare was now no longer his concern. When probed for an opinion about the resettled people’s lack of access to farming land, he replied:

“Sometimes it is due to their own negligence. I told them to wait until we finish the entire discussion, so they will know well what is happening. But they accepted and moved, and now they have started complaining. But now it is not my issue anymore.”

He went on to explain that they had even brought the issue up to governmental courts, to take back some of the land that had been granted (by him) to the mining company. After legal assessment it had been found that it had been an unlawfully large portion of land allocated, and some were therefore taken back. According to him, this is the area where the mining company had attempted to distribute farming fields to the resettled. His concluding remarks on why the resettled were not allowed to go to these fields now they were back into the possession of the chief was:

\(^{19}\) On both occasions, the tribute consisted of various food items. The attempts to not pay any monetary tribute were strongly rejected by the royal establishment. A modest sum of 80 kwacha was therefore added to the tribute as it was deemed necessary to follow local customs in this regard.
“[…] but I am the highest authority for allocating land this way. So that’s why we asked them to stop any activity on that land. The government came in, and we stopped that kind of allocation of land.”

While discussing the traditional justice system and the role of headmen and the chief, chief Musele highlighted the mediating role of traditional leaders, arguing that there would simply be no peace within the communities without them. This was also his attitude towards the apparent discrepancies between himself and the mining company.

“Even if we complain [about past issues] it is too late. We need to sit down and negotiate and see the way forward, having meetings with the mine. Now is not the time for quarrel and disruptions, we keep harmony and peace here.”

This sort of problem-solving approach was also apparent whilst discussing the complaints of poor drinking water from the respondents. The chief underlined that this is now a resolved issue, and that they are not accusing anybody for the quality of the water or any pollution. He also appreciated that the mining company would provide better drinking water in the communities, which had been found to be a critical need from his subjects. In situation such as these, where there are accusations from the people onto the investor, the chief felt that his role as a peace keeper and negotiator was the key to keep peace in the area.

However, chief Musele was still concerned about the allocation of jobs for local people within the mine, an issue he felt was still unresolved. The root of the problem was unfair competition of jobs, according to the chief. He complained how even the procedures of posting available jobs on the company website proved to be a disadvantage for people within his chiefdom due to the lack of electricity and internet access. But on the other hand, the chief emphasized that he had seen other proofs of company commitment to the affected communities apart from employment, but regretted that high taxes were said to be diminishing the CSR-budget:

“Those taxes go to areas we don’t even know, but we are relying on their CSR that goes direct to us in the community. It is better to increase on that rather than taxes. Those just go to government coffers, we can even get nothing or just very little from that! They don’t even know us. But the CSR are directly aimed to benefit us in the community. It’s even shameful that the area containing the biggest mine: there is no college, no hospital, no boarding school, no university, no asphalt roads, no electricity, no recreation centers. But for other areas without the mines they have all those things, but we don’t even have energy. We are not accusing, but we are reporting this to them because people want to see the benefits coming to them. We don’t want to see quarrelling, but we are here to see development.”

He also complained about the existing schools in the area, arguing that they were too few to cater to the population. This had resulted in overcrowded classrooms and poor quality of education.

The chief was lastly asked to comment on the situation of heavy alcohol consumption within his chiefdom. According to him, he would attempt to limit the drinking by advising shops to not sell alcohol in the mornings, and by punish wrongdoers with bodily labour on his fields. In addition, he would tour the chiefdom each year and urge people not to spend money drinking. In terms of malnutrition, he indicated that it was not an issue for the true locals, “the Museles”, as they were excellent crop producers. Instead, these kinds of “lazy behaviours” were imported from non-locals, according to him.
4.6. Key respondent – ZEMA

Two respondents of different specialties were interviewed from the Zambian Environmental Management Agency (ZEMA). One principle inspector was interviewed April 1, 2019 about his experiences in the area and with the study group. A second respondent from ZEMA was a senior inspector and was interviewed April 2, 2019 about his knowledge about EIA’s and experiences from the studied group and associated stakeholders.

The principle inspector was asked for his opinion regarding the claims by respondents that the soil is infertile in the resettlement areas in comparison to how they perceived the soil to have been in Wanyinwa, thereby increasing their dependency on fertilizers. Although he was not able to refer to a study on the matter that had been undertaken by ZEMA, the principle director found it unlikely that there would have been a perceivable difference in soil fertility. The only perceivable threat that he could envision in that regard would be in case there was local contamination from fumes or gases from nearby smelters. Seeing as to how the resettled communities had not been moved closer to a smelter, also this was deemed unlikely. He went on to explain how the historical reliance of mining companies may have impacted the mentality of affected communities negatively, in a way that problems may be exaggeratedly described in search for benefits. The principle inspector worried that this mentality was causing problems within such communities, and that people’s dependency tend to increase as they get used to free services from private companies.

The senior inspector confirmed that there may be only basic samples, if any, from the Kalumbila area in regards of soil impact from mining. This is due to the legal demand of companies to take daily samples and provide reports after every six months. In other places around the Copperbelt, extensive mappings and studies has also been carried out by external actors, for example, look for heavy metals in vegetables and fruits. According to him, ZEMA had been called to investigate the water pollution only.

Furthermore, the senior inspector was able to provide some insight into the dispute between land rights between the mining company, the chief and the government. According to him, it was found that the chief had made an error in consenting to give away more land than is legally allowed. He explained that even if it was customary land under the chief, the mine’s activities are still under government responsibility. Therefore, their initial claim for a title deed of around 500ha ended up being renounced by the government.

When discussing access to natural resources, the senior inspector was unsure if the mining company had really understood how it could be a challenge for the resettled people to feel like they still have that access. He explained that people who rely on natural resources in this manner are used to walk freely in any direction to conduct their livelihood practices. When faced with restrictions, it may feel like a challenge for them to walk around that area, especially when they are perceivably long distances. In addition, he found that there may have been a cultural oversight from the mining company to place the resettlement so adjacently to restricted areas. He explained that usage of fences is overall very rare rurally and may thus be interpreted with distrust rather understanding and appreciation for the safety components of having them there. He explained how feelings of being imprisoned may therefore stem from this culture, as well as poor communication with the resettled in regards of how they may access these resources.

The senior inspector was also asked for his opinions regarding the environmental status of the mine from the point of view of a mine inspecting authority. He then explained that the procedure of diverting the river from the mine area to make a dam was initiated before formal approval from the authorities. In addition, the request to divert the river was also declined, even though the procedure had already been conducted by the mine. As a result of this, and the fear of more environmental problems arising, the construction of the mine had been suspended for some time in 2012. When probed for more information as to why the mine would risk such an operation without formal approval, the senior inspector explained that they may have been under much pressure from investor due to the delay in getting the approval. He concluded that even though certain companies may not follow the correct procedures, it is hard to find documentation of it due to the gaps in inspections and evaluations.
5. Discussion

This section discusses each SSP in the context of a statistical visualization from the individual interviews, complemented with the focus group discussions as well as findings from key respondents when applicable. Through this compilation of findings and an analysis based on the guiding SSP, an overall assessment of the importance of each issue has been made. The section concludes with a summary of the backcasting process from the vision of social sustainability as has been navigated by the principled guidelines (the SSP’s). Suggestions for suitable actions, here referred to as policy recommendations, are presented in relation to each identified issue in order to map out how social sustainability may be attained in the studied system. In doing so has an overall understanding of the current status of social sustainability within the resettlements has been depicted.

The findings from the individual interviews have been statistically color-coded in order to get a descriptive overview of the two resettlements. It was deemed appropriate to simplify the findings in a concrete manner in order to identify most important contributions to structural obstacles for social sustainability within the studied system, as has been found through the SASS model. This could be done by dividing the findings from the individual interviews into three categories, depending on the percentage of certain responses to the different key issues within each SSP as presented in the previous section. Issues on which an overwhelming majority of respondents (<75%) were able to agree upon were color-coded either green or red, to represent the popular opinion on the matter in that resettlement. Issues where there was no such clear majority were color-coded yellow, indicating mixed perceptions on the matter. Responses marked with N.A. in the previous section have been discounted in the percentage calculation. The coding of the SSP’s is visually explained in Fig. 16. A full summary of the coding can be found in Appendix C.

<table>
<thead>
<tr>
<th>Positive / optimistic / satisfactory &gt;75 %</th>
<th>Mixed, divided</th>
<th>Negative / pessimistic / unsatisfactory &gt;75 %</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Green" /></td>
<td><img src="image" alt="Yellow" /></td>
<td><img src="image" alt="Red" /></td>
</tr>
</tbody>
</table>

Fig. 16. SSP coded

5.1. SSP1 – Health

The individual interviews allowed for certain differences between the northern and southern resettlements to become apparent, although the overall assessment from both communities was largely negative. Each category is discussed in-depth, with the guiding standpoint that “the social conditions within the studied system should not expose people to systematic undermining of their health”, as outlined in the analytical framework.

Fig. 17 presents the findings from the individual interviews when coded.

<table>
<thead>
<tr>
<th>SSP1 – Health</th>
<th>Shinengene</th>
<th>Kalumbila North</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access to healthcare</td>
<td><img src="image" alt="Yellow" /></td>
<td><img src="image" alt="Green" /></td>
</tr>
<tr>
<td>Injury frequency</td>
<td><img src="image" alt="Red" /></td>
<td><img src="image" alt="Red" /></td>
</tr>
<tr>
<td>Alcohol consumption</td>
<td><img src="image" alt="Yellow" /></td>
<td><img src="image" alt="Red" /></td>
</tr>
<tr>
<td>Diet</td>
<td><img src="image" alt="Red" /></td>
<td><img src="image" alt="Yellow" /></td>
</tr>
</tbody>
</table>

Fig. 17. SSP1 comparative
5.1.1. Access to healthcare

For Kalumbila North, the perceived access to healthcare had largely improved post-resettlement, whereas opinions were more divided on the matter in Shinengene. Although all respondents were clear on the fact that there had been no clinic in their previous community, the actual access to these health services had still worsened for some (particularly in Shinengene) due to the comparatively poor services of the new clinics. Earlier, these respondents had found it easy to use various types of transport to get access to larger clinics with better services. Most respondents in the resettlements were dependent on free health care services in the near vicinity due to very low levels of income, rendering the local clinics’ services key in regards of their de facto access to sufficient health care.

Therefore, it is important to also highlight the many identified gaps within the service provision of the local clinics. Among the most notable gaps are medicine shortages, no ambulances, no proper maternity ward, insufficient staffing and also lack of equipment for examination. These gaps were consistently found in both resettlements, although respondents in Kalumbila North generally found it easier to access healthcare elsewhere when needed in such situations. The focus group discussions were at large conclusively in unison with findings from the individual interviews on this issue.

The CRC from the Trident foundation provided insights on problematic issues surrounding the local clinics. First, the service provision within the clinics are still reliant on the mining company to some extent even though the clinics are publicly run, which is due to governmental inadequacy in the matter. In addition, the legal and operational constraints on the mining company to carry out these service provisions have resulted in a situation whereby many people are not getting adequate access to healthcare within the resettlements. The principal inspector from ZEMA also emphasized potential backlashes of a social system being dependent on private actors for public services, as this may be rooting a dependency on these companies. From what it seems, such a dependency is already established in this regard. Chief Musele had yet another take on the matter. He found the current system of tax allocation from the mining operations to be highly unfair, questioning why national development would seemingly take precedence over local development. For him, it was key for the local communities to see their area improve (e.g. through service provisions) in order to keep peace and harmony with the mining company. The way he regarded the matter, the amount of taxes paid by the company ought to be decreased in favour of company CSR in the local area. This viewpoint again indicate a strong reliance on the mining company to be the main service provider locally.

In conclusion, access to healthcare services has indeed improved for most respondents after the resettlement. However, deeper knowledge about the quality of their current healthcare has revealed underlying issues regarding the quality of the services available. This paper argues that access to sufficiently high quality of health services is vital in order for a social system to not systematically undermine people’s health. However, various social conditions, such as poverty, is currently preventing people within the studied system to access such health services, thus rendering the issue critical for social sustainability according to the SASS model.

When taking insights from key respondents into consideration, it is clear that the dynamics between the various actors in the studied system has created ambiguity and negative impacts for the resettled. The established system seems to already have established a dependency on the mine as the main service provider, even to the extent of relieving the government of its duties in this regard. Seeing as this is strongly rejected within FQM’s sustainability strategy, as well as the guiding principle within their other policies to not create a local dependency on their activities, there is a complexity in envisioning proper actions for suitable implementors in this regard.

First, it is clear that a general reliance on KML to be the main service provider is unsustainable. The dependency on them may be lessened if the national authorities can manage to develop faith in governmental service provision through proper provision of basic services in the community clinics. However, KML as a responsible mining company may still assist in several ways to ensure that the resettlements they have created does not systematically prevent people from accessing sufficient healthcare. Providing structures for public clinics in both resettlement was a good initiative, but rendered ineffective due to inadequate government service provision. As such, the mining company may instead enable the resettled to travel easily to other clinics with better services, for example. A less complex
intervention that may directly improve the situation for the resettled may be the establishment of bus lines from the resettlements to communities and cities with better quality of services. Local ambulances stationed at each clinic should also be prioritized. Seeing to the low levels of income in the area, especially Shinengene, this ought to be considered for company CSR as affording bus tickets would be likely challenging for the community population.

5.1.2. Injury frequency

Injuries within the resettlements are perceived to be common by most respondents, in particular snake bites and broken bones. These were said to happen most often as people travel on bad roads or in the bush. In Kalumbila North, accidents from conducting piecework was also mentioned by some. The topic was, however, not brought up as critical in the focus groups. When mentioned, it was with similar statements to the individual interviews, although the male focus group in Shinengene also expressed worry about tall trees on their plots.

Although the perceived frequency of the injuries is troublesome, there also seems to be adequate measures available to deal with such situations in most cases since people tend to rely on traditional medicine or help from the clinic. But the fact that people do seem to be affected at a high rate of injuries due to embedded logistical circumstances within their social system can be argued to still qualify the issue for intervention. The issue is not deemed critical, however.

Since the problem seems mostly connected to poor methods of transport, the most appropriate action to take is to improve the safety aspect of how people in the resettlements travel in their daily lives. For instance, by improving road quality or introducing safer transport options.

5.1.3. Alcohol consumption

Problematic alcohol consumption was perceived most dire in Kalumbila North, but also existent in Shinengene. Based on the interviews, it seems as if the higher level of possible alcoholism in Kalumbila North is tied to the somewhat easier task of earning money in that area, particularly in terms of doing piecework for more wealthy persons within the community or in the nearby Kalumbila town. Chief Musele had also recognized the potential societal alcohol problem within his chiefdom and had already implemented some measures to target the issue. It would seem as if these measures are largely inadequate, however, based on the findings of this study.

Although not necessarily a health-related issue, this paper argues that the extent of the drinking identified within the resettlements is likely to have negative impacts in terms of health within the communities. There is an identified pattern of behaviour embedded in the studied social system taking shape as a type of self-reinforcing poverty trap in regards of alcohol consumption. Poverty is an underlying factor for several health issues in the area, such as having a healthy diet and access to good quality health services, which most respondents feel unable to have. When some income can be generated within this social group, there is a risk of mismanagement of funds as the money can be spent on alcohol instead of household development or welfare. Findings have also indicated gender differences on the topic, whereby men are both traditional income providers as well as the most often identified drinkers. As such, the alcohol consumption may likely have bad impacts on health for those who depend on the drinker, enlarging the issue further. Not to forget that excessive alcohol consumption and alcohol addiction is a health risk in themselves. Therefore, this study will argue that this is, in fact, a critical issue for social sustainability within the studied system.

The issue is currently the largest in Kalumbila North, but the findings would suggest that any increase of income in Shinengene may tip the scale to follow the example of Kalumbila North unless adequate prevention measures are taken. Suitable interventions may be limiting access to alcohol as well as changing societal values on the matter. Since there seems to be a large trust in the traditional and religious leaders, it may be suitable to work on the issue in a decentralized manner through such actors’ leadership.
5.1.4. Diet

There is a comparative difference between Kalumbila North and Shinengene in the statistical compilation of the assessed quality of diet. When assessing the results more in-depth, however, it becomes clear that the change of diet is income and livelihood related. All of the four respondents whom had found that their diet had not deteriorated post-resettlement had sufficient or good livelihoods in different ways, and they all lived in Kalumbila North. As such, it becomes clear that the quality of diet is embedded in the social conditions, i.e. poverty and lack of sufficient livelihoods, within the studied system.

Concerning the description most often given to describe the current diet (leaves and starch food) for most of the respondents, the root of the problem appears to go in many directions. As indicated and explained among respondents themselves as well as the CRC at the Trident foundation and the senior inspector at ZEMA: people were largely self-reliant with food prior to the resettlement through agriculture and traditional hunter-gatherer practices. The current situation indicates large restrictions in this regard, however. First, there is a variety of challenges for the resettled to access fields for agriculture. Challenges are both logistical and embedded in the justice system, particularly the customary since the chief has effectively prevented a number of the resettled to access farming fields. Potentially, there are also ecological challenges to agriculture in the area. Although, this was deemed unlikely by the principle inspector at ZEMA. Second, access to natural resources from forest and waterbodies has been reduced to an seemingly large extent, resulting in a drastic livelihood change for hunter-gatherer practices and related income-generating activities. Third, the lack of local transport, market opportunities and/or income render the resettled unable to purchase supplementing food items. Fourth, consumption of traditional sources for protein (meat and fish) have been greatly reduced. There is a dam logistically accessible to inhabitants of Kalumbila North, although lack of necessary skills for fishing render the beneficiaries few. Domestic animals, apart from the occasional chicken and rodent, are also deemed impossible to keep for spatial reasons in both resettlements. Due to the severity of the health consequences and the number of challenges to self-reorganization for the resettled, this issue should be regarded as critical.

Findings from the respondents, the Trident foundation as well as the chief indicate unsustainable social conditions in terms of unhealthy power relations within the studied group whereby the chief may be considered to act unethically regarding land provision. Furthermore, it is clear that the resettled have attempted to reorganize themselves post-resettlement and continue on with the livelihood practices that they are familiar with. However, their loss of agricultural land and access to natural resources has not been adequately replaced in order for them to successfully restructure accordingly within the new system. As such, they are arguably being exposed to a systematic undermining of their health in terms of inadequate diets. Therefore, solutions should be sought that may allow the resettled to regain the ability for self-sufficiency in food production at large and also establish sufficient income-generation to purchase complementary food items. For example, the chief should not abuse power through threats, but instead strive to provide land for agriculture. In addition, KML could assist in transport provision through CSR to ease various challenges connected to logistics. They could also implement various schemes to stimulate the local economy, as has been outlined within their guiding policy documents. For example, by purchasing local produce for their operation at a larger extent.

5.2. SSP2 – Influence

The individual interviews allowed for certain differences between the northern and southern resettlements to become apparent also for SSP2. Each category again discussed in-depth, with the guiding perspective that “the social conditions within the studied system should not systematically prevent people from participating freely to shape their social system”, as outlined in the analytical framework.
Fig. 18 presents the findings from the individual interviews when coded.

<table>
<thead>
<tr>
<th>SSP2 – Influence</th>
<th>Shinengene</th>
<th>Kalumbila North</th>
</tr>
</thead>
<tbody>
<tr>
<td>Influence in resettlement process</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Influence in quality of life</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perception of justice system</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Fig. 18. SSP2 comparative

5.2.1. Influence in resettlement process

Despite being generally negative towards the outcome of the resettlement, it would seem as if the majority of the individual respondents still had tangible influence during the actual resettlement process and accepted it due to the “resettlement package” being seen as desirable. Quite a few respondents in Kalumbila North claimed to have not accept the resettlement voluntarily, however. It is unclear as to why a greater number of respondents in Kalumbila North perceived their resettlement to have been conducted involuntary.

Similar sentiments about involuntary displacements were also brought forward for various reasons among respondents in all the focus groups. These findings are a cause for concern since involuntary displacement would indicate that the resettled were previously prevented from participating freely in their social system. As such, the aspiration from KML to make the resettlement inclusive and fair by refusing to deal solely with the chief cannot be deemed successful in this regard. Findings from both ZEMA and chief Musele suggest that operational constraints for KML was a contributing factor to some of the issues leading up to the involuntary displacements, such as diverting the river before having the formal approval or having finalised the resettlement. It should be underlined that the national government also contributed to the negative outcomes in this regard due to the lack of leadership as well as allowing for ambiguity in resettlement and mine-inspecting processes.

Since the resettlement process is now in the past, and the fact that most respondents still felt that it was an inclusive process, it should now be only regarded as an intermediate issue for this study. However, the severity of the consequences for involuntary displaced people should not be disregarded. Since findings in this study indicate both errors by governmental authorities and their procedures, as well as unethical handling of the issue from KML, it is logical to argue that both of these stakeholders should act to rectify the issue as much as possible. In addition, measures should be taken to assure that the same mistakes will not occur in the future.

One way to recognise the mistakes made in this regard would be by a formal apology from the responsible parties onto the affected. This should also be the only natural response from KML if they are to follow the newly developed policies for sustainable business conduct. This is especially clear in the aspect of which they underline respect for local communities and solidify that no people should be involuntary displaced due to their project developments. The national government also ought to improve the structural and systemic mechanisms on a national level to increase protection for vulnerable groups such as the local communities within this study. The development of a new national resettlement policy is a good sign, and should be furthered through rigorously evaluation and assessments to ensure its sufficiency in all related aspects. In addition, the inspecting authorities must improve on follow-up controls and drastically advance their record-keeping practices to allow transparent and sound processes.
5.2.2. Influence in quality of life

Another aspect of influence in this sense has been identified as the respondents’ capacity to actively impact their lives in a positive way without underlying social conditions preventing them from doing so. However, findings in this study suggests that most respondents’ social conditions (i.e. level of education, income or occupation) were found to be keeping them from impacting their own quality of life to any measurable extent. The lack of access to previous livelihoods such as farming and natural resources have left the respondents vulnerable to starvation and increasing poverty. The fenced surroundings and lack of transport have made them feel isolated and rendering them unable to generate income for development purposes like education or improving their quality of life in various ways. Respondents also expressed great disappointment in terms of not being able to find employment, especially from the mine, which some argued was due to their lack of education.

Although most respondents indicated lack of influence in this manner, it was much more apparent in Shinengene. It was perceivably easier to grow crops in Shinengene, but spatial and capacity constrains rendered harvests useless without access to markets. In Kalumbila North, at least those households with employment or well-developed farming practices indicated ability to influence their lives positively in many ways. Small income-generating activities like piecework was also perceived more available in Kalumbila North than Shinengene. This would also explain the general sense of more influence in this regard for people in Kalumbila North, even though they had also indicated less influence in the actual resettlement process.

This issue should be considered critical due to the identified systematic obstacles for the resettled to influence their own situation independently. Suitable interventions ought to remove the obstacles that limit the resettlements’ own reorganizing tendencies. In doing so, it would enable them to influence their situation and gain a higher quality of life rather than remaining in a state of poverty. Suitable actions may be increasing levels of employment in the area or by or facilitating other income-generating activities. It would be appropriate with larger involvement of KML in targeting this issue since the resettled have a decreased livelihood situation as a direct result of the resettlement and the company is in a strong position to have positive influence in this regard. However, other external actors such as NGO’s and local government may also assist in the matter in various ways.

5.2.3. Perception of justice system

Respondents from both individual interviews and focus group discussions, in both resettlements, were pleased with their justice system and how it functioned within their societies. The most appreciated quality of the system was the decentralized structure that enabled trust and conflict prevention within the communities.

However, some findings still indicate breaches and potential problems within these social structures that may cause limits to their ability to freely influence their social system. The fact that it is generally deemed culturally impossible to go against the traditional leaders wishes, especially the chief’s, indicate that freedom of expression is restricted. Another worrying factor in that regard is that the chief may in fact sentence his subjects to penalties like whipping and servitude: a direct offence against article 4 and 5 in the United Nations Declaration of Human rights (United Nations, 2015). In addition, several respondents stated that the chief had even made death threats to those who would defy his command regarding land disputes. This was also confirmed by the CRC at the Trident foundation. This exaggerated and oppressive behaviour may have been largely or entirely induced by the changing societal structures within the chiefdom with the establishment of the mine. That the mine, as a powerful actor, attempted to go against traditional practices with land allocation may have been seen as great provocation for the chief - initial mapping had also observed strong ties to cultural practices within the royal establishment. Nonetheless, since the chief is a vital, and most often appreciated, actor within the social system, it is important that his role is contributing towards the goal of social sustainability rather than act an as obstacle.

In addition, several findings suggested that having to pay for justice (= bribe) was required, especially to the police and the local vigilante group. This puts the social system at risk for two main reasons. First, victims of a crime may refrain or be unable to take action to have justice as they have no way of
influencing the established justice system. Second, as “paying for justice” becomes embedded in the social system, it may put impartiality in the very investigation at risk for a number of reasons, rendering equal influence in the justice system impossible.

Although the justice system is largely embraced by the respondents, deeper analysis indicate that embedded structures may put the social system at risk through lack of influence. As such, this issue should still be categorized as an intermediate issue for the resettlements. Suitable interventions ought to abolish unjust and harmful socially rooted practices within the justice system. For example, the chief should not have the mandate to entrench on human rights. These types of sentences should be replaced with various community development work, not servitude work for his own benefit, such as picking trash or cleaning public spaces. In addition, national and local government should work in various ways to hinder bribes within the police force. Arguably, KML has no clear role or responsibility in this regard other than adhering to human rights and incorrupt practices in their own operations in order to stand as a good example.

5.3. SSP3 – Competence

For SSP3, the coding from the individual interviews revealed that local perceptions regarding skills, education and independent ability to develop new competences were largely the same in both resettlements. Each category is once more discussed in-depth, with the guiding perspective that “the social conditions within the studied system should not systematically prevent people from developing through learning or acquiring new competences”, as outlined in the analytical framework.

Fig. 19 presents the findings from the individual interviews when coded.

<table>
<thead>
<tr>
<th>SSP3 – Competence</th>
<th>Shinengene</th>
<th>Kalumbila North</th>
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<tr>
<td>Sufficient education</td>
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<td><img src="image4.png" alt="Red" /></td>
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<tr>
<td>Ability to increase competence</td>
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<td><img src="image6.png" alt="Red" /></td>
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</tbody>
</table>

**Fig. 19. SSP3 comparative**

5.3.1. Perception of work skills

Positive findings indicated a perceived sufficient level of work skills among most respondents in regards of their current work. Most mentioned skills were connected to farming and had been traditionally developed through instruction from parents. When the topic was discussed in the focus groups, their sentiments largely mimicked the individual respondents’ statements. In addition, there are also no particular findings from the key respondents that would indicate any underlying factors impacting this issue.

As such, there seems to have been sufficient opportunity for the resettled to previously develop sufficient work skills. This indicate a social system able to generate some opportunity to develop basic skills needed for everyday work. The issue is therefore not argued to be neither critical nor intermediate in this study.

5.3.2. Sufficient education

A clear majority of the respondents from both resettlements found that their education level was insufficient. Even the respondents whom had first indicated that it sufficed mentioned how personal constraints made future studying impossible anyhow, or how they had desired more education when they were younger. In addition, findings from the focus groups further emphasized these statements.
whereby most people found their education level too low. Many respondents expressed concern about their children’s education as well. The lack of secondary education in the near area was perceived to be a large challenge for most respondents, resulting in their children dropping out of school prematurely. As such, it would seem as if the current social conditions within the studied group does in fact systematically prevent people from develop through educational learning according to their preferences.

According to some of the key respondents, this issue had already been identified and targeted to some extent. The CRC from the Trident foundation emphasized the state responsibility in education provision, but also mentioned how the foundation worked to support this provision, mainly through facility provision and transport. As mentioned earlier, chief Musele had leaned the other way by indicating a desire for less taxes to the state and more CSR from KML in the local communities in order to attain higher levels of ‘positive development’ in the area. He also worried about the quality of education delivered within his chiefdom due to overcrowded classrooms. The principle inspector from ZEMA did not mention education specifically, but had expressed concern for community dependency on private companies to deliver various sorts of free public services.

For this study, it is considered critical to break the cycle of the social constraints that are preventing people from developing through educational learning. A variety of actions should be taken in order to ensure full primary and secondary school attendance in the area, as well as improving quality of education. This may be done, for example, by establishing more schools in the area and by ensuring easy access to already established schools. It becomes problematic yet again to discuss the most suitable service provider in this regard. KML is an influential actor but is not suitable to be the main provider of education due to the relating issues of mining-company dependency. The responsibility therefore remain primarily with the national authorities. Although access to education seem to have improved along with the resettlements, many within these communities are still facing challenges in this regard. Although it must be argued that KML does not have a direct responsibility in the matter, it can still be considered important for them to assist in various ways. In doing so, they may contribute to extensive positive long-term impacts within the resettled communities, which is also the outspoken aim of the company. Their involvement in the matter could be by establishing a collaborative relationship with the national authorities, and both encourage improvements in education provision in the area as well as providing financial assistance to establish new schools, like has already been done already. In addition, transport services, sponsoring of school fees, providing school lunches, etc. may also generate large benefits for the communities in this regard. Private contractors providing various services to the mining company (such as bus transport, preparing meals) could also be encouraged by KML to carry out these services as a way of giving back to the local communities.

5.3.3. Ability to increase competence

All respondents from the individual interviews expressed a desire to increase their practical competences and a large majority also wished to continue developing knowledge through education. The same tendencies were found across all focus groups as well. However, most respondents in the resettlements found themselves unable to develop in these manners without assistance, such as sponsorship for a training programme. This kind of assistance had also been occasionally accessible for some respondents, mainly through various projects and trainings enabled by KML.

A vicious cycle of disempowerment thus becomes clear when scrutinizing the different statements from respondents. Without sufficient education levels, and with only farming skills, it is not likely that respondents can earn income from other means other than farming and the occasional piecework. This study has found that very few of the resettled in Kalumbila North and Shinengene are currently employed by the mining company, although many of them had been so previously at the construction phase of the mine. It would seem as if the need for unskilled labour has since then declined rapidly. In addition, only very few people within the resettlement claimed to be able to generate income from farming, since most were limited to subsistence farming on very small plots due to the land issues described earlier. Other sources for income had also been limited, like access to natural resources and markets. Consequently, it was considered impossible for the respondents to develop skills or increase education levels without having access to finances.

49
This indicate that respondents are not empowered enough to break the competence preventing-cycle on their own. It is clear that the social conditions, in this case high levels of poverty and lack of obtainable training/learning opportunities, place severe constraints on the resettled in regards of their desired access to competence development. Arguably, it must be considered positive for the resettled to at least have some occasional opportunities in this regard through KML-projects or sponsorships. At the same time, however, it must also be considered to increase the dependency on the company, especially since the company seems to be the only service provider in this regard.

Consequently, this study will categorize this issue as critical. It is important to emphasise how access to competence-development will contribute to long-term independency for the resettled. This make it a a suitable area for KML to target, as they strive to prepare the local communities for the upcoming mine closure by spurring independency. Suitable actions may be learn-by-doing employment since this could help to create practical work skills as well as relevant work experience. Another action may be to engage community members in small-scale business training accompanied with assistance to access suitable markets.

### 5.4. SSP4 – Impartiality

SSP4 aimed to explore any social conditions that may act as obstacles to impartiality within the studied group. Each category within the principle is yet again discussed in-depth, with the guiding perspective that “the social conditions within the studied system should not systematically bring negative partial treatments to people”, as outlined in the analytical framework. Findings from the two resettlements followed a similar pattern, although more potential obstacles to impartiality were found in Shinengene.

Fig. 20 presents the findings from the individual interviews when coded.

<table>
<thead>
<tr>
<th>SSP4 – Impartiality</th>
<th>Shinengene</th>
<th>Kalumbila North</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived discrimination</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender equality</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relationship with other resettled</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relationship with non-locals</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Fig. 20. SSP4 comparative**

#### 5.4.1. Perceived discrimination

The principle was first investigated through an open-ended question, aimed to allow for free interpretation from within the resettlements. As a result, an unexpected trend of perceived discrimination from the point of view of the respondents emerged in both communities. When scrutinizing the various statements, it would seem as if the respondents exposed to certain characteristics of class-discrimination within the two resettlements respectively. According to them, a smaller ‘elite’ whom are formally employed have rooted a discriminatory pattern of behaviour within the communities. The behaviour is most often described to be similar to bullying or harassments, aimed frequently at the most destitute within the village.

This is a cause for concern since alienation of certain groups within a social system is likely to cause various negative impacts such as social unrest or even open conflicts. There has been no indication (yet) of such repercussions based on the statements of the respondents, however. This would arguably make the issue intermediate in priority. Any preventative actions should attempt to abolish any degrading behaviour towards certain groups within the social system. It would be suitable to investigate why it is deemed socially acceptable to ridicule a “lower class” within the community, and if there are any underlying characteristics of economic power within the communities that facilitates the behaviours.
The customary and religious leaders are suitable choices due to their cultural status and may act as positive change-makers to establish better relations between these groups within the communities. In addition, KML may also contribute to the situation on the basis that many of the “higher class” within the resettlements are their employees, and the FQM Sustainability Strategy clearly give mandate to the company to enforce sound and ethical codes of conduct from their employees.

5.4.2. Gender equality

The respondents from both focus groups and individual interviews were also asked questions about gender equality within the resettlements. Findings suggest that the valuation of people are closely tied to the work they do, and in many cases men and women have a division of labour established within the social system. This type of gendered roles was also frequently said to be easy or simple for women in relation to the difficult and hard work for men. This was the underlying reason for many whom stated that men would therefore be considered “higher” than women. Another reason stated by many respondents was that men are the “head of households”, meaning that their cultural status as such render gender equality impossible. These types of findings were not as frequent in Kalumbila North as in Shinengene. Those respondents who would adhere to gender equality seemed to do so either because of their personal observations of seeing women managing traditionally male jobs, or by simply stating personal convictions that were men and women are equal in status and rights.

Although this study hardly managed to investigate the issue of gender quality with sufficient scope or depth, certain patterns still emerged that would indicate problematic social conditions within the resettlements. To clarify, the issue is not in a division of labour in itself, but rather a concern because one group (men, in this case) is generally perceived to have a higher value or status within the communities. This may in turn negatively impact the opportunities for, and empowerment of, women and girls. The issue is therefore considered critical in Shinengene and intermediate for Kalumbila North due to the rate of progressive statements given from respondents within the northern resettlement in this regard.

Targeting actions should focus on community commitment to gender equality and to establish equal opportunities and rights in all aspects of the social system. As such, local leaders (both governmental and customary) are suitable to work with embedded values that are acting as obstacles to gender equality and re-route the system accordingly. Any legal factors that are directly supporting gender discrimination must be abolished. Since there is a notable tie between the type of work a person does and how people are valued, there is also an opportunity for the mining company to work with value change for gender equality on a direct level by including women from the resettlements in their work force, perhaps in learn-by-doing positions to develop mine operator-skills. Another action may be to sponsor trainings for graduated girls, in order for them to learn relevant skills and gain employment in the mine upon completed training.

5.4.3. Relationship with other resettled

Although the resettlement had resulted in some mixtures of villages into one community, there were in general no indications found from any respondents that would suggest problematic social conditions in that regard. Quite the opposite, as people were keen to highlight how they lived together in harmony and that trust was high within the communities. The issue is therefore considered to be neither critical nor intermediate within this study.

5.4.4. Relationship with non-locals

Previous findings had indicated social unrest between non-locals and locals within the Kalumbila area. The findings from the CRC at the Trident foundation also shed light on the issue since it had resulted in unruly behaviour and demonstrations due to competition for employment some years back. The chief made certain comments that could confirm a sense of aggression towards non-locals as well, referring to them as “lazy” when discussing starvation issues within the resettlements. He also found the very
system of electronic announcements for available jobs unfair toward the people of his district and in favour of others.

When discussing non-locals within the resettlements, however, no such patterns of social conflict could be identified in either community. Instead, similar statements of living in harmony and trusting each other were mostly brought forward in both individual interviews as well as in the focus groups. However, some people did complain that very few local people were employed by the mine in favour of non-locals. But rather than directing anger or resentment towards those employed, respondents mostly referred to their own inability to receive employment within the mine due to their low education levels and lack of skills.

This study will therefore argue that this particular threat to impartiality within the social system is on an intermediate level. If ignored, however, it may rapidly become critical once more and result in clashes between the groups yet again. The guiding principle for solutions to this issue would be to ensure meaningful and liveable livelihoods for both groups within the resettlements. This may be done through employment of locals (low-skilled labour/learn-by-doing) within the mine, or by establishing economic drivers to improve the already existing livelihoods from agriculture and other activities within the resettlements. The latter may be done through economic schemes like supplying only locally produced food within the mining company, the district schools as well as the local supermarket within Kalumbila town. In order to avoid creating a dependency, measures should be taken to ensure that employees have enough skills to find new jobs after mine closure. In addition, those benefitting from economic drivers should be prepared well in advance of mine closure so that adaptations can be made for their livelihoods as well.

### 5.5. SSP5 – Meaning-making

The final principle is meant to distinguish any social conditions that may act as obstacles to meaning-making within the studied group. Each category within the principle is yet again discussed in-depth, with the guiding perspective that “The social system must not remove abilities for people to find meaning, be it individually or commonly sought”, as outlined in the analytical framework. Findings from the two resettlements followed a similar pattern, and an overall positive trend emerged.

Fig. 21 presents the findings from the individual interviews when coded.

<table>
<thead>
<tr>
<th>SSP5 – Meaning-making</th>
<th>Shinengene</th>
<th>Kalumbila North</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spiritual satisfaction</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marriage and partners</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Future dreams and plans</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Fig. 21. SSP5 comparative**

#### 5.5.1. Spiritual satisfaction

The spiritual satisfaction was commonly high within both resettlements, albeit to a lesser extent in Kalumbila North. The CRC from the Trident foundation had explained how the resettled in Kalumbila North had not received readily built churches as in Shinengene. This was also a cause for the lack of satisfaction for one respondent in Kalumbila North who belonged to a branch of Christianity without access to a church within the vicinity. However, most respondents who had perceived to have issues in terms of their spirituality connected it to general poverty rather than physical structures. For them, it
was deemed important to generate more altruistic behaviours within the community in accordance to their faith. This was, however, not seen as possible since most people were restricted by poverty.

As such, this study will categorise the issue as intermediate for Kalumbila North since the findings have indicated that the social system established there may prevent a number of inhabitants to find meaning. Solution-seeking should adhere to actions aiming at redesigning the social system to allow for sufficient meaning-making, despite social constraints such as poverty. Since there are individuals who feel unable to contribute altruistically, the religious communions should enable collective actions instead. One suggested course of action is thus to take collective action within or among the community churches and jointly aid individuals with various socio-economic issues (e.g. orphans and elderly) within the community. Arguably, such actions of “self-help” would also increase feelings of independency in the community and possibly create stronger bonds within.

5.5.2. Marriage and partners

Although high levels of poverty were found within both resettlements, only very few people referred to it as a potential obstacle for establishing a relationship (= marriage). Rather, people would emphasize that it would be no problems at all connected to these matters, as long as it happened according to tradition. This emphasis may be due to a fondness of the traditional way of social life, whereby a partnership is founded not only between two individuals but as an agreement between the two families as well. Since no indications were found that this social system is an obstacle to impartiality in this manner, it will not be regarded as an issue to target within this study.

5.5.3. Future dreams and plans

Most respondents had a positive and pragmatic outlook on their future, whereby most aimed for a higher quality of life or living well in accordance to their religious beliefs. In a way, this enquiry thus acted as a practical complement to ‘finding meaning in life’ in comparison to the first more mental-wellbeing or spiritually-oriented question. Due to the general optimism among respondents in this regard, this particular issue cannot be seen as an obstacle to SSP5.

5.6. Backcasting for Social Sustainability

Backcasting has been defined in this paper as the process in which a vision (social sustainability) is defined, and the suggested actions (policy recommendations) are created within the boundary conditions (the SSPs) to envision how to transition from status quo to the vision.

This section has engaged in a backcasting from the defined vision of social sustainability based on the principled definition derived through the SSPs. Several issues were thus discussed and evaluated in terms of their potential prevention of the desired scenario. If deemed to be obstacles to social sustainability, the issues were also categorized as critical or intermediate. Suitable policy recommendations were also created and connected with proposed implementors. It has been deemed important in this study to not focus solely on the role of the mining company in the policy recommendations, but to view the situation broadly and in a long-term perspective. KML does indeed carry a big responsibility for the people they have resettled, but it is not constructive nor truthful to suggest that they bear the sole responsibility for long-term social sustainability within the resettlements.
5.6.1. Critical issues to social sustainability

Findings from the discussion have enabled a compilation (Table 4) of critical issues to social sustainability and their main target areas, as well as policy recommendations and proposed implementors.

<table>
<thead>
<tr>
<th>ISSUE</th>
<th>SSP</th>
<th>TARGET AREA</th>
<th>POLICY RECOMMENDATION(S)</th>
<th>PROPOSED IMPLEMENTOR(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access to healthcare</td>
<td>SSP1</td>
<td>Health</td>
<td>- Improving health care services within public clinics</td>
<td>National and local government</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Establishing transport options, e.g. bus lines and ambulances.</td>
<td>KML, Local government</td>
</tr>
<tr>
<td>Alcohol consumption</td>
<td>SSP1</td>
<td>Health</td>
<td>- Limiting access.</td>
<td>Chief Musele, government</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Value changes, i.e. benefits of not drinking.</td>
<td>Traditional leaders, religious leaders, schools</td>
</tr>
<tr>
<td>Diet</td>
<td>SSP1</td>
<td>Health</td>
<td>- Removal of cultural barriers to use land.</td>
<td>Chief Musele</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Establishing easy access to natural resources and agricultural land.</td>
<td>KML</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Enabling income-generating activities, e.g. trade of local produce.</td>
<td>KML</td>
</tr>
<tr>
<td>Influence quality of life</td>
<td>SSP2</td>
<td>Influence</td>
<td>- Increasing employment ratio.</td>
<td>KML</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Enabling income-generating activities.</td>
<td>KML, NGO’s, Local government</td>
</tr>
<tr>
<td>Level of education</td>
<td>SSP3</td>
<td>Competence</td>
<td>- Establishing more schools, especially secondary schools.</td>
<td>Government (aided by KML/NGO’s)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Ensuring easy access to education for all students (logistically, financially, etc.).</td>
<td>KML, private contractors (bus companies, food suppliers etc.)</td>
</tr>
<tr>
<td>Ability to increase competence</td>
<td>SSP3</td>
<td>Competence</td>
<td>- Learn-by-doing employment opportunities</td>
<td>KML</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Business training and access to suitable markets</td>
<td>KML</td>
</tr>
<tr>
<td>Gender equality</td>
<td>SSP4</td>
<td>Impartiality</td>
<td>- Value changes within the social system.</td>
<td>Local leaders, community members</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Gender equal laws and traditional procedures.</td>
<td>Government, customary leaders, community members</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Changing values towards gender equality by including women in the mine-workforce.</td>
<td>KML</td>
</tr>
</tbody>
</table>

Table 4. Critical issues to social sustainability
5.6.2. Intermediate issues to social sustainability

Findings from the discussion have enabled a compilation (Table 5) of intermediate issues to social sustainability and their main target areas, as well as policy recommendations and proposed implementors.

<table>
<thead>
<tr>
<th>ISSUE</th>
<th>SSP</th>
<th>TARGET AREA</th>
<th>POLICY RECOMMENDATION(S)</th>
<th>PROPOSED IMPLEMENTOR(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Injury frequency</td>
<td>SSP1 Health</td>
<td>Both</td>
<td>- Implementing safer transport options.</td>
<td>KML, local bus companies through CSR</td>
</tr>
<tr>
<td>Influence in resettlement process</td>
<td>SSP2 Influence</td>
<td>Both</td>
<td>- Formal apology to the affected people.</td>
<td>KML, Government authorities</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Implementing better structural mechanism on a national level to enhance protection for vulnerable groups.</td>
<td>Government, inspecting authorities</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Improving record-keeping and transparency.</td>
<td>Inspecting authorities</td>
</tr>
<tr>
<td>Justice system</td>
<td>SSP2 Influence</td>
<td>Both</td>
<td>- Reforming sentences in customary court to be in line with human rights and community betterment.</td>
<td>Chief Musele, NGO’s (for expertise), government</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- National and local reforms to prevent bribes within police force.</td>
<td>Government (all levels) Police authority, community members</td>
</tr>
<tr>
<td>Perceived discrimination</td>
<td>SSP4 Impartiality</td>
<td>Both</td>
<td>- Establishing good relations between targeted groups in the communities.</td>
<td>Traditional and religious leaders</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Enforcing sound and ethical code of conduct for mine-employees.</td>
<td>KML</td>
</tr>
<tr>
<td>Gender equality</td>
<td>SSP4 Impartiality</td>
<td>Kalumbila North</td>
<td>- Value changes within the social system.</td>
<td>Local leaders, community members</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Gender equal laws and procedures.</td>
<td>Government, customary leaders, community members</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Changing values towards gender equality by including women in the mine-workforce.</td>
<td>KML</td>
</tr>
<tr>
<td>Relationship with non-locals</td>
<td>SSP4 Impartiality</td>
<td>Both</td>
<td>- Enabling better income generating activities within resettlements, e.g. employment of sales from agricultural produce.</td>
<td>KML, local government, local businesses, private contractors</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Ensuring independency after mine closure through preparations and skills-development</td>
<td>KML</td>
</tr>
<tr>
<td>Spiritual satisfaction</td>
<td>SSP5 Meaning-making</td>
<td>Kalumbila North</td>
<td>- Enabling collective altruism within community to target feelings of spiritual inadequacy.</td>
<td>Religious leaders, community members</td>
</tr>
</tbody>
</table>

Table 5. Intermediate issues to social sustainability
6. Conclusion

This study has aimed to investigate structural obstacles to social sustainability within two resettlements, Shinengene and Kalumbila North in Zambia. The resettlements were created in accordance with best practice frameworks, yet a number of issues connected to the resettlements were being continuously reported after its implementation. This was deemed to warrant the case for further investigation through applying an analytical model that could both identify key social sustainability issues as well as guide the production of suitable policy recommendations.

This study had two parallel matters to investigate. First, it aimed to investigate social sustainability comparatively between the two resettlements. Second, it aimed to explore the current status of social sustainability in the resettlements within a framework for strategic social sustainability. It was found that the two resettlements had almost identical social systems, which only seemed to differ in terms of relative access to different stocks of services and resources as well as the proportion of farmers/hunter-gatherers and employed workers within the two communities. Furthermore, the findings indicated both similarities and differences between the two resettlements in terms of social sustainability-related issues that were identified through the application of social sustainability principles.

In terms of SSP1-Health, both communities were found to have three critical issues (access to healthcare, alcohol consumption and diet) and one medical issue (injury frequency) for social sustainability. However, the issue of poor diet was found to be most important in Shinengene, and the issue of excessive alcohol consumption was found to be most important in Kalumbila North. In addition, both communities were found to have one intermediate issue in regards to injury frequency.

For SSP2-Influence, it was found that Kalumbila North perceived to have had less influence in the resettlement-process compared to Shinengene. On the other hand, perceived influence over quality of life was found to be higher in Kalumbila North as opposed to Shinengene. Similar results were found regarding influence in the justice system in both communities. Influence in quality of life was deemed to be a critical issue for both communities, whereas influence in the justice system and the resettlement process were deemed to be of intermediate importance.

The comparative findings for SSP3-Competence showed the same pattern in both communities. Both communities perceived to have good skills for their current work, rendering this a non-issue for social sustainability. However, level of education and the ability to increase competence were identified as critical issues for social sustainability in both the northern and the southern resettlements.

The two communities followed the same pattern for SSP4-Impartiality, although Shinengene were deemed to have larger issues with class discrimination and adherence to gender equality than Kalumbila North. The class discrimination was found to be an intermediate issue for both communities during the analysis. However, the issue of gender equality was deemed to be critical in Shinengene and slightly less important in Kalumbila North. Furthermore, investigations into relationship with other resettled people indicated no signs of obstacle for social sustainability in either community and was therefore considered a non-issue. The relationship with non-locals was perceived to be good within both communities, but other findings suggested that future problems may emerge unless preventative measures were taken, thus rendering the issue intermediate in both communities.

The final principle, SSP5-Meaning-making, generated positive findings in both communities at large. Both the issue of marriage and partners as well as the issue of future dreams and plans were found to be non-issues in both communities. However, although spiritual satisfaction was deemed a non-issue for Shinengene, it was deemed to be an intermediate issue for Kalumbila North.

When related the findings of this paper to previous research on the case, it is clear that some aspects of this study are in agreement with the results of previous studies. For example, it was confirmed that the resettled people did find it more difficult to access natural resources now compared to prior to the resettlement as had been suggested by Kapesa et al. (2015). In addition, a variety of land-related issues were identified in this study, which had also been suggested in previous findings (Chu & Phiri, 2015, Chu, et al., 2015). However, there are also elements discovered in this study that conflicts with previous findings in the area. For instance, there were an indication of conflicts between the resettled locals and
in-migrated people in previous studies (Kapesa, et al., 2015), but no such tendencies were discovered within this study.

The case was chosen due to its link to the mining industry, and the procedures of resettlements at large. These findings are meant to be both contributory towards new RAP’s being developed or implemented around the world, while at the same time offering insight as to what may be done to improve the lives for people living in the Kalumbila resettlements in regards to increasing their social sustainability.

To conclude, this paper have found that a nuanced view is necessary when analysing the impacts from large-scale infrastructure projects on local communities in countries with evidently low state control, like Zambia. As has been clearly seen within the context this paper, there is a presence of the mining company in almost every issue touched upon. This presence has been identified as good or beneficial in many ways, such as through the provision of necessary services and general community development in an area where government absence is clearly seen. However, the company presence has also created new social issues within the area, e.g. an increased competition for jobs, conflict with local leaders as well as a diminished access to natural resources. It is important to keep this nuanced view in mind since it clearly indicates that no simple solutions are readily available for implementation, but ought to first be properly understood through suitable analytical tools, such as the SASS model, in order to not create new problems elsewhere within the social system.

6.1. Evaluation of the SASS model

It has been part of the objective of this study to contribute to sustainability science, and to further the development of the SASS model in some small way. After extensive work with the model, in a logistically limited manner, certain lessons learnt about the model is shared here for other practitioners of the model to note:

- As a solo researcher for this paper, it has been a challenge to dive in-depth into all five SSP’s within the limited time and scope of the paper. In addition, taking into account that the SASS model only accounts for “half” of the FSSD model, it can be concluded that the full model may be too extensive to be applicable for smaller and logistically limited studies such as this one.

- Another challenge was to find an appropriate balance between following the boundary conditions of the model while at the same time not allowing unwarranted researcher influence when designing the questionnaires. This became especially clear for SSP2 “Influence” and SSP5 “Meaning-making”, since it was found to be difficult designing questions allowing sufficient room for the respondents’ individuality on the topics.

- The broadness of the SSP’s was largely beneficial and made the model easily applicable to the studied case. However, it was a challenge to formulate suitable interview questions that would align with the model without much prior understanding of the specifics of the studied case. In essence, the broadness and general applicability leave much room for researcher interpretation, which may be both beneficial and limiting. For this study, there was an array of cultural, circumstantial and geographic circumstances that were not identified until arriving in the field. Even then, some of these circumstances were only found by chance (e.g. biking accident = asking about injuries). This then begs the question if the model is too broad to be applicable to a case where the researcher has little prior understanding and limited time to spend gathering primary data in the field, as this may lead to important aspects of the social system not being found and targeted.

- On the other hand, the broadness of the SSP’s was also able to generate a comprehensive understanding of the social system at large. This would arguably work in favour for implementors when deriving suitable actions from the model, as it gives a deep understanding of core issues, and their interrelatedness, to the goal of social sustainability.
• Although the model made data collection a challenge in some aspects, it made up for this later, in the analytical parts of the study. The principles had already been established and became the natural frame to build the discussion around. Furthermore, the step-by-step basis of the model made policy recommendations (actions) appear naturally when obstacles to social sustainability were defined.

6.2. Future studies

Throughout the work with this paper, ideas for future research has been developed. These ideas are meant to both gain clarity in a number of points of interests derived from this study, as well as fill the gaps that this study has been delimited and limited to. These suggestions are presented below:

• The scope of this study could be enlarged in future research in order to ensure greater accuracy of representation among the findings. This include, for example, a higher number of respondents and more time spent mapping in the area to understand the resettlements dynamics.

• It would be interesting and beneficial for potential implementors or researchers to apply the whole FSSD model in the area as compared to the main focus on social sustainability that was present within the context of this study. That way, ecological sustainability could be discussed in relation to social sustainability, and a greater understanding of the dynamics of the interrelated systems could be reached.

• It would also be interesting to make a comparative study with these findings as compared to the status of social sustainability in other smaller communities around Zambia. In doing so, valuable lessons may be derived in assessing both various impacts from industries such as mines, as well as national knowledge on key issues within the country.
7. Acknowledgements

This paper is dedicated to Lars-Gunnar Wikell (06-05-1942 – 22-03-2019) who sadly passed away during the time of the fieldwork for this research. Beloved grandfather, I carry your wisdom and kindness with me everywhere I go. The memories of our last conversation enabled this paper to be completed despite an array of challenges. Thank you, for everything.

I would like to express my gratitude towards a number of wonderful individuals whom contributed in various ways to the work of this paper. In addition, much appreciation is directed towards the Geological Survey of Sweden for sparking my interest for the topic and for assisting in logistical and practical matters relating to the study.

I would like to dedicate special thanks to my closest team of colleagues at the Geological Survey of Sweden, mentioned alphabetically: Erika, Jonathan, Jonnina, Mattias and Pontus. Your guidance and unwavering support have made me grow professionally in many ways, and I am counting myself lucky to learn from all of you and for all the exciting and important work that we get to do together.

A very warm thank you is also dedicated to my fantastic supervisor, Patricia Lagun Mesquita, who has spent many late evenings reading my drafts and gently guided me through this process. An equally warm thank you is directed to my impressive reviewer, Merlina Missimer, who developed the analytical framework this study has been built around, and whom has gone way above what can be asked from a reviewer. Thank you both for your guidance and steadfast encouragements.

My greatest appreciation and respect goes out to all of the people who took time out of their lives in order to be interviewed for this study: the respondents in the northern and southern resettlements, the CRC at the Trident foundation, the principal and senior inspectors at ZEMA as well as chief Musele. Thank you for your cooperation and for being so helpful. I appreciate that you have trusted me enough to share your experiences, thoughts, visions and ideas. I hope that this paper will do you all justice.

Finally, I must express my deepest gratitude to you, Jonathan. Thank you for sacrificing your time, sleep, and energy to help me overcome various obstacles emerging throughout this process. Your comforting words and constructive feedback helped me develop this paper from the beginning to the very end. I thank you from the bottom of my heart.
8. References


## Appendix A. Interview sheet (guiding questions)

<table>
<thead>
<tr>
<th><strong>Overview – introduction</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Name/gender</td>
</tr>
<tr>
<td>Age</td>
</tr>
<tr>
<td>Occupation</td>
</tr>
<tr>
<td>Education</td>
</tr>
<tr>
<td>Marital status – children?</td>
</tr>
<tr>
<td>Part of the Kalumbila resettlement programme?</td>
</tr>
<tr>
<td>Previous resident area?</td>
</tr>
<tr>
<td>Other person living with Respondent?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>SSPs Health</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Is there a clinic/hospital in the area?</td>
</tr>
<tr>
<td>Was there a clinic/hospital in the former area?</td>
</tr>
<tr>
<td>Can medicine be bought in the area? Is there a pharmacy?</td>
</tr>
<tr>
<td>Could medicine be bought in the former area? Was there a pharmacy?</td>
</tr>
<tr>
<td>Is medicine affordable to you (and your family) ?</td>
</tr>
<tr>
<td>Is it common to suffer from injuries in this area?</td>
</tr>
<tr>
<td>Has the health-situation changed for you living in the resettled area, compared to living in your former area? If yes, how?</td>
</tr>
<tr>
<td>Do you think that you (and your family) have access to all health-services you need?</td>
</tr>
<tr>
<td>----------------------------------------------------------------</td>
</tr>
<tr>
<td>How is the situation with alcohol in the village? Is there a bar?</td>
</tr>
<tr>
<td>Is there any additional comments you want to add to describe the health situation now and/or before the resettlement?</td>
</tr>
</tbody>
</table>

**SSP2 Influence**

<table>
<thead>
<tr>
<th>Did the mine company listen to your wishes during the resettlement? Was it fair? Could you refuse to go?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is it better to get cash or property as compensation from the mine?</td>
</tr>
<tr>
<td>If you encounter a problem in the community, what can you do to affect it? Is it a good system?</td>
</tr>
<tr>
<td>If you encounter a problem in your family, what can you do to affect it?</td>
</tr>
<tr>
<td>Is it easy to get justice if a crime is done to you? Does it cost money?</td>
</tr>
<tr>
<td>If you disagree with the headman/chief, what happens?</td>
</tr>
<tr>
<td>If you disagree with the mine, what happens?</td>
</tr>
<tr>
<td>What has been good with the resettlement? Has the mine done good things for the people?</td>
</tr>
<tr>
<td>What needs to improve in the community for all to get a good life?</td>
</tr>
</tbody>
</table>

**SSP3 Competence**

<table>
<thead>
<tr>
<th>Do you think you have good skills on how to do your work?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do you think you have enough education?</td>
</tr>
<tr>
<td>What are the main difficulties in your work or life?</td>
</tr>
<tr>
<td>Question</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
</tr>
<tr>
<td>What training have you had to learn your work?</td>
</tr>
<tr>
<td>Have you developed any skills or knowledge after the resettlement program?</td>
</tr>
<tr>
<td>Do you want to increase your skills and/or your knowledge?</td>
</tr>
<tr>
<td>Is it easy for you to learn new skills or get more education? What do you need for that?</td>
</tr>
<tr>
<td>What natural resources did you have access to before the resettlement program?</td>
</tr>
<tr>
<td>What natural resources do you have access to now?</td>
</tr>
<tr>
<td><strong>SSP4 Impartiality</strong></td>
</tr>
<tr>
<td>In your opinion, is there any discrimination within this community? If yes, how?</td>
</tr>
<tr>
<td>Have you yourself felt discriminated against?</td>
</tr>
<tr>
<td>Are men and women equal here?</td>
</tr>
<tr>
<td>Is it a good or bad relationship between the community and the chief?</td>
</tr>
<tr>
<td>Is it a good or bad relationship between the community and the mine company?</td>
</tr>
<tr>
<td>Is it easy to get help from the police? Is it expensive?</td>
</tr>
<tr>
<td><strong>SSP5 Meaning-making</strong></td>
</tr>
<tr>
<td>Do you consider yourself belonging to a religion?</td>
</tr>
<tr>
<td>Is there anything missing in your life as a Christian? Can you practice your faith?</td>
</tr>
<tr>
<td>What do people do here on their free time?</td>
</tr>
<tr>
<td>What do you do on your free time?</td>
</tr>
<tr>
<td>Do people do any bad things on their free time?</td>
</tr>
<tr>
<td>What would you wish do to with your life? What is your dream for yourself?</td>
</tr>
<tr>
<td>---</td>
</tr>
<tr>
<td>When people want to marry someone here, are there any difficulties or problems?</td>
</tr>
<tr>
<td>What free time activities do you want to change (add/remove) here?</td>
</tr>
</tbody>
</table>

**Trust**

<table>
<thead>
<tr>
<th>Do you trust the mining company?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do you trust other people within the community?</td>
</tr>
<tr>
<td>Do you trust the headman and the chief?</td>
</tr>
<tr>
<td>Do you trust the police?</td>
</tr>
<tr>
<td>How can we get more trust here?</td>
</tr>
<tr>
<td>How can we have less conflict/trouble here?</td>
</tr>
</tbody>
</table>

**Diversity**

<table>
<thead>
<tr>
<th>How is the relationship with the different groups in the community?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are there many new people coming to the community from outside? How is it affecting the area?</td>
</tr>
</tbody>
</table>
## Appendix B. Respondents table (overview)

<table>
<thead>
<tr>
<th>Date of interview</th>
<th>No.</th>
<th>Gender</th>
<th>Respondent (N.A. anonymous)</th>
<th>AREA</th>
<th>TYPE OF INTERVIEW</th>
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<tbody>
<tr>
<td>23 March 2019</td>
<td>1</td>
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<td>Individual</td>
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<tr>
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<td>Northern resettlement</td>
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<td>Individual</td>
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<tr>
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<tr>
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<tr>
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<td>FQML – Trident project</td>
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<td>Key respondent</td>
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<tr>
<td>29 March 2019</td>
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<td>M</td>
<td>Chief Musele (not anonymous)</td>
<td>Royal Establishment</td>
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<td>ZEMA</td>
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### Appendix C. Comparative coding (full)

<table>
<thead>
<tr>
<th>SSP1 – Health</th>
<th>Shinengene</th>
<th>Kalumbila North</th>
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<tbody>
<tr>
<td>Access to healthcare</td>
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<tr>
<td>Injury frequency</td>
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<td>[ ]</td>
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<tr>
<td>Alcohol consumption</td>
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<tr>
<td>Diet</td>
<td>[ ]</td>
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</table>

<table>
<thead>
<tr>
<th>SSP2 – Influence</th>
<th>Shinengene</th>
<th>Kalumbila North</th>
</tr>
</thead>
<tbody>
<tr>
<td>Influence in resettlement process</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>Influence in quality of life</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>Perception of justice system</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SSP3 – Competence</th>
<th>Shinengene</th>
<th>Kalumbila North</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perception of work skills</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>Sufficient education</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>Ability to increase competence</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SSP4 – Impartiality</th>
<th>Shinengene</th>
<th>Kalumbila North</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived discrimination</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>Gender equality</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>Relationship with other resettled</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>Relationship with non-locals</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SSP5 – Meaning-making</th>
<th>Shinengene</th>
<th>Kalumbila North</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spiritual satisfaction</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>Marriage and partners</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>Future dreams and plans</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
</tbody>
</table>