UNDERSTANDING THE PARTICIPATION AND ROLE OF WOMEN IN ARTISANAL AND SMALL SCALE MINING IN SOUTH AFRICA
Report prepared for ActionAid South Africa 2022

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The project team would like to extend appreciation to the following individuals/organisations that assisted with the data collection:
1. Bathopele Cooperative in Kimberley, Northern Cape province
2. Khuthala Environmental Care Group in Ermelo, Mpumalanga province
3. KOSH Artisanal Mining Primary Cooperative, Stilfontein, North West province
4. Burgersfort, ASM and Limpopo Province

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EXECUTIVE SUMMARY

The artisanal and small-scale mining sector has been growing with an estimated 30% of the workforce constituted by women globally. With benefits of income generation enabling women to support their families, the sector has been marked as having the potential to contribute to addressing socioeconomic struggles that affect the wellbeing of women. In particular, ASM provides avenues for addressing gender inequality as still characterising most mineral economies and sectors. It is recognised that for the benefits of ASM to be leveraged, the risks and challenges experienced by women working in ASM need to be addressed. This is because on the other end, ASM can perpetuate inequalities leaving women vulnerable with limited access to opportunities and benefits. As such, a critical component of the formalisation of the sector includes consideration of both positive and negative impacts of ASM on women, and this comes with understanding their experiences in the sector.

Since the advent of democracy, South Africa has been dealing with high levels of poverty, unemployment, inequality, and other socioeconomic ills. As such, the country’s development plan is centred on the need to improve the living standards of the population by eradicating poverty particularly amongst the households that are living below subsistence level. The national development plan (NDP) also aims to address inequality which remains a defining feature of the country’s socioeconomic landscape. Because of the history that South Africa went through, its demographic structure is a determinant of poverty and unemployment in that the most affected by the two remain those who were discriminated against and disenfranchised during colonialism and apartheid. Poor people in the country are mostly Black South Africans, those living in rural areas, youth, children, and women.

Over the years, the country has recorded in increase in female-headed households. With responsibilities of taking care of families, the socioeconomic struggles of women have increased. This has been worsened by the difficulties in finding employment and accessing economic opportunities in the country. Amongst the responses seen in the country is a significant percentage of women moving into the informal sector to eke out a living. According to Statistics South Africa (2018), the informal sector accounts for 17,4% of total employment in the country. There are more women working in the sector compared to men (i.e., close to 50% of the workforce are women). In the case of mining communities, more women are seen moving to work in the ASM sector because of limited income generating opportunities.

As the case in other countries, the potential of the ASM sector towards socioeconomic development is local communities is recognised. With the growing percentage of women engaging in the sector’s activities, there are opportunities in terms of leveraging the benefits of ASM to increase the participation of women in the country’s economy. As such, it is important that the involvement of women in ASM is recognised and understood.

This study comes at the back of the background that has been provided – it is also necessitated by dearth of research looking at the participation of women in the ASM sector in the country. While there has been growing insights into the ASM sector in the country, the involvement of women in the sector’s activities has been overlooked. To this end, the overarching aim of this study is to build evidence base on women in ASM and provide understanding of their participation and roles in different ASM value chains. The coverage of the study includes building a profile of women that are working in ASM and providing insights into the factors that underpin their engagement in the sector. The study also discusses the benefits of ASM to women’s livelihoods as well as the challenges being experienced on site and in communities from participating in ASM. Lastly, the study makes recommendations on aspects that need to be considered to support women in ASM.
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<td>SGD</td>
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<td>Small Scale Mining</td>
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1. INTRODUCTION AND BACKGROUND

The objective of the report is to provide insights into the participation of women in the artisanal and small-scale mining (ASM) sector in South Africa. This research is important in terms of increasing the knowledge on ASM in the country, understanding the involvement of women in the sector, and providing evidence-base to inform policy and related interventions aimed at formalising the ASM sector ensuring that gendered perspectives are taken into consideration. In terms of the broader national context, this study is important given the socioeconomic status of women in the country.

Amongst the major challenges in the country is increasing levels of poverty, unemployment, and inequality. In the second quarter of the year (i.e., Q2:2022), the official unemployment rate was reported at 33.9%. According to Statistics South Africa (2022), the number of unemployed persons increased by 132 000 in Q2. Poverty levels in the country also remain with about 55.5% people living in poverty (i.e., this is approximately 30.3 million people) (World Bank, 2020). In reviewing the progress made in the attainment of the country’s national development plan objectives, the National Planning Commission (2020)2 highlights that there has not been any improvement in poverty levels since 2011. In fact, the levels of poverty have increased and are expected to continue on the same trajectory given the consequences of Covid-19 pandemic. Amongst which was deepening inequality levels in the country. With an income inequality of 0.69, South Africa remains the most unequal country in the country.

As raised by the Department of Planning, Monitoring and Evaluation (DPME) et al (2018), the most affected by the three dimensions are Black South Africans, those with low levels of education, economically inactive South Africans, those living in rural areas, youth and children as well as female-headed households. According to Nwosu and Ndinda (2018), the percentage of female-headed households has been increasing globally, including in South Africa. In contextualising poverty and inequality in the country, Statistics South Africa (2020) highlighted that 42% of the children in the country lived with their mothers only. It was also noted that as high at 50% of female-headed households in some provinces (i.e., Eastern Cape and Limpopo) do not have an employed household member (Statistics South Africa, 2020).3

To this end, women constitute a large percentage of the country’s population group that is most vulnerable to poverty and unemployment. The unemployment rate of women in Q2 was recorded at 35.5% and this compared to 32.6% amongst males. The labour absorption rate, which measures the percentage of working-age population that is employed is 53% amongst women and 64.4% amongst men (Statistics South Africa, 2020). This is because women find it harder to find employment and access economic opportunities in the country.

The high incidences of poverty amongst female-headed households are attributed to several factors including lack of access to economic opportunities, strained participation in the labour market because of household responsibilities, and discrimination in the labour market. According to Nwosu and Ndinda (2018), female-headed households also have high dependency ratios compared to male-headed households and this affects their ability to support their families. Given the role played by women in households, Nwosu and Ndinda (2018) highlight that poverty will remain an issue in the country if the economic challenges facing women are not addressed. In view of the direct relationship between poverty and income, it is important to look at platforms that offer employment opportunities that can be leveraged by women thereby increasing their participation in the labour market and income-generating capacity to a level that will allow them to play their roles as breadwinners.

As will be highlighted in the report, amongst the key characteristics of ASM is its ability to accommodate women to work in the sector. Of the 44.7 million people employed in the ASM sector, a significant percentage of the workforce is constituted by women. It is estimated that women account 30% of the total number of people working in ASM, and in some countries, as high as 50% of the workforce are women. The participation of women in ASM is mainly attributed to low barriers of entry with miners requiring only basic equipment to work in the sector. Women perform several roles in the sector, and these range from direct involvement in mining and processing activities as well as supporting activities such as transportation and food/goods supply. While the difference in remuneration is amongst the issues in ASM (i.e., with male miners earning higher than female miners), several studies have revealed...
that women engaging in ASM earn higher incomes compared to those working in non-mining activities (i.e., agriculture) (United States Agency for International Development, 2020).

With most women in ASM being breadwinners, ASM is playing a significant role in ensuring the livelihoods of women and their families. As such, the participation of women in ASM offers benefits that can support countries’ efforts to address socioeconomic challenges thereby meeting several Sustainable Development Goals. Specifically, SDG 1 (i.e., No poverty), SDG2 (i.e., Zero hunger), SDG 5 (i.e., gender equality and women empowerment) and SDG 10 (i.e., reducing inequalities within countries). According De Haan et al (2020), the benefits of ASM that comes with the participation of women encompasses the enhancement of women’s resilience and ability to deal with economic shocks.

ASM also provides a platform to forge social and economic empowerment of women in support of the global goal towards broad based socioeconomic development (De Haan et al, 2020). While the positive impacts (i.e., and potential thereof) of the sector are widely acknowledged, and work continues to be done to enhance the benefits of ASM; it is equally important that the risks constituting the vulnerability of women in ASM are addressed. The marginalisation and exclusion of women in the sector are amongst the overarching concerns in the sector, and these translate to the lack of access and restrictions on the participation and remuneration of women working in ASM. As highlighted by IGF (2018)4, the sector is also characterised by traditional and cultural beliefs that further discriminate against women – relegating them to limited roles across the ASM value chains.

In view of both the positive impacts and shortcomings of the sector, it is important that women's representation and responsiveness are an integral part of formalisation interventions. Understanding the participation of women in ASM as well as their experiences and perspectives is therefore important in ensuring that the ASM sector becomes a platform that is fully promoted as advancing social and economic empowerment of women.

For the case of South Africa, ASM has the potential to contribute towards addressing the high levels of unemployment and poverty, particularly in rural parts of the country where most mining affected communities are found. According to the Department of Mineral Resources (2018), mining communities are located mostly in areas that are characterised by abject poverty and limited economic opportunities. In a study conducted by ActionAid South Africa (2018)5 on social and labour plans and benefits thereof, more about 73% of the study participants (i.e., sample size of 759) indicated that none of their family members are employed or have been employed by large-scale mining operations in their communities. The level of unemployment and lack of economic opportunities remain the central issues in mining affected communities. The study found that women are the most affected by not only the adverse impacts of mining on health, safety and the environment but must also deal with structural issues that affect their livelihoods (ActionAid South Africa, 2018). Of the women that participated in the study, about 73% indicated that they have not benefitted from mining operations. In fact, they have been subjected to varied forms of violence. In her speech at the 13th Annual Women in Mining Conference and Career Expo, the Deputy Minister of Mineral Resources and Energy, Dr Nobuhle Nkabinde highlighted that women in mining communities experience highest levels of Gender Based Violence (GBV)6.

According to the United Nations Human Rights Council (n.d)7, GBV is mostly entrenched in discriminatory beliefs and attitudes that perpetuate inequalities and powerlessness of women. The other main causes of GBV are poverty and lack of livelihood opportunities. Amongst the strategies to dealing with violence subjected to women should be facilitating their full participation in the economy and in decision-making in the country. To this end, social and economic empowerment of women in the country remains a critical component of the country’s development plan. This is both in terms of redressing apartheid and colonial legacies as well as dealing with current socioeconomic issues that continue to restrict and oppress women despite the increasing role that the play in society.

With evidence of the prevalence of women in ASM in the country, it is important that their involvement in sector is recognised and understood. Against the insights provided, this is coming from a perspective of the benefits of the ASM sector in addressing the socioeconomic challenges facing women in the country. Also, in understanding that, the ASM sector is characterised by a myriad of challenges that are adversely affecting mining communities, more especially women. Amongst the major concern in the country are links between ASM and criminal activities. On a daily basis, there are reports of murders, rape and other forms of violence linked to illegal mining. On 28 July 2022, eight women were raped in an abandoned mining site in Krugersdorp, in Johannesburg. More than 80 people were arrested majority of which are reported to be involved in illegal mining activities in the area. In the same area, 21 bodies of suspected illegal miners were found on the 03 November 2022. These two incidences are amongst the many cases that are connected to ASM and illegal mining that are reported in the country. To this end, amongst the interventions in the country have been to curb illegal mining and criminality that characterises some of the ASM activities.
In doing so, the government hopes to “create an ASM sector that operates optimally in a sustainable manner while contributing to the economy in the form of taxes and royalties, and through job creation” (DMRE, 2022:68).

Against the background provided, the premise of the study in terms of the need to understand participation and roles of women is based on the following:

1. ASM continues to grow globally providing livelihoods to millions of people including women who constitute a significant percentage of the sector’s workforce. While there are benefits leveraged by women working in ASM, there is a need to address the challenges facing women in the sector.
2. As the case globally, South Africa has seen an increase in ASM activities and a considerable number of the people that engage in the sector’s activities are women. As noted by Bester (2019), there is a perception in the country that only men work in the sector, and as such, participation of women and impacts thereof are overlooked. There is therefore a need for targeted research on women working in the sector to broaden understanding of ASM activities in the country. To this end, this study comes with the objective of building evidence base on women in ASM.
2. LANDSCAPE OF THE ASM SECTOR IN SOUTH AFRICA

2.1. Overview of the ASM sector and activities

The ASM sector in the country comprises of a spectrum of activities ranging from those using rudimentary and simple methods of mining and processing and those on the "upper end" that employs machinery and "high-capacity" equipment. The various activities are found in all nine provinces across the country. South Africa hosts a wide range of minerals, and ASM activities work in different minerals including gold, diamonds, coal, chrome as well as industrial minerals and construction materials (i.e., sand, aggregates, clay, dimension stones and others). These minerals are mined using both surface and underground mining methods. There are several categories of ASM in the country, with some activities working surface mining deposits. There is also a sizeable percentage of the miners that are recovering minerals from mining dumps, in particular diamonds and gold.

There are also, those that are working underground in derelict and ownerless mines (i.e., these are mines whose owners/lease holders have abandoned and are not operating), in operating large-scale operations as well as in mines that have been poorly rehabilitated. ASM activities are taking place in both rural areas, specifically mining communities where large-scale mining is taking place or has ended (i.e., old mining areas). There is also a growing number of activities taking place in peri-urban regions where abandoned mines are located (Jinnah et al, 2017). According to the Department of Mineral Resources (2010), of the 6000 derelict and ownerless mines, there are about 900 open shafts located in three provinces. Of these shafts, 244 are in Johannesburg. There is a high concentration of ASM activities taking place these shafts despite government’s effort to seal them as part of the country’s rehabilitation programme.

2.2. Insights into the profile of the miners

The number of people engaging in the sector’s activities is unknown. However, various studies have provided insights into the profile of the people working in the sector. Most of the miners are men, with a considerable percentage being women. ASM activities are also carried out by young people, although Ledwaba et al (2019) noted participation across the different age groups with the oldest miner in Kimberley being 82 years old. Though not widely reported, a few reports have made references to women working with their children in ASM sites (Munakamwe, 2018; Bester, 2019; Chuma, 2021). According to Chuma (2021) 10, the lack of money is amongst the reasons why children work alongside their parents in ASM. Similarly, as with most women, many of the children in artisanal and small-scale gold mining (ASGM) sites are found to be involved in processing activities, mostly, crushing of run-of-mine (Chuma, 2021).

In terms of nationality, both South Africans and foreign nationals work in the sector. In some sites, the percentage of foreign nationals coming mostly from Lesotho, Mozambique, and Zimbabwe exceed locals (Munakamwe, 2018). Reports from Mineral Council South Africa have indicated that 90% of the miners that have been arrested because of illegal mining are undocumented immigrants. While this has been a finding of several studies, it has been highlighted that not all artisanal miners are illegal immigrants. Both legal and illegal immigrants as well as locals engage in the ASM activities in the country (Nhlengetwa and Hein, 2015; Bester, 2019). With a considerable percentage of ASM activities taking place underground, it has been highlighted that most of the miners have worked for large-scale mining operations (Chamber of Mines of South Africa, 2017). While there is definite link between ASM and large-scale mining, Ledwaba et al (2019) found that the sector is also concentrated by those who have no prior mining experience and/or exposure. From a sample size of 1179 miners, only 29% of the miners had worked for large-scale mining operations.

2.3. Factors linked to the proliferation of ASM

Against some of the profiling information, the participation in ASM can be linked to performance and legacy of the mining industry (i.e., as constituted by large-scale mining) as well the broader socioeconomic issues in the country. The growing levels of unemployment and poverty are amongst the major factors that have led to
increased participation in ASM. According to Bester (2019), this is coupled with lack of economic opportunities and limited livelihood options, particularly in rural areas where most mining communities are located. As revealed by ActionAid South Africa (2018), most of the households in mining communities depend on social grants as the main source of livelihood. For most South Africans, social grants are not enough to support families, particularly large families and so, a complementary livelihood options are often essential for households to be able make ends meet.

According to Martin (2019)12, the issues of poverty and unemployment in neighbouring countries have also contributed to the rise in ASM activities. With the South African mining industry having supported families in neighbouring countries through the migrant labour system, the loss of remittances has adversely affected families in Lesotho and Mozambique (i.e., as major labour sending areas for the gold mining operations). As the case in South Africa, unemployment rate in the two countries exceed 30% (Martin, 2019). The socioeconomic challenges as well as political crises seen in the various neighbouring countries have resulted in many foreign nationals moving to South Africa in search of economic opportunities, and a considerable percentage settle in ASM because of either prior mining experience or the low barriers of entry associated with ASM activities.

The latter is amongst the factors that make ASM as preferred livelihood strategy. The low barriers of entry are looked at in terms of education and skills requirements, as well as capital and/or resources required to work as an artisanal miner. The other feature of ASM encompass the prospects to earn higher income as well as quick income compared to other livelihood strategies (Ledwaba et al, 2019). Through the use of simple methods to mine and recovery minerals, some of the ASM activities are lucrative. In particular, the high gold price has resulted in those engaging in gold mining activities to earn more income compared to other mineral commodities. The issue of criminality or involvement of criminals has also been linked to the proliferation of ASM activities in that, criminal syndicates would bring people into ASM to work for them. There has been reports of foreign nationals, in particular, being falsely recruited to work in large-scale mining operations to end up working for criminal syndicates.

As noted, the other factors that underpin ASM participation are connected to large-scale mining operations. Specifically, downscaling and retrenchments which have left ex-mine workers without employment. Post-1994, the mining industry lost about 150,000 jobs. This is a decline from total employment of 611,018 in 1994 to 458,954 in 2022 (DMR, 2014; Mineral Council South Africa, 2021). The gold mining sector recorded the largest loss of employment moving from 392,327 in 1994 to 93,998 in 2021. The level of employment is linked to the performance of the mining industry, which has been declining (Mbazima, 2020). Retrenchments in the industry is expected to increase as it deals with a myriad of challenges affecting productivity, outputs and profitability. It has been advanced that most of the retrenched mineworkers struggle to find employment, more so in other business sectors. This has been linked to poor reskilling of the miners as well as the “confined” use of mining skills and experience. There is often a mismatch between the skills that are transferred to the mineworkers in preparing for retrenchments, and the types of skills that are required by businesses that are operating within communities. Some the skills training is steered towards the mineworkers establishing their own businesses to become entrepreneurs. As revealed by several studies, the survival and success rate of small businesses is low. This then leads to ex- mine workers resorting back to ASM activities because of its potential to provide a guaranteed and higher income.

As highlighted above, there are about 6000 derelict and ownerless mines in the country. As such, the rise in ASM comes as a consequence of poor mine closure and rehabilitation. Part of the implementation of mine closure involves decommissioning and dismantling of mine infrastructure. As noted by Nhlengetwa and Hein (2015), the miners gain access into abandoned mines through old access portals and ventilation shafts that were left open. According to Van Wyk (2016), the old mine infrastructure that have been left behind is converted into informal settlements providing housing to migrants. The mining sites then become source of livelihood because of the minerals that can be extracted. More so, slimes dams, tailing storage facilities and rock dumps provide opportunities for mineral exploitation in mining communities.

Lastly, given the history of mining and discriminatory practices that led to the majority of South Africans being excluded from owning and benefitting from the country's minerals, ASM is seen as a route to enforce transformation of the mining industry. As had been recognised by government post-1994, those that engage in ASM regard it as a platform that enables communities to benefit from the mineral endowment in the country.

2.4. Positive and adverse impacts of ASM

The link between ASM and the country's transformation agenda is amongst the factors that have been used to build a case for government to formalise the sector’s activities. As highlighted, ASM is seen as tool to redress the injustices instituted by the apartheid and colonial regimes by increase the percentage of Black South Africans in the mining industry having supported families in neighbouring countries through the migrant labour system, the loss of remittances has adversely affected families in Lesotho and Mozambique (i.e., as major labour sending areas for the gold mining operations). As the case in South Africa, unemployment rate in the two countries exceed 30% (Martin, 2019). The socioeconomic challenges as well as political crises seen in the various neighbouring countries have resulted in many foreign nationals moving to South Africa in search of economic opportunities, and a considerable percentage settle in ASM because of either prior mining experience or the low barriers of entry associated with ASM activities.

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Lastly, given the history of mining and discriminatory practices that led to the majority of South Africans being excluded from owning and benefitting from the country's minerals, ASM is seen as a route to enforce transformation of the mining industry. As had been recognised by government post-1994, those that engage in ASM regard it as a platform that enables communities to benefit from the mineral endowment in the country.

2.4. Positive and adverse impacts of ASM

The link between ASM and the country's transformation agenda is amongst the factors that have been used to build a case for government to formalise the sector’s activities. As highlighted, ASM is seen as tool to redress the injustices instituted by the apartheid and colonial regimes by increase the percentage of Black South Africans in the mining industry having supported families in neighbouring countries through the migrant labour system, the loss of remittances has adversely affected families in Lesotho and Mozambique (i.e., as major labour sending areas for the gold mining operations). As the case in South Africa, unemployment rate in the two countries exceed 30% (Martin, 2019). The socioeconomic challenges as well as political crises seen in the various neighbouring countries have resulted in many foreign nationals moving to South Africa in search of economic opportunities, and a considerable percentage settle in ASM because of either prior mining experience or the low barriers of entry associated with ASM activities.

The latter is amongst the factors that make ASM as preferred livelihood strategy. The low barriers of entry are looked at in terms of education and skills requirements, as well as capital and/or resources required to work as an artisanal miner. The other feature of ASM encompass the prospects to earn higher income as well as quick income compared to other livelihood strategies (Ledwaba et al, 2019). Through the use of simple methods to mine and recovery minerals, some of the ASM activities are lucrative. In particular, the high gold price has resulted in those engaging in gold mining activities to earn more income compared to other mineral commodities. The issue of criminality or involvement of criminals has also been linked to the proliferation of ASM activities in that, criminal syndicates would bring people into ASM to work for them. There has been reports of foreign nationals, in particular, being falsely recruited to work in large-scale mining operations to end up working for criminal syndicates.
wherein government earmarked the sector as a vehicle capable of fostering social and economic growth through the participation of historically disadvantaged South Africans in the mining industry (Ledwaba, 2017).

The other factors used to promote the ASM sector in the country are contribution towards employment and poverty alleviation in local communities. ASM activities also contribute to the establishment of small businesses thereby increasing direct and indirect jobs associated with the sector’s activities. Specifically, ASM plays a considerable role in providing economic opportunities to the youth as well as women. ASM also provides a platform to those who want to raise money to go to school or start their own businesses. In some communities, ASM has been the decline in crime levels because of the livelihood opportunities it has created. There have been several media interviews where the miners talk about ASM being an escape from involvement in criminal activities because of the need for income to survive.

The experiences of communities on criminal activities and ASM are mixed. As noted, amongst the concerning issues in the sector is the involvement of criminal syndicates, whom have been connected to murders, rape, human trafficking, money laundering, forced labour and other high-level crimes (Martin, 2019; Harmony, 2020). The public is usually at risk with these activities take place within communities. According to Harmony (2020), more than 400 violent incidents have been reported between 2013 and 2020. Johnson (2016) also report that more than 300 miners were killed, and the main causes of the fatalities were turf wars and murders. Both the Gauteng and the Free State provinces have recorded increases in murders and attempted murders, and this has been linked to illegal mining. According to the South Africa Police Service (2019), illegal mining was the cause of 62 murders, 79 attempted murders and 37 assault in 2018/2018 reporting year. The criminal activities in ASM not only affect communities, but also the miners that are working in the sector to make a genuine living. Some of the ASM sites are the most dangerous in the country because of the firearms taken to work, and ambushes that are usually created for rival groups amongst the miners (Sibanye Stillwater, 2019).

The violence coming from illegal mining also affected large-scale mining operations because of the intrusion of the miners in active shafts. Illegal mining pose health and safety risks to those working in large-scale mining operations. In September 2019, a mine manager at Harmony Gold was shot and killed by illegal miners. Illegal mining has also been linked to the theft of copper cables, explosives, and diesel from the mines (Directorate for Priority Crime Investigation, 2017; Sibanye, 2019a). Dealing with encroachment and associated risks, mining company have had to spend substantial amounts in security. More so, the mining industry is estimated to be losing R7 billion in potential revenue that is earned through illegal mining and illicit gold and diamonds trading (Mineral Council South Africa, 2019).

The other negative impacts of ASM include damage to infrastructure and environmental impacts, mostly land degradation and water and air pollution caused by poor mining and processing practices (Sibanye Stillwater, 2019). There are also concerns on the amount of water used in ASM operations, which is mostly clean water that is supplied to communities. There have also been a number of accidents involving underground fires and explosions resulting in the death of the miners, and this continue to affect families who are left without breadwinners.

2.5. Involvement of women in ASM

As noted, while there is a perception that only men engage in ASM activities, this has been dismissed based on the evidence coming from several studies. While the number of women working in the sector is also not known, a study conducted by Ledwaba et al (2019) in three areas (i.e., Kimberley, Vlakfontein and Carletonville), found that women accounted 14% of the study participants (i.e., sample of 1179). In chrome mining in the Burgersfort area, Community Monitors (2018) reported that women make up more than 70% of the workforce. As the case in other countries, the percentage of women is expected to differ across ASM sites and this is influenced by several factors including the mineral commodity being mined, type of mining and the dynamics in the various sites.

Ledwaba et al (2019) also revealed a wide age range of the women that are working in ASM. Both young and older women are found to be engaging in the sector’s activities. Also, some of the women are locals’ comings from different parts of the country while others are cross- border migrants from Zimbabwe, Lesotho, and Mozambique. Munakamwe (2015)14 indicated that some of the women in ASM are independent migrants which encompasses those that migrate into other countries based on personal choice other than to join a spouse. The other insights on the women working in ASM is that most are breadwinners and have dependents as some bring their children to ASM sites.

The roles and responsibilities across the ASM value chains are found to be well defined. As coming from global literature, several studies have noted the concentration of women in particular stages of the mining value chain. Specifically, women are involved in the processing work that involves crushing and milling of the ore (Jinnah et al, 2017; Bester, 2019; Chuma, 2021). In some sites, the recovery of gold using the
amalgamation process is done by women and children (Munakamwe, 2015). The transportation activities within the mine sites are also done by women. Women are also leading businesses within mining sites, such as selling food and input suppliers to the miners.

While the involvement of women in mostly processing and supporting activities seem to be the norm as reported in several studies, there are women who are participating the whole mining value chain, including the extraction of minerals. There are women who are playing leading roles and are sponsoring mining activities and have men working under them (Jinnah et al, 2017). Chuma (2021) also highlights that women working in ASM have been making strides to fully benefit from the sector and work for themselves. That said, the participation of women in ASM is influenced by traditional/cultural beliefs being imposed as “rules” in ASM sites. In particular, women are not allowed to work at all underground in some mining sites (i.e., more especially in gold). In some sites, women can work underground, however are not allowed to enter mines when they are on their periods or have had sexual intercourse prior to coming to work. According to Chuma (2021), in one of the ASM sites, male miners indicated that women are not allowed to work underground because they are vulnerable to criminality, and they are at risk of being raped. It not known is this was raised from the perspective of the male miners wanting to protect the female miners in terms of what is happening underground, or it is based on them excluding women from ASM work, with women regarded as not being strong enough to carry out the work.

These restrictions form the base of gender inequalities that exist in the ASM sector. In addition to the dealing with the broader challenges in the ASM sector, women are disadvantaged when it comes to remuneration. According to Jinnah et al (2017), the amount earned by women differs according to the work that they do. However, for women who are involved in crushing and milling, earn about R100 per day. This is from crushing and milling 20 litre buckets of ore, which (i.e., depending on the amount of gold) can yield about 5 or 6 grams of gold. Based on the price of gold of R650 per gram, the male miner will earn between R3,250 and R3,900. This is more than 30 times the income earned by the female miners. In light of these working arrangements, Chuma (2021) indicates that exploitation of women in ASM is prevalent as they are mostly assigned low paying roles.

The other challenges that women must deal with are working conditions which expose them to numerous health and safety risks. The use of mercury by female miners around children is amongst the main concerns. There are also issues of gender-based violence within ASM sites and in communities. As raised by Ledwaba et al (2019), women are also subjected to abuse by the police and are often pressured into sexual favours to avoid arrests. It is noted that the police often take advantage of the fact that the majority of women do not know their rights and not well-versed with laws governing gender base violations in the country. Vulnerability of women to violence and assaults is worsened by the locations of mining sites, which are mostly in the bushes where is no form of security. According to Jinnah et al (2017), women are forced to enter into sexual relationships with male miners for protection and as well as for work. The other overarching challenges that need attention encompass the lack of access to mineral land, finance, skills and training, as well as support. Women are also found to be inferior in ASM sites and do not have platforms to raise their concerns.
3. OBJECTIVES OF THE STUDY

As highlighted, the study aims to contribute towards building an evidence base on women working in ASM. The focus of the study is on the following area:

- Building a profile of women engaging in ASM activities – As noted, there are currently no estimates of the number of women engaging in ASM activities (both directly and indirectly). However, through studies that have been conducted, insights into the profile of the women in ASM have been provided. This study follows suite and provides demographic information on the miners with the aim of ascertaining if there are particular groups of women that work in the sector.

- Understanding the drivers of ASM – While there is increasing understanding of the drivers of ASM, there is a need to look at the specific factors that lead to the participation of women in the sector. Understanding these can provide a base on which targeted interventions can be identified.

- Mapping the roles and involvement of women in ASM value chains – The study also aims to broaden understanding of the involvement of women in ASM. This is done through mapping the value chains of the different minerals and using this as a base to establish the extent of participation in the sector’s activities.

- Assessing the benefits of ASM to the women livelihoods – The study also provides insights into benefits leveraged by women in ASM, and impact thereof to them and their families.

- Unpacking the challenges facing women in ASM – The study also discusses the challenges facing women in ASM. With these insights, areas of intervention are identified.
4. APPROACH TO THE STUDY

4.1. Research design

A case study method was used to conduct the research. Crowe et al (2011) describe the case study method as a research approach that is used to obtain in depth and multifaceted understanding of a complex issue in its real-life context. Amongst the advantages of a case study method is that allows for what, why, how questions to be addressed. Case studies are rooted in understanding relationships between phenomena, context, and people. Through case studies, lived experiences of participants can be captured.

The main disadvantage of the case study method is that it lacks rigour and may be bias because it is concentrated on a particular setting. While the study is not steered towards generalisation, it involves the use of multiple case studies. As a category of the case study method, it enables the researcher to study the similarities and differences between the selected case studies thereby providing holistic understanding of the issues coming from the study. A multi-case study approach is also a way of validating research as it increases the reliability of findings (Baxter and Jack, 2008).

4.2. Description of the case study areas

The focus of the study is on four case study locations. The ASM sites include (1) Ermelo, Kimberley, Burgersfort and Stilfontein. Figure 1 shows the locations of the study areas in relation to mineral distribution in the country. The description of the four sites is provided below.

Ermelo is a small town located in Mpumalanga province. The area forms part of the Msukaligwa local municipality, one of seven municipalities in the Gert Sibanye district municipality. Ermelo has a total population of 83,865 with women accounting 50.2% of the population. About 68% of the population is of working age (i.e., aged between 15 and 64). In terms of education profile, 34.8% of those aged 20 years and above have matric qualification and only 12.4% have tertiary qualifications. The area has 24,340 households and of these, 37.4% are female-headed. The unemployment rate in the area was 25.1% in 2017 and this increased from 23.1% in 2014. About 11.9% of the household are reported to have not income. According to Gert Sibanye district
municipality (2020), about 42% of the population in the local municipality where Ermelo is situated live in poverty.

As can be seen in figure 1, Mpumalanga province has large coal deposits, which constitute 80% of the country’s coal resources. The province is also rich in gold deposits as well as other minerals including platinum, chrome, manganese, and industrial minerals. The economy of Ermelo has been largely supported by mining and agriculture. More so, coal mining which started in the 1850s (Hancox and Götz, 2014). According to Legault et al (2017), most of the coal mining operations in the area are no longer operational and have been abandoned. Amongst the challenges the communities in Ermelo are dealing with are health, safety and environmental risks emanating from mines that were left unrehabilitated. With challenges of unemployment, particularly amongst the youth; community members have resorted to artisanal mining which is taking place in abandoned underground mines. The common mining method that was used by large-scale mining operations was room and pillar, where “structures of coal” were left behind for support. The artisanal miners are mining the pillars.

Kimberley is a historic mining town located in the Northern Cape province. It is well known for the discovery and exploitation of copper and diamond mining that started in the 1850s and 1880s respectively. Artisanal mining has been taking place in the area since then. Mining in Kimberley then transitioned into large-scale mining. As can be seen in figure 1, the province hosts several minerals deposits, mostly diamonds, iron, and copper. The province also has rich deposits of semi-precious stones. These different minerals are mined by artisanal miners as well as large-scale operations.

Kimberley has a total population of 96,977 people. Of this, women account 51.5% of the population. About 67% of the population are of working age. Kimberley has about 24,395 households and of these, 37% are female-headed. In terms of education levels, only 31.8% have completed grade 12 (i.e., matric education), and about 17% have higher education qualifications. Kimberley is located within the Sol Plaatje local municipality, which has an unemployment rate of 31.9%. Youth unemployment in the area is 41.7%.

These high unemployment levels are attributed to the area’s declining economy which was largely supported by mining and manufacturing sectors. According to Sol Plaatje local municipality (2017), De Beers Consolidated Ltd closed its operations in 2005 (i.e., the Kimberley mines). These assets were sold to Petra Diamonds in 2010 through a joint venture with Ekapa Mining (i.e., Kimberley Ekapa Mining). In 2018, Petra Diamonds sold its share to Ekapa Mining, who are currently mining diamonds in Kimberley.

ASM activities in Kimberley have been taking place within Ekapa’s license area. In June 2018, the miners were granted mining permits in an effort to curb illegal mining that was adversely affecting Ekapa’s operations. This was the first pilot project in the country to formalise ASM activities. Ekapa provided 400 hectares of mineralised land, which was allocated to two primary cooperatives that were housing about 800 miners. While the project reported successes in terms of enabling the miners to trade their diamonds through a formal market and them earning higher revenue from the sale of the diamonds; the project was negatively affected by conflicts and in-fighting amongst the miners as well as violence that continued to disrupt Ekapa’s operations.

It has been reported that Ekapa has been spending R3 million on security to deal with encroachment on their mining sites. In addition, the situation in Kimberley poses safety and security risks to legal miners and has negatively affected participation in ASM activities and the prospects of the sector, particularly in terms of the role the case study was supposed to play in guiding the formalisation of the country’s ASM sector. Against the objectives of the study, insights are provided on how this particular formalisation attempt, and failure thereof affected women who are depending on the sector for their livelihoods.

Burgersfort is a mining town located in Limpopo province. It is part of the eastern limb of the Bushveld Igneous Complex, where deposits of platinum, chrome, and vanadium are found. Most these deposits have been mined by large-scale mining operations until 2016, when there was a rise in artisanal mining activities. These activities were conducted alongside operations that we carried out by mining entrepreneurs (i.e., known as “investors”) in the community. These “investors” brought in machinery and equipment and employed locals to work for them. Mining took place at a medium scale through the use of heavy earth equipment to mine chrome. These operations have since been stopped at they were taking place without appropriate mining licences. The communities in Burgersfort are left with open pits, and this is where ASM activities are taking place.

Burgersfort has a total population of about 6,360 people, of which 46.7% are female. About 76% of the population are of working age. The area has 2,222 households and female-headed families account 23.3%. Only 17.8% of those aged 20 years and above have tertiary qualification, and 35.9% have completed matric. Burgersfort is part of the Greater Tubatse local municipality and total unemployment, and youth unemployment are 42.9% and 59.6% respectively. According to the Greater Tubatse municipality (2017), the region was identified to be a destressed mining municipality. The destressed mining areas/regions are those that are largely dependent on one
economic sector (i.e., mining) and are characterised by high levels of poverty and unemployment stemming from lack of economic opportunities. As noted by Greater Tubatse Municipality (2017)18, population growth in the municipality doubled between 2005 and 2015. This has adversely affected the socioeconomic prospects of the area, which are further dimmed by declining large-scale mining as operations are placed on care and maintenance. In addition to growing poverty and unemployment levels, the reasons given by communities for engaging in ASM are lack of economic opportunities and benefits coming from active large-scale mining operations.

Stilfontein was established in 1949 as a residential area to house mine employees working in three mines in the area (i.e., Hartbeesfontein, Buffelsfontein and Stilfontein). The area is located in the North West province and forms part of the City of Matlosana local municipality. Stilfontein has a total population of 17,942 people, with females accounting 46.7%. About 70.6% of the population are of working age. There are 6,651 households with women heading 24.3% of these. About 39% of the population have completed matric and only 12.2% have higher education qualification. About 55% of those that are in low skilled jobs. More so, close to 42% of the population older than 14 years are illiterate. The unemployment rate in Stilfontein is 33%, with youth unemployment of 43%. According to the City of Matlosana (2016), 16% of the households have not income.

The high levels of unemployment in the area are linked to downscaling in the local mining industry. According to City of Matlosana (2016), 80% of those that used to work at the mines were retrenched by 2016. Amongst those affected are community members that are staying in Margaret village, a residential area named after one of the shafts within the Stilfontein gold mining operation (i.e., Margaret shaft). The study was conducted in ASM sites located close to the community. The activities are taking place on surface where gold is recovered from primary deposits as well as mine waste. Their interest at the time was to connect with buyers as they have not made sale for three weeks because of the sting operations.

4.3. Data collection methods

The sources of data for the study included survey, focus group discussion and site observation. The latter involved studying the ASM sites to obtain insights on the activities that are carried out, tools used, working conditions and roles of female miners across the different activities. Notes were also taken on working conditions and the areas surrounding ASM sites. This information was deemed important in placing the experiences of the miners in context. Surveys were used to collect demographics of the miner, and this was included with the aim of providing insights into the profile of women that engage in ASM activities.

Focus group discussion was the main method used because it allows the researcher to obtain in-depth understanding of social issues drawing from experiences and perspectives of participants. Unlike individual interviews, focus group discussions allow the participants to build on each other points of view, exchange information and lessons, and also ask each other questions. A total of 49 miners completed the survey. Of these, 22 took part in the focus group discussion across the four sites. The questionnaire used for the survey and to facilitate the group discussions is included in Appendix B. Table 1 provides a summary of the focus group participation in the different study locations. Participation was voluntary with the only criteria being that participants must be female miners. The table also provides the dates on which the site visits were conducted (i.e., data collection took place between June and September).

Table 1: Participation in the focus group discussions

<table>
<thead>
<tr>
<th>Study area</th>
<th>Number of participants</th>
<th>Date of site visits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kimberley</td>
<td>2</td>
<td>22 and 23 June 2022</td>
</tr>
<tr>
<td>Ermelo</td>
<td>7</td>
<td>17 June 2022</td>
</tr>
<tr>
<td>Burgersfort</td>
<td>3</td>
<td>20 and 21 July 2022</td>
</tr>
<tr>
<td>Stilfontein</td>
<td>10</td>
<td>23 September 2022</td>
</tr>
</tbody>
</table>

As seen in the table, only two female miners took part in the discussion in Kimberley. This was because of the conflicts amongst the miners that were still taking place at the time of the site visits. The site visits were arranged through Bathopele Cooperative, and hence it was shared that miners are scared of being associated with the cooperative because of fear of being victimised by the group of miners that are in conflict with the cooperative.

Three miners took part in the discussion in Burgersfort. At the time of the visit, there was a sting operation carried out by DMRE, police and other government officials at the ASM sites and it was reported that miners were arrested for illegal mining. Because of the fear of being arrested, there were few miners on site. Of those on site, a few female miners declined to participate in the study, after finding out that we were not buyers. Their interest at the time was to connect with buyers as they have not made sale for three weeks because of the sting operations.
Seven miners participated in the focus group discussion in Ermelo. An additional 27 miners completed the first part of the questionnaire (i.e., demographic information) and this is included in the results to build up towards a profile of women working in ASM.

Ten miners took part in the focus group discussion in Stilfontein. At the time of site visits, there had been an influx of people coming to the area to work. According to the local miners, most of them are coming from the Krugersdorp area, and had fled after the police intensified their operations following the incident that led to eight women being raped.

4.4. Data analysis methods

With consent from the miners, the discussions were recorded. In all sites, the discussion was in local language, which both the participants and researcher understood. In preparing for data analysis, the recordings were translated and transcribed. Thematic analysis was used to analyse the data and involved drawing out information that answers specific questions that were posed to the miners. It was also used to identify and build themes that were emanating from the discussions. The findings from the study are presented in two parts. The first part provides case study results, while the second part consolidates the results providing aggregated view of the findings of the study. To enhance the insights from the study, direct quotations are included to support the results.
5. CASE STUDY RESULTS

5.1. Kimberley

5.1.1. Insights into the profile of female miners

Both miners are South Africans and are aged 46 and 52 years. They have dependants and are breadwinners. One miner has five children and three grandchildren. The other miner is supporting two children. Both were employed as domestic workers prior to moving into diamond mining. One miner started working permanently in ASM in 2016. Prior to that, she used to come to ASM sites with her brothers on weekends while employed. She then decided to resign and work as an artisanal miner on a full-time basis. The other miner was introduced to ASM by her friend, and they would work together on a periodic basis. In 2019, she decided to move to Kimberley to pursue ASM on a permanent basis.

5.1.2. Factors supporting the participation of women in ASM

Both miners resigned from their previous employment because the salary that they were receiving was not enough to cover household expenses and needs. They shared that they were earning R1,900 and R2,500 per month. One miner said that “since working as a domestic worker, she has nothing to show”. She moved into diamond mining with the hope that it will improve her life and that of her family. This was the response from another miner:

“The salary was not satisfactory for the work that I did because I used to cook, clean, and look after the kids. That is the reason I left, and I decided to stand on my feet, and I came here to see if the standard of living of my household will change or not”.

She further mentioned that apart from domestic work, the other option that was available was working in a farm. She indicated that the wages paid to farm workers are even low, with people earning R700 per month. In addition to low remuneration, having to work extended hours contributed to one miner resigning from her work. She shared that her hours were increased for the same salary. The working environment was also unfriendly in that “when you don’t come to work, there are complaints, when you raise your concerns, it becomes a problem”. When she was thinking about the time she travelled to Kimberley, she said that she had R50 in her pocket which was money to buy food. She came to the camp (i.e., where miners are staying) and erected her shack. Coming into the camp, they had to seek permission to work and live at the camp from Bathopele cooperative (i.e., an association of artisanal miners).

When asked if there were rules that they had to follow as female miners, they indicated that there were only general rules such as “no stealing”, “no damage to property”, and safety rules. It was shared that if you break any of the rules, you were going to be banned from the camp. The rules applied to all the miners and those who stayed at the camp. They said that the rules were easy to follow, and none of them were discriminatory to women.

Figure 2 shows the shacks where most of the miners are staying in Kimberley. They call these “shanties”. Most are made plastics which cover wooden poles that have been put into the ground the create a structure. Some of the shacks are built using corrugated iron sheets. Some miners have set up tents. The shacks are usually divided
into two rooms, one being the bedroom and the other serving as a kitchen.

5.1.3. Overview of ASM and value chain activities

Figure 3 shows the diamond mining value chain with the activities that they miners perform. The value chain can be divided into three components, namely, extraction of ore, processing of ore and marketing and sale of the diamonds. To start working, the miners need to have a pick, shovel, wheelbarrow, sieve/screen, buckets, and a plastic stockpiled or loaded into buckets. Figure 3 shows a mining site where soil material has been dug out using a pick and some have been loaded into 20 litre buckets. As seen in the figure, the depth of mining is a few centimetres.

During the extraction stage, vegetation is cleared, and soil material removed and stockpiled or loaded into buckets. Figure 3 shows a mining site where soil material has been dug out using a pick and some have been loaded into 20 litre buckets. As seen in the figure, the depth of mining is a few centimetres.

Once miners have sufficient material, they move to the processing stage, which also takes place on site. This encompasses sieving the material by moving the screening table back and forth. Figure 5 shows the screening table, which is normally placed on top of two buckets that have been locked together in order to provide a suitable height for the miners to work with. The screening table is made of mesh which is joined to four planks. The miners use two tables with different aperture sizes.

Through the use of a back-and-forth movement, the fine material escapes through the mesh, and the coarse particles remain (i.e., as can be seen) in figure 6. The gravel material is then removed from the screening table and stockpiled on a level ground that is covered with a plastic sheet. This is shown in figure 7 below. This is an iterative process that is followed until enough gravel material has been stockpiled. The last step is sorting, where fractions of the material are checked in search of diamonds. A small piece of plastic is normally used as the miner go through the material by hand and this

Figure 3: Diamond mining value chain

Figure 2: Shacks where miners stay in Kimberley

Figure 5: A screening table placed on top of buckets
Before the miners were granted mining permits (i.e., prior to 2018), they sold their diamonds through the black market mostly through middlemen. One of the miners shared that her brothers used to take the diamonds to the buyers on her behalf. The legalisation of the miners came with the opportunity for them to sell their diamond through tendering. Once they find diamonds, they take it to Bathopele offices. At the offices, the diamonds are weighed, packaged, and send to CS Diamonds, a diamond dealer in Kimberley.

Diamond tendering runs once a month for a week. During the tender week, registered and licensed buyers would check the stones and make bids, and these would be communicated to Bathopele’s representative, who then relay the price to the respective miners. The miners would then decide if they were taking the price or not. If accepted, the money is paid into Bathopele’s bank account. Depending on the amount and request from the miners, payments are either transferred into the miners’ bank accounts or they are paid in cash. Bathopele only charges 2% of the sale amount as an administrative fee. If the miners are not in agreement with the price on the table, they can withdraw their stones from the tender. At the time of the visit, the tender was running, and several miners were coming to Bathopele’s offices for updates on the bids.

5.1.4. Involvement of women across the ASM value chain

The ASM sites are not located far from the camp and so, so miners walk to and from work. Both women had no prior mining experience and had to learn how to mine diamonds. As noted, one miner worked with her brothers before venturing on her own and the other miner, was taught how to mine diamonds by her friend. They indicated that they were able to learn quickly because the work is not difficult. When moving into ASM permanently, they worked on their own, however at the time of the visit, they were working together.

They are involved in the whole value chain and perform all the activities that were discussed above. They shared that they work seven days a week but would usually take a day off on Sunday to do house chores like laundry. Their working times differ in summer and winter, but they work eight to nine hours. In winter, they leave the camp at 07:00 to start work at 08:00 and would knock off between 16:00 and 17:00. In summer, they leave earlier around 06:00. Their production target per day, is typically four to five buckets of soil material produced by each of them (i.e., about ten buckets of soil per day). They shared that digging is the most labour-intensive activity amongst the tasks that they perform. They have structured their work such that, digging and stockpiling is done, for instance on day 1. The second day is then allocated to sieving and stockpiling.

Once miners find diamonds, they take it to the market. They either sell the stones through the formal tendering processing that is accessed through Bathopele cooperative or the black market.
In day 3, they would sort the material and search for diamonds. As they are performing the different tasks, they are always on a look out for diamonds. Another task that is uncomfortable is sieving because of the amount of dust that is generated so it is important for miners to cover themselves.

In terms of participation in the market, as noted, they sell their diamonds through Bathopele. They miners understand the process and mentioned that they do not have issues with it. They are able to obtain good prices from the tendering process. One miner mentioned that she once found a 4-carat diamond, which she sold for R27,000 in the black market. If the diamond had been sold through formal channels, she would have received about R300,000. When asked if they know how to estimate the worth of a diamond, one miner said that she is able to estimate by looking at its size. She further said that:

“When it comes to colour, it’s a bit difficult. But when you place it on your hand, you can see the clarity. Sometimes, I go around comparing it to small stones estimating how much they’d be worth, and I would miss the estimate by a single digit or so”

Through experience, she has learnt about the features that are looked at when evaluating the quality of diamonds. When miners bring their diamonds, Bathopele representatives also explains to the miners what they buyers looks at, and they would check the diamonds to together before they are packaged. The two miners were amongst those who were waiting for a call from Bathopele to hear about the bid price for their stone. They found a 1.21 carat diamond. Since moving in ASM in 2019, one miner shared that she this was her first sale. Amongst the difficulties for working in diamond mining is the uncertainty of production (i.e., finding diamonds). Miners can go months and even years without finding diamonds or finding stones that sell for little money. When asked how they are able to keep working when diamonds are not coming out for prolonged periods, the miners shared:

“If your heart really wants something, it will be content with the effort. I want to build a house, but myself a car. I want plenty of things for my home so you have to be hopeful that what you want you will get”. “As a mother, whatever you desire or want in life you must tell yourself that you need to work. You can’t wait for a white person to tell you don’t come to work tomorrow. Here I know that I am working from myself, the money that I make will be all mine. I know that money will not solve all my problems. I don’t know how much it will be, but I hope it doesn’t scare me because it will be my

first. I have never had R10,000 plus to myself before”.

During periods when they do not have money, they would borrow from fellow miners. They would ask for money from home. They mentioned that the miners who find themselves without food would reach out to buyers in the black market who would give them food or money upon agreeing that they would sell their diamonds to them. This is the reason why some miners are still selling in the black market. Another challenge with selling through the tendering process is that you have to wait for a month for payment. Despite these challenges, they indicated that they do not mind waiting because of the price is significantly higher. In support of this, one miner said “few days ago, a man sold his piece [diamond] that is worth R300,000 for R14,000” in the black market. When the payment comes, they will share the money equally. They indicated that this is common amongst the miners who are working together and in groups. One miner said that when she was working with her brothers, they also split the money equally.

When asked about their working relationship with the miners, they said that they have not had any problems with fellow miners. They have a good relationship with male miners and whenever they need assistance, they are there to help. On the contrary, their relationship with some female miners is not good, more so with women who are artisanal miners and staying at the camp with their partners. This is what one miner said:

“I would rather approach a man when I am in need of something. We work closely with elderly men so it’s easier to get along. When I am in need of anything, they assist wherever they can. It’s a problem with women. When you borrow a mere R10, they will tell you ‘even I have problems in my households’”.

When asked why the relationship amongst women is not good, they think that it was because they do not drink alcohol and hence keep to themselves. There was an initiative to organise women who are working at the sites and those living at the camp to discuss their own mining permits so that they can work free. They wanted to open a day-care centre for women who were living with their children at the camp. According to the miners, some women would bring the children along and some would have children while staying at the camp. Some of the children do not go to school and would come along to the mining sites. Child labour is becoming an issue in diamond mining in Kimberly, as there are children around the age of 15 who are working as artisanal miners. The women in mining initiative did not materialise and hence prevailing
relationships amongst the female miners.

5.1.5. Benefits of participating in ASM

Having moved into ASM with the hopes of improving their living standards, the miners were asked if being artisanal miners changed their lives, or it is still the same or has worsened. The miner who has been working in diamond mining since 2016 said that she has been able to provide for her family and that her life has changed positively. This was her response:

“I had a husband, but we separated, and I came here. So, I play both roles now. We used to share stuff but now I have my own. When I found a stone, I bought myself a couch set worth R9,000, which I still use to this day. I sent my eldest child R1,500 and I bought my grandchildren clothing and paid school fees. I bought one a bicycle because his school is far. My life has changed based on what I have done”.

Based on other miners’ experiences and what she has seen, the other miner is hopeful that she will also be able to achieve the things she has set herself to do. She shared that she wants to make changes on her house so that her children can be satisfied that their money is working. With the payment that they are expecting, she indicated that she would use the money to take care of her children’s needs as well as hers, and she will save the rest with the hope that they will make more money which she will use to build at home.

When asked if they would leave ASM if government offered them alternative employment, both of them said no. Amongst the benefits of working as an artisanal miner is flexibility in that they work for themselves and are not reporting to anyone. They also said that they are used to the environment and the work that they do. More so, the returns can be very high over a short period of time enabling them to improve their lives.

5.1.6. Challenges facing women in ASM and proposed areas of intervention

The main challenges highlighted by the miners emanate from the conflicts amongst the miners which have had an adverse impact on miners’ organisation and formalisation attempt. Bathopele Cooperative was one of the two primary cooperatives that were granted mining permits (i.e., about 800 miners were organised into two groups and granted two mining permits). In less than a year of obtaining permission to mine and trade diamonds legally, the initiative was surrounded by violence. According to the miners, fractions started to develop within Bathopele group. At the time of the visit, there were two groups, and one was instigating fights. These have created an unfavourable environment for the miners. They shared that they are at times forced to participate in meetings and protest action and if one refuses, he or she is either banned from the camp or is physically harmed. They have been several incidences where miners have been harmed. This has created fear with miners being told what to do and the response has been to keep quiet to protect themselves. This was shared by one miner:

“I do attend meetings. I listen to what is being said. When it is all said and done, I leave to go to my shack. I never want to voice my opinion”.

The miners expressed that it is no longer safe at the camp. When Bathopele was operating well, they had marshals who were responsible for the safety and security of the miners both at the camp and in ASM sites. There are no longer marshals and miners are responsible for guarding their own safety. This is what one miner said:

“It is not safe. We might even get raped walking through the mountain. But you walk with God, he’ll always protect you”.

According to the miners, women are the most vulnerable especially those that are staying alone. There was once a man who was going around knocking at “shanties” and wanting to go in. There have been rape cases at the camp. It was shared that some of the things that are happening are not voiced and reported. This is despite there being a committee tasked with dealing with issues at the camp. It was noted that in the past, when incidences were reported, the committee would investigate and call a meeting with parties that are involved. Depending on the cases, some would be reported to the police. This is no longer happening as serious cases are not reaching the police anymore. In making this submission, the miners shared an incident that happened where:

“A young man assisted an elderly woman who had fell. So, the son of the elderly woman came and stabbed the young man thinking that he violated the women. They burnt his shack. The family of the victim also retaliated”.

Apparently, this case was not reported to the police. As a result, the miners have taken the decision to not report anything to the committee but instead go to the police. The other issue that was pointed out was that the committee comprises of only men
and most of them are from Lesotho. They think that the reason why cases are not reported to the police is because some of the committee members might not have permits to stay or work in the country. It was also shared that committee members elected themselves and hence tend to take sides of those who commit crime at the camp. When asked if they are not victimised if they go directly to the police, they said there was a lady who was violated and went to the police. They came and arrested the person responsible, and nothing happened to her, as far as they know.

Against the challenges that were highlighted, the main area of intervention pointed by the miners is for Bathopele to function the way that it used to. It was shared that they used to live and work freely when the miners were organised. The rules were being followed and one of them was about noise that the camp. Loud noise had to be stopped at 21:00 to allow miners to rest so that they are productive the following day. They shared that you find people making noise at 1 am. Crime was low because of the patrols and system that they had put in place. At present, they cannot walk free and relieving themselves in the bush puts them at risk. They can longer chop wood in the mountain because everywhere they are scared.

Secondary to this, some of sponsorship for them to be able to buy food. Some of the miners are receiving the R350 social relief fund, but other have not income. As part of the women- in-mining project, they were planning to open a soup kitchen to provide food to the miners. They also wanted medical services (satellite clinics) where elders can receive their medication and for miners to receive proper health care. During the time of Bathopele, their representatives would take clinic cards of elderly miners and go collect medication for them.

The miners also spoke about the need for government to address the violence that is taking place at the camp. There is a need for government to arrest the miners are stealing and harassing others to restore order at the camp.

5.2. Ermelo

5.2.1. Insights into the profile of female miners

The majority of the miners are in the age group 26 to 35% (i.e., 32%). Young women (i.e., between the age of 18 and 35) account 47% of the total participants. The youngest and oldest miners are 20 and 55 years old. Most the miners fall under the category of grade 7 to 11 (i.e., 61%). About 33% of the miners completed their matric qualification. All the miners are South Africans. In terms of previous employment, 50% of the miners were working before moving into ASM. Most of them were employed as domestic workers and some worked at retail stores. A few of the miners were part of government’s Community Work Programme which is an initiative that provide temporary employment in communities.

Most of the miners have dependants (i.e., 94%) and are breadwinners (i.e., 97%). About 61% of the miners have between 1 and 3 dependants, while 32% have between 4 and 6 dependants. When asked if they have another source of income apart from ASM, 47% of the miners indicated that they receive social grants. Most of the miners started working in coal mining in 2022 (i.e., 55%). There are several miners who have vast experience in the sector with work experiencing ranging from 3 years to more than 10 years.

5.2.2. Factors supporting the participation of women in ASM

The high levels of unemployment and poverty are the main reasons why most women decided to move into ASM. Most of the miners indicated that they struggled to find employment because of lack of experience. ASM provided them with the opportunity to make a living in the current economic conditions where there are no jobs. The miners highlighted that coal mining was the only job that was available in the community. Some of the miners shared that their husbands/partners are not working, and it is income in order to support their families. This was said by one miner:

“You will find that sometimes we are sitting with our husbands, and they are also unemployed. So, we can’t both sit on our hands. So that’s why we say let’s be like other wives and go to the coal mines and then at least we can provide food for the family, plus you can feel how cold it is now. We can buy potatoes, sugar, and other things”

The need to support and provide for their families was highlighted by most of the miners and this is because most of them are breadwinners (i.e., as highlighted in the demographics). This was a submission during the discussion:

“I didn’t want to end up doing negative things in life, be a burden to the government and [I] also wanted to provide for myself and my family”.

Other miners mentioned that they have many dependants that they need to provide for. As was noted in the Kimberley case, several miners indicated that they resigned from previous work because they were earning low wages. Coming into ASM, it was
perceived to be a better job that offered relatively higher remuneration. The other drivers of ASM that led to the participation of women in ASM are the need to be financially independent. This was expressed during the discussions:

“When children ask for money, they ask their mothers not fathers. So, it’s important for us to have our own. Ewe shouldn’t always have to ask from men when there are possibilities of having our own”.

The miners were also attracted to ASM by the opportunity to learn new skills and acquire mining experience, which for some, may enable them to find employment in large-scale mining operations. For some, working in ASM may be a stepping stone to obtaining employment in large-scale mining operation.

5.2.3. Overview of ASM and value chain activities

Figure 8 shows the coal mining value as followed in Ermelo. ASM takes place in abandoned underground mining operations. The value chain can be divided into two components, extraction and transportation of coal followed by marketing and sale of coal. The miners extract coal from pillars using a chisel and hammer. It is then loaded into wheelbarrows and transported from underground to surface. When reaching surface, it is stockpiled. No coal washing is done. Most of the miners work in groups, typically groups of four and five. The miners that extract coal from the pillars are known as “blasters” and those that transport it from underground to surface are called “shatterkars” (i.e., they are named after shuttle cars which hauls coal in underground mining operations). Typically, two miners will be mining, and the other two loading and hauling the coal from underground. Because the roadway to stockpiling area is steep, one shatterkar will be pushing the wheelbarrow and the other one pulling it with the rope ahead. The other miner is usually on surface guarding the stockpile and managing sale of coal.

According to the miners, there are two working shifts. The morning shift starts at 05:30 and ends around 16:00. The miners that work nightshift start working around 21:00 and 22:00 and leave in the morning when the other shift starts. Figure 8 shows the entrance of one of the underground miners. As can be seen, miners have to bend when entering and exiting the mine.

Figure 9: Opening used by miners to enter and exit the mine

Miners are not allowed to enter the mine without a head lamp and boots because the working areas are usually wet, and sometimes flooded.
Figure 9 is another underground mine where access is through a staircase. This mine is called “Esitespini” (i.e., directly translated as at the staircases) and miners have to climb 83 stairs going in and out of the mine. After extracting the coal, it is loaded into sacks which the miners put on their backs to take to surface. Figure 10A shows the decline/stairs that are used by the miners and figure 10B is the outside of the decline with two openings. The sacks that miners use to load and transport coal can be seen in the figure as well.

Figure 11 shows the stockpiling area, where the different groups bring their coal. This area is called the “market place” because it is where buying and selling of coal takes place. There are coal yards that buys and sells coal in the surrounding communities. Some of the miners have their own coal yards which they supply coal with. They also have their own vans to transport the coal from the mine to the community. Those without transport would hire vans from community members (i.e., there are community members that are solely involved in the transportation of coal).

Coal is sold at the same price at the mining site, and this has been agreed upon by the miners. One load of coal (i.e., that is one tonne) is sold at R600. An additional amount of R250 is charged to transport coal to the customer. The miners who have their own vans therefore charge R850 per load of coal.

5.2.4. Involvement of women across the ASM value chain

According to the miners, both men and women perform the same tasks, even when working in groups. This was a response that the miners echoed:

“Yes, we do cutting, transportation using a wheelbarrow and unloading outside. If you are pushing a wheelbarrow, we work together. While one does the cutting, the other transports the load outside and remember there is a slope, so there is teamwork there”.

Some of the women are part of all-female groups and some are working with male miners. They mentioned that they there are no tasks that have been allocated to men or women. During a shift, they alternate between the different activities. While this is the case, most women indicated that they do not work night shifts. From the focus group, only one miner shared that she has worked during the night. When asked if she was not scared to working night shift, this was her response:

“There are men that I travel with, and I’d be the only woman. We’d return in the morning. They don’t have a problem. If there was something, it would be on a personal basis and not randomly so. They wouldn’t try anything because you are a woman”.

The miners shared that they have good working relationship with some of the male miners. This is because they know each other from the community and at times, they walk together from the community to the mine and those who have transport, would offer them a lift for free (i.e., miners usually pay for lifts). This is highlighted during the discussion:

“We know each other very well. Even when you are tired, they’ll look after you, give you a little push. Sometimes when you’re out of coal and low on money, they lend you or buy for you food because they know the women who sell”.

Miner also mentioned that there are male miners who do not want them to work at the mine. One miner even stated that “you do come across those that are not kind, who’ll tell you that they don’t want you by their spot”. Because the miners are mining pillars, the working areas are arranged such that the miners or different groups are not concentrated in one area to ensure that the mine does not collapse. Some of the women expressed that they are sometimes allocated areas that are far and where there is poor quality coal. Their participation in the coal mining is also restricted by some of the rules that are there. In particular, they are not allowed underground if they are on their periods or had sexual intercourse the previous day. They believe that failure to abide by these rules will lead to accidents in the mine. From the discussion, most of the women believe this to be true and hence follow the rules.

Unlike in Kimberley, the miners work two to three times a week in winter. They work less days in summer because the demand for coal is usually low. If two miners are working together, they can produce 30 sacks of coal per day. Each sack is 50kg and that comes to 1500 kg (i.e., 1.5 tonne of coal). This equates to one full truck, which they charge R600 (i.e., excluding transport cost). As noted, the selling price is the same across all miners and so, they make R600 per day. They indicated that they share the money equally. Those with coal yards indicated that they sell each sack for R50. This means 1.5 tonne of coal generates about R1,500 resulting in a profit of R650. When asked if it was difficult to find customers as women, they said no because they are able to provide sell coal at a credit particularly to women who depend on social grant. They would come to them to coal with the agreement that they will pay month end. One miner said that “whether a customer has cash or needs credit, I always sell to them”. Depending on the demand, some of the miners said that they make about R2,000 in two days during winter.

5.2.5. Benefits of participation

The benefits of participating in ASM encompassed the ability to provide and take care of ones’ family and needs as well as financial independence. The following submissions were extracted from the discussion.

5.2.6. Challenges facing women in ASM and proposed areas of intervention

The main challenge that women have to deal with is access to the mine. While some male miners do not have a problem with women working underground, some deny them access. In addition to the above-mentioned rules that affect participation in ASM, some male miners that do not want to see them underground because they are “simply women”. During the discussion, one miner expressed that despite both men and women having the same struggle to feed their families, some of them are denying them an opportunity to make a living.

The other challenge that was raised was having to travel long distances by foot to the ASM sites, which are located a few kilometres from the community. As noted, the miners have to pay for transport to and from the mine. They also shared that the working areas are normally flooded and because of lack of equipment, they at times have to work in flooded areas which is not safe. The lack of facilities, specifically bathroom is an issue. They have to return to surface to relief themselves. They also have to bring water to drink and wash at the end of their shift.

There are also health and safety risks associated with working in coal mining. The major concern is the dust that is generated during mining. The miners indicated that they have to drink milk afterwards and this assist with clearing chests and lungs. There have been incidences where working areas collapsed, and miners were injured. When asked if they have been injured, they said no female miners have been injured. This is because they follow instructions. When they are told that it is not safe to go underground, or work in certain areas, they follow the instructions. Also, when there are accidents, they are normally the first ones to be assisted to leave the mine. When asked if they are not scared to return to work after an accident, one miner said:

“It is scary of course. We do not go for a few days because of trauma but eventually your mind will calm down and you try not to think about it. God will be with us. Sooner than later, we even forget about the tragedy. After a while, we remind ourselves but then again it is part of life”.

Another challenge that the miners are faced with is police coming to close the sites because they are working without mining licenses. When they come, they confiscate...
their equipment. They also take coal from fines/tickets for heavy loads, and this is normally between R300 and R500. When talking about this, one miner said:

“It’s hard to let go of all you have worked for including your equipment. It pushes one back because you will have to purchase tools first. Sometimes you don’t even have the money which means now you must borrow. Again, if you decide to borrow tools, you must pay for them”.

The miners also mentioned that they are not receiving any support and that they are working on their own. They are not part of any group or initiatives that are prompting the formalisation of ASM in the country. At the time of the public consultations for the new ASM policy, they said they saw male miners attending meetings. They were not invited to the meetings, and they thought that the gatherings are only for men. Some of them said that some of the male miners are their partners and brothers and they stay in the same house, and they did not share any information with them. The focus group discussion was actually the first gathering where female miners set together.

Against the challenges that they are facing, the main intervention that was highlighted most miners is for government to give them an opportunity to make a living. The following were expressed during the discussion:

“We would like our government to give us an opportunity as women not to be denied access in a number of things because we are denied access in many things. Here it is clear that we can make a living, so we wish for the government to look after us so we can put bread on the table”. “We want to be assisted by government, have you seen food prices, fish oil? Food is expensive. Now taxi fares are going up from here to town. So, we are pleading with government. As women, we are always denied opportunities. Men get opportunities but abandoned their families, so as women we must do everything. Sometimes husbands tell their wives to stay at home as housewives but that is not what we want. We want to work for ourselves. When kids get sick, fathers will complain about not having money for healthcare, but we are still not given opportunities to work” “I hope we get opportunities. Now it gets difficult as our kids grow older because grant money will be terminated once they reach 18 years of age, the money is terminated. My child is 18 years and still in school, how will we now fund his studies? How will we pay school fees? Buy school uniform? It means now everything is halted”.

When asked if alternative employment is given to them, would they accept it or not; there were mixed responses with some miners saying that they are looking for other employment. Some indicated that they are comfortable in ASM and only want government to assist with the challenges that they are experiencing on site. The former group said they will only accept jobs that are permanent because they are used to working full time. They also indicated that they would accept any job even if it is cleaning because they are not educated. Some miners said that they cannot communicate in English and so they will take any permanent job that has pension benefits. Some miners highlighted that even if they accept government’s job, they will not leave coal mining. They will go to the sites on weekend to make extra income. Lastly, those that said that they will not take any job expressed that there is “money in mining”. Government should assist them with mining licenses, transport to the mine, facilities (i.e., water and electricity), and personal and protective equipment (PPE).

5.3. Burgersfort
5.3.1. Insights into the profile of female miners

All three miners are South Africans and are aged between 28 and 36 years (i.e., two of them are 36 years old). They have only completed grade 11 schooling. All three miners were not working before moving into ASM. They moved into ASM in 2022. All three miners are breadwinners and support four people. Apart from the income generated in chrome mining, they also depend on a social grant of R480 that is paid per child on a monthly basis.

5.3.2. Factors supporting the participation of women in ASM

As the case in other sites, participation in ASM was prompted by lack of employment opportunities. When asked if they were looking for employment, one miner expressed:

“Where will we even start to look, what is the use? People find employment through people who know them. We do apply, but it is useless”

The need to provide for oneself was also pointed as a reason that led to them moving into ASM. In particular, it was highlighted that ASM allows them to make a living without asking anyone. One miner indicated that she used to sell food on ASM sites when they were under the operation of “investors”. When the operations were closed by government, she had no income and decided to work as an artisanal miner. She has been involved in chrome mining since January 2022. Both her and her husband are working in chrome mining.
5.3.3. Overview of ASM and value chain activities

As noted, ASM is taking place in abandoned pits that are found within communities. Each pit has been allocated to a group of miners. In the site visited, there were 15 miners working alongside each other. Of the 15 miners, 8 were female. One of the rules on the sites is that miners must work in the sites that they have been allocated. If you are a “new” miner, you are required to seek permission from the existing groups to work. You can either be added to the existing groups or be allocated a site to work from. Mining takes place on the surface, although there are sites where underground mining is practiced. Figure 12 shows one of the abandoned pits where ASM is taking place. One can see the size of extraction and amount of waste generated using heavy equipment. These pits are found within communities in Burgersfort, some in other peoples’ backyards.

Figure 13 shows the chrome mining value chain which has been divided into two parts. The extraction of chrome includes the removal of the overburden to expose the chrome. Once accessed, chrome is extracted. The miners use mainly chisels and hammers to remove both the waste rock and the chrome. Because of the hardness of the host rock, some miners use jackhammers, which they hire out for R100 per hour. A jackhammer is used to break both the waste rock and chrome. Depending on the area being mined, the miners indicated that a jackhammer allows them to produce 10 wheelbarrows a day. This compares to 3 loads when using a chisel and hammer.

Figure 14 shows chrome belt that has been exposed. This is then chipped off using a chisel and hammer.

Figure 15 shows chrome that has been stockpiled. It is moved from the pit to the stockpile area using buckets or wheelbarrows.

Each site/group has four leaders who are tasked with managing the working relationships as well as communicating with the buyers to ensure that all the miners within the group benefit from a sale. It was noted that, from the four leaders, two are female. Chrome is sold to local buyers who are known to the miners. When they come to the sites, they usually buy in bulk, usually 50 loads of wheelbarrows. These are then distributed amongst the miners to ensure that everyone makes a sale and has some money to take home. Chrome is sold per wheelbarrow and the miners charge
R100. This is a standard price that has been agreed by the miners. When asked if the distribution of the sale is normally done in a fair manner, the miners said that they have not been disadvantaged. According to the miners, local buyers transport the chrome to Steelpoort (i.e., this is a town located 29km from Burgersfort) where it is sold to bulk buyers who then export it to China.

5.3.4. Involvement of women across the ASM value chain

While there are groupings within mining sites, the miners work as individuals. Both male and female miners perform the same activities across the value chain. They start working at 08:00 and finishes around 17:00. They come from different villages and travel by foot to the mining site. During the site visit, it took us almost an hour to access the site using a car. When asked if they are not scared of walking in the mountains, they said no and that there have not been incidences. They are used to travelling alone at times. According to the miners, level of crime in the community has declined because of chrome mining. One miner said that “people work for themselves. You can’t go steal when you have money”.

In terms of their daily schedule, one miner said that she leaves home around 05:45. She wakes up at 05:15 to prepare children for school. Once they are ready, she cleans the house and leaves for work. After work, she has to cook and normally goes to bed at 21:00. They work Monday to Sunday, and only takes day off to do chores and/or run errands. When asked if their family does not have a problem with them working the whole week, one miner said “they know work comes first. If I don’t go to work, where will I get the money”. The miners also indicated that they do not work during rainy days because the pits would be flooded. They do not have any equipment and have to wait for the water to evaporate. With average temperatures of about 29°C, it normally takes a few days for the miners to resume work. There, however, has been heavy rains that resulted in them ceasing work for prolonged periods.

When asked if there are any rules governing their work, they said that miners are required to work in the sites that they have been allocated. No underground mining is allowed at their mining site. The miners are not allowed to work night shifts. All these rules apply to all miners and hence are found not to be discriminatory against women. Through elected leaders, female miners have a platform that they can use to raise concerns and issues. They are also represented when buyers come and are of the view that allocation of sale is done in a fair manner. The also shared that they have a good working relationship with male miners.

5.3.5. Benefits of participation

As highlighted by other miners, participation in ASM has enabled them to provide for themselves and their families. One miner mentioned that that she is able to “society” (i.e., this is a form of insurance that community members make payments to provide funeral cover in the event of a death of a family member). The following was expressed by one miner:

“We can now afford to pay the ‘society’. We no longer have to beg for maize meal. Before coming here, there was no sugar in my household, but I am going to buy it on the way home. So, I can do things for myself”.

When asked if they will accept alternative employment from government resulting in them moving from ASM, all three miners said yes because they will be receiving a guaranteed salary at the end of the month. And so, they will be able to take care of their children. The shared that they will consider any type of employment, however the salary must match or exceed the income that they are generating from chrome mining. One miner said:

“I can’t be going to work for R30 whilst I am used to working for R200 per day. So, we have to have an agreement first, but we need jobs”.

5.3.6. Challenges facing women in ASM and proposed areas of intervention

The miners shared that the removal of the overburden material is strenuous and at
times, they cannot afford to hire a jackhammer and have to resort to using chisel and hammer. When asked about the type of assistance that they need, they said they need machinery that they can use to remove waste. They also need equipment that they can use to drain the water from pit during rainy seasons. When asked if there are any safety risks on the site, they said they have not had incidences. They are only removing thechrome that has been exposed. They have heard about a number of incidences where underground mining is taking place.

With increasing government’s sting operations, they are struggling to sell the chrome. At the time of visit, they said that they have been working for four weeks without any buyers coming. In the past, buyers used to come on a daily basis to buy chrome. The other challenge that they used to face was buyers not keeping to arrangements where miners would sell their chrome in agreement that they would be paid once the buyers sell the chrome in Steelpoort. One miner shared that she once sold chrome that was worth R7,000 and only received R3,500 from the buyer. Because of this, miners sell chrome with cash at hand.

When asked if they can sell directly to bulk buyers (i.e., in Steelpoort), they said it is difficult and requires money. This is because one needs to hire a tractor loader backhoe (TLB) and a truck which costs R3,000 and R6,000 respectively. The truck can carry 150 loads of wheelbarrow. One also need bribe money to pay off the police while transporting the chrome. When asked how much is bribe, they said you need at least R2,000. In total, miners will need to close to R15,000. It was noted that buyers get about R57,000 from selling those loads. The sale price depends on the grade of the chrome. The miners mine low-grade chrome (38% Cr2O3) which is sold at R1,300 per tonne. High grade ore (i.e., 42-43% Cr2O3) is sold at R2,000 per tonne. When asked how they know that there are different grades, they said that buyers once took the samples for testing. Even with them knowing that the quality differs, the miners sell their chrome at a standard price (i.e., R100 per wheelbarrow). Summing the individual costs, buyers make a profit of about R27,000. This equates to about 47% of the revenue that is generated.

Another issue that the miners highlighted is the inability to report cases to the police. There have been cases of theft where their stockpiled material was stolen. They said if one goes to the police station, he or she will be arrested for illegal mining.

5.4. Klerksdorp
5.4.1. Insights into the profile of female miners

The miners are aged between 23 and 55 years. Young women who are below the age of 35 years account 30% of the miners. The other 60% split equally is shared by miners who are between the ages of 36 to 40 years and above the age of 45 years. In terms of highest level of education, most of the miners (44%) fall under the category of grade 5 to 8. Only 22% of the miners have completed matric. Foreign nationals, all from Lesotho were more than South Africans and accounted 70% of the total participants. All the miners have dependants, and all except one miner are breadwinners. About 60% of the miners have between 1 and 3 dependants. Half of the miners were not working prior to engaging in ASM. Of those that were employed, three were working as domestic workers. One miner was employed at an internet café and the other one was a sales agent. The level of experience of the miners differs, with most miners having joined ASM in 2022. Several miners have been working in the sector for more than 3 years.

5.4.2. Factors supporting the participation of women in ASM

Unemployment coupled poverty and the need to provide for one’s family were highlighted as the main reasons that led to the miners engaging in gold mining. One miner shared that she used to struggle with food and electricity, and she decided to come to ASM to try and make money. Another miner spoke about lack of economic opportunities even for those who have completed matric. She further spoke about challenges facing mining affected communities that are drawing people into ASM. This is what she said:

“I decided to come and work here because I passed my grade 12. With only grade 12 qualification, there are little to no jobs. Even on the social and labour plan for large-scale mining operations, there is no development in the community. There are no jobs, internships, learnership, scholarships or bursaries, there is none, no opportunity. I started in 2016, I don’t knock on doors for work, I am self-employed”.

5.4.3. Overview of ASM and value chain activities

There are three primary gold deposits that can be exploited, and these are, alluvial deposits, eluvial deposits (i.e., weathered rock or soil) and hard rock deposits. Most of the activities are mining eluvial and hard rock deposits. At the site visited, miners were working with loose sediments. Figures 16 shows ASM sites where mining is taking place. The type of material being mined can be seen on the figures. The miners are also working tailings from a mine dump (i.e., see the “white” material). As seen on the figure, miners are working alongside each other.

Figure 16 shows the gold mining value chain, which has been divided into four parts.
The first part involves prospecting of gold. A portion of land is cleared, and a soil sample is taken. Using panning, the miners check if the sample contains gold or not. Panning is a gravity concentration method where heavy and light particles are separated from each other using water. The miners use blue “makarapa” (i.e., hard hat) to concentrate gold within the sample. If mineable gold is found, the miners proceed to set up their operation at the particular site. If there is no indication of gold, more sampling is done on the same area and in other areas until they find gold-bearing material.

Once settled on an area, mining starts, and it involves digging, stockpiling, and loading material into buckets. Once sufficient material has been stockpiled, processing takes place Figure 19 shows a group of miners processing the ore material. First, the ore is washed (i.e., concentrated) using sluicing. As shown on the figure, a sluice is an angled platform that has been constructed from soil and rocks. According to Environmental Protection Agency (2022)21, sluices are usually at a slope of between 5 to 15 degrees. The floor of the sluice is lined with plastic material and several towels on top. At the higher end of the sluice is a perforated basin and bread tray (i.e., both are serving as screens). At the lower end of the sluice, is a pond in which the slurry material is deposited.

The allocation of tasks can be seen on the figure. On one hand, there is a miner that takes a portion of material from the stockpile and place it in the basin. On the other hand, one miner draws water with a bucket and pour it in the basin. In the middle, there is another miner who stirs the mix to facilitate separation. As the material flows down the sluice, heavy material (i.e., gold particles) are trapped on the towels. The slurry is then directed into the pond by another miner with a shovel (i.e., as shown on the figure). When sufficient material has been washed, the towels are removed and washed in water.

The concentrate is then upgraded using panning. This is followed by concentration amalgamation (i.e., mercury is added to the gold concentrate). The miners indicated that they receive mercury for free from buyers. This is in agreement that they will sell the gold to them. The amalgamation process takes place on site, however away from the mining site, in hiding in the bushes. Once the miners have their mercury-gold amalgam, they take it to the buyers for sale. It was mentioned that smelting is done by the buyers. They heat the amalgam with a burning torch to release gold from mercury. From there, the gold doré is weighed, and the price given.

The miners do not pay for smelting and no fee is deducted from the sale price. Gold is sold for R650 or R700 per gram. The miners indicated that they are able to sell gold every day – they do not struggle with buyers. The issue is the shortage of legitimate buyers who would give them fair prices for their gold. They shared that they have access to buyers including women, however they cannot disclose their names.

5.4.4 Involvement of women across the ASM value chain

Coming into ASM, they saw men working in ASM sites and they followed them. Most of the women indicated that they were taught by men to conduct mining activities. None of them had prior experience and/or exposure in mining. It was shared that male miners did not have issues with women coming to the sites to work alongside them. The working arrangements on site differ, with some miners working in groups (i.e., usually between 4 to 6) and others on their own. The composition of the groups also differs, with some groups having equal number of men and women, and some being majority men.

Both men and women carry out the same duties and activities. Those working in mixed groups, alternate between tasks. One miner even said, “when he puts the pick down, I use it, when he puts the shovel down, I use it and so forth”. The miners work every day and would take day off either on Saturday or Sunday. They start working at different
times. Most indicated that they arrive at the site between 07:00 and 09:00. Their daily routine starts with them preparing kids for school and only then, they would leave to come to work. Most of them stay in Margaret village, that is located less that 1 km from the mining site. They indicated that that knock off time differs – as they normally leave work once they have finished their work on the day. The production differs, however, on a good day, they can produce between 3 to 4 grams of gold. As noted, one gram of gold is about R600/R700. The sales are shared equally even those working with men. There are two shifts and all women indicated that they only work during the day. This was the reason provided by one miner:

We are afraid of working night shift because we know those who work night shifts don’t work the way we do. The men who work night shift will not treat us well because those who we are familiar with will not be around”.

They indicated that they have a good working relationship with the male miners that they work with. When asked if they are rules that they need to adhere to, they said that, as female miners, they have agreed that they will dress accordingly. Women are required to wear long pants (i.e., inside) with dresses on top. This is to ensure that when they bend, they are covered, and nothing is showing. They said there have not been any incidences where women have been attacked. The other rule is that the miners should walk together and that female miners must not be left alone at the ASM site. This was shared during the discussion:

“The men look after us, we walk together with them. They wait for use even though they are already done with their work especially when the sun is about to set. It is something that has been arranged that when women who are still busy working and it’s getting late, there should be men who will remain and look after them”.

According to the KOSH Artisanal Mining Primary Cooperative (2022), there are between 70 and 80 miners who are part of the association. Women account about 30% of the total miners. The KOSH association was launched in July 2022, and this is part of organising miners in support of the formalisation of the ASM sector in the country. It was shared that after the launch, more women (i.e., estimated around 50) expressed interest in joining the association. However, because of the challenges that the miners are dealing with around illegality and the need to ensure safety and security of the miners, they have decided to limit the number of miners that affiliated to them.

5.4.5. Benefits of participation

The benefits of participating in ASM includes obtaining remuneration that matches level of effort. This was a response from one miner when asked about benefits of ASM.

“You reap what you sow, unlike there where you get paid a constant amount irrespective of how much you work, I earn what I actually worked for”.

Another miner spoke about the flexibility that comes with working in ASM and being able to make own decision that benefit herself. This is what she said:

“If one is not feeling well, you stay at home and take care of yourself. No one is here to shout me. I am losing yes, but my health comes first. I will return when I am better and will earn for what I have worked for on the day I returned and to be that is a benefit”.

One miner who used to work at an internet café in town indicated that working close to home has enabled her to save money. She is able to walk to work – she shared that:

“I used to travel to town everyday which meant I needed transport and lunch money. Now it’s easy because I walk to and back from work. I used to spend R52 a day on transport going to work in town, and I worked Monday to Saturday”.

Her transport cost came to R312 per week and R1,240 on a monthly basis. Working as an artisanal miner has afforded her flexibility in that she can come to work any time. Most of the miners spoke about how ASM has enabled them to take care and provide for their families. The following are submissions from the discussions:

“It has changed my life. I stay with my mother, so I am able to do things for her. Anything that I want to do, I can do it with the type of work that I do”.

“I started working here this year. Working here has helped me a lot because I have a child who is still in school...She needs R50 a day for transport and lunch money, so this job allows me to afford that”.

“I pay R500 [insurance]. Back then I used to skip some months without paying but now I pay every month. Even the society formed by women in the community, I pay that also, on time”.

“I used to be a cleaner at a shop. Ever since I started working here, my life has changed a lot. I can afford to take care of my child and put food on the table. I love what I do, and I don’t see myself leaving it. I started working here
in 2011”.

“I was a domestic worker. My life changed because now I can put food on the table, I can buy my children some clothing and they receive lunch money, which is all stress free”.

“I used to be a domestic worker. I used to earn R60 a day and did not go every day. On the day that I would go to work, I would do all the chores such as cleaning, laundry, and ironing. But since coming here, my children have a better life. They have grown, they have food to eat and clothes to wear”.

When asked if they would accept alternative employment, all miners said they will reject the offer. This is coming from the view that government will probably offer temporary employment and when the contract ends, they will be left vulnerable and in debt. This was raised during the discussion, and was supported by the miners:

“The only thing government can do is to legalise artisanal mining so that we can work by the law. If we have to pay tax, we will”.

5.4.6. Challenges facing women in ASM and proposed areas of intervention

The challenges raised by the miners include police brutality. They shared that when if there are miners that are arrested, all of them suffer because they work in groups. Police often take their tools, and they normally have to start afresh. Since the launch of the KOSH artisanal miners’ association, they have been able to talk to the police and explain that they are only trying to make a living. Since the incident that happened in Krugersdorp, there has been influx of people coming into ASM sites in Stiffontein. One of the concerns that the miners have is that the “new” miners wear balaclavas to hide their faces/identity. They also mentioned that these miners carry guns. They work during the night and there have been cases of theft with tools going missing and some miners have found their stockpile missing. In support of the formalisation of ASM in the country, the KOSH miners are trying to build relationship with Harmony Gold Mine, which has ownership of mineral rights where the miners are working. This was mentioned during the discussion:

“Because we are close to the plant, we know that side we don’t go as it will cause problems, but now they do as they please. It tempers with the relationship we want to build with large-scale mining. We are afraid of them,

but we have a problem of encroachment. And again, if we do have a title deed for this land, how can we get rid of them if we are regarded as illegal. So, both groups are regarded as one. Even when the police arrive, they can’t differentiate”.

The miners spoke about difficulties in the police and Harmony distinguishing between “genuine” miners and those that are involved in criminal activities. This was also noted in the discussion regarding the concern:

“Security is a problem as you can see anyone can enter and exit. The ones we try to avoid also come, no one can do anything. Now it disrupts our bigger plan, as you can see there are cameras. This is to prove that we show up every day and build a personality for ourselves, what kind of miners we are, we wear reflectors, hard hats. We are an organisation and not just individuals. So, these temper with that”.

The other challenges that were raised were lack of facilities with female miners having to relieve themselves in the bush. They have to walk deep in the bush to avoid being seen. In doing that, they have to make sure that they are not far from where the others are working. Access to water for processing is also a challenge. The miners are currently drawing water from a borehole and this water is polluted, coming from underground workings. When asked about the dangers of mercury, they shared that they know that it is dangerous however, do not have much information. In responding to this question, one miner said, “we need knowledge so that we can be empowered”. The areas of intervention include the need for legitimate markets. They also need security and for ASM sites to be restricted to the miners that are part of the KOSH miners’ association. They also need mining land. They indicated that most of the land that is available has been allocated to large-scale mining operations. They also need PPE, equipment as well as training workshops.
6. OVERALL FINDINGS AND INSIGHTS

The objective of the study was to build evidence on women in ASM and increase understanding of their participation and roles in the sector. The following is a synthesis of the insights obtained from the four case studies.

Profile of women in ASM

The combined demographics are summarised in Appendix B. There is no particular age group in terms of the women’s participation in ASM. Women of all ages are found to be working in the sector. There is a considerable percentage of young women as well as those in order age categories. The majority of women engaging in ASM have went as far as middle school education (i.e., grade 7 to 11). Few of the miners have matric and higher education/qualification. Majority are South Africans, however, there seem to be a sizeable number of women coming from other countries working in ASM, in particular gold mining. Most of the women have dependants and are breadwinners. The majority of the women have between 1 and 3 dependants, with some having between 4 and 6 dependants. Most of the women were not working before moving into ASM, and those who were employed were working mostly as domestic workers. Majority of the women started working in ASM this year, with a few having been in the sector for more than 2 years.

Factors underpinning the participation of women in ASM

Some of the factors that lead to the participation of women in ASM are not unique. In particular, high levels of poverty and unemployment as well as lack of economic opportunities particularly in mining communities. However, as noted, women are the most vulnerable to the socioeconomic ills in the country. Level of poverty, unemployment and inequality are the highest amongst women. More so, women have a low probability of finding employment. As noted in the demographics, more than 50% of the women were not working prior to engaging in ASM activities. The position of women within households as breadwinners also requires them to be economically active to be able to provide for their families.

Because of low education levels, some of the women found themselves working as domestic workers. As noted by Deedat (2022:22), domestic workers are amongst the lowest paying occupations in the country characterised by high levels of vulnerability, exploitation, and precarious working conditions. The International Labour Organisation (2019) highlights that most of domestic workers are employed without clear terms of employment, are mostly unregistered and employers often do not adhere to required regulations. The same assessment has been made in South Africa, with government having implemented the National Minimum Wage Act in 2018. In terms of the law, the minimum wage for domestic workers is R23.19 per hour. If one is working 40-hours a week, this should amount to about R4,000 per month. According to the Department of Employment and Labour (2022), employers are not complying with the Act and are still underpaying domestic workers. Two of the miners shared that they were earning between R1,900 and R2,500 per month. Because of the low remuneration from domestic work, they decided to move into ASM.

The other motivation factors were the need to be financially independent. Several women remarked they wanted to be in position where they are able to provide for their families themselves. The need for skills and experience and prospects thereof, in terms of enabling them to find employment in large-scale mining also came out as one of the drivers behind the participation of women in ASM.

Amongst the questions posed to the miners was if they would accept alternative employment if offered by government. The responses from the discussion were mixed with some saying they would and other answered otherwise. Those that will accept the offer indicated that the job must be permanent, and they must work full time. The other condition is that the salary that they get must match and/or exceed the income generated from ASM. Against their education levels and work experiences, they are prepared to consider any type of employment. The other group of miners have settled in ASM, and their main call is for government to assist with the challenges that they are facing.

Mapping roles and involvement of women in ASM

This study provided contrary insights in terms of the roles that women play in ASM. From
all four sites, it was found that female miners were involved in the whole mining value across different commodities (i.e., as covered). The different working arrangements were noted in the case study sites. Some of the female miners are working in groups that are mixed (i.e., both male and female), and some are working as individuals. Working arrangements are a factor of the activities that need to be completed and manpower that is required. It was found that female miners perform the same tasks as their male counterparts across the value chain. They have access to the markets – with direct links to buyers or customers. In order to prevent conflicts amongst miners, standard selling prices have been agreed upon making sure that female miners are not disadvantaged. In the case of Kimberley, the female miners were found to understand the diamond tendering process, which is designed such that they have the prerogative to accept or decline the price that is given.

While there are positive insights into the involvement of women in ASM, the extent of participation is affected by several factors. Amongst the key restrictions are the beliefs that are imposed to women which result in them being unable to work on certain days. There are also safety and security issues which limit women to only working during day shifts. Household responsibilities and unpaid care work also affects participation in that women can only come to work at certain times after preparing kids for school and also doing house chores. Generally, some of the activities are physically demanding and labour intensive affecting the productivity of female miners and outputs thereof compared to male counterparts.

In terms of the working environment, female miners generally have a good working relationship with male miners. Most of them indicated that they taught them how to mine. As noted, some female miners are working together with them in groups, and some alongside them in ASM sites. While this is the case, there are elements of discrimination against women, with some male miners still not supporting the participation of women in ASM. This came out in Ermelo where ASM is taking place underground. While some male miners provide assistance to women working in ASM ensuring their safety, female miners have to guard themselves. They prefer to work with male miners that they are know and are familiar with.

They have to dress accordingly so that they do not attract unwanted attention. The lack of facilities, specifically, toilets make them vulnerable on site. The incidences of GBV were raised in Kimberley. The miners shared that there have been rape cases and incidences where women were violated. The rise in GBV is attributed to the lack of miners’ organisation as was the case when they were granted mining permits. The conflicts and infighting amongst the miners have created an unsafe environment both at the camp and in ASM sites, and these have left women, particularly those that are staying alone vulnerable and at risk of being violated.

**Benefits of ASM**

Across all four sites, the main benefit leveraged from ASM is the ability to provide for their families. ASM has also given the miners financial independence, which comes with the ability to make own decisions. Those that have worked as domestic workers are able to see change in their lives as they are able to cover household expenses and support their families. The flexibility that comes with ASM also enables them to take care of their health.

**Challenges facing women in ASM and areas of intervention**

Amongst the challenges raised by the miners comes from their interaction with the police. There are concerns regarding police brutality and them confiscating their equipment during raids. Because they are working without the required licenses, they are unable to report cases of the police because they will be arrested for illegal mining. It is only in Kimberley where the miners are able to report cases to the police. Another concern is the violence that is taking place in and around ASM sites posing safety and security risks to them. Access to working sites or mining land where they are free to work is another challenge. The other challenges relate to the working conditions and lack of equipment and machinery, facilities, and PPE. The miners also spoke about not being recognised and being provided with opportunities to make a living as artisanal miners. The proposed intervention coming from the sites include the need to address the violence in ASM and incidences that are not only affecting communities, large-scale mining operations but also those that are engaging in the sector’s activities to solely make a living. There is a need for mining licenses as well as mining land so that female miners can work freely. The other intervention are access to legitimate markets, machinery and equipment, facilities and services to support mining, PPE and training.
7. FORMALISATION THROUGH THE GENDER LENS

On 26 April 2021, the DMRE published the Draft Artisanal and Small-Scale Mining Policy. The Bills comes at the back of increasing calls for government to manage ASM activities in the country because of the positive and negative impacts that are seen in the sector. The positive impacts marked as the contribution of the sector to job creation, and poverty alleviation. There are also benefits coming from the participation of women, youth and retrenched mineworkers who find themselves without employment. The negative impacts that have been raised include the concerns on health and safety, criminal activities linked to ASM and risks to large-scale mining operations in the country. While there are divergent views on how the government should manage the ASM sector, the DMRE developed the ASM policy framework, and its objective is to create a formalised ASM sector that can operate optimally in a sustainable manner while contributing to the economy through taxes and royalties and job creation.

The second objective of the policy is for the country to eliminate illegal mining. Amongst the aspects that are covered in the proposed policy is licensing of ASM activities. This comes at the recognition that current licencing system under the Minerals and Petroleum Resources Development Act (MPRDA) is not accommodative of most of the ASM activities particularly in terms of the requirements of obtaining a mining licence. While the policy recognises the need to prioritise women and vulnerable groups who are involved in ASM, it is silent on how this will be actioned.
8. CONCLUDING REMARKS

Amongst the main findings of the study was the importance of ASM in enabling women to support their families. As highlighted, a sizeable number of women has settled in the sector with ASM being their main source of livelihood. To advance the findings of this work, the following are proposed:

• Similar research must be extended to other ASM sites to increase the evidence base on the participation of women in ASM. This research can be extended to male miners in order to provide a base of contrasting/comparing the involvement of female and male miners and dynamics thereof.

• When conducting the research, one of the questions that came was who are women in ASM? The focus of the study was on women who are engaging in ASM activities. In the case of Kimberley, there are women who are staying at the camps who interact with the miners and ASM and are affected by the sector’s activities. ASM also affects communities where its activities are taking place, and as highlighted women are most affected by risks emanating from illegal mining. Against these insights, there is need for research that brings forth the perspectives of women who are interacting with ASM activities and those who are directly involved.

• The other area of research may encompass the interrogation of why women leave ASM, and this comes from the finding that most of the women that took part in the study have less than 2 years’ experience, with most of them having started working in ASM this year. It is a question of the risks associated with ASM that lead to high turnover, or was the move to ASM temporary? On the other side, there is a question on what is keeping women who have been working in the sector for several years.
APPENDIX A: DEMOGRAPHICS OF THE MINERS

**Age distribution**

- 18 - 25: 15%
- 26 - 35: 20%
- 36 - 45: 25%
- 46 - 55: 30%

**Levels of education**

- Primary school (grade 1 to 6): 5%
- Middle school (grade 7 to 11): 15%
- Matric: 20%
- Further education: 5%

**Education profile**
APPENDIX A: DEMOGRAPHICS OF THE MINERS

Nationality
- South African: 86%
- Lesotho: 14%
APPENDIX A: DEMOGRAPHICS OF THE MINERS

Where you employed before ASM?

- Yes
- No

47%
53%
APPENDIX A: DEMOGRAPHICS OF THE MINERS

How many dependants do you have?
- 1 - 3 dependants (56%)
- 4 - 6 dependants (35%)
- More than 6 dependants (9%)
APPENDIX A: DEMOGRAPHICS OF THE MINERS

Are you a breadwinner?
- Yes
- No

96% Yes
4% No
REFERENCES

APPENDIX A: DEMOGRAPHICS OF THE MINERS

Do you have other sources of income?
- Yes
- No

47% 53%
APPENDIX A: DEMOGRAPHICS OF THE MINERS

When did you start working in ASM?

<table>
<thead>
<tr>
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<th>Count</th>
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<tr>
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</tr>
<tr>
<td>2011 - 2013</td>
<td></td>
</tr>
<tr>
<td>2014 - 2016</td>
<td></td>
</tr>
<tr>
<td>2017 - 2019</td>
<td></td>
</tr>
<tr>
<td>2020 - 2022</td>
<td>80</td>
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How many years have you been working in ASM?

<table>
<thead>
<tr>
<th>Years of experience</th>
<th>Count</th>
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<tbody>
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<td>Less than 2 years</td>
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<tr>
<td>3 - 5 years</td>
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<td>6 - 8 years</td>
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<tr>
<td>9 - 11 years</td>
<td></td>
</tr>
<tr>
<td>More than 11 years</td>
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</tr>
</tbody>
</table>
Chuma, M (2021). Reframing artisanal and small-scale gold mining as a livelihood strategy and the role of law in constituting livelihood assets (PhD thesis, University of the Witwatersrand).

Munakamwe, J (2015). The interface between the legal and illegal mining processes: unpacking the value chain of illegally mined gold. 10th GLU Conference, Precarious work: Organizing the “bottom” of the supply chain.

A representative of Bathopele Cooperative is licensed and permitted to sell diamonds in accordance with the requirements stipulated by the South African Diamond and Precious Metal Regulator as governed by the Diamonds Act No. 56 of 1986, as amended.
Goedemoed Mining Primary Cooperative was the second umbrella cooperative that miners belong to.
Available: https://www.epa.gov/international-cooperation/artisanal-and-small-scale-gold-mining-without-mercury#:~:text=sluicing%20have%20completed.-,Sluicing,5%20to%2015%20degree%20angle.