

Implications of illegal mining in Gauteng Province

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ABSTRACT: *Illegal mining remains one of the growing socio-economic problems in the Republic of South Africa, particularly in Gauteng province. It is well documented and recognised that illegal mining has an array of implications and challenges. It is against this background that the Gauteng Department of Community Safety conducted a study between April to August 2016 with a view to explore the problem at hand. The study employed qualitative research methods, wherein expert interviews were used for data gathering purposes, while the thematic approach was applied to analyse data. The study reveals pertinent issues, chief amongst others include lack of an integrated strategy to address illegal mining, weak coordination between key role players, and a fragmented policing approach to illegal mining. Additionally, the study indicates that crimes such as property related crime and house burglary are among other types of crime that are associated with illegal mining activities. The study put forward several recommendations with a view to improve and strengthen illegal mining strategies. These include, enhancing collaboration and coordination among key stakeholders including police and the Department of Mineral Resources, relaxing mining legislation to promote small scale mining, as well as strengthening compliance with mining legislation.*

Keywords: *small scale mining; Artisanal mining; surface mining; underground illegal mining; levels of illegal mining;*

I. INTRODUCTION

The triple challenge of unemployment, poverty and inequality remains one of the thorniest socio-economic challenges confronting South Africa presently. It could be argued that one of the key manifestations of the above mentioned problems is illegal mining. It has been reported that illegal mining in South Africa and Gauteng in particular is on the rise (Chamber of Mines South Africa, 2016). The prevalence of illegal mining could be attributed to a number of abandoned mines in the country and in the province. For instance it has been established that there are more than 6 000 abandoned mines across South Africa, while it is further estimated that there are about 600 abandoned mines in Gauteng Province alone (Debut, 2015).

The Department of Mineral Resources (DMR) defines illegal mining as “conducting mining activities without mining rights (News 24: 26 June 2014)”. Illegal mining is an extremely dangerous undertaking as those who partake in this endeavour are often heavily armed and in possession of explosives normally used for setting traps for mine employees, security personnel and rival gangs (Chamber of Mines, 2016). Illegal mining has spurred on gang rivalry and turf wars which are on the rise because illegal mining syndicates vying and fighting for mining space (News 24, 26 June 2014). The aim of this article is to present the findings and recommendations emanating from the study undertaken by the Gauteng Department of Community Safety to explore socio-economic, intergovernmental and policing implications of illegal mining in the Gauteng Province.

II. LITERATURE REVIEW

2.2 Key definitions

2.2.1 Illegal mining concept

According to the Department of Mineral Resources (News 24, 26 June 2014) illegal mining refers to conducting mining activities without mining rights. Once granted, mining rights stipulate, among others, the duration of mining and the size of the mine. On the other hand, Dozolme (2016) defines this illicit activity as conducting mining operations without land rights, mining license, exploration or mineral transportation permit or any other document that could legitimise on-going mining operations. Furthermore, the South African Human Rights Commission (2013) defines illegal mining as unregulated artisanal mining, with those who participate in the activity commonly known as *Zama-zama* in the South African context. These definitions are consistent with existing literature on illegal mining. For instance, the 2016 Global Initiative Against Transnational Organised Crime report defines illegal mining as a blatant violation of the law, in cases where mines operate in protected areas or fail to comply with environmental, tax and labour law.

The most common denominator in the illegal mining concept is embarking on illegal mining activities without a permit or license from the Department of Mineral Resources. In contrast to these definitions, the Benchmarks Foundation (2016) asserts that illegal mining is as a result of improper closure of mining shafts, which makes it easier for illegal miners to access the abandoned mines.

2.2.2 Underground illegal mining

According to the Ghana Minerals Commission (2000), underground illegal mining is quite rife and a prominent type of illegal mining. The Commission further alludes that this method involves mining of hard rock from underground workings. The workings are mostly in old and abandoned mines accessed mainly by shafts. The fragmented gold bearing rock is carried to the surface in bags by the miners for processing. The underground method employed by small scale miners is labour intensive and also involves high risks due to the possibility of stope collapse, especially when they are poorly supported (Ghana Minerals Commission, 2000).

According to respondents, underground mining is mostly prevalent in old mining areas and abandoned or improperly closed mines. Furthermore, respondents indicated that most of the illegal miners are recruited to go underground for a three week to six month period, or even more than the said periods. This illegal activity is said to be perpetrated by mainly foreign nationals from Mozambique, Zimbabwe and Lesotho as well as former employees of mines with skills and expertise in mining (Chamber of Mines, 2016). Media reports highlight the disconcerting picture of an increasing number of deaths and accidents as a result of illegal mining. According to Boning (2015), more than 80 illegal miners died after an underground fire at a Harmony gold mine in 2009. Furthermore, in March 2012, at least 20 workers were buried alive after a rock fall hit a closed gold mine in the Gauteng province.

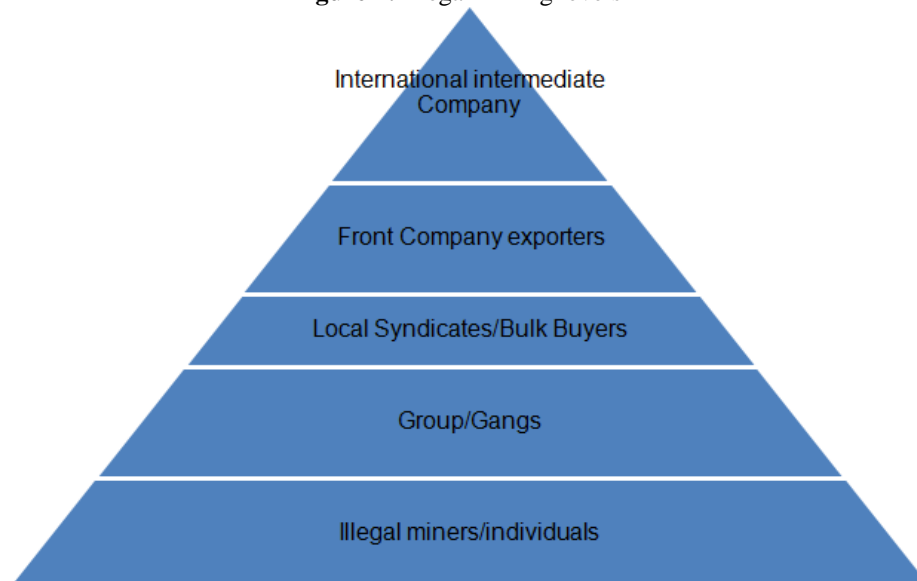
2.2.3 Surface mining

Surface mining is commonly known as open cast mining. It is a broad category of mining in which soil and rocks overlying the minerals are removed. This practice includes open-pit mining and strip mining. It is a broad category of mining in which soil and rocks overlying the minerals are removed. This practice includes open-pit mining and strip mining. The South African Human Rights Commission had a study done on unregulated surface mining activities in South Africa (South African Human Rights, 2013).

2.3 Levels of illegal miners

Study respondents indicated that there are various levels of illegal mining that exist with each level strongly connected and supported by the higher levels as illustrated in figure 1 below.

Figure 1: Illegal mining levels



Source: South African Human Rights Commission (2013)

As already indicated earlier, most of the illegal miners are said to be foreign nationals who are recruited by the handlers and syndicates who promise them monetary rewards and a better life. Figure 1 illustrates that illegal miners, that is, the “foot soldiers” who actually go underground to engage in physical digging are at the bottom end of the illegal mining value chain. The second tier in the value chain comprises of groups or gangs

who ensure the safety and security of illegal miners against rival groups. Additionally, the second tier typically involves various ethnic groups based on nationality. Furthermore, it should be noted that the groups within the second level are also responsible for recruitment and provision of basic necessities such as water, food, clothes, lighting as well as other tools used in illegal mining operations.

The next level within the value chain is made up of syndicates or bulk buyers who are primarily responsible for establishing both a local and international network of buyers and transportation. Most importantly, their primary responsibility is to ensure that the gold or diamonds are transported, delivered and distributed nationally and internationally using authentic companies.

The fourth level within the syndicate network comprises of Front Company Exporters. According to one illegal mining expert, these groups consist of well-connected syndicates who export diamonds or gold to large international syndicates. Finally, the last level is made up of International Intermediate syndicate groups who further distribute the diamonds or gold to their respective countries.

2.2.4 Small-scale mining

Small scale mining or artisanal mining (ASM) refers to informal mining activities carried out using low level technology or minimal machinery. It is estimated that more than 100 million people rely on this sector for income, mainly in developing nations. In some areas ASM takes place alongside large-scale formal mining leading to conflicts (<http://www.miningfacts.org>).

Artisanal mining is also used to describe extraction of minerals by means of labor-intensive methods, using basic tools such as picks, shovels and basins or somewhat mechanised means using heavy machinery but only on a small scale. It is usually undertaken by individuals, groups, families, or cooperatives with minimal or no mechanisation, often informally and or illegally. Small scale mining occurs all over the world and it is widespread especially in developing African countries (Dorner et al., 2012:7).

III. RESEARCH METHODOLOGY

The study employed the qualitative research method, while semi structured interviews with experts in mining and law enforcement were used to collect data. Respondents of the study included officials from the Department of Mineral Resources (DMR), the Benchmarks Foundation, the Council of Scientific and Industrial Research (CSIR), the Chamber of Mines and South African Police Service (SAPS) among others. In order to make sense of data collected, it was coded and labeled for analysis.

3.1 Qualitative research

This study employed qualitative research methods. Qualitative research is a process in which research is conducted with an intention to transform the world. Research is conducted in the field and it allows direct interaction with the people being studied in their context. The researchers collect data themselves by analysing documents, observing behaviour or interviewing participants (Creswell 2007). A qualitative researcher interprets what is seen, heard and understood. This must be seen in light of the researcher's background, history, context and prior understanding. The researcher tries to develop a complex picture of the problem or issue by reporting multiple perspectives and identifying multiple factors involved (Creswell 2007: 37). This research method was preferred because it enables the researcher to explain the phenomenon of illegal mining in detail, given the research objectives and problem statement of this study. This information is key to inform future interventions and strategies to address illegal mining in the province.

3.2 Data Collection

The researcher utilised semi-structured interviews to collect data for this study. A semi-structured interview is a qualitative data collection strategy in which the researcher poses and probes respondents about a series of planned open-ended questions using an interview guide developed beforehand. The interview guide entailed specific worded questions (Given 2008).

3.3 Sampling procedure

The researcher employed purposeful sampling to select respondents for the purpose of collecting data for the study. A purposeful sampling strategy was selected to fit the purpose of the study, resources available and the constraints being faced by the researcher during the execution of the study (Patton 1990 cited in Emmel 2013). In view of the topic under investigation, the researcher has employed an expert interview approach. An expert interview is when the interviewee is an expert in his or her area of study. This type of interview can be one-on-one, or held with a large group. It can be formal or informal and held over the telephone, by email, or in person. An expert interview is an exploratory research technique used to gather specific information, known as primary data, in order to solve a particular problem (Tougas 2008).

In this study, experts in the area under investigation were interviewed. These included officials from the Department of Mineral Resources, the Benchmarks Foundation, the Council of Scientific and Industrial Research (CSIR), the Chamber of Mines, the Gauteng Department of Community Safety as well as members of South African Police Service (SAPS). In addition, the researcher employed secondary data methods where the existing literature and information was reviewed.

3.4 Data Analysis

Data has been prepared and coded, divided into small units and a label has been assigned to each unit. The researcher read field notes several times to identify that which seemed to be important. The labeling process has been informed by what was mentioned by the respondents during data collection and crafted by the researcher during the process of coding. Coding is the process of grouping evidence and labeling ideas so that they gradually show a broader viewpoint. Finally, data was presented in a discussion (Creswell & Clark 2007: 131 -132).

IV. FINDINGS

Based on the submissions of respondents which are consistent with the literature, there are a plethora of factors that could be attributed to the persistence and proliferation of illegal mining activities in South Africa, particularly Gauteng province.

4.1 Inadequate enforcement of mining legislation by the Department of Mineral Resources

The study respondents bemoaned the fact that the Department of Mineral Resources is not adequately enforcing the law and there is no consequence management for non-compliant behaviour. Additionally, the respondents highlighted that some mining companies are seriously flouting the rules and consciously defiant of legislation. One of the prerequisites for a company to acquire mining rights is technical ability and a social and labour plan; however to some extent the Department of Mineral Resources is not proactively monitoring the level of compliance. Consequently, some mining companies take advantage of the situation and remain non-compliant. The implications for sporadic monitoring are that some mining companies will cease operations without the department being aware and fail to properly close mines shafts. These issues to some extent create a conducive environment for illegal mining and community unrest as a result of unemployment due to mine closures.

4.2 Scanty legislative framework

The majority of the study participants accentuated that despite the proliferation and sustained challenges emanating from illegal mining, South Africa is yet to adopt illegal mining-specific legislation to prosecute illegal miners and syndicates involved in this unlawful activity. Currently, all issues pertaining to illegal mining are dealt with under the Mineral and Petroleum Resources Development Act (MPRDA) of 2002, which is argued, is inadequate to deal with the scourge. Consequently, the criminal justice system is disempowered and highly compromised in prosecuting as well as ensuring that illegal miners are convicted.

The MPRDA stipulates several requirements which should be complied with or addressed prior to issuing a mining license. These requirements are financial ability, technical ability and economic programme, work programme, environmental management plan as well as social and labour plan among others (Hoadley and Limpitlaw 2004). Furthermore, Hoadley and Limpitlaw (2004) state that these stringent requirements are essential, however, in some instances they perpetuate illegal mining and even discourage prospective mining companies from applying for mining rights.

4.3 Feeble crime intelligence

Central to crime prevention is effective police intelligence. One of the illegal mining experts with an extensive policing background mentioned that current policing strategies or interventions to curb illegal mining are not fruitful due to ineffective police intelligence. The respondent further asserted that the current policing approach to illegal mining is fragmented and uncoordinated as well as reactionary. As a result, these activities are gaining momentum. In light of the fact that illegal mining activities have a strong criminal element, the police should use intelligence to gather information to enable prompt response to the scourge. It was mentioned that illegal mining activities are well-orchestrated therefore police need to involve community members to gather this type of information. The information would basically include the value chain and the elaborate network of criminal activities. Also, the police should ascertain the routes used to transport the diamonds or gold and ultimate buyers and distributors. However, the situation remains unresolved due to poor policing intelligence. The respondents further warned that if the situation remains unaddressed it could escalate into a national crisis.

4.4 Criminality factor

It has been established through literature that illegal mining is an end result of unemployment (Boning, 2015). However, the current study found that there are well organised white collar crime syndicates or groups that operate within this space. According to Munamakwe (2014), the *Zama Zama's* operate as syndicates based on ethnicity or nationality. The above argument is further substantiated and supported by the study respondents, who further asserted that these ethnic groups are usually from Mozambique, Lesotho, Zimbabwe and Malawi. Challenges associated with illegal mining are further exacerbated by conflicts among these groups. It was further noted that these conflicts could result in injuries or even deaths. This finding is supported by the Mail and Guardian (29 August 2015) which indicates that a high level of violence amongst illegal miners is usually associated with gangsters and turf wars.

4.5 Implications of illegal mining activities in Gauteng province

The study found that illegal mining has not only law enforcement implications, but there are socio-economic as well as intergovernmental implications associated with this illicit activity.

4.5.1 Impact of illegal mining on policing

It has been established that illegal mining like most socio-economic issues in the country have serious policing implications. First and foremost, police have a statutory obligation to investigate and arrest any person involved or participating in illegal mining. Based on discussions with cluster commanders in areas covered by the study as well as officials from DMR, there are difficulties experienced by law enforcement agencies to curb illegal mining. Firstly, the number of disused or abandoned mine shafts in Gauteng is so high to such an extent that the police do not have enough capacity to prevent the proliferation of illegal mining due to limited human and physical resources at the disposal of the police. As a result, the police find it difficult to address violence and sometimes deaths associated with illegal mining. To a larger extent, this problem puts an additional strain on the police as they have other priority crimes to focus on.

Secondly, law enforcement agencies are not sufficiently equipped to curb illegal mining because illegal miners spend most of their time underground, they have special equipment and are heavily armed thus making it very difficult for police to deal with this crime. As a matter of fact, illegal miners demonstrated that they are indeed heavily armed and dared law enforcement agencies during the walk about inspection of illegal mining by departmental officials and the police along the N12 in Benoni. Thirdly, it was found that illegal mining activities aggravate property related crimes in areas where they are prevalent. For instance, this study established that significant increases in house and business burglaries were recorded in areas where illegal mining activities are prevalent. It is alleged that the burglaries are perpetrated by illegal miners in their quest to acquire necessities such as groceries, alcohol and lighting equipment which are said to be very expensive underground.

The study further established that human trafficking is one of the manifestations of illegal mining activities. Unsuspecting job seekers from other countries or locally are lured under false promises of better employment opportunities. It is only on their arrival that they are forced to participate in illegal mining, while some are even coerced into prostitution. A senior official of the SAPS further highlighted that some foreign illegal miners are forced to stay underground for a very long time due to fear of being arrested or killed by their handlers. In addition, policing of illegal mining is also hampered by corruption among some law enforcement officers. For instance, it was established that some of the arrested foreign nationals engaging in illegal mining were released after paying bribes when they were actually supposed to be detained at Repatriation Centres. As a result, the perpetration of this crime increases. There is anecdotal data that illegal mining contributes to the high murder rate in the province and country wide, although the 2014/15 Annual Report of the South African Police Services (SAPS, 2015) only identifies illegal mining as one of the crime generators in areas where such an activity occurs. In addition, the Gauteng Integrated Policing Plan (Department of Community Safety, 2016) acknowledges illegal mining as one of the key drivers of contact related crimes in the province. The study also found that currently only the Honeydew cluster of the SAPS has a strategy to address illegal mining in the area. However, the Gauteng Integrated Policing Plan proposes under its strategic and operational interventions that the SAPS should develop a province-wide illegal mining strategy. One study respondent highlighted that "*illegal mining is like service delivery protests, where people are complaining about houses and basic services. Initially these protests start as socio-economically related, but eventually have a spillover effect to policing as police are expected to maintain law and order*". Based on these assertions it became clear that illegal mining has a strong policing element, however, the other respondent from SAPS cautioned that police alone cannot reduce or eliminate illegal mining as it is a multi-pronged issue. It is worth highlighting that illegal mining related activities pose a threat to the law enforcement agencies, the Department of Community Safety and province as a whole. The Gauteng Department of Community Safety as a custodian of safety issues in the province is faced with a stern challenge of realising the National Development Plan aspirations of creating safer communities as well as National Outcome 3 "all people are and feel safe".

4.5.2 Socio-economic impact of illegal mining

Most of the respondents unequivocally cited a rise in unemployment and poverty levels as the major and most plausible explanation of why people engage in illegal mining. These findings are further corroborated by the Chamber of Mines (2016) that high levels of unemployment as well as the poor economic situation, induces people to explore other means to make a living despite possible dangers and fatal consequences that they might be subjected to. Furthermore, the respondents pointed out that although the bulk of illegal miners are foreigners, there are also South Africans who are actively involved in this illicit activity. Additionally, participants emphasised that most of the South Africans involved in illegal mining are former mine workers with extensive experience in mining. A similar explanation of unemployment is also regarded as the driving force for foreign illegal miners flocking into South Africa. According to Boning (2015) socio-economic problems are the major contributors and an important cause of illegal mining in the country.

Although it is very difficult to quantify the economic impact of illegal mining, it is nonetheless estimated that R6 billion is lost annually to illegal mining (Chamber of Mines, 2016). However, it should be noted that no evidence exists that suggests what percentage of this R6 billion goes to government as tax. According to a Gauteng-based Department of Mineral Resources (DMR) official, illegal mining is proliferating due to the growing demand in gold and diamonds in other countries. It is also worth noting that illegal mining activities compete with the legal and formal operational mines as the price of gold or diamonds from illegal mining activities is cheaper and easily accessible from illegal operations as compared to formal operations.

4.5.3 Intergovernmental relations implications

The study established that there are glaring gaps in terms of intergovernmental relations in responding to illegal mining or promotion of small scale mining. For instance, there has been a recognition from the Department of Mineral Resources (DMR) that another mechanism to curb illegal mining is to adopt the small scale mining approach as a means to create employment. To this effect, it was gathered during engagements with a Gauteng-based DMR official that there was a small scale mining pilot in operation along the N12 on the East Rand, although the pilot could not be verified despite efforts by the researchers to pay a visit to the said small scale mining pilot. Furthermore, the study revealed that no evidence exists with regard to initiatives to facilitate the advancement of small scale mining, particularly in Gauteng province. In the same vein, the study found that the Gauteng Department of Economic Development, in its capacity as the main driver and custodian of economic growth and job creation in line with the Gauteng Growth and Development Strategy is not yet engaged in efforts to promote small scale mining in the province.

It was also established from an interview with an official from the Gauteng Department of Community Safety that other sector departments of the Gauteng Provincial Government are less involved in endeavors to curb the scourge of illegal mining. The official highlighted that participation of sector departments such as Health is limited to illegal mining rescue operations. The study further acknowledges the existence of a Provincial Illegal Mining Forum which should convene on a monthly basis, to discuss and share information on illegal mining. However, to date the efficacy and impact of the said forum in reducing illegal mining activities remains unknown and unexplored. Additionally, the study could not ascertain the existence of a coherent strategy to respond to illegal mining at municipal level, except for a reactive response particularly in cases where rescue operations have to be undertaken. The case in point is the recent incident at Langlaagte in the City of Johannesburg in September 2016 where illegal miners were trapped underground resulting in some dying in the process.

Based on the researcher's interactions with the respondent from the Gauteng Department of Cooperative Governance and Traditional Affairs (COGTA), it was found that although illegal mining as well as closure of mines impacts directly on surrounding communities, the response of local government at the moment is reactive because COGTA only gets involved once the mines are closed and there are issues with the provision of services such as water, sanitation and electricity. These services are in most instances provided by the mining houses when the mines are operational.

V. INTERNATIONAL RELATIONS IMPLICATIONS OF ILLEGAL MINING

It was established under the socio-economic implications of illegal mining that unemployment and poverty aggravates illegal mining. However, it was found that 70% of illegal miners arrested are undocumented foreign nationals, particularly from Lesotho, Mozambique and Zimbabwe. Most foreign illegal miners die underground; however they remain unaccounted for, hence it is difficult to estimate the precise number of deaths due to the nature of the business. Therefore, the implications are that, very few South African nationals participate in illicit mining activities. To a larger extent these statistics reflect that illicit mining is not a crime primarily perpetrated by locals given the number of illegal immigrants arrested for taking part in illegal mining activities. The study also found that Zimbabweans are not only involved in illegal mining in South Africa, but their participation in this illicit activity could be traced as far as West African countries such as Ghana.

The researchers established that the Department of International Relations and Cooperation has not yet made overtures to the countries of origin of illegal miners in the quest to promote government to government responses to deal with the scourge. Furthermore, efforts by the researchers to contact identified embassies purported to be countries of origin of illegal miners drew a blank.

VI. CONCLUSION

Based on the findings of the study, it could be deduced that illegal mining is gaining momentum and primacy in Gauteng Province. Worth noting is the fact that illegal mining permeates various aspects of society such as socio-economic conditions, political factors and policing matters among others. The study further concludes that a multi-sectoral response is imperative if the province or the country is to turn the tide against illegal mining. Subsequently, the study recommends that various short, medium and long term mechanisms should be implemented to mitigate this problem. Recommended interventions include promotion and formalisation of small scale mining through relaxation of legislation and red tape. Furthermore, explicit legislation is required to criminalise illegal mining activities so as to facilitate the prosecution of perpetrators involved in this illicit activity.

As a result of the findings of the study, the following issues remain pertinent. First and foremost, the study reveals that illegal mining remains one of the growing and persistent socio-economic problems confronted by the country. Growing evidence suggests that if the challenges emanating from illegal mining remain unabated, it has huge potential to undermine the developmental agenda as well as socio-economic policy trajectories of the country. Therefore, it is of paramount importance to realise that no single solution exists to succinctly and systematically address the scourge of illegal mining. The law enforcement agencies, non-governmental organisations as well as the Chamber of Mines should develop a concerted and joint strategy with interventions to improve the situation.

Flowing from the findings of the study as well as its limitations, the researchers recommend that such research topics are worth pursuing in future. There is a need to undertake a large sample survey which includes illegal miners with a view to better understand their operations. Secondly, there should a study to ascertain the link between illegal mining and gangsterism in Gauteng province. Lastly, there is a need to investigate the channels or routes used to transport minerals produced from illegal mining activities, this will include the recipients and who verifying the authenticity of those minerals.

The researchers have deduced that illegal mining is gaining momentum and primacy in the country. Worth noting is the fact that illegal mining permeates various aspects of society such as socio-economic conditions, political factors and policing matters among others. The study further concludes that a multi-sectoral response is imperative if the province or the country is to turn the tide against illegal mining. Subsequently, the study recommends that various short, medium and long term mechanisms should be implemented to mitigate this problem. Recommended interventions include promotion and formalization of small scale mining through relaxation of legislation and red tape. Furthermore, explicit legislation is required to criminalise illegal mining activities so as to facilitate the prosecution of perpetrators involved in this illicit activity.

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