



**PSIRA**  
Private Security Industry Regulatory Authority

**SECURING THE EARTH'S TREASURES:**  
Regulating the rendering of security services  
in the South African mining sector





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Regulating Security Services in the  
South African Mining Sector

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**About the Report**

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# EXECUTIVE SUMMARY

Mining is the extraction of an economically useful material from the ground, and mines are vulnerable to theft and other varieties of criminality due to the value of the products extracted from underground or from the surface. Among the reasons the mining industry relies heavily on security service providers as they protect mineral company personnel, secure mining sites, and facilitate operations. In addition, Also, the private security industry plays an important role in fighting crime in the mining sector. Furthermore, it is critical for security service providers rendering security services in mines to comply with the PSiR Act.

The study shed light on the specialised field of mining security within the private security sector in South Africa. It also revealed the impact of private security on both active and closed mine operations and the safety of its people. Additionally, in-house and contract security providers play an influential role in providing security services based on the nature of the mine. Mine security measures and equipment are used to protect and prevent further illegal activity and encounter challenges in the mining industry. Moreover, it was determined that PSiRA grades are not sufficient for security officers in mines, so specialized training is required.

The study also identified different stakeholders that assist security officers in overcoming the challenges they encounter. Among the stakeholders are SAPS, community policing forums, security forums, and DMR inspectors. PSiRA can still improve its regulations and control of the rendering of security services in the mining sector. Accordingly, mining industry inspections should be conducted regularly and effectively to ensure compliance with PSiR Act and the regulations drafted in terms thereof by security service providers. This is in addition to the registration of security service providers installing, servicing or repairing security equipment. Lastly, the Authority should establish mobile units to provide identity cards and information about where complaints may be reported.

# ABBREVIATIONS

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<b>ATM's:</b>	Automated Teller Machine
<b>CCTV:</b>	Closed Circuit Television
<b>CPF:</b>	Community Policing Forum
<b>CSG:</b>	Council for Geoscience
<b>DMR:</b>	Department of Mineral Resources
<b>GDP:</b>	Gross Domestic Product
<b>ID:</b>	Identification
<b>MHSA:</b>	Mine Health and Safety Act, 1996
<b>MQA:</b>	Mining Qualifications Authority
<b>NGOs:</b>	Non-governmental Organisation
<b>PPE:</b>	Personal Protective Equipment
<b>PSIR Act:</b>	Private Security Regulation Act 56 of 2001
<b>PSiRA:</b>	Private Security Industry Regulatory Authority
<b>SASSETA:</b>	Safety and Security, Sector Education and Training Authority
<b>SETA:</b>	Sector Education and Training Authority

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# 1. Introduction

According to Statistics South Africa the South African mining sector's contribution to South Africa's GDP is 1.2% of the overall 4.6%. Needless to say, with such contribution to the SA economy there will always be a need for security services in the Mining sector. Moreover, there is a need to ensure compliance with the Private Security Industry Regulation Act 56 of 2001 (PSiR Act) and the regulations drafted in terms thereof. The main object of the PSiRA is to regulate the private security industry, and exercise effective control over the practice of the occupation of security service provider in the public and national interest and in the interest of the private security industry itself. Furthermore, the Authority, amongst its functions in terms of section 4 (d), has a responsibility to conduct an ongoing study and investigation of the rendering of security services and practices of security service providers to identify shortcomings in the PSiR Act and the Levies Act, or any other policy or rule made in terms thereof, and to deal with any evasion, abuse or violation of the procedures or principles contained in the PSiR Act and the Levies Act, or any policy or rule made in terms thereof.

Throughout South Africa's history, mining has been a foundation of the economy due to its vast and diverse resource base . For example, mining for gold, coal, and other natural resources has had a significant impact on the South African economy, with both positive and negative consequences (Nkosi, 2018). Furthermore, the country's mining industry is one of the longest-lived sectors and is still largely prosperous. The way mines operate has evolved significantly over the last few decades, including changes in the role and scope of on-site security services (Adornmedia, 2019). Moreover, many mining projects in South Africa have been exceptionally large and long-term, necessitating massive capital and displaying a high level of risk. For example, South Africa must compete with both developed and developing countries to attract foreign and domestic investment. It is therefore prudent that PSiRA conduct this study to identify any shortcomings that might have been created by the evolution of mining sector in relation to the rendering of security services.



## 2. Background

There is a heavy reliance on private security companies in the operations of the mining sector. Mining companies and the communities in which they operate frequently interact through private security personnel. For example, they protect mining company's employees, secure mining sites, and facilitate operations (Jacopucci, 2021). On the other hand, the focus of mining safety is now changing to the protection of people and assets. Although modern mining corporations have a zero-tolerance approach to health and safety infringements, safety providers are required to create and enforce their own health and safety regulations (Servest, 2019).

The mining sector suffers as a result of related crimes, which include corrupt practices for example, security guards collaborating with illegal miners to supplement the low salary they receive each month, has affected the mining sector due to a high number of precious products stolen annually (Nasiorowska, 2010). Other mining challenges include violence against workers and management and forced labour. The South African mining industry has embarked on improving this country's economy, however, security challenges emerge from illegal mining activities that access the minerals extracted legally in the legal mines (Nasiorowska, 2010). Thus, illegal mining activities occur when law enforcement, such as security personnel or police, has limited resources to stem criminality. (Mineral Council of South Africa, 2022). As a result, this activity leads to the loss of revenue, taxes, work opportunities, capital spending, export markets, foreign exchange earnings, and sourcing produced by constitutionally protected mining (Mineral Council South Africa, 2022).



There are a variety of safety concerns such as dangers, potential injuries, and damage that must be addressed. It is therefore necessary to understand and manage a number of aspects, such as site-access compliance, business inductions, and accommodation management (Cullis, 2012). According to Turok (2013), the present turbulence in South Africa's mining industry can be attributed to factors including the decline in global demand for platinum and other minerals as a result of the recession, the impact of the Marikana disaster on labour relations and the structural nature of our mining industry.



### 3. Rationale

The contribution of the mining sector to the South African economy is so significant that there will always be a need for security services to be rendered during the lifespan of a mine and beyond. Furthermore, security in the mining sector for mining personnel, mining equipment, and the minerals can contribute to attracting direct foreign investment to the country and boost economic growth. It is important for PSiRA to conduct this study to enhance the credibility of the private security industry in the fight against crime in the mining sector. Moreover, there is no regulator which can properly regulate that which it does not properly understand.



## 4. Research aim

The proposed research seeks to uncover the specialized field of mining security within the private security sector in South Africa.



## 5. Research Hypothesis

The hypothesis for this study is as follows:

*The rendering of security services in the mining sector of South Africa remains ever more critical in the current economic environment than ever before.*



## 6. Research objectives and questions

### 6.1 Research objectives

The objectives of this study are the following:

- a) To explore the impact of private security in the general mining activities.
- b) To explore the effectiveness or lack thereof of the current PSiRA regulatory regime in the Mining Sector.
- c) To establish the level of training required for security officers to render security services in the mining sector.
- d) To discover the security measures and security equipment used to protect the mining sector from criminal activities.
- e) To identify categories of security services that are rendered by security service providers in the mining sector.
- f) To identify the stakeholders involved in mining security.



## 6.2 Research questions

The main research question for the study is as follows:

*What is the nature of security services rendered in the mining sector and how can PSiRA improve its regulatory mechanisms in the mining sector?*

The secondary research questions are as follows:

- a) What is the impact of private security in general mining operations?
- b) How effective is the current regulatory regime of PSiRA in the Mining sector?
- c) What is the level of training required for security service providers to render services in the mining sector?
- d) What security measures and security equipment are used to protect and prevent illegal activities in the mining sector?
- e) What are the categories of services rendered by security service providers in the mining sector?
- f) Who are the stakeholders involved in the mining security?





## 7. Research Methodology

The research employed both desktop and field research. This study used qualitative research methods to gain deeper insights into the rendering of security services in the mining sector. In order to lay down a general theoretical and practical background, existing scholarly writings, including books and articles, were utilised. A structured and an unstructured interview process was conducted with PSiRA-registered and non-registered service providers. In addition, a purposive and snowball sampling method was used to reach participants from different South African mining organizations and private security companies from Gauteng, the North-West, Limpopo, Mpumalanga, Northern Cape, Western Cape, Eastern Cape, Free state, and Kwazulu-Natal provinces.

This study was exploratory in nature. It considered the extent of the sector within South Africa with a view to understanding its demands and challenges. Also, the study considered whether PSiRA is adequately equipped to effectively regulate and control the rendering of security services in the mining sector. The research findings intend to assist PSiRA in understanding the rendering of security services in the mining sector. This is with a view to developing policy that will inform the development of regulations relating to the rendering of security services in the mining sector. A purposeful sampling technique was used with the targeted participants being security service providers for the mining sector, mining companies, and PSiRA employees.





## 8. Literature Review

In this section, in order to understand what “mining” is and what mining security means, it is necessary to point out gaps in knowledge and look at other scholars’ discussions.

### 8.1 The nature of mining industry

The word mining sounds similar to mineral, and that’s because mining involves the removal of minerals. Therefore, mining is defined as the process of extracting minerals from the earth, and transforming it to mineralised form that benefits the miner economically (Corporate Finance Institute, 20220). In addition, the two main ways to extract minerals from the earth are surface mining and underground mining (Fried, 2013). The mining operations of underground and surface mining differ depending on what types of minerals are extracted. Surface mining is defined as a form of mining that involves removing soil and rocks covering mineral deposits. This type is also known as open-pit or open-cast mining (Great Mining, 2014). In South Africa, this method is used to mine for iron, copper, chromium, manganese, phosphate, and coal. According to King (2019), underground mining is the practice of extracting minerals and ore that are too deep underground to be extracted using traditional surface mining techniques. There are many resources and minerals that are more valuable than others, depending on market conditions, supply and demand in primary industries, socio-economic and geological factors. As a result, specialist mining security personnel are now trained on specific scenarios associated with mine sites and their operations due to the specific nature of mine sites (Mining.com, 2016). Every mining site requires a high level of security, and this type of operation obviously requires key security role players on hand.

Mining is known for its financial strength, heavy use of expatriate workers, and its ability to promote money, goods, and service flows (Sagne, 2016). Taking things from the earth can determine the economic wellbeing and the direction of nations. It can even lead to wars and tense diplomatic encounters. Therefore, multinational Private Security Companies may not always be able



to meet mining companies' complex security requirements. There is no doubt that mines, and their monetary value, dramatically impact the lives of millions and even the immediate future of the world today. Hence safety and security are important factors in the mining industry (Mining.com, 2016).

## **8.2 Security operations in the mining sector**

There are resources and minerals that are more valuable than others, depending on market conditions, supply and demand in primary industries, socio-economic factors, and geological factors. As a result, specialist mining security personnel are now trained on scenarios specific to mine sites and their operations (Mining.com, 2016). Also, any mining site requires a high level of security, and on having key security role players on hand. According to Mariotti (2021), every mining operation is different, and security and safety solutions must be tailored to meet the requirements of each. For instance, open-pit mines put emphasis on access control systems, whereas underground mines place a higher priority on people location management and gas leak detection. Furthermore, offshore mines focus on meeting and maintaining safety standards.

There are general security principles that apply to the mining security industry, but the core needs will differ. Coal mining for example generally requires lower-level security than diamond mining, which necessitates advanced body scanners. (Moyo, nd). Based on the type of mineral mined and the location of the mine site, some sites will have different pre-employment security measures. According to Tyne (2020), during active mines operations, South African mines invest heavily in security technology to protect their workers and prevent intrusion and theft.

## **8.3 The role of security in the mining sector**

The purpose of private security companies in the mining sector is to deliver defensive armed protection for premises by providing vigilant protection against guerrilla forces, or providing a bodyguard (personal protection) for someone (Bosch, 2008). Additionally, private security personnel are employed in unused



mines and in legal mines so that the assets and resources of these mines can be protected and to assist in minimising the easy access to abandoned mines (Lebitso, 2021). In this case, the mining companies hire highly trained security staff to deal with riots and crowd control, also to do investigations pertaining to crime on their premises and prevent people from entering the mine premises illegally. They have the same array of equipment as the police such as teargas, armored vehicles, dogs, water cannons and helicopters (Botha, 2015).

In relation to mining operations, security services should ensure that human rights are protected, provide security to mine workers, equipment, and facilities, and protect the mine site or transportation routes from interference with legitimate extraction and trade, whether they are public or private security forces (Initiative for Responsible mining Assurance (IRMA), 2018).

Muzo (2016) stated that mines, with extensive mining operations (gold and other precious metals, coal, and platinum group minerals), tend to concentrate on asset protection, access control, and preventing theft of company property and goods (including equipment and storage). Brent (2011) argued that mine sites should be secure round-the-clock and that it must be possible for the hired security team to clear all people entering the mine after work has ended and all mining staff and visitors must be monitored.

Interestingly, according to Khuzwayo (2020), the security director of a private security company has experienced that government alone is unable to calm or control protests, thus employing private security services to prevent dramatic disruptions in mining production is necessary.

## **8.4 Health and safety**

Aside from securing equipment, employee safety is paramount. Asmag (2021) indicates that the safety of personnel is the main priority of security managers in the mining sector. Along with monitoring compliance with health, safety, and environmental requirements, they are also tasked with preventing the theft of



crucial raw materials and machinery specifically those operating in challenging conditions. Moreover, security is more than just a matter of duty of care as security has occupational health and safety implications. For instance, access to certain areas should only be enabled to those with proper training and expertise (BEI Security, 2016). Also, at mines, only personnel who have passed safety inductions, medical checks, and training should be allowed to enter the premises (Asmag.com editorial team, 2021).

The Mine Health and Safety Act, 1996 (Act No. 29 of 1996) and its regulations authorize that all employees be provided with safety training, with primary focus on promoting safety and health. According to the Department of minerals (2011), the objectives of the Mine Health and Safety Act No 29 of 1996 are described below:



In addition, the Mine Health and Safety Inspectorate was established in terms of the Mine Health and Safety Act, 1996 (Act No. 29 of 1996), as amended. The aim is to execute the constitutional mandate of the Department of Mineral Resources to protect and safeguard the health and safety of mine employees and communities affected by mining operations.

## **8.5 Security services in mines**

Mining, oil, and gas companies may use public, private, and in-house security to protect their sites and personnel (DCAF, 2016) therefore the study will focus on the use of contract security services and in-house security services in the mines. When it comes to the private security industry in South Africa, contract security and in-house security can be broadly distinguished (Hough, 2002). Furthermore, Hess (2009) categorized security services as follows; contract services are outside firms or individuals who provide services for a fee, whereas in-house services are directly hired, paid, and controlled by the company. Similarly, Berg and Nouvea (2011), define in-house security as protecting a company's interests using its own personnel, equipment, and security operations. In contrast, there are several items that contract security will take care of including background checks, training, hiring of security staff, sourcing of equipment and uniforms, as well as providing medical insurance benefits (S, 2018). As shown above, this means both contract and in-house security personnel perform and provide security services in the mining industry.

### **8.5.1 In-house security instead of contractors**

Most companies looking for security services debate whether to have an in-house security team or contract an external security team. It is becoming increasingly common for companies to make their own security personnel available because these individuals are more loyal, more motivated, have a higher level of knowledge of the specific operation and personnel within the organization, and are more flexible in learning and supervising (Hess, 2009).



For instance, the numbers of in-house security personnel employed by mining houses are still high, with clear differences in productivity (News 24, 2014). However, Gastrow (2001) stated that

*some mine companies increasingly rely on contractors for specialized functions. For example, mine security and transportation of gold are examples of such functions. In addition, the number of in-house security personnel seems to have decreased, and some mines consider private security companies more effective than using in-house security.*

It is agreed by Hough (2002) that certain industries, such as mining, local authorities, and financial institutions, employ in-house protective services, but the trend is towards outsourced guarding services as part of a contract security group.

Another reason, for using contract security services it is to enable a company to easily hire a new officer without delay by requesting one from a security company. Whereas in-house security allows company owners to relieve certain security personnel of their duties if they are unhappy with their performance. In the next step, they are forced to find a replacement to fill the vacancy. There are always security officers on standby at private security companies for the purpose of responding to such situations (IGS security service, 2017). Lastly, mining houses require a holistic approach to finding a security provider who can offer a customised and specialized service (Stallion, 2022).

## **8.6 Security measures and equipment used in the mining**

The mining industry requires enhanced security to prevent theft and accidents in large-scale operations that are often characterized by complex installations and heavy machinery (Diouf, 2016). Therefore, it is important to observe proper security measures to ensure success in the mining sector.



There are many mining security methods available, such as control rooms, alarms, electronic security systems (such as CCTV cameras utilising artificial intelligence, video surveillance, and mobile solutions), and access control equipment that can act as an additional eye and ear, and evidence collector to protect a mine (Servest, 2016). According to Abrahamsen and Williams (2017), efforts to secure mines are not only manifested through razor wire, CCTV, and frequent patrolling of mines, but also by enlisting local communities and NGOs to play an active role in mine safeguarding.

### **8.6.1 Electronic security systems**

For South African mines, security surveillance has become crucial not just as a result of escalating crime, but also because of updated labour legislation requiring worker health and safety (De, 2003). Currently the mining industry utilizes CCTV analogy cameras as a remote video observing arrangement, and utilizes ground control faculty to screen and record the underground work site wellbeing (Sai Lakshmi and Nivash, 2017). To add, as a result of the use of CCTV, the mining industry implemented surveillance systems in diamond mines and gold/precious metal refineries to prevent the smuggling and pilfering of diamonds and precious metals (Van Zyl, 2010 cited by Minaar, 2006:3). In addition, video surveillance systems are designed to monitor sites with high levels of activity during active mining. For site activity and safety compliance to be monitored accurately, cameras need to have a high resolution to clearly identify people and vehicles (Tyne, 2020). Security cannot be achieved without visual surveillance. Detection, protection, and deterrence of “Zama Zama”-illegal miners are the primary goals of this technology, together with providing evidence for prosecution and capture (Security Focus Africa, 2019).



### **8.6.2 Guarding and patrolling**

Security officials are assigned according to site requirements. In addition, security officials conduct daily patrols according to site requirements and intelligence reports received from analysts (Nek & Minnaar, 2021). In Barret's (2020) report, the mining security patrols are equipped with vehicles that cover long distances day or night. Security guards in patrol vehicles are a time-effective and efficient way to cover a site and, as the vehicles are fitted with cameras, guards can also record any suspicious activity and report on it in real time.

### **8.6.3 Positioning systems**

In addition, an underground mine for example uses positioning systems to detect people entering and leaving the mine at key entrance and exit points (Thrybom *et al.*, 2015). According to Hawkins *et al.* (2006), a positioning system is made up of sensors and digital mine maps. Also, location tracking can be implemented to ensure workers can be found during an emergency or to manage blasting safely underground.

### **8.6.4 Perimeter protection**

There are entry and exit points within the mine perimeter. Surveillance aids with intrusion detection through smart cameras, linking video and alarms, and AI cameras that support human and vehicle recognition.

### **8.6.5 Access control systems**

In addition to ensuring reliable access control both inside and outside, access control systems enable easy integration with third-party devices (Bosch, 2018). Additionally, an identifier such as a smart proximity card, contact card, badge, token, or long-range active device, is typically used in an access control system. It also includes readers and controllers for controlling access and egress



(Hi-Tech Security Solutions, 2007). According to Invoxium Market (2020), mines require touchless biometrics as an alternative to traditional access controls due to the changing world in which they operate, especially regarding these restrictions under COVID-19.

Furthermore, South Africa has implemented biometric technologies in the mining industry over the past ten years or more. As an example, Nasiorowska (2010) identified three major biometric technologies: facial recognition, fingerprinting, and iris recognition. To add, the development of biometric facial recognition technology has increased both the scope and effectiveness of surveillance, as well as the capability of humans to recognize people. Moreover, whenever two faces with the same name appeared in this particular gold mine, the facial recognition access control system alerted security staff.

### **8.6.6 Metal detectors used in mine**

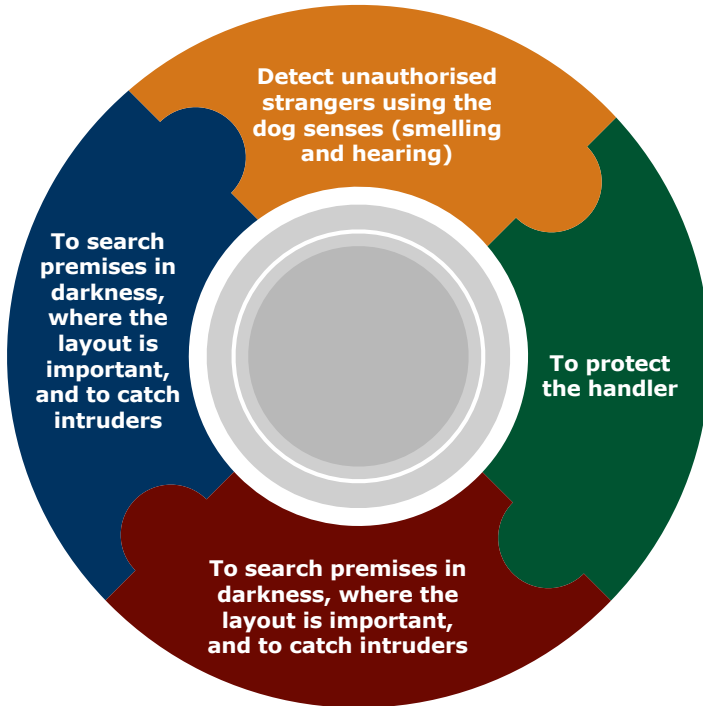
It is common practice to use metal detectors to conduct detailed, individual searches for foreign objects (Mokhuane, 2016). These devices rely on electromagnetic fields to detect any foreign objects on or within the body. Likewise, security officers use metal detectors after expanding the refinery to conduct non-physical body searches (Mokhuane, 2016).

### **8.6.7 The use of security dogs on mines**

In security, dogs serve a variety of purposes, but their main value is in using their natural instincts. Human presence is crucial to their work, so it can never be replaced by technology (Genesis K9 Group media, 2020). Even though there are high-tech devices that can detect explosives Hirsch (2014) argues that a dog is more effective, especially when there are heavy metal explosives. It is also more dangerous to use a probe on a human than on a dog when doing this work.



The main use of dogs is (Genesis K9 Group media, 2020) to do the following:



The use of dogs to detect explosives is an incredible technique for reducing the threat posed by anti-personnel mines, anti-tank mines, and unexploded ordinances such as explosives, rocket launchers, grenades, and shells that remain 'live.' (Van't Haaff, 2015). According to Hirsch (2014), dogs are used in airports and in the mining industry but their duties, particularly their searching pattern, are very different. Explosive dog search patterns are more enjoyable for both the dog and the handler, and the dogs search for vehicles, buildings, and luggage. A sniffing dog for mines, on the other hand, must be extremely monotonous and repetitive in order to be effective.

This indicates that dogs and their handlers provide key security services a finding supported by research conducted by Gichanga (2015). Since PSiRA is mandated to regulate working animals, both the dog handler and the dog must comply with the PSiRA act by being registered, trained, and having a basic security grade.

## **8.7 Mining security challenges**

Unlike in other industries mines face unique security challenges. In particular, South African mines face challenges including mineral theft, illegal mining, among others.

### **8.7.1 Theft of minerals**

The theft of mineral resources, such as copper cables, explosives, and diesel, and the prevention of illegal miners and criminal syndicates from entering the mining premises are issues of prominence in the mining security industry today (Moyo, nd). It is the primary security concerns for most mining companies, which is why PSCs are contracted. A common example of petty theft is the theft of items by employees and non-employees. Poor security can allow workers to operate alone or with criminal elements accessing the mine from outside. Also, mine security management is challenged by establishing an infrastructure with the capability of positively identifying all individuals on site with required credentials and restricting their movement based on their roles.

According to Bhat (2016), the remote or isolated locations of these plants require remote operation centres which control or handle trucks, drills, trains, ship loaders, mills, or concentrators. The mines are vulnerable to cyber-attacks by environmental activists for political or economic reasons, such as disruption of the metal market, especially copper. To add, copper cable theft is a problem across the country and internationally. This has necessitated that security staff change their tactics as they are sometimes confronted by heavily armed criminals (Anglo Gold Ashanti Annual Report, 2013).



## 8.8 Illegal mining (Zama-Zama)

There is a *Zama Zama* problem in many mines today, where illegal miners risk their lives for financial gain. Security service providers need to be highly skilled to deal with the crime of illegal mining. Even though mining security companies continue to provide security services to the mining sector, illegal activities still emerge (News 24, 2017). Illegal mining activities take place on the surface and underground and manifest at closed-off mines, abandoned mines, and in many cases even at operating mines. Illegal miners, known in South Africa as “Zama Zamas”, are often heavily armed and, when trespassing on operating mines, set ambushes and booby traps for employees, security, and rival groups of illegal artisanal miners (Mineral Council South Africa, 2022). African mining companies have been struggling with the problem of illegal mining for years. Their search for reliable and affordable security solutions has been unsuccessful in combatting artisanal miners illegally entering their properties and compromising site safety.

### 8.8.1 Security safety

In this case, some security officers perform tasks that expose them to risks. For instance, they operate heavy equipment, which includes climbing up on trucks to check loads and handling manual gates. In addition, security officers that deliver mining resources can be at risk from criminal attack (Gastrow, 2001). To add, on-site security and round-the-clock mobile patrols, ensuring the safety and security of people, the environment, and the assets of mining operations in remote and potentially dangerous environments, makes it logistically challenging, and the large size of these mining sites poses a serious security risk. There would be a lot of investment involved in fencing those areas. Because of this, a customer used balloons equipped with security monitoring to monitor their entire mining site (Montague, 2017).



Olawumi (2011) states that the mining sector has difficulty monitoring and controlling easy access to abandoned and active mines. This is because they have deeper holes to close, which costs enormous amounts of money, which could benefit the industry in a variety of ways, including enhancing security. Security breaches on mining properties are becoming more prevalent in particular, around large opencast pits. It is more than possible for any mistake to be fatal, halting production as well as potentially putting mine employees at risk without proper safety equipment and safeguards (Montague, 2017).

### **8.8.2 Inexperienced security personnel**

Many mines utilise the lowest levels of trained guards in an attempt to contain cost with little no career opportunities, resulting to high staff turnover and many security guards, regrettably, becoming involved in crime to supplement their income (News 24, 2016). For the same reason, De Goede (2008) research stated that the guards for private security companies are not involved in internal security and the protection of miners in a potentially dangerous working environment. They are not given special training, but they receive the same basic training package as guards for residential areas.

## **8.9 Stakeholders in the mining industry**

There are various stakeholders in the mining industry which collaborate with private security companies. According to Lebitso (2021), different stakeholders assist local SAPS members and work in collaboration with private security companies to ensure safety and security. In addition, stakeholder organizations such as the Department of Mineral Resources (DMR) assists police with rooting out illegal mining activities by providing information on illegal mining statistics and strategies to curtail it. Other stakeholders include community policing establishments which are dedicated to reducing crime and combating illegal mining activities within communities.





## 9. Research findings

The findings in this section are based on the experiences of the participants as well as their observations.

### 9.1 The impact of mining security

The study discovered that mine security is primarily aimed at protecting the product from theft, and the safety of the clients, visitors, and employees. As well as preventing robberies, security records any incident that might explain a drop in production or provide insight into the cause of an accident. In the mining sector, the respondent explained that mine security involves protecting the mine assets and employees and complying with the Mine Health and Safety Act . The study has shown that all major mining sites require one or more forms of protective protocol, whether it is through technology, personnel, or a combination of both. One of the participants mentioned that although new technology has been invented for providing security services, the need for human expertise still remains, showing a balance between the two. For example, if anything is captured by the cameras, then a response team still needs to respond to what the camera shows. Therefore, it is important to maintain a balance between technology and people.

The research found that when it comes to any type of mine, safety is the key factor. There is no security if there is no safety. Safety in mining refers to managing mining operations and events to minimize risks, hazards, and accidents for miners and for everyone who enters the mine premises. Also, every mining site has to take a number of precautions and phenomena as guided by the Mine Health and Safety Act in order to ensure safety. According to the document (Mine Health and Safety Act 29 of 1996 | South African Government, n.d.), under the Mine Health and Safety Act No. 29, 1996 (as amended), the government of South Africa established the Mine Health and Safety Inspectorate. This act established the owner's responsibility to provide health and safety training; identify, investigate and eliminate hazardous factors; control



and minimize the risk to employees; hire hygienists; provide medical attention; and so on to protect the health and safety of mine workers.

Based on the findings in the study, different mines have different levels of security due to the operations and security risks related to them. For example, in a quarry mine (which is a surface open pit mine that extracts sand and stone), the minerals do not have a high value, so security will prioritize the protection of employees and the monitoring of visitors and trucks entering or exiting the mine. In comparison with quarry mines, underground and surface mines that extract coal, diamond, gold, chrome, and manganese have a stricter security operation since these minerals have high value. Also, they will focus on securing the mining site, protecting employees, visitors, escorting trucks, and inspecting the products.

In the study, it was found that minerals in closed mines are still present; therefore, security plays a crucial role in protecting the site, and some mines are not permanently closed as they could reopen at any time. Furthermore, assuring the protection of mine premises, trucks, diesel, and mine plants, is the responsibility of the security department and they should be secured in accordance with DMR regulations and the landowner's responsibility to hire security services to protect the land. Once the mine has been closed and the most valuable materials have been removed, it must be restored to its original state. The process is called rehabilitation. It involves covering mine entrances, replanting grass and trees, and testing surrounding water, soil, and air for contaminants. The Mine Health and Safety Act (MHSA) Section 54 gives the DMR the authority to close mines and shafts following a safety breach. However, if this process of rehabilitation is not done well, there will be a number of risks attached to abandoned mines that pose significant environmental challenges, such as those related to personal safety for anyone compelled to explore in the expectation of discovering neglected minerals (such as collapsing a mine shaft, drowning in an open-cast mine, or becoming trapped in a sinkhole) (Tyne, 2021). Illegal mining is a major issue in the country on a social, economic, and legal level.





This is due to the fact that the land on which these mines are located is usually not secured.

The mining industry includes the refinery/smelting/processing of minerals. A refinery is a manufacturing facility that refines or converts raw materials (gold, diamonds, platinum, chrome, and manganese) into valuable products. The definition of 'processing', according to the Mine Health and Safety Act, means recovering, extracting, concentrating, refining, crushing, smelting, classifying, washing, calcining or gasification any mineral.

Some of the participants highlighted that security is very tight in the mining smelting/refinery department. They added that Mining security is about protecting the mineral that is being processed, controlling access, documenting everything and anyone that enters and leaves the mine, and protecting employees and authorised trucks that transport the raw and finalised mineral.

## **9.2 The PSiRA regime's effectiveness in the mining industry**

According to the study, the mining industry is making a concerted effort to comply with PSiRA regulations. More importantly, they are in accordance with Mine and Health and Safety Act regulations. Furthermore, PSiRA has the authority to regulate the provision of security services in the mining sector because security services provided in the mining sector are defined in paragraphs (a) to (m) of Section 1 of the PSiRA act.

The mine security department ensures that everyone employed as a security personnel, regardless of whether they are in-house or contract security, is registered with PSiRA and follows the mine's safety procedures and policies. Most of the managers highlighted that they screen their officers before employing them by checking criminal record, PSiRA registration, relevant qualifications, and mining experience. There will, however, be a difference in screening for in-house security personnel and contract security officers. For in-house security, it will be the mine's responsibility



to conduct the screening, while for contract security, it is the company's responsibility.

The participants highlighted that the PSiRA regime is effective since they introduced the upgraded system for registering and renewing certificates. This has saved a lot of time and travel from one province to another to renew or register. The only problem will be with those who are technologically challenged or illiterate. In addition, they pointed out that private security companies, that are located far from the headquarters and regional offices, are having difficulty receiving PSiRA cards. Even though a new system has been developed for renewing and registering certificates, they cannot access the cards. Other participants added that they help their security officers who are not technologically advanced to renew their certificates. The site manager has a database of all the security employees and their PSiRA details. A list on the database informs the manager how many days remain until their PSiRA certificate expires, and this is checked every month.

Some research participants believed that the PSiRA regime can still be improved upon from where it is now. One participant stated that PSiRA should conduct more inspections in mines. The study revealed there were no PSiRA inspections or that they occurred a long time ago. This was due to the fact that most of the mines were located far away, and there was a shortage of PSiRA inspectors in some regions; they couldn't reach all the mines. Due to some security companies "taking shortcuts" and providing an opening for fly-by-night training centres, the participants were eager for inspections to be performed on security companies operating in registered mines to determine if they comply with PSiRA regulations. Furthermore, it was stated that there is a need for PSiRA awareness. There are some mining companies who are unaware of PSiRA and where they can report issues relating to the security companies they hire.

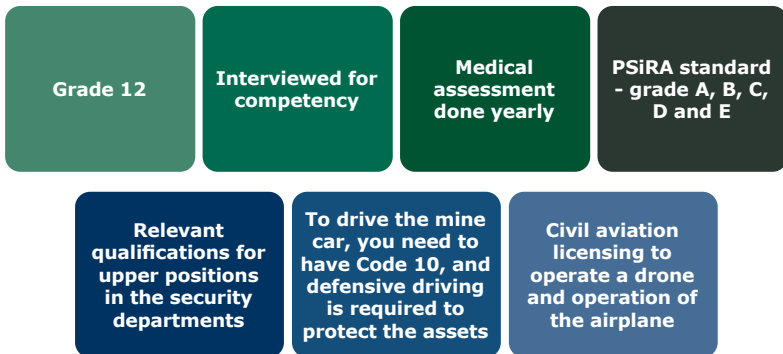


### 9.3 Training required in the mining sector

The study found that the security personnel operating in the mines are provided the basic training they get from PSiRA grades, and other mines give extra training for their guards, especially the in-house security personnel. They are given specific training in the sector, and they are required to be familiar with the relevant legislations. The participants from the contract security service sector highlighted that training depends on the level of positions and are specific to the area of work. For instance, security personnel who deal with access control will do monthly training on access control while others will train for armed response. The security officers are provided training by their mine site managers. Special training is offered in other mines by the site managers. They offer special training when they are promoting security personnel in terms of career development. For instance, if a security guard is promoted to the gate or to control room or alarm control, then they receive training on the responsibilities associated with that task.

The study also revealed that the security personnel hired in the mining industry undergo employee induction training provided by the mine. This induction training enables security service providers to understand the nature of the mining and the site operations.

Recruitment requirements to be a security guard, supervisor, site manager and area manager at a mine are as follows: -



Mines provide the following training: -



The participants mentioned that they are at different levels and roles in their security department and for one to be promoted or employed to higher positions, one needed operational and technical experience in a security environment, preferably in the mining industry.

Lastly, most participants pointed out that the training given by PSiRA is not sufficient for mine security officers; it needs more practical training than the grades. Also, due to the amount of fly-by-night training companies, security officers are poorly trained and unable to perform their duties. The training provides no content, and other participants do not have the necessary experience for the job but have obtained the PSiRA certification and grades. According to the PSiRA training department, special courses are offered by PSiRA accredited training providers, including mining security. PSiRA has previously processed 1700 course reports on mining security. Amongst the accredited training providers are G4S Training, Gray Security, and Amplats Group Training. However, the challenge now is that the PSiRA training department no longer receives course reports on mine security from security service providers. The gap arises from the fact that the industry is unaware that PSiRA accredited training providers offer the special training course on mining security.

#### **9.4 Security measures and equipment**

The research found that the security measures and applications vary significantly between mines and that the effectiveness of a security measure depends on the integration of technological measures and human expertise. To add, technology and human expertise are the components of security equipment and security



services defined in section 1 of the PSiR Act and currently regulated by the PSiRA. Moreover, South Africa's mining industry uses a variety of security measures and security equipment to protect and safeguard its people, properties, and operations.

#### **9.4.1 The use of CCTV/surveillance control and control rooms**

Access control helps mines enforce rules that ensure the safety and protection of their employees and operations. Along with that, they are also used by the mine's security officer in case of problems. The information they provide will be helpful in identifying trends of unsafe acts and conditions, as well as in investigating incidents. The CCTV monitoring cameras are positioned at gate entrances and other sensitive areas. Additionally, security officers in the surveillance room rotate shifts to ensure that they don't stay long in the camera.

One participant mentioned they are considering the use of drones, but they have not yet been deployed. A drone equipped with cameras and scanners is useful for mining operators in monitoring current conditions. As well as patrolling and supervising large perimeters, drones will be used to identify security breaches and alarm response as well as assist in search operations for missing persons.

#### **9.4.2 The perimeter fence/access control**

This is used as a barrier that surrounds the mine site, discouraging illegal entry and preventing the unauthorised removal of precious metals from restricted areas. The mines use the latest technology such as biometric systems (iris, facial, and fingerprint scanning), access cards, metal detectors, and security searches to identify employees when entering and leaving the mine site. Other measures that control employees' unauthorised movement and prevent mineral theft include polygraph testing and X-ray scanning. The study revealed that both refineries and the mining sites implement security measures to protect against threats. Despite this, the industry has a tight security fence around it; access is monitored, and enclosures have electrically controlled



gates with employees and trucks entering occasionally. Those who are allowed in and out of the mine must sign a register indicating their date and time of entry and exit.

### **9.4.3 Alcohol and drug testing**

Testing for drugs and alcohol is mandatory when entering mine sites. A breathalyser is used by the security officer to ensure the safety of visitors, employees, and employers at the workplace. For example, breathalysers can be used to control access to mine sites using biometrics. The participants noted that when employees arrive at their workplace, they simply swipe or tap their access cards or their finger to activate the breathalyser. Furthermore, this confirms that they are registered employees and monitors their attendance as well. After the biometrics confirm identity, the breathalyser will be activated. The test requires the smallest sample of breath, and results can be obtained within seconds. After a negative breathalyser result has been obtained, access to the work area is granted. A person under the influence of alcohol is not permitted to enter the workplace under the Occupational Health and Safety Act.

### **9.4.4 Access control for visitors and vehicles**

Visitors, vehicles, and trucks are controlled in South African mines using access control such as barrier gates, which are supervised manually or automatically by the security guard stationed there. In regard to controlling the vehicle, there will be a stop and search procedure. A security officer at the main gate will confirm the visitor's arrival with the person inside the mine to check if they expect a visitor. When the person has given the officer confirmation, access is granted. Firstly, the visitors fill in a visitor register a complete a driver's form. A permit will be issued to the driver, which will be handed back at the main gate when the visitor leaves. The permit must be signed by the person he is visiting; if not, the driver must return to get the permit signed. In the event that no confirmation can be obtained, access must be denied until the person being visited has collected the visitor at the main gate. The host will accompany the visitor. Testing for alcohol is an essential measure for anyone entering the premises.



A search will also be conducted for all company assets, stock, and equipment upon leaving the mine premises. As with visitor entry to the mine, there are some additional procedures to follow.

#### **9.4.5 The parking of vehicles in the mining industry**

The findings of the study identified that the parking of vehicles in a specific manner is a security measure in some South African mining industries. The parking of the vehicle must follow the mine's rules and procedures for entry and exit. The driver must ensure that a vehicle is parked in designated areas and does not obstruct other vehicles or doors. Reserve parking is a mine safety measure that allows drivers to quickly drive away in the event of an emergency or disaster. The participant emphasized that regular patrols between vehicles are conducted to check for any suspicious activity or the condition of the vehicle.

#### **9.4.6 The uniforms and PPE**

Most participants noted that security officers in the mine wear uniforms as a form of identification. As a part of the requirements for their protective equipment, whenever security officers patrol risky areas, they are equipped with bullet-proof vests and protective clothing to prevent injuries if they bump into a dangerous object, and they are also given panic button alarms for when they see any suspicious activity in the area, and call for backup. Additionally, they wear reflectors, boots, and freezer suits when it's cold. Torches are provided to security officers for patrolling at night or in dark areas, particularly in underground mines. A participant also pointed out that if the security officer feels that the environment they are in is risky or unsafe for them, they are allowed to leave the area immediately under section 22 of the Mine Health and Safety Act.

#### **9.4.7 Toolbox talk**

The toolbox is the strategy used by security personnel to discuss issues and how to deal with them. One of the participants mentioned that they use a toolbox before starting their daily shifts. They check the surroundings and make sure everything is in proper working order. When an asset is damaged, they notify the authorities.



They plan their day, including who will be in charge of what. Another respondent said that they use the toolbox to compile risk evaluations and outline the risks and defensive mechanisms in order to prevent crime and create awareness about them.

#### **9.4.8 The use of dogs in mines**

In the study, dogs were found to be used by South African mines to provide protection. However, not all mines use dogs for security purposes, particularly quarry mines (open-cast mines). According to Gichanga (2015), highlighted that according to PSiRA grades, security dogs fall into four categories: protection dogs (DH1, DH2), patrol dogs (DH3, DH4), and sniffer/tracking dogs (DH5).

The main functions that are performed by the dogs in the mines are the following: -



Mines use all these categories of dogs but the majority rely on protective and patrolling dogs (DH1, DH2, and DH3). A DH4 is not commonly used in most mines; however, they are permitted to be used when the suspect poses a danger to the handler or someone else, or if someone has been killed. In the case of DH5 dogs used to deter illegal activities, the study found that miners conceal explosives found in the mine to assist illegal miners (Zama Zama's) or to bomb ATMs. To counter this the dog will search the miners before they enter the shaft, and when they go out, they focus on searching for explosives and canned food within the bags. Additionally, gold dust can be detected by the dogs but not the mineral itself due to its inodorous nature and lower in vapour pressure. Furthermore, the dog and handler will go underground using a shaft to search for and capture the Zama Zama's.

The study found that there are PSiRA training centres that are registered and accredited with PSiRA and SASSETA for dog training where dogs and handlers are trained by





PSiRA-registered instructors. One of the instructors emphasized that there are no specific qualifications required to be a dog handler. If a person has prior experience working with and understanding dogs, they will ensure that both the dog and the handler are PSiRA registered and SASSETA accredited. A working license certificate and a chip to identify the dog are required for the working animal. A proper training program is provided to the handlers in terms of legal and practical requirements. For example, when should you unleash the dog when apprehending the suspect and for which reasons you are releasing the dog.

There are two ways the dogs are set up in mines, one being that the service provider will drive them in and out (in the evening and pick them up in the morning). However, this option is expensive when the mine is located far from the service provider. Therefore, the best option is for the dog to stay in the mine site and the service provider will only come and provide food, medicine and training.

## **9.5 Categories of services rendered**

### **9.5.1 The role of private security service in the mine**

Mines use two types of security service providers, namely in-house and contract. These security service providers play a similar role in the mine. By virtue of the PSiR Act, they provide security services to the mine by protecting property, assets, and people. One of the participants mentioned that it was not possible to sustain a mine without security services and that private security plays an integral part in this field.

Most of the participants from quarry mines highlighted that they hire contract security services to provide access control, guarding, and patrolling during the night. The majority of mines that participated mentioned that they use both in-house and contract security service providers on their mine sites. As a result, each security service provider has its own responsibilities, and the tasks that an in-house security department cannot do, is outsourced to a security service provider. On the other hand, both the mine's in-house and outsourced security will work together to solve any security problems and conduct investigations. The contract



security services provider will offer services that include the following: guarding, electronic integration solutions and remote site monitoring, monitoring and armed response, underground clearing, and investigations. As a part of the mine's in-house security services, they provide investigations and administrative work, as well as monitoring mine operations and working closely with the HR department.

Furthermore, private security services are hired in mines to transport minerals and products from one site to another. Since the mine does not have the capabilities to process minerals, it exports raw material to smelters or refineries for processing. On the other hand, these products/minerals are also exported to other countries by either airplane or truck. As a result, aviation security plays a role in the mining industry with regard to the transport of minerals by airplanes. Mining security officers are responsible for protecting both minerals and pilots. As stated above, Seanego and Xulu (2022) defined aviation security as the protection of airports, people, airplanes, and aircraft and added that its main objective is to identify criminal activity that may lead to catastrophic events in airports (airside) and during flights. Furthermore, one of the participants highlighted that aviation security officers are trained to identify explosives, or anything tampered with as potential threats. The security personnel must be trained and must comply with civil aviation regulations, as outlined in Parts 109 and 110 of the Civil Aviation Regulations. The regulations 109 and 110 seek to ensure standardization in the carrying out of security tasks to protect civil aviation from acts of unlawful interference.

### **9.5.2 Securing mining information systems**

The research revealed that mines use information systems companies to protect and secure information. During the research, respondents were asked to give their insight into mining security. This was based on their understanding of the systems they use to protect mine information and the security measures they have implemented to handle challenges faced in the mine. They noted that mine security is about physical control and access control, but the information system is about safeguarding personal information and preventing crimes from happening. Again, the





security planning process involves investigating where the threat originates and ensuring that security incidents are reported to the mine manager. In almost all cases, mines encounter problems due to information being breached or violated by employees or security guards on the premises. Furthermore, when the systems in the mines are not protected, and some equipment and trucks are automated, this could lead to major accidents. For example, if someone hacks into a mining system, they can remotely control the system and its operations. Therefore if they have autonomous vehicles on the road, hackers could take control of them. On a mine site, the trucks might collide with each other, with equipment, or with people.

As a result, mining security systems are protected by periodically changing passwords. There is a specific department to deal with that and physical security to control access. The research further revealed that not all mining companies use external companies to safeguard their information but use internal IT security technicians who are PSiRA-graded to provide this security service. The above information raises concerns about cyber-security attacks in mining. Among the mines that took part in the study, none of them experienced cyber-security attacks, but many have experienced physical security breaches, where employees steal minerals underground.

Therefore, it is relevant to note that even though this mine has not yet been attacked, they must prepare for the possibility in the future. Mining.com (2021) published an article that discussed PwC South Africa's response to attacks on two major mining companies in 2019. Due to the migration of their email systems to cloud-based mailing platforms, both organisations' networks were exploited by the attackers.



### 9.5.3 Security personnel roles

The typology of the roles undertaken by security personnel in the mining sector is as follows: -

#### **ASO (ASSISTANT SECURITY OFFICER)**

responsible for carrying out the delivery of daily security services in accordance with the relevant policies and procedures

#### **SSO (SENIOR SECURITY OFFICER)**

operates 24 hours a day, does plant patrolling and alarm control

#### **SSO RISK (SECURITY OFFICER: RISK)**

responsible for inspections in the plant (for example, checking pipes and cables are in good condition)

#### **SSO INVESTIGATION (SECURITY OFFICER: INVESTIGATIONS)**

conducts investigations on the incidents that happened in the mine (e.g., diesel theft), and work closely with the HR department

#### **SITE AND SUPERVISOR/SECURITY MANAGER**

responsible for effectively managing the overall security function (strategic, tactical, and operational) and resources at the operation in order to secure company assets, ensuring a safe and secure working environment

#### **SECURITY OFFICER**

conducts patrols (in vehicles and others in foot) and guarding

### 9.5.4 Security challenges

The study found that there are several security challenges common to most mining industries, but that some are unique to the operation and nature of the mines.

#### a) Theft and illegal activities

The study discovered that theft is the most common problem in the mining industry. Copper cables are stolen by illegal miners, and mining equipment is stolen by employees as well as illegal miners. Participants mentioned that perpetrators steal cables and cut fences in remote areas. The theft poses a security challenge for the security officer because of the resultant power outage at the site. The officer will be unable

to monitor or control mine operations, increasing security risks. They also stated that diesel is stolen by both external (from the outside) and internal (from within employees, especially those who drive the trucks).

b) Community or employee unrest

The participants highlighted that in the mining sites there is a lot of sabotage and vandalism and attacks by the local residents. The communities protest about unemployment and demand jobs by staging protests on mine property.

Protests pose a security risk to security guards and the mining company because security guards are not trained to deal with crowds, and protesters may vandalise property and attack guards. Additionally, the protests negatively affect the mining sector by distracting or stopping operations, which results in billions of rands being lost. The mine will therefore hire external private security companies with special units to deal with riots to ensure that these types of actions are minimized. A participant mentioned that in order to avoid protests from the community, the mine employs at least 70% of residents. They provide community services that will benefit the community and promote community engagement.

c) Security guards' pay

The mining companies emphasized that some private companies pay their guards low wages which may lead to bribery and involvement in organized crime. It also demotivates security personnel from doing their jobs effectively. More theft and less security will affect the mine's productivity, which is a concern.

## 9.6 The role of relevant stakeholders

There are different stakeholders within the mining industry that ensure safety and security. For example, private security providers cooperate with the SAPS, Community police forums (CPF) and DMR inspectors. In some mines there is collaboration within the



different private security companies. For example, security officers assist other security officers from other mines regarding suspicious activity in their area; as such, they call up other security officers for back-up so they can help each other if there is a rumour of a strike. When riots break out during protests, the mine receives assistance from a private security company's special unit while awaiting the arrival of the SAPS.

The majority of participants mentioned that they attend a monthly security cluster/forum where they discuss challenges and solutions. Furthermore, most South African mine security companies collaborate with the SAPS with participants stating that they worked with police station commanders. Additionally, the SAPS has a rotational team to combat criminal activity. Police help mining companies with investigations and also with making arrests of intruders. The security officers at the mine and the SAPS meet up and conduct searches in the community, especially in scrapyards. This is to determine whether they have been selling stolen cables or buying stolen items that belong to the mine.

The community policing forum (CPF) is another stakeholder that works with the SAPS and security clusters. Members of the community use the forum as a community voice to combat crime and enhance the living conditions in the area. The CPF utilizes a WhatsApp group to share crime-related information, communicate about meetings, and receive police feedback when strikes or intruders are imminent. One participant however, disagreed that community members assist in crime prevention; instead they are responsible for committing the crimes that become a challenge to the industry.

The Department of Mineral Resources (DMR) plays an active role in dismantling illegal mining at every level and promoting safe operating practices in the mining sector by working closely with the Council for Geoscience (CSG) to seal open holes, collaborating closely with SAPS when conducting operations in squatter camps, and ensuring all gold refineries and jewellery shops are legitimate by investigating them (Lebitso, 2021).



## 10. Recommendation

Based on the research findings, the following recommendations are made to enable PSiRA to better understand and regulate mining security services.

### 10.1 The impact of private security in the mining sector

Private security has a significant impact on the mining industry and helps it to thrive. Mines prioritise safety in their operations. There is a correlation between safety and security when it comes to security services in the mining sector.

In developing policies to regulate security services in the mining industry, PSiRA should align those policies with the Mine Health and Safety Act. Private security companies are required to follow the ethical conduct and human rights policies of the mining company with which they are contracted. They must also adhere to the law and professional standards of the industry in which they operate. Additionally, the mining sector should ensure that they employ accredited private security providers, as well as review the background of the private security guards they use.





## **10.2 Effectiveness of PSiRA legal regime**

### **10.2.1 Regulating and registering dogs**

The Authority must ensure that training centres provide valid work certificates and that each dog has a unique identification number (ID) or PSiRA number. Security service providers must register the dogs individually. In this way, the regime will be effective, and compliance will be ensured.

### **10.2.2 Inspections by PSiRA officials**

The research discovered that a gap in inspections both in the limited number of inspections conducted by PSiRA and limited number of accredited inspectors that conduct inspections in large provinces. The recruitment of inspectors are therefore necessary to further capacitate the law enforcement unit of the Authority. Regular inspections by PSiRA officials are required to ensure compliance with the PSiR Act in the mining industry to ensure that everyone providing security services is registered and compliant with the PSiR Act.

### **10.2.3 Awareness of where to report issues**

Mining companies are unaware of the reporting procedures for security companies that are non-compliant with the Act. In section 3(m) and (n), the Authority's mission is to ensure that compliance with existing legislation by security providers is promoted and controlled through an active monitoring and investigation of the affairs of security service providers, as well as to protect the interests of customers of security services. Therefore, it is advisable that PSiRA should be notified if mining companies find that a security service provider has engaged in improper conduct. The Authority must augment the complaints reporting channels to the industry to increase compliance in the industry and specifically within the Mining sector.





#### **10.2.4 Mobile units**

Research findings also indicated that not all security officers are able to obtain PSiRA cards. This is because the PSiRA offices are far away from their provinces and access to PSiRA cards becomes a challenge. It is recommended that security managers in the particular area or province and schedule a date that works best for them, and then request PSiRA's mobile units to assist them with issues. In addition, PSiRA can announce via its social media pages when and where its mobile registration units will be based to register people and issue access cards. Unemployed and employed security officers will have the opportunity to update and renew their registration, as well as access their cards.

#### **10.2.5 Data-base system**

According to the research findings, PSiRA should have a database that functions like a file history and is accessible only to certain individuals when screening candidates. For example, executives in the security department and HR department can have access to this information. They should also have a platform that flags if the person hired has criminal record. In this way, the person will be prevented from engaging in criminal activity with another company.

### **10.3 Security training in the mining industry**

As mining security training involves more practical and physical training on the mining site, it is generally conducted internally by security service providers and training centres in the mines. For instance, private security companies and other security training centres in the mine have their own training programme based on the organisational needs and client demands.

It is recommended that PSiRA ensures compliance within the industry on training. The Authority needs to ensure that security service providers provide adequate training and use applicable and officially approved methods and procedures. Also, the



communication department can advertise these special training courses and can list the details of accredited training providers who provide mine security training programmes. By doing so, security officers will know which facilities provide mining security training.

#### **10.4 Security measures and equipment**

To ensure assets and people are protected, PSiRA must ensure that security service providers use adequate security measures and equipment. It is mandatory to register with PSiRA if one intends to install or repair this security equipment. In light of this, all security service providers must be registered with PSiRA to ensure their functions are defined as a security service in accordance with the PSiR Act.

#### **10.5 Categories of rendered security services**

Despite the fact that most security service providers employed by mine companies are PSiRA-registered, some providers - especially security technicians and site managers, and some in-house investigators - are not registered with PSiRA because they are unaware that they should be. More educational programmes are required for the general public to understand who has an obligation to register with PSiRA in terms of the PSiR Act.

#### **10.6 Stakeholders involved in the mining security**

With regards to the stakeholders involved in the mining sector, it is recommended that there be a strong relationship between PSiRA and mining companies, and SAPS and private security companies should work together rather than compete. The safety and security of mining can only be achieved through collaboration of all stakeholders involved in the mining sector. Such collaboration will further enhance the credibility of private security as a major stakeholder in mining security.



## 11. Conclusion

The mining industry relies heavily on private security companies to protect and safeguard company personnel, minerals, secure mining sites, and to facilitate operations. In addition, safety and security are imperative factors in the mining industry. Moreover, the unique nature of each mine sites requires special training for mine security personnel to deal with specific scenarios that occur. In addition, private security must take precautionary measures and follow procedures as guided by the Mine Health and Safety Act to ensure safety. Furthermore, compliance with the PSiR Act is mandatory for private security companies providing security in mines.

The study found that the rendering of security services varies depending on the location of the mine, the operations, and the type of mineral that is extracted or processed. The study showed that while some mines require a low level of security because the mineral that is extracted or processed does not have a high value, other mines require a high level of security because the mineral extracted or processed has a high value.

The current regime of PSiRA was found to be ineffective in the mining industry due to a lack of training and a shortage of PSiRA inspectors which results in no inspections at some mines. Also, there are still security companies that are not registered with PSiRA but render security services. It was recommended that more inspections be conducted on security companies, and that a large number of inspectors be employed for the PSiRA to be effective in this sector. Also, PSiRA should have a database that functions like a file history and is accessible only to certain individuals when screening candidates. In this way, the person found to have a criminal record will be prevented from engaging in criminal activity with another company. The study found that mining industries use both in-house and contract security service providers, depending on the role or services needed.



The level of training required by security officers in the mining industry needs to be improved and made more practical through mining security programs and courses provided by security service providers to ensure compliance with the PSiR Act.

Furthermore, the study highlighted a number of security challenges at mining sites indicating a need for adequate and effective security measures and security equipment to protect and prevent illegal activities. Lastly, stakeholders such as the SAPS, the community, the community police forum, and DMR inspector officials should collaborate with security officials at the mine to offer a unified approach to the improvement and management of mine security.



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