economic development & tourism
MPUMALANGA PROVINCE
REPUBLIC OF SOUTH AFRICA

MPUMALANGA
THE PLACE OF THE RISING SUN

RESEARCH REPORT ON THE STATE OF MINING IN MPUMALANGA

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COMPILED BY: RESEARCH & DEVELOPMENT

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TABLE OF CONTENTS

ACRONYMS

ASM	
BEE	Black Economic Empowerment
COP	Conference Of the Parties
DEDT	Department of Economic Development and Tourism
DMPR	Department of Mineral and Petroleum Resources (South Africa)
GDP	Gross Domestic Product
GVA	Gross Value Added
HDSA	Historically Disadvantaged South African
IDC	Industrial Development Corporation
IDP	Integrated Development Plan
MCSA	Minerals Council South Africa
MEGDP	Mpumalanga Economic Growth and Development Path
MHSA	Mine Health and Safety Act
MCD	Mining Community Development
MHSC	Mining Health and Safety Council
MPRDA	Mineral and Petroleum Resources Development Act
MQA	Minerals Qualifications Agency
QLFS	Quarterly Labour Force Survey
SAIMM	Southern Institute on Mining and Metallurgy
SAMRAD	South African Mineral Resources Administration
SLP	Social and Labour Plan
Stats SA	Statistics South Africa
UNFCC	United Nations Framework Convention on Climate Change

KEY FINDINGS

- In 2024, Mpumalanga had 268 mines and quarries which accounts for 13.2% of the 2 029 operating mines and quarries in South Africa.
- Emalahleni, Steve Tshwete and Govan Mbeki combined host 52.3% of all mines in the province.
- It is estimated that in 2023, the mining industry in Mpumalanga made export sales of primary minerals worth R115.8 billion and local sales of primary minerals worth R108.5 billion.
- It is estimated that in 2024, Mpumalanga contributed 23.0% to the GDP of South Africa's mining industry.
- The average annual growth rate for the mining industry in Mpumalanga over the period 1996 to 2024 was only 0.5%.
- It is estimated that the mining industry (0.5%) will achieve only marginal growth annually between 2024 and 2029.
- The Mpumalanga mining industry recorded an employment elasticity of --3.05 over the period 2015 to 2024.
- The South African mining industry employed 433 515 individuals at the end of Q2 2025.
- Employment in the Mpumalanga mining industry declined by 16 876 between 2020 and 2025.
- The industry faces acute skills shortages, worsened by the demands of the Fourth Industrial Revolution.
- South Africa ranked 68th out of the 82 countries in the 2024 Global Investment Attractiveness Index.
- About 86% of companies achieved the target of 26% ownership by HDSA in 2018. The higher proportion are BEE entrepreneurs.
- The industry has achieved the employment equity targets with 78.7% being on the core skills, 70.5% in junior management, 61.4% in middle management and 52.8% in senior management.
- In procurement targets, the industry has achieved all the targets by an average of 75%.
- The industry had in 2019 achieved the employment equity by an average of more than 65%.
- In 2020, more women were absorbed in chrome and other minerals. In 2022, 18% of women were in top management and 15% in senior management positions.
- Between 2024 and 2025 the Mining Qualification Authority funded 89 beneficiaries from Mpumalanga to be trained on small scale mining (NQF Level 2).
- 95.9% of mining employees have written contracts compared to 59.9% in the rest of the economy.
- There has been a decrease in the number of fatalities in mining industry in South Africa, from 60 in 2020 to 42 in 2024.
- South Africa is still struggling to reach 5% target on global exploration expenditure, in 2023, it accounted for 0.90%.
- It is estimate that illegal gold mining activities alone, costs South Africa about R70 billion every year.

1. INTRODUCTION

The Mpumalanga Economic Growth and Development Path (MEGDP), which is a provincial framework aimed at taking the national policy imperatives forward, places an emphasis on the acceleration of amongst others economic growth and job creation. It further identifies mining as one of the industries that must be supported for growth and development. Mining can have a local, regional and national impact on economic growth and development that can be leveraged to build new infrastructure, new technologies and unlock employment opportunities. These are emphasised in the Provincial Mining Lekgotla Pledge that was signed by different stakeholders within the Mpumalanga mining industry in 2012.

This updated report present keys aspects on mining industry in Mpumalanga like the location of mines, analysis of the economic contribution (1996 to 2024) as well as the labour profile (2008 to 2025). The report also endeavours to present a picture on transformation matters as prescribed by the Mining Charter in South Africa. Data presented in this report was primarily sourced from S&P Global, Minerals Council South Africa (MCSA), Statistics South Africa (Stats SA) and Department of Mineral and Petroleum Resources (DMPR).

2. ECONOMIC AND LABOUR PROFILE

2.1. Background

According to the DMPR's *Operating Mines and Quarries and Mineral Processing Plants,* there were 268 mines and quarries in Mpumalanga in 2024, which accounted for 13.2% of the 2 029 operating mines and quarries in South Africa. (Table 1)

Table 1: Number of operating mines and quarries in Mpumalanga according to primary mineral produced, 2024

Primary mineral	Number of mines and quarries
Aggregate	17
Andalusite	2
Attapulgite clay	1
Brickmaking clay	11
Chrome ore	11
Coal (Anthracite & Bituminous)	179
Gold	13
Granite	9
Limestone	1
Magnesite	1
Nickel	1
Platinum group metals	6
Sand	9
Semi-precious stones	1
Silica	5
Talc	1
Total	**268**

Source: DMPR – Directory D1/2025

The DMPR was unable to provide exact geographical coordinates for the operating mines in Mpumalanga. With the data provided it was possible to construct Table 2, which summarises the number of mines, mining companies operative as well as the primary minerals mined per local municipal area in Mpumalanga. According to the data, operating mines were spread over sixteen local municipal areas in 2024. Emalahleni (57), Steve Tshwete (44) and Govan Mbeki (36) hosted the largest number

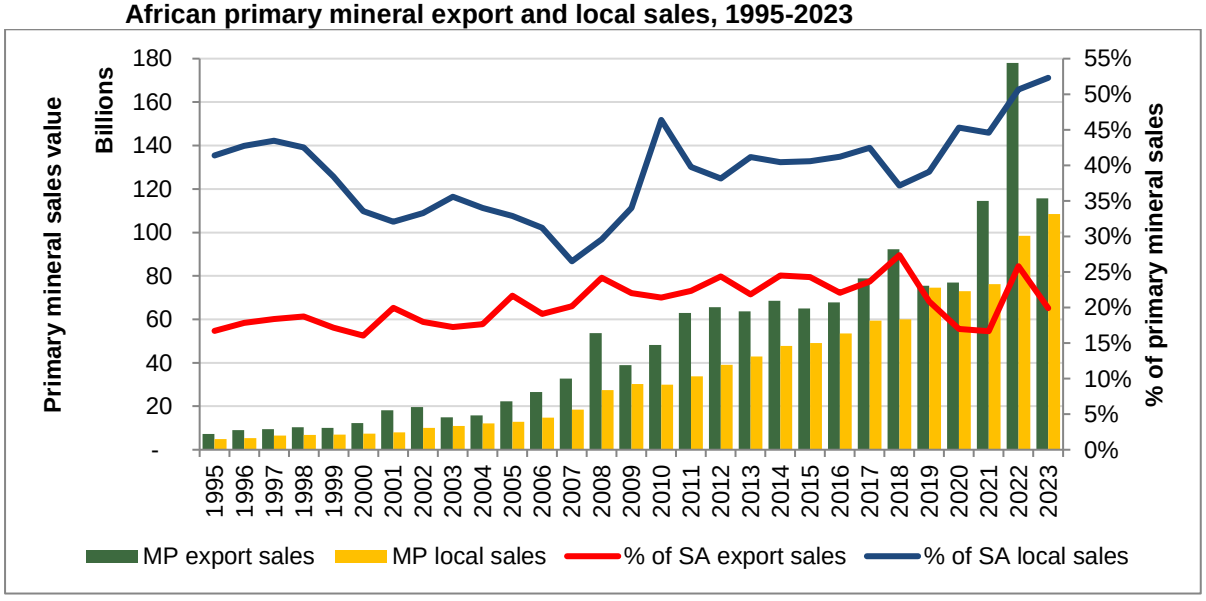
of mines. The aforementioned three local municipal areas combined to host 52.3% of all mines in the province.

Table 2: Mines and primary minerals mined per local municipal area in Mpumalanga, 2024

Local Municipal Area	Number of mines	Number of mining companies	Primary mineral mined
Bushbuckridge	1	1	Aggregate
Chief Albert Luthuli	13	12	Aggregate, Bituminous coal, Brickmaking clay, Dimension stone, Gold & Nickel
City of Mbombela	21	16	Aggregate; Anthracite coal, Bituminous coal, Brickmaking clay; Gold; Magnesite; Sand; Semi precious stones & Talc
Dipaleseng	1	1	Gold
Dr Pixley Ka Isaka Seme	4	4	Bituminous coal
Emakhazeni	14	14	Bituminous coal; Granite; Limestone; Nickel & Silica
Emalahleni	57	51	Aggregate; Bituminous coal; Brickmaking clay & Sand
Govan Mbeki	36	19	Aggregate; Bituminous coal; Gold & Sand
Lekwa	2	2	Aggregate & Bituminous coal
Mkhondo	4	4	Aggregate, Bituminous coal & Anthracite coal
Msukaligwa	22	20	Aggregate; Bituminous coal & Brickmaking clay
Nkomazi	2	2	Anthracite coal & Sand
Steve Tshwete	44	41	Bituminous coal; Brickmaking clay; Granite & Sand
Thaba Chweu	27	23	Andalusite; Attapulgite; Brickmaking clay; Chrome ore; Gold; Granite; PGM[1]; Sand; & Silica
Thembisile Hani	1	1	Bituminous coal
Victor Khanye	19	19	Brickmaking clay; Bituminous coal, & Silica

Source: DMPR – Directory D1/2025

Figure 1: Mpumalanga's estimated primary mineral export and local sales in the context of South African primary mineral export and local sales, 1995-2023



Source: DMPR – B1/2024

According to the DMPR's Minerals Statistical Tables, the mining industry in Mpumalanga achieved export sales of primary minerals valued at R115.8 billion and local sales amounting to R108.5 billion in 2023 (Figure 1). Between 1995 and 2023, Mpumalanga's contribution to South Africa's local primary

[1] Platinum group metals

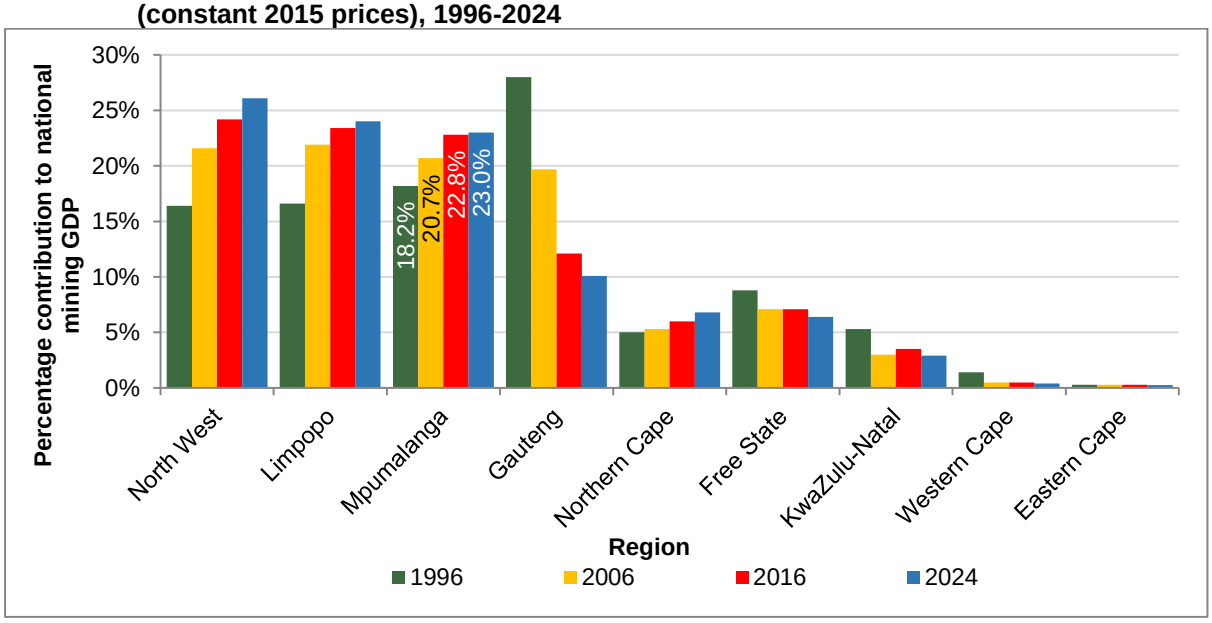
mineral sales ranged between 26.5% and 52.3%. During the same period, Mpumalanga's share of the country's export primary mineral sales showed a gradual increase, climbing from 16.7% in 1995 to 27.4% in 2018, before declining to 16.7% in 2021 and then recovering to 19.9% in 2023. These figures underscore the significant role Mpumalanga plays in both local and export markets, reflecting its resilience and adaptability in the face of market fluctuations.

2.2. Economic contribution and growth

Mpumalanga's contribution to the national mining industry and comparative growth

It is estimated that in 2024, Mpumalanga contributed 23.0% to the gross domestic product (GDP) of South Africa's mining industry. In terms of provincial contribution to the national mining industry, Mpumalanga occupied third place in 2024 behind North West (26.1%) and Limpopo (24.0%). Mpumalanga's substantial share improved from 18.2% in 1996 (Figure 2).

Figure 2: Comparative contribution to the national mining industry's GDP at basic prices (constant 2015 prices), 1996-2024



Sources: Stats SA – Provincial Gross Domestic Product 2024
S&P Global – Regional eXplorer (ReX), July 2025

Table 3: GDP at basic prices (constant 2015 prices) growth rates for the mining industry in South Africa and provinces, 1996-2029

Province	1996-2024	1997-2002	2002-2007	2007-2012	2012-2017	2017-2022	2024-2029
Western Cape	-4.2%	-10.1%	-0.3%	-0.9%	2.3%	1.4%	1.6%
Eastern Cape	-0.8%	-0.1%	-1.0%	-0.3%	0.7%	-2.7%	0.8%
Northern Cape	0.8%	0.7%	-0.3%	-0.2%	2.7%	-1.4%	0.6%
Free Sate	-1.4%	-4.1%	0.6%	-1.6%	1.0%	-6.4%	-2.2%
KwaZulu-Natal	-2.4%	-10.0%	-0.4%	-0.1%	2.0%	-1.6%	0.7%
North West	1.4%	1.8%	5.4%	-0.5%	-0.1%	-0.9%	0.3%
Gauteng	-3.9%	-3.4%	-3.2%	-6.6%	-0.4%	-6.2%	0.2%
Mpumalanga	**0.5%**	**0.7%**	**1.8%**	**-0.8%**	**1.9%**	**-1.9%**	**0.5%**
Limpopo	1.0%	4.8%	1.0%	-1.6%	2.0%	-0.4%	1.7%
South Africa	**-0.3%**	**-0.3%**	**0.9%**	**-1.8%**	**1.2%**	**-2.1%**	**0.6%**

Sources: Stats SA – Provincial Gross Domestic Product 2024
S&P Global– ReX, July 2025

Over the period 1996 to 2024, the South African mining industry contracted by 0.3% per annum, whereas the average annual growth Mpumalanga mining industry was 0.5% per annum (Table 3).

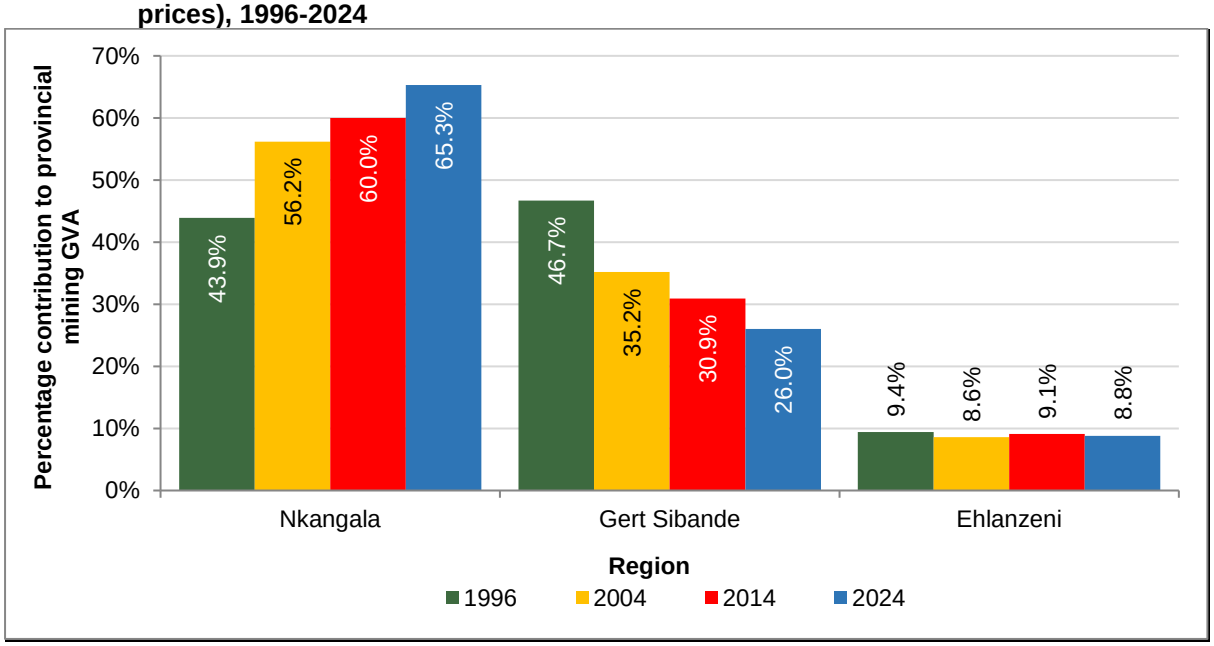
Mpumalanga recorded the fourth highest average annual growth rate over the 28-year period. Only Limpopo, North West, Northern Cape, and Mpumalanga recorded average annual growth over the 28-year period. Due to the 2008/09 and 2020 recessions, Mpumalanga suffered contractions over the period 2007 to 2012, as well the 2017 to 2022 period. Mpumalanga's mining industry is expected to recover slowly in the period 2024 to 2029 with an expected average annual growth rate of 0.5%.

Districts' contribution to the provincial mining industry and comparative growth

In 2024, the mining industry in Nkangala, expressed in gross value added (GVA) terms, made the largest contribution to the provincial mining industry followed by Gert Sibande. Nkangala's dominant share increased from 43.9% in 1996 to 65.3% in 2024 (Figure 3). Over the 28-year period, Gert Sibande's share shrunk from 46.7% in 1996 to 26.0% in 2024.

The average annual growth rate for the mining industry in Nkangala over the period 1996 to 2024 was 2.0% (Table 4). Among the three districts, only Gert Sibande recorded an annual average contraction of 1.6% over the 28-year period.

Figure 3: Comparative contribution to the provincial mining industry's GVA (constant 2015 prices), 1996-2024



Source: S&P Global– ReX, July 2025

Table 4: GVA (constant 2015 prices) growth rates for the mining industry in Mpumalanga and districts, 1996-2029

Region	1996-2024	1996-1999	1999-2004	2004-2009	2009-2014	2014-2019	2019-2024	2024-2029
Gert Sibande	-1.3%	-0.6%	-2.3%	-4.0%	3.0%	-1.4%	-3.6%	1.5%
Nkangala	2.0%	6.4%	4.3%	0.5%	2.3%	2.0%	-1.9%	0.2%
Ehlanzeni	0.3%	-0.9%	1.7%	-2.9%	5.9%	-1.0%	-1.4%	-0.3%

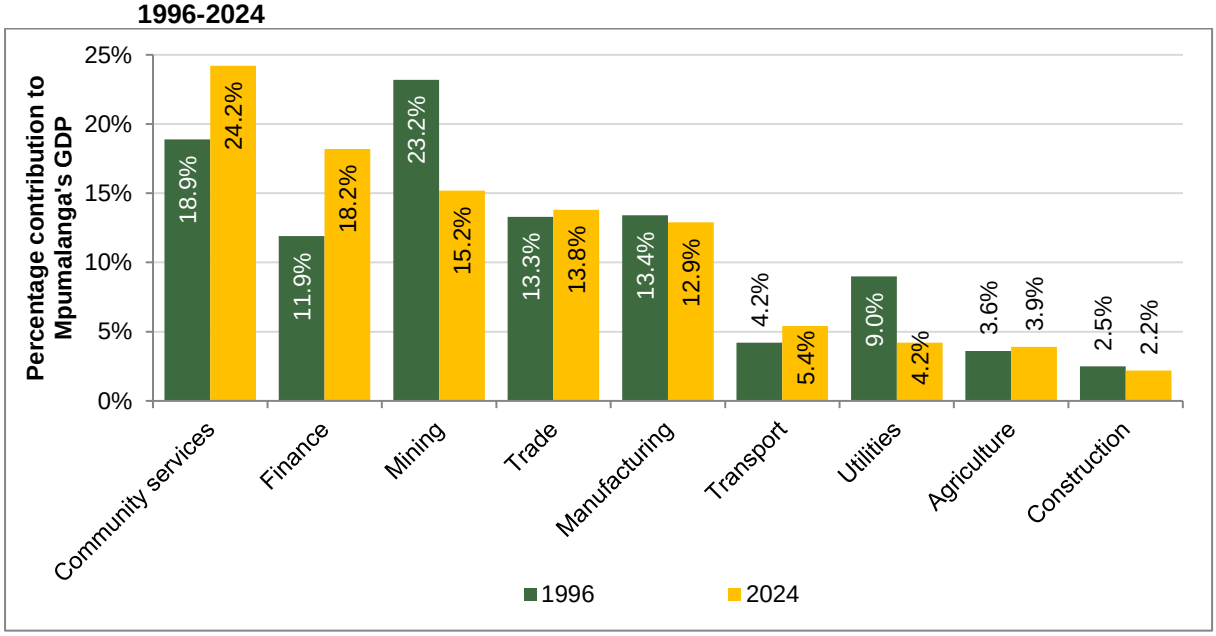
Source: S&P Global– ReX, July 2025

Contribution by mining to Mpumalanga's economy and comparative growth

It is estimated that in 2024, the three largest contributors (in constant prices) to the provincial economy were community services (24.2%), finance (18.2%) and mining (15.2%). This was decidedly different from 1996, when mining (23.2%) was the leading industry followed by community services (18.9%), and trade (13.3%). Mining was the third largest industry in 2024 and the industry's contribution declined by

8.0 percentage points between 1996 and 2024. In current prices, mining, however, was the single largest industry in 2024 with a 19.2% contribution. Figure 4 displays the contribution by each economic industry to the provincial economy in 1996 and 2024.

Figure 4: Comparative contribution to Mpumalanga's GDP (constant 2015 prices) by industry, 1996-2024



Sources: Stats SA – Provincial Gross Domestic Product 2024
S&P Global– ReX, July 2025

Table 5: GDP (constant 2015 prices) growth rates for Mpumalanga's economic industries, 1996-2029

Industry	1996-2024	1997-2002	2002-2007	2007-2012	2012-2017	2017-2024	2024-2029
Agriculture	2.4%	4.6%	-2.9%	3.5%	6.7%	4.4%	1.5%
Mining	**0.5%**	**0.7%**	**1.8%**	**-0.8%**	**1.9%**	**-1.9%**	**0.5%**
Manufacturing	1.8%	4.3%	4.6%	1.0%	0.7%	-1.7%	1.2%
Utilities	0.0%	-1.8%	4.0%	0.3%	-1.8%	-2.4%	-0.3%
Construction	1.6%	-0.8%	10.0%	4.7%	-0.1%	-5.6%	2.3%
Trade	2.1%	4.1%	4.2%	2.1%	0.6%	-0.8%	1.1%
Transport	3.2%	6.0%	6.2%	2.1%	1.8%	-0.5%	3.1%
Finance	2.9%	1.3%	7.5%	2.2%	1.8%	2.0%	3.1%
Community services	2.1%	3.0%	4.0%	1.5%	1.7%	1.2%	1.7%

Sources: Stats SA – Provincial Gross Domestic Product 2024
S&P Global – ReX, July 2025

The historic growth for the economic industries of Mpumalanga is presented in Table 5. Between 1996 and 2024, the fastest growing industries in terms of economic growth were estimated to be transport (3.2%), finance (2.9%) and agriculture (2.4%). The average annual growth rate for the mining industry in Mpumalanga over the period 1996 to 2024 was only 0.5%. Apart from utilities that remained flat (0.0%), mining recorded the lowest average annual growth rate over the 28-year period. It is estimated that the mining industry (0.5%) will achieve only marginal growth annually between 2024 and 2029.

Contribution by mining to Mpumalanga's districts' economy and comparative growth

Table 6 displays the share of each economic industry in the three districts' economies in 1996 and 2024. In 2024, the largest contribution to Nkangala's economy was by the mining industry with a 26.4% share. Mining made the third largest contribution to Gert Sibande's economy with a 15.2% share, whereas mining made the third smallest contribution to Ehlanzeni's economy of only 3.6%. Between 1996 and

2024, the mining industry's share decreased in both Gert Sibande and Ehlanzeni.

Table 6: Contribution to districts' GVA (constant 2015 prices) by industry, 1996-2024

Industry	Gert Sibande		Nkangala		Ehlanzeni	
	1996	2024	1996	2024	1996	2024
Agriculture	4.0%	5.7%	2.4%	2.8%	3.7%	3.4%
Mining	32.6%	15.2%	25.4%	26.4%	6.5%	3.6%
Manufacturing	15.2%	16.0%	13.2%	13.2%	11.1%	10.6%
Utilities	5.5%	4.7%	10.5%	3.9%	4.2%	4.3%
Construction	1.9%	2.0%	2.2%	1.9%	3.1%	2.5%
Trade	11.2%	13.8%	10.7%	11.2%	16.9%	16.8%
Transport	3.5%	5.7%	3.4%	4.8%	4.2%	5.4%
Finance	8.6%	14.7%	13.5%	16.2%	18.6%	22.2%
Community services	17.5%	22.2%	18.7%	19.6%	31.7%	31.2%
Total industries	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Source: S&P Global – ReX, July 2025

Table 7 displays the average annual growth rates of each economic industry in the three districts' economies between 1996 and 2024. Between 1996 and 2024, Nkangala's fastest growing industries were transport and finance with mining (2.0%) recording the joint fourth fastest growth. Over the 28-year period, only the mining industry in Gert Sibande (-1.6%) registered an annual average contraction, which partly explains the decline in contribution depicted in Table 6.

Table 7: GVA (constant 2015 prices) growth rates for Mpumalanga's districts' economic industries, 1996-2024

Industry	Gert Sibande	Nkangala	Ehlanzeni
Agriculture	2.5%	2.3%	2.2%
Mining	-1.6%	2.0%	0.3%
Manufacturing	1.3%	1.8%	2.3%
Utilities	0.6%	-1.7%	2.5%
Construction	1.4%	1.3%	1.7%
Trade	1.9%	2.0%	2.4%
Transport	3.0%	3.0%	3.3%
Finance	3.1%	2.5%	3.1%
Community services	2.0%	2.0%	2.4%

Source: S&P Global – ReX, July 2025

2.3. Contribution by sub-industries and comparative growth

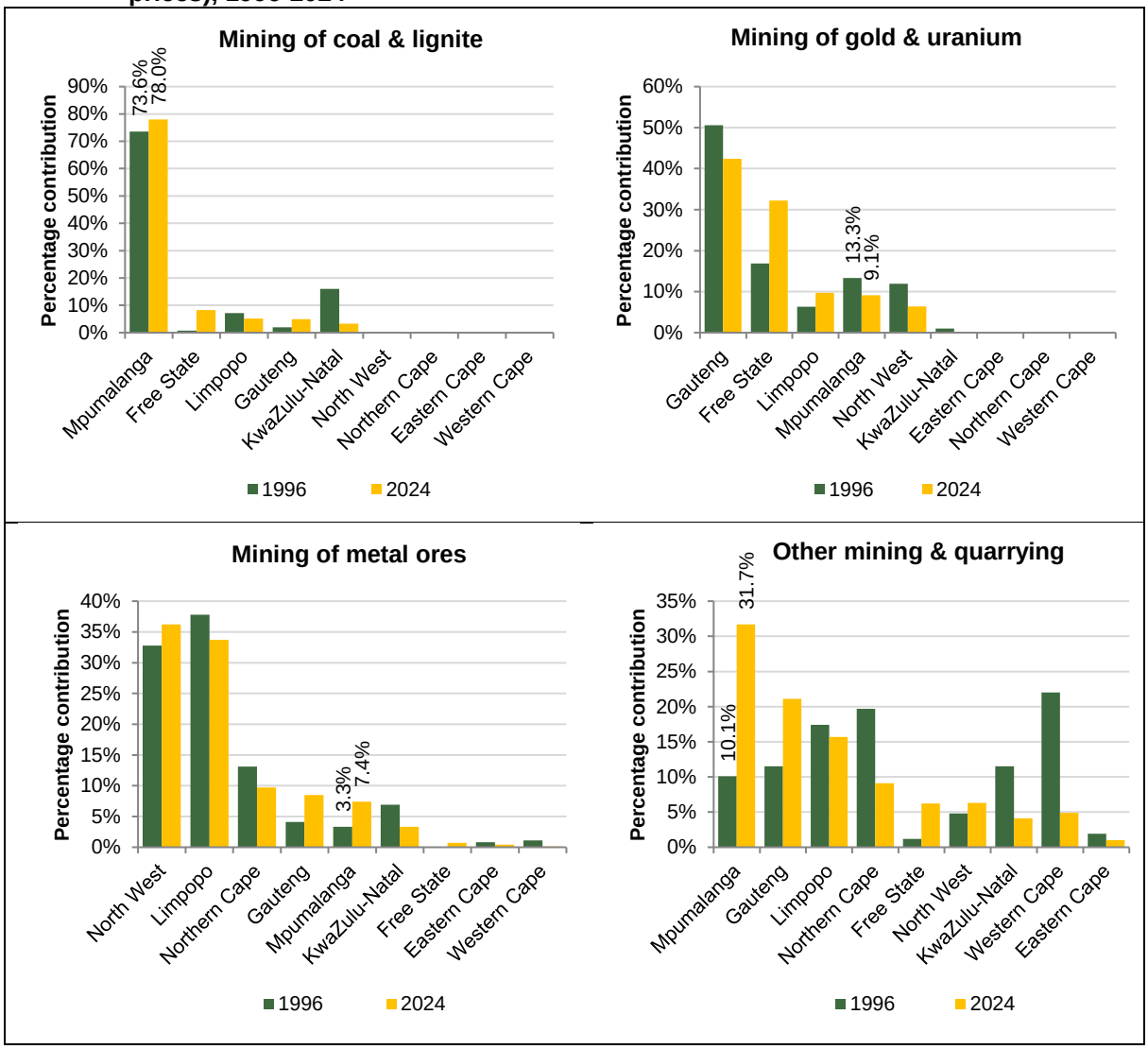
National mining

The contribution by the nine provinces to the four mining sub-industries between 1996 and 2024 is depicted in Figure 5. Mpumalanga dominated the national mining of coal and lignite sub-industry with a contribution of 78.0% in 2024. The province's contribution in this sub-industry increased from 73.6% in 1996. Mpumalanga's share of metal ore mining as well as other mining and quarrying increased over the 28-year period to 7.4% and 31.7%, respectively. The province's share of mining of gold and uranium declined from 13.3% in 1996 to 9.1% in 2024.

Provincial mining

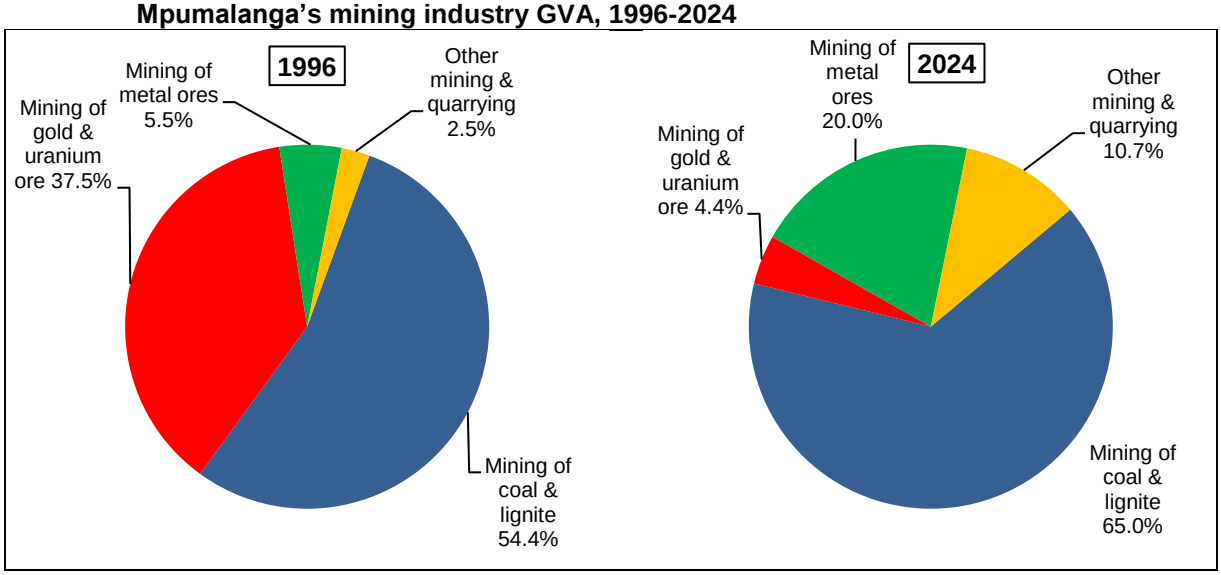
Figure 6 displays the relative size of Mpumalanga's four mining sub-industries in 1996 and 2024. Mining of coal and lignite was the largest mining sub-industry in 2024 with a share of 65.0%, while the mining of metal ores was the second largest with a share of 20.0%. It is important to note that the shares of coal and lignite mining, metal ore mining as well as other mining and quarrying increased, whereas the share of the gold and uranium mining sub-industry declined substantially between 1996 and 2024.

Figure 5: Comparative contribution to the national mining sub-industries' GVA (constant 2015 prices), 1996-2024



Source: S&P Global – ReX, July 2025

Figure 6: GVA (constant 2015 prices) contribution by Mpumalanga's mining sub-industries to Mpumalanga's mining industry GVA, 1996-2024



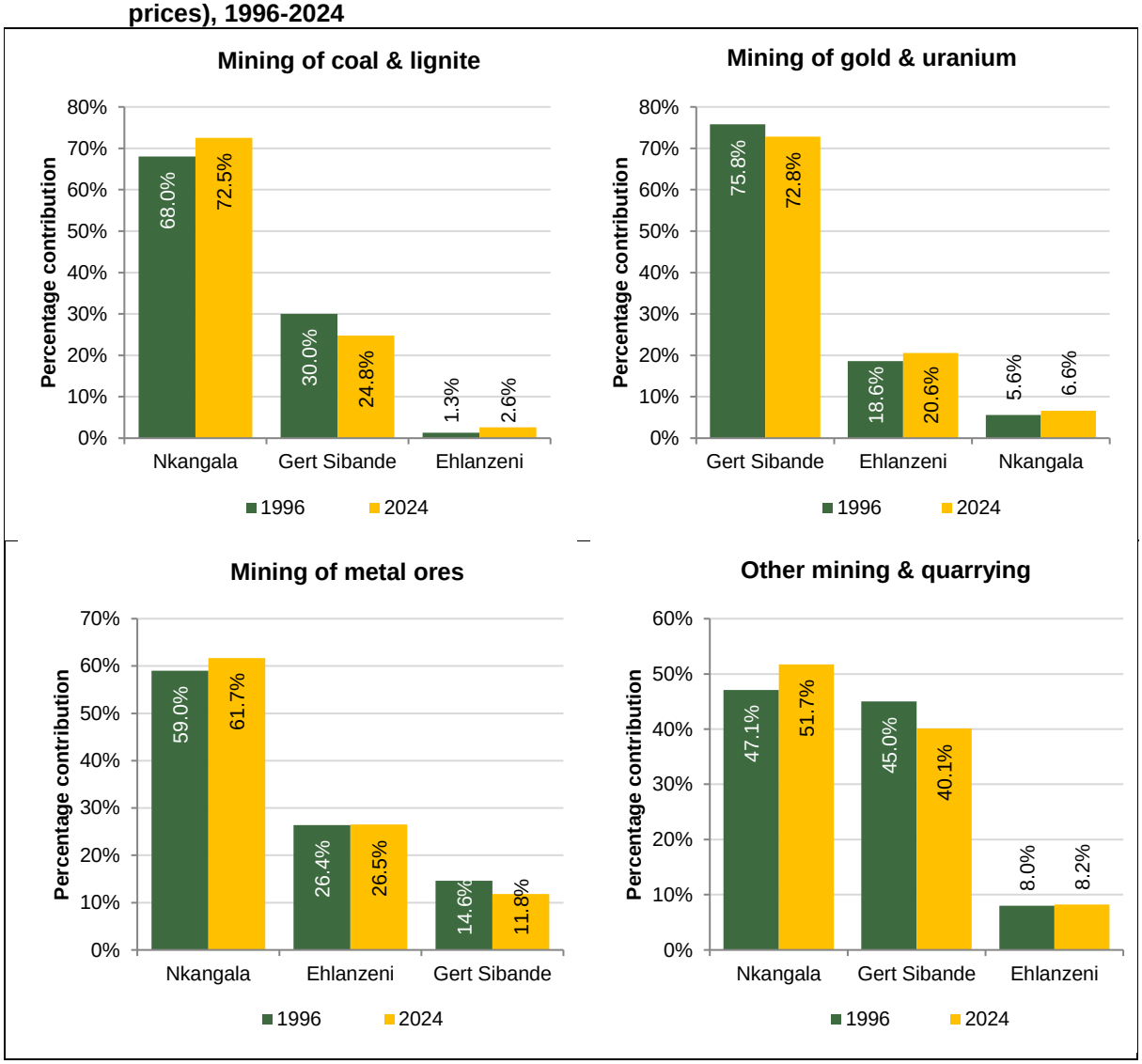
Source: S&P Global – ReX, July 2025

District mining

The contribution by the three districts to the four mining sub-industries between 1996 and 2024 is depicted in Figure 7. Nkangala dominated the mining of coal and lignite with a contribution of 72.5% in 2024. The district's contribution in this sub-industry increased from 68.0% in 1996.

Gert Sibande dominated gold and uranium mining with a 72.8% contribution in 2024, albeit somewhat lower than in 1996. Nkangala's share of metal ore mining increased over the 28-year period from 59.0% in 1996 to 61.7% in 2024. Over the 28-year period, Nkangala (51.7%) increased its share in terms of other mining and quarrying.

Figure 7: Comparative contribution to the provincial mining sub-industries' GVA (constant 2015 prices), 1996-2024



Source: S&P Global – ReX, July 2025

2.4. Other relevant economic indicators

Comparative advantage

The location quotient is an indication of the comparative advantage of an economy. When the share of an industry in a regional economy is greater (less) than the share of the same industry in the national economy that regional economy has a location quotient larger (smaller) than one, or a comparative

advantage (disadvantage) in that particular industry. Between 1996 and 2024, the Mpumalanga mining industry consistently held a comparative over the national mining industry. The 2024 location quotient was 2.82 and it was the highest of the nine industries.

Labour intensity

Labour intensive industries are identified by comparing the output generation capacity with the utilisation of labour. When an industry utilises a larger share of the provincial employed than what its share towards the provincial output is, that industry is regarded as a labour intensive industry. In 2024, the mining industry in Mpumalanga exhibited a lower employment share (5.7%) relative to its output share (15.2%), thereby indicating a low level of labour intensity.

Employment elasticity

The rate of employment growth in an economy, or in any industry of it, is determined by many factors operating simultaneously, one of which is how fast the economy grows. Employment elasticity provides an indication of the historic rate of employment growth as determined by the historic economic growth. Such an employment elasticity of an industry can be calculated by dividing the observed growth rate of employment during any past period by the observed economic growth rate during the same past period.

The Mpumalanga mining industry recorded an employment elasticity of -3.05 over the period 2015 to 2024. Translated into actual values, this figure indicates that, between 2015 and 2024, every 1% economic growth resulted in a 3.05% decline in the employment numbers of the mining industry in Mpumalanga.

Labour productivity

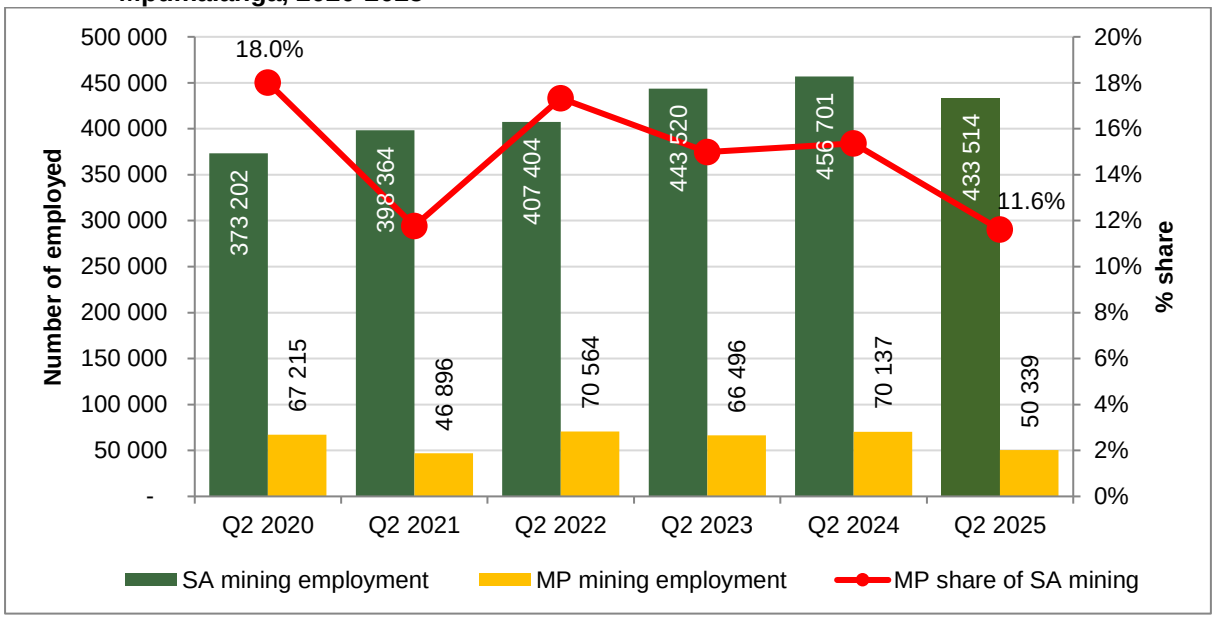
Productivity can be measured by relating changes in output to changes in one or more input to production. Should an industry achieve a score of more than unity (1) then that industry is regarded as experiencing higher labour productivity than all industries combined. When comparing Mpumalanga's industry specific labour productivity with that of the province's total industries, it is evident that the mining industry was one of four industries (mining, manufacturing, utilities and finance) that achieved higher labour productivity than the total industries combined in 2024.

2.5. Labour profile

The South African mining industry employed 433 515 individuals at the end of Q2 2025 (Figure 8), showcasing its substantial role in the country's labour market. At the end of Q2 2025, the South African mining industry employed 60 312 more individuals than five years earlier in Q2 2020, indicating a positive trend. This growth highlight the industry's resilience and adaptability in the face of economic changes.

Employment in the Mpumalanga mining industry, however, declined by 16 876 over the 5-year period. Therefore, the province's contribution to the national mining industry employment declined from 18.0% to 11.6%. At the end of Q2 2025, the Mpumalanga mining industry employed the fourth highest number of individuals among the nine provinces, reflecting its role as a notable player in the national mining workforce.

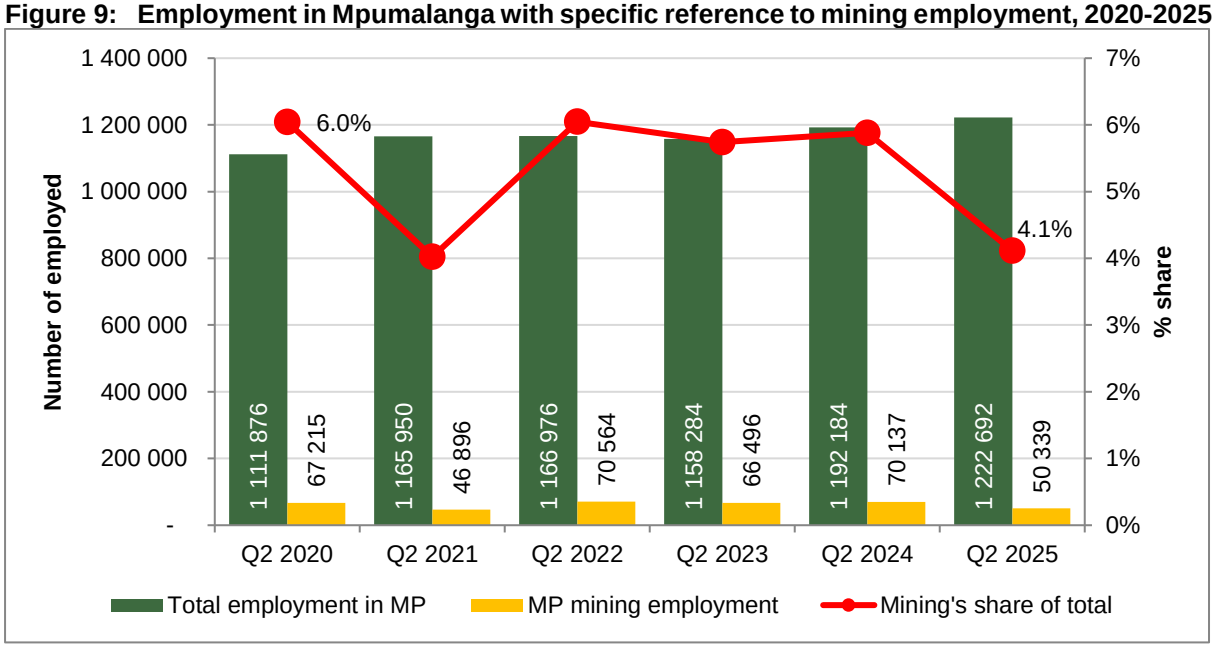
Figure 8: Employment in the South African mining industry with specific reference to Mpumalanga, 2020-2025



Source: Statistics South Africa – Quarterly Labour Force Survey (QLFS), 2025

According to Figure 9, Mpumalanga's total employment number increased from 1 111 876 in Q2 2020 to 1 222 692 in Q2 2025, revealing an upward trend. The mining industry, however, lost jobs and employment share over the same period. This decline underscores the need for proactive measures to reskill the mining labour force in light of the transition towards cleaner energy technologies amidst environmental concerns.

Figure 9: Employment in Mpumalanga with specific reference to mining employment, 2020-2025



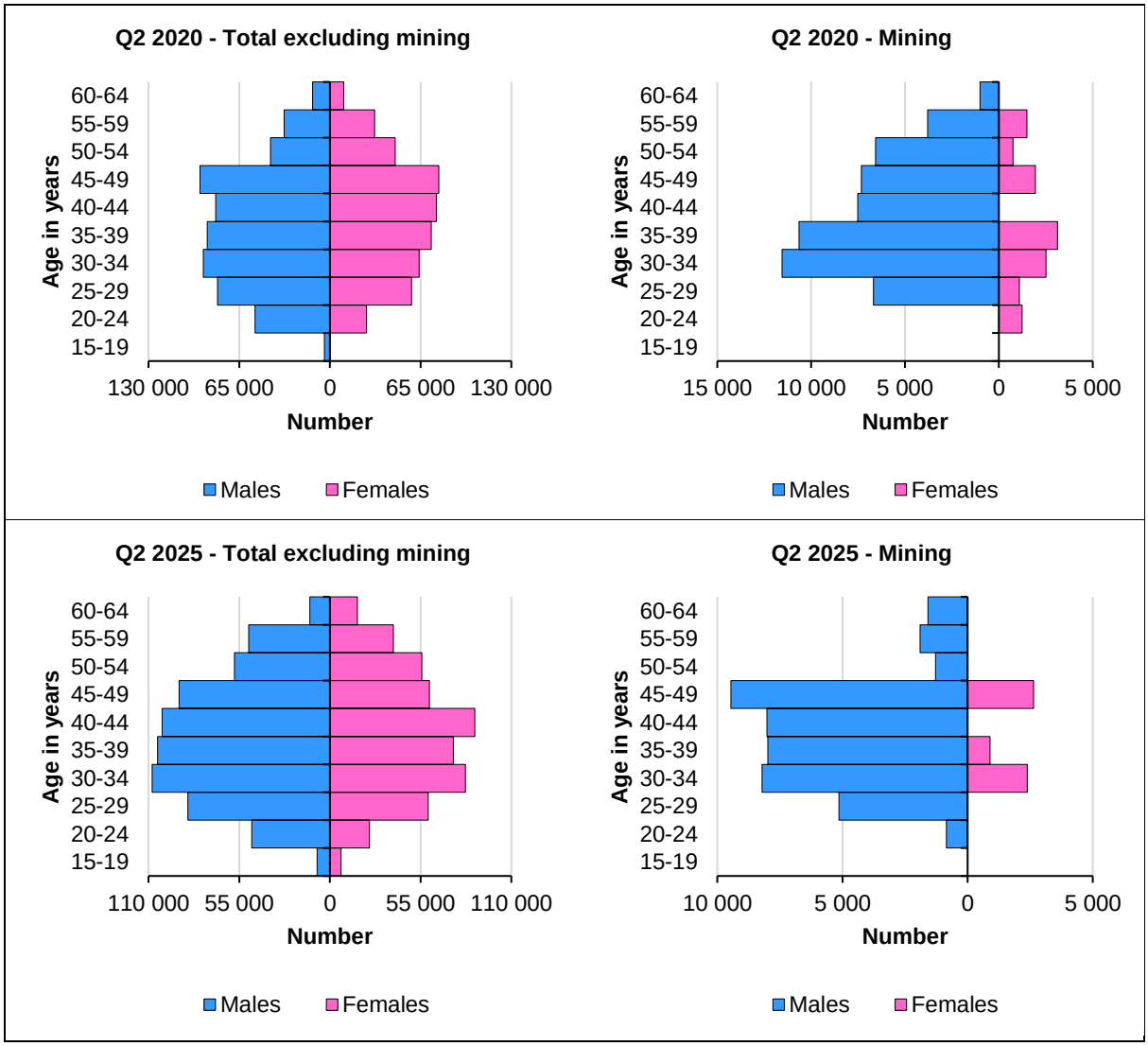
Source: Statistics South Africa – QLFS, 2025

The mining industry was one of three industries that recorded job losses over the 5-year period, emphasising the challenges faced by various industries. The mining industry's contribution declined from 6.0% in Q2 2020 to 4.1% in Q2 2025.

It is evident from Figure 10 that the gender profile of the mining industry in Mpumalanga differs radically from employment in the rest of the industries. At the end of Q2 2025, males dominated employment numbers in the mining industry with a share of 88.2%, which was much higher than the 56.8% of males in the other industries. This was higher than the 82.0% share at the end of Q2 2020, reflecting a persistently male-dominated workforce. These disparities emphasize the need for targeted efforts to address gender diversity in this industry.

The youth of working age (15-34 years) made up 32.9% of the total number of employed in the Mpumalanga mining industry at the end of Q2 2025. This was lower than five years earlier when the youth of working age contributed 34.3%. The age cohort of 45-49 years represented the most populous age cohort with 24.0% of those employed in the mining industry at the end of Q2 2025. The 45-49 years age cohort was also the most populous cohort five years earlier with a share of 20.9%.

Figure 10: Employment by gender and age in Mpumalanga with specific reference to mining, 2020-2025



Source: Statistics South Africa – QLFS, 2025

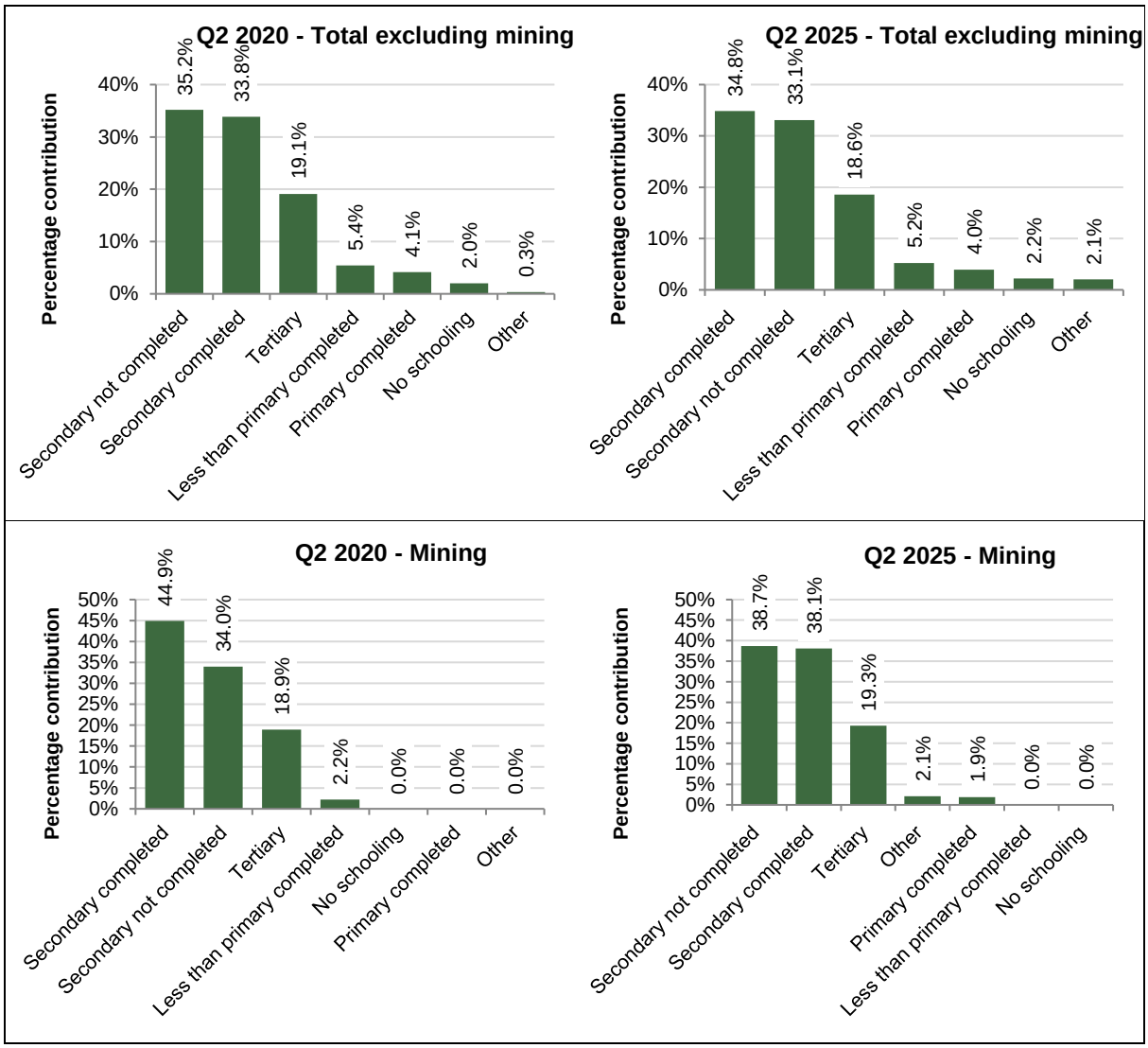
At the end of the Q2 2025, the majority (34.8%) of the employed in the other industries indicated that they have completed their secondary education. In contrast, the majority (38.7%) of the employed in the mining industry have not completed secondary education. This highlights a lower level of educational

attainment within the mining industry compared to the rest of the industries.

The employed in the mining industry that held a matric were lower at the end of Q2 2025 than in the corresponding quarter of 2020. This decline in matriculation rates among the mining industry employees emphasizes the importance of addressing education-related challenges to ensure a skilled and capable workforce.

It is apparent from Figure 11 that in total, only 4.0% of the employed in the mining industry have not completed any level of schooling higher than primary level at the end of Q2 2025 compared to total employment's 13.5%. This indicates a relatively lower percentage of individuals with minimal education in the mining industry. This disparity highlights the generally higher educational qualifications of the mining workforce compared to the broader workforce.

Figure 11: Educational profile of the employed in Mpumalanga with specific reference to mining, 2020-2025



Source: Statistics South Africa – QLFS, 2025

3. IMPACT OF JUST TRANSITION ON COAL MINING

Growing concern over the impacts of climate change across the world has led to the widely shared goal of a 'just transition' to cleaner energy sources and reduced dependence on coal. Different definitions

are used for the just transition, but a key component is that no one is left behind when changes are made to energy and economic systems to mitigate climate change. That involves sharing the costs and benefits of the changes fairly, supporting workers with new jobs or retraining, and supporting communities through broader economic changes. Fundamental to just transition is preventing further societal fragmentation along wealth, race, age, and gender lines. Internationally, there has been a transition away from coal mining, particularly in Europe, and a growing awareness of the need for new policies to address job losses, skills shortages and changing value chains and supply chains. South Africa is under pressure to do the same, as the world's 7th largest coal producer and the 14th biggest CO_2 emitter.

Decarbonisation is the change of the economy towards lower greenhouse gas emissions. In the energy sector, decarbonisation implies the reduction of coal's share in the energy mix, compensated for by an increase in the shares of renewable energy sources and natural gas (a fossil fuel of lower carbon intensity than coal). Coal mines and power plants are capital intensive and require large scale infrastructures, usually owned by the state. Decarbonisation provides multiple opportunities in a more competitive business environment.

Despite South Africa's significant reliance on coal for its mining and energy sectors, moving to sustainable energy sources has its own economic benefits in the long term. Sustainability has long been touted as a significant opportunity for South Africa, as it looks to rebuild economic momentum at a time when most economies across the globe are investing in sustainable projects. Hence, South Africa has often been at the forefront of international efforts to address climate change.

The United Nations Framework Convention on Climate Change (UNFCCC) was formed in 1992 as a result of a global commitment by countries to cooperatively find solutions to limit global average temperature increased. There are 197 parties (196 states and one regional economic integration organization) to the UNFCC Convention. The convention is supported by a secretariat that supports all institutions dealing with matters related to climate change. UNFCC was formed with the ultimate objective to achieve the stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous interference with the climate system.

South Africa acceded to the UNFCCC in 1997 and ratified the Kyoto Protocol in 2002. In 2010, it was among the first emerging economies and developing countries to come forward with a voluntary emissions reduction pledge for 2020 under the Copenhagen Accord. In 2021, South Africa hosted the 17th Conference of the Parties (COP 17), which resulted in the launch of the Durban Platform for Enhanced Action.

Over the past two decades, South Africa has also adopted a range of national and sectoral policies, plans and strategies that aim at decarbonising the economy while meeting broad developmental objectives. To enable development and implementation of these policies the country created an elaborate system of climate governance, with several new institutions and consultative and decision-making processes.

In line with Paris Agreement that encourages countries to thrive towards limiting global warming to well below 2, preferably to 1.5 degrees Celsius, compared to pre-industrial levels; in October 2021, South

Africa announced that it has joined in partnership with France, Germany, United Kingdom, United States of America and European Union to support a just transition to a low carbon economy and a climate resilient society.

This partnership solidifies what was pledged in the G7 Summit meeting in 2022 where the emphasis was on to accelerate the just transmission. This means that South Africa will start closing coal plants earlier than anticipated. South Africa is set to receive $8.5bn (£6.2bn) from to help end its reliance on coal in a deal announced at the COP26 climate summit. South Africa will not only receive financial assistance but technical and climate-related-capacity-building from other developed countries as stipulated in the Paris Agreement.

In 2022, Mpumalanga Provincial Government launched the Mpumalanga Green Cluster Agency as part of its response to the global warming phenomenon and its impact. The agency is a product of many years of research and robust engagements with different stakeholders in the Green Economy both nationally and internationally.

The Agency main purpose is to unlock and unblock the economic opportunities in the green economy with the aim of making a contribution to regional economic diversification and job creation efforts. This also focuses on the carbon capture and storage, hydrogen and clean aviation fuel. The Cluster publishes a series of market intelligence opportunity brief giving a snapshot of the current opportunities for investors interested in supporting the green economy of the Mpumalanga.

In May 2025, Mpumalanga Green Cluster Agency (MGCA) signed a Memorandum of Understanding (MoU) with the Presidency's Just Energy Transition Project Management Unit. The MoU with the Presidency runs through 31 December 2027, with annual review and possibility of extension. Under this agreement, MGCA is officially assigned as the provincial implementer/secretariat for the Mpumalanga Just Transition Portfolio (2025-2027)**.** Responsibilities include facilitating project preparation, accessing funding, coordinating among stakeholders, capacity building, and ensuring consistent reporting of progress.

MGCA has partnered with Coaltech via a Memorandum of Agreement, to explore R&D and innovative technologies for transitioning coal-based activities. These include land repurposing, biofuels/biogas, mine water issues, ash beneficiation, etc.

3.1. Developments of gas find in Mpumalanga

Climate change remains one of the defining global challenges of the 21st century, driving countries to pursue sustainable development pathways that reduce carbon emissions while ensuring economic growth and social well-being. As South Africa advances its efforts toward a zero emissions future, the focus is on identifying energy solutions that are both environmentally responsible and economically feasible.

While renewable energy sources such as wind and solar power, as well as low-carbon options like nuclear energy, play a critical role, they also face scaling challenges, including high upfront investment costs, transmission constraints, and intermittency issues. Against this backdrop, Liquefied Petroleum Gas (LPG) has emerged as a cost-effective, versatile, and transitional energy solution within the broader

Just Energy Transition (JET) framework. South Africa recognizes LPG as a key transitional energy carrier, offering opportunities to reduce reliance on coal and biomass while still maintaining affordability and accessibility. Its adaptability allows LPG to be integrated across multiple sectors, supporting both environmental goals and economic development.

According to a report released by Greenpeace Africa and Centre for Research on Energy and Clean Air (CREA) in June 2025, in 2023 alone, 42 000 deaths in South African were attributable to fine particulate matter (PM2.5) pollution, including over 1 300 children under the age of five. The report indicates that these deaths cost South Africa R960 billion in 2023, the equivalent of 14% of the GDP. These costs come in the form of premature deaths, respiratory illness, lost workplace productivity and overburdened health systems.

On May 5, 2024, Kinetiko Energy successfully completed South Africa's first onshore gas-to-power generation pilot using the Korhaan-1 well in the Amersfoort Cluster. The trial produced 1.2 MW of electricity, with the gas quality reaching 99% methane highlighting the commercial viability of locally sourced natural gas. This pilot forms part of Kinetiko's broader strategy to develop conventional gas resources in Mpumalanga, Free State, and KwaZulu-Natal, aimed at supporting South Africa's energy transition and complementing the shift toward renewables.

This successful demonstration strengthens Kinetiko's plans to develop a Liquefied Natural Gas (LNG) production cluster of approximately 30 wells at the Amersfoort site. The project forms part of a joint venture with the Industrial Development Corporation (IDC), aimed at accelerating domestic gas development and reducing reliance on imported energy.

To further reduce geological uncertainty, Kinetiko secured $2.2 million (R39 million) for a gas flow testing programme across five wells, scheduled to begin in Q3 2024. Early exploratory work in the northern tenement of Mpumalanga revealed positive flow zones and favourable permeability, reinforcing the region's potential for commercial-scale gas production.

At full scale, the project is expected to supply 500 MW of new electricity initially, with the potential to expand to 1.5 GW, offering a major boost to industrial growth**,** energy security, and job creation in the province.

In a parallel development, a potentially transformative natural hydrogen gas discovery is under investigation. In November 2023, the University of Pretoria began scientific studies on naturally occurring hydrogen reserves found beneath Mpumalanga. Though still in early research phases, this discovery could enable the deployment of small modular generation units (approx. 20 kW), suitable for domestic or light industrial applications offering a possible new pathway for decentralized, clean energy solutions. Together, these developments position Mpumalanga as a key player in South Africa's transition to cleaner, locally sourced energy, contributing to both energy security and economic revitalization in the region.

4. INVESTMENT IN MINING IN SOUTH AFRICA

Due to lack of recent data and information on investment barriers in mining industry from DMPR, this section is based on the manipulation of data from Fraser's Institute Annual survey of mining companies

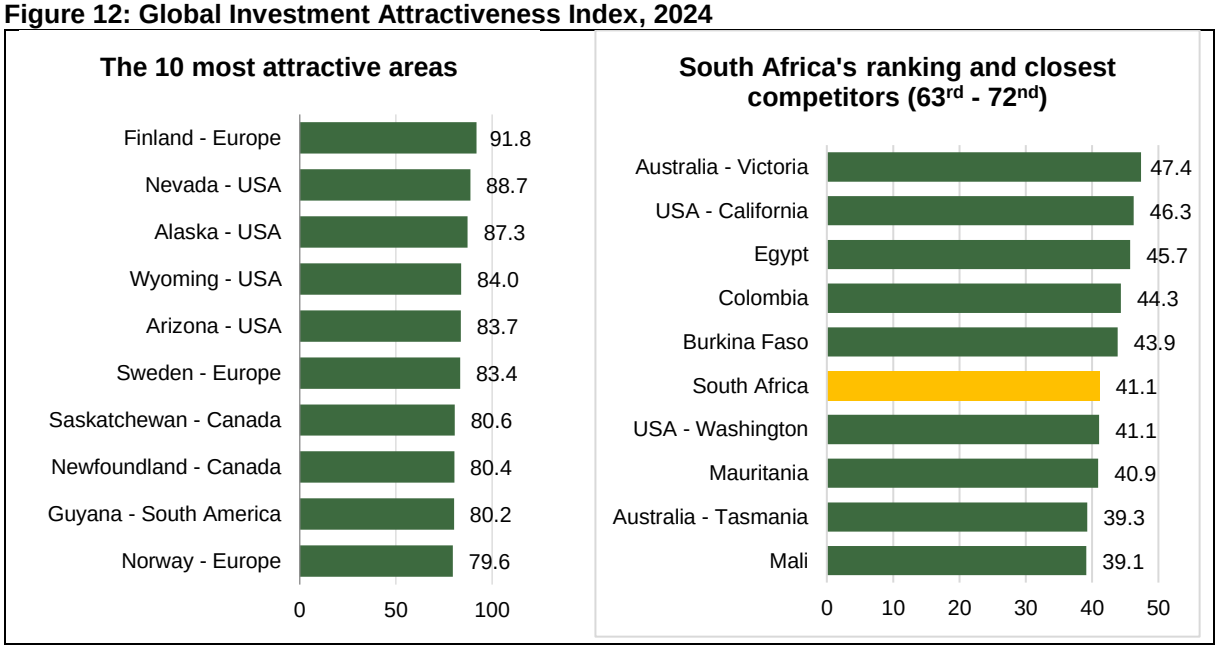
for 2023.The survey is an attempt to assess how mineral endowments and public policy factors such as taxation and regulatory uncertainty affect exploration investment.

According to Fraser's Institute, the Investment Attractiveness Index is a composite index that combines both the Policy Perception Index (PPI) and results from the Best Practices Mineral Potential Index. The Policy Perception Index provides a comprehensive assessment of the attractiveness of mining policies in a jurisdiction, and can serve as a report card to governments on how attractive their policies are from the point of view of the mining industry leaders. Best Practices Mineral Index provides data on mineral potential.

4.1. Global Investment Attractiveness Index

Figure 12 shows the top ten most attractive areas globally as well as South Africa's ranking in the Global Investment Attractiveness Index. The jurisdiction where investors showed the greatest appetite in 2024 was Finland in Europe. Finland, moved up from 17th place in 2024. Nevada in USA, which ranked 2nd in 2023 remained in the same position in 2024. Alaska in USA, which ranked 11th position in 2023 moved up to 3rd place in 2024. Wyoming in USA ranked 4th, moving up from the 26th place it occupied in 2023. Five jurisdictions, namely, Alaska, Finland, Norway, Sweden and Wyoming were outside of the top the 10 in 2023 and moved to within the top 10 in 2024. In 2024, USA had the most jurisdictions (4) in the top 10, followed by Europe (3) and Canada (2).

Figure 12: Global Investment Attractiveness Index, 2024

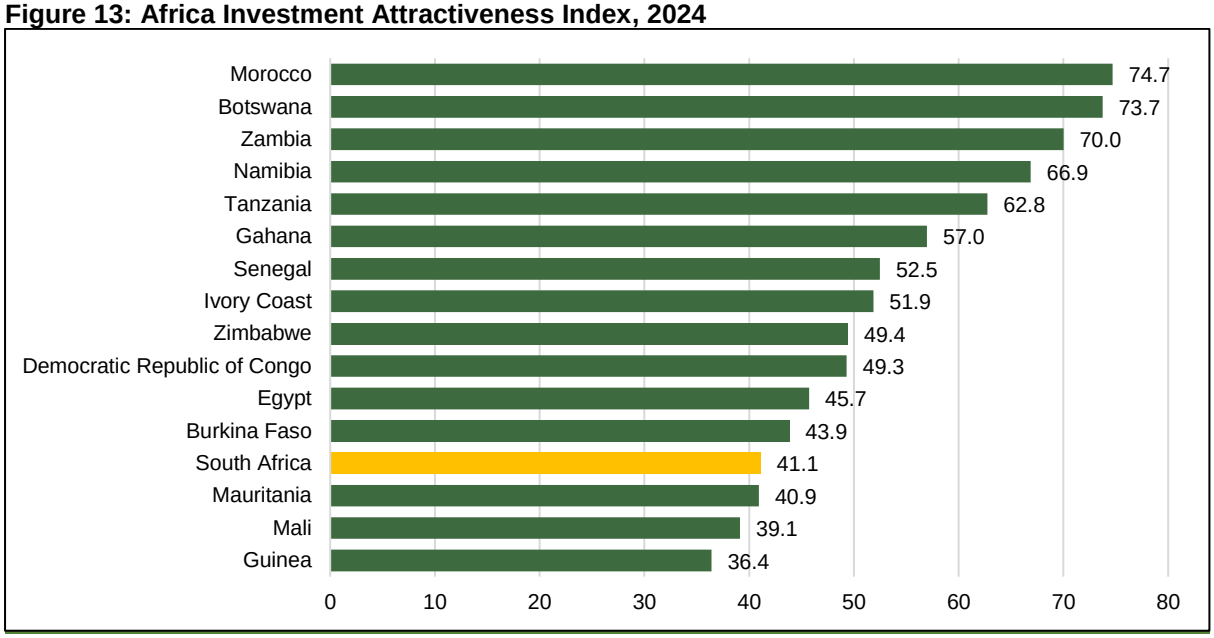


Source: Fraser Institute – Annual Survey of Mining Companies, 2025

South Africa, for the fifth consecutive year, ranked in the bottom half of global mining jurisdictions, reflecting a continuing trend of declining competitiveness within the sector. In the 2024 edition of the Global Investment Attractiveness Index, the country was placed 68th out of 82 jurisdictions, a further drop from its 2023 position of 62nd out of 86. South Africa's score placed it on equal terms with Washington State in the USA, while making it less attractive to investors than Burkina Faso – an indication that emerging markets elsewhere on the continent are outpacing South Africa in terms of mining investment potential.

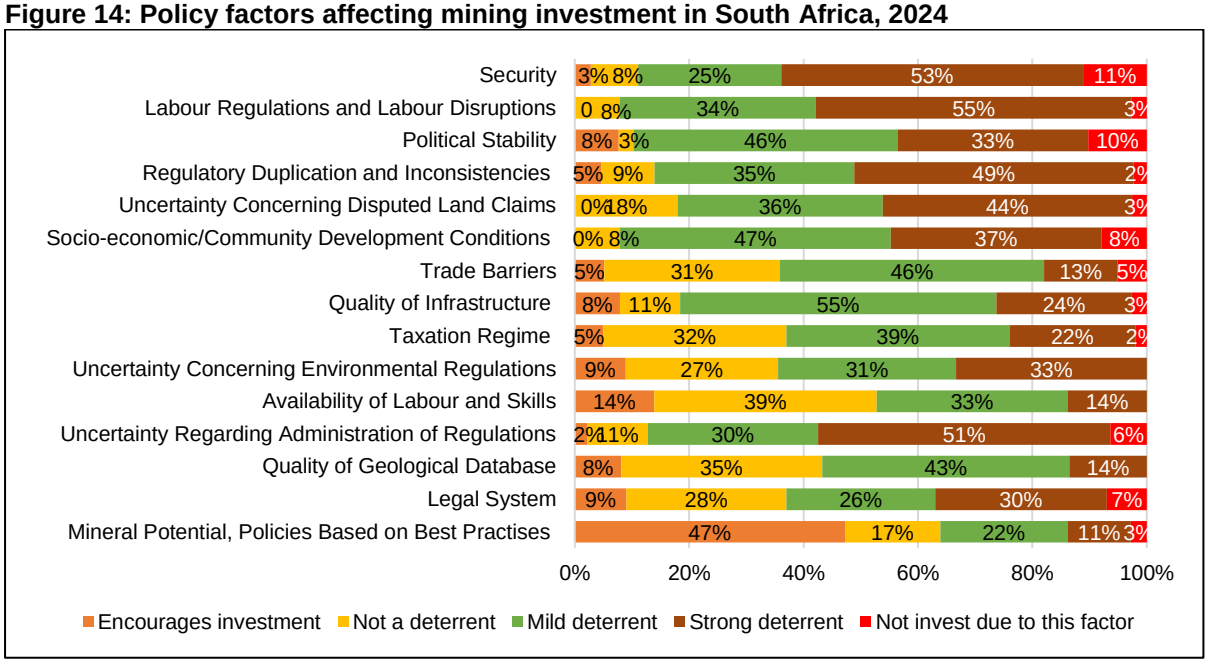
Figure 13 illustrates that South Africa's performance in 2024 was lacklustre even when assessed against its continental peers. Within Africa, the country ranked only 13th, underscoring its relatively weak standing in a region traditionally seen as rich in mining opportunities. By contrast, Morocco, Botswana and Zambia emerged as the leading destinations for mining investors on the continent, owing to more stable regulatory frameworks, improved governance and proactive policies to attract foreign capital.

Figure 13: Africa Investment Attractiveness Index, 2024



Source: Fraser Institute – Annual Survey of Mining Companies, 2025

Figure 14: Policy factors affecting mining investment in South Africa, 2024



Source: Fraser Institute – Annual Survey of Mining Companies, 2025

Figure 14 depicts that labour regulations and labour disruptions (55% + 3%), security (53% + 11%), uncertainty regarding administration and regulation (51% + 6%) and regulatory duplication and inconsistencies (49% + 2%) played a strong role in deterring investments in South Africa. Other factors that made South Africa not attractive to investors were uncertainty concerning disputed land claims political stability, socio-economic conditions, uncertainty concerning environmental regulations and the

legal system. The availability of labour and skills, the quality of geological database and the mineral potential were the least of the concerns of potential investors.

4.2. Challenges affecting mining industry in South Africa

The mining industry remains one of the cornerstones of South Africa's economy, with the potential to directly contribute towards achieving nearly half of the National Development Plan (NDP) 2030 goals. Given this strategic importance, it is imperative that the challenges facing the sector are addressed as a matter of urgency.

Mining continues to be a major employer, providing livelihoods not only through direct jobs but also through indirect employment opportunities across value chains such as logistics, energy, and manufacturing. The industry further contributes significantly to foreign exchange earnings, government revenue through taxes and royalties, and infrastructure development in mining regions.

Shortage of skills

South Africa is currently experiencing a serious shortage of skilled workers. It has a negative effect on South Africa's economic prospects and on global participation in South Africa. This skills shortage severely affects socio-economic growth and development in South Africa. The mining industry had not been spared from this challenge. The skills shortages in mining and mineral industry had existed for a decade and had a widespread effect on South Africa economy. This affects the country's functioning in the global economy.

Despite the industry's best efforts, the shortages continue to grow and threaten the delivery of projects and growth plans. Some of the reasons of shortage of skills in mining industry may be traced to the legacy of a poor basic education system which has resulted in many employees having little capacity to acquire modern skills. According to MCSA, the national shortage of skills in the mining industry highlights the challenges associated with finding and retaining qualified staff and increases the demands for training and development in this key industry of the economy.

The Mining Qualification Authority Sector Skills Plan 2020-2025 highlighted top ten skills that are hard to fill in the South African mining industry, amongst them are managers (mine, production and engineering), engineers (mechanical and mining), occupational hygienists, mine overseers, diesel mechanics, fitter and turner technicians as well as auto electricians. The main reasons for the shortage of these skills are lack of relevant qualifications or experience and others being equity qualifications. Another factor contributing to the skills challenges is the skills gap amongst employees or lack of specific competencies by employees to perform tasks. The advent of the Fourth Industrial Revolution (4IR) and the demand for its associated skills has further exacerbated the already dire situation.

Infrastructure

Despite Eskom's generation fleet stabilising in 2025, mining companies are still accelerating off-grid and wheeled supply because electricity remains costly and grid access is constrained. Energy commonly accounts for roughly 20–40% of mine operating costs, therefore efficiency and supply diversification remain priorities to mining companies. The MCSA's latest review notes strong industry momentum on self-generation and co-generation even as transmission bottlenecks limit new connections in high-

resource provinces. In parallel, logistics reforms are slowly turning the corner. For example, Richards Bay Coal Terminal (RBCT) coal exports rose in 2024 on better rail performance.

Industrial actions

South Africa's mining industry remains susceptible to disruptions influenced by labour disputes and illegal activity. In late 2024, Harmony Gold secured a landmark five-year wage agreement with key unions including NUM, AMCU, UASA, Solidarity and NUMSA, intended as a buffer against industrial action risks.

The industry also grapples with severe unrest tied to illegal mining. A high-profile siege at the Stilfontein gold mine, part of Operation Vala Umgodi, involved authorities cutting off food and water to force illegal miners to surface. The confrontation resulted in the deaths of miners, widespread public condemnation and a court-ordered rescue in January 2025.

Access to capital especially to junior miners

Access to capital remains one of the biggest obstacles facing the South African mining industry, and the challenge is even more pronounced for junior miners and new entrants. Mining is inherently capital-intensive, requiring significant upfront investment for exploration, feasibility studies, licensing, equipment procurement, and compliance with regulatory standards.

In recent years, rising exploration and production costs - driven by inflationary pressures, energy shortages, stricter environmental standards, and logistical bottlenecks - have eroded profit margins across the sector. These conditions have made investors increasingly risk-averse, particularly toward early-stage or small-scale mining ventures.

Policy uncertainty

In line with the Fraser Institute's 2023 and 2024 findings, policy uncertainty remains a key challenge for South Africa's mining industry and is cited as one of the main reasons why the country continues to rank low on the Investment Attractiveness Index. It is for this reason that that significant work has been done to remove the policy uncertainty that held back the development of the industry through the finalization of the Mining Charter 2018 and clarifying the Mineral and Petroleum Resources Development Amendment Bill.

The 2018 Charter was judged by the Gauteng High Court in 2021 to be a policy document and not legally binding. In 2025, the Department of Mineral and Petroleum Resources (DMPR) tabled amendments to the Mineral and Petroleum Resources Development Act (MPRDA) to incorporate transformation requirements, such as black ownership, inclusive procurement, community development and employment equity, directly into the law.

Delays in granting of permits

According to the Fraser Institute, reports of licensing delays continue to dampen investor sentiment toward South Africa's mining sector. While DMPR reported progress, processing 114 mining rights, 982 prospecting rights and 385 mining permits by December 2024, backlogs remain problematic. A parliamentary report revealed that none of the 2 525 permit applications submitted in the 2023/24 fiscal year had been processed by year-end.

The latest mid-year data shows only partial throughput (e.g., 73 mining rights, 1 358 prospecting rights, 1 093 mining permits processed) though it's unclear how this compares with the remaining backlog. To modernize the system, DMPR has embarked on implementing a new online mining cadastre. Initial indications were that the system was on track for completion by June 2025, although some pilot projects were delayed to October 2025.

4.3. Exploration to grow the mining industry

Mineral exploration is a systematic, multi-stage process for identifying and assessing new mineral deposits for potential economic extraction. It is distinct from the later stages of mining but includes efforts to expand reserves at existing operations. The primary goal is to efficiently discover economically viable deposits to meet the demand for raw materials.

According to the Centre for Strategic and International Studies (CSIS, 2025) Africa's share of global exploration spending has consistently declined, falling from 16% in 2004 to just 10.4% in 2024. Sub-Saharan Africa is the most cost-effective region globally for mineral exploration spending efficiency ratio of 0.8 which outperforms Australia (0.5), Canada (0.6) and Latin America (0.3). Despite Africa's vast geological potential and a landmass three times the size of Australia and Canada, Australia received 15.9% and Canada 19.8% of global exploration spending in 2024, which was significantly more than the entire African continent.

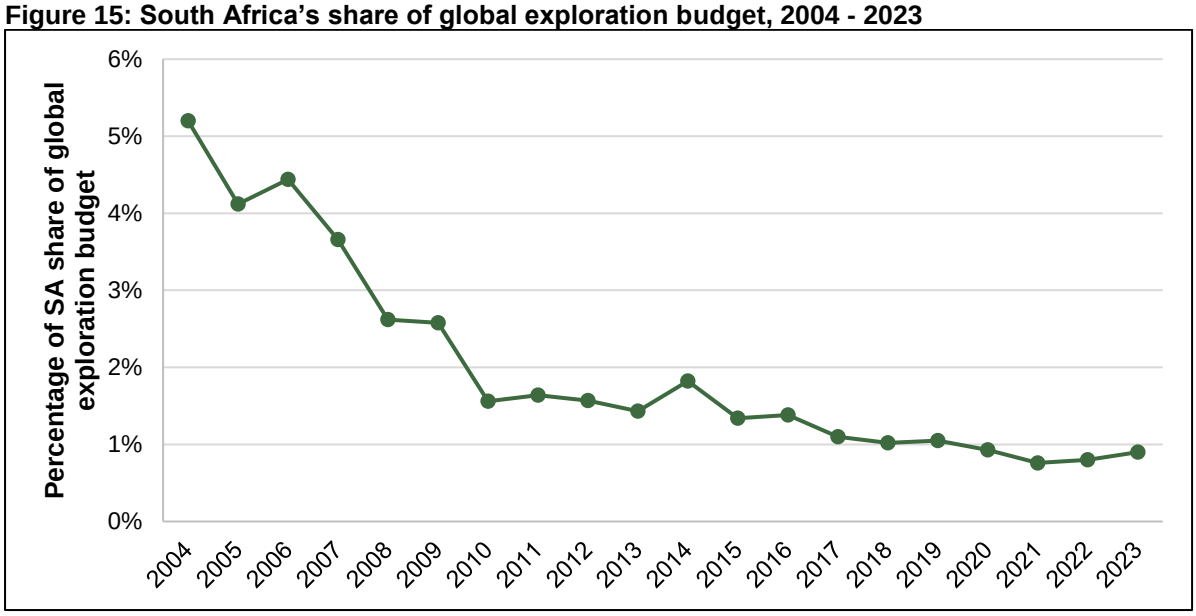
The Democratic Republic of Congo (DRC) remains Africa's exploration powerhouse, particularly for copper and cobalt, which are key mineral energy transition. The DRC continues to attract critical mineral investment, though its 2024 spend of $130.7 million is notably lower than its 2012 peak of $389 million. This figure represents approximately 10% of Africa's total exploration investment. Copper received $71 million the largest share of DRC's exploration budget and cobalt received $8.3 million making the DRC the second highest global beneficiary of cobalt exploration after Australia.

In Niger, exploration dropped by 89.8% from $66.4 million in 2012 to just $6.8 million in 2024. Mali also experienced a sharp downturn from $153 million in 2022 to $72 million in 2023. Similarly Burkina Faso witnessed a 68.7% drop in exploration from $121 million in 2021 to $37.9 million in 2024. According to S&P Global Market Intelligence**,** South Africa's mining exploration budgets stood at $117.4 million in 2023, which is equivalent to about one-third of its 2012 peak of $322.5 million. S&P also notes that platinum group metals (PGM) and gold exploration accounted for about 70% South Africa's exploration budget in 2023.

Figure 15 indicates that in 2022, South Africa accounted for just 0.8% of global exploration spending which rose to 0.9% in 2023. In 2023, the total exploration spending in South Africa was approximately $117 million, well below the 5% global target set by Government.

Exploration is high-risk, with major mining companies engaging in brownfields exploration, while juniors handle Greenfield projects, relying on venture capital. Tax incentives are crucial to attract investors to exploration. Canada's flow-through share model has been successful in nurturing specialist junior exploration firms. The MCSA proposes adopting similar incentives after observing their success in Canada.

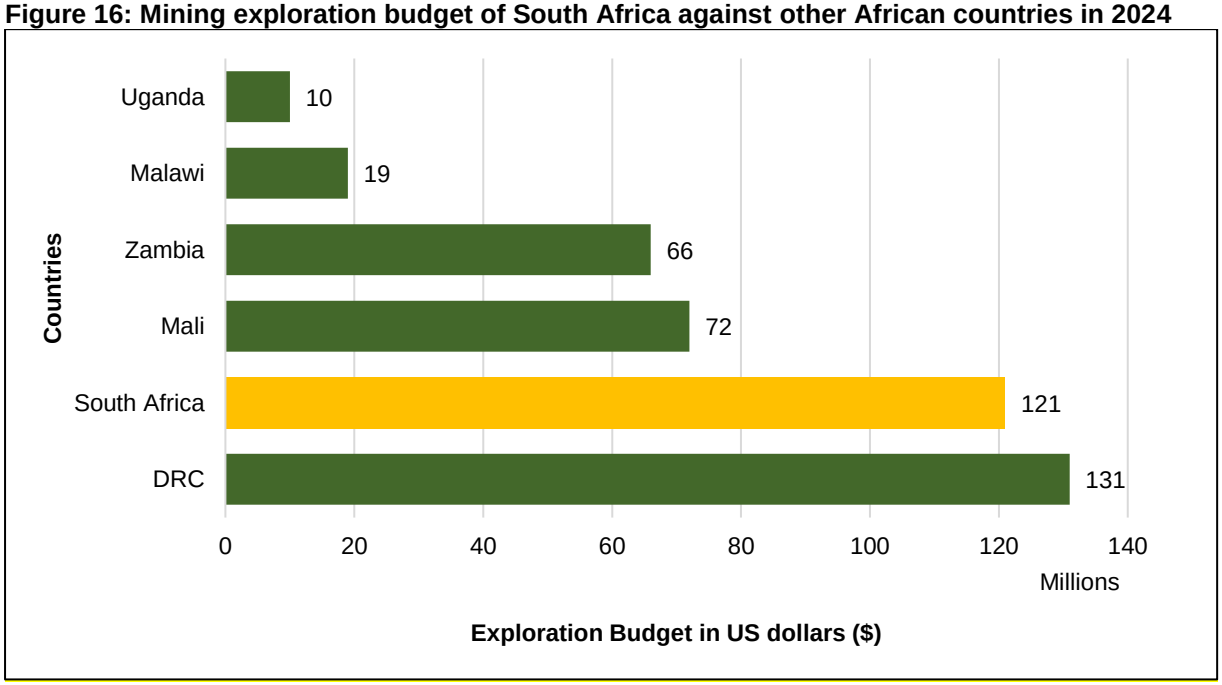
Figure 15: South Africa's share of global exploration budget, 2004 - 2023



Source: SAIMM, 2025

Despite challenges, South Africa's resource sector could rebound. The MCSA suggests that mining investment could double should the country restore itself as a top-tier investment destination. In 2024, the total mining exploration investment in Africa totalled approximately $1.3 billion, rising from $1.1 billion in 2019. Figure 16 indicates that in 2024 the DRC had the largest exploration budget at $131 million and the smallest exploration budget was allocated in Uganda at $10 million. In the same year, South Africa's exploration budget stood at $121 million, placing it behind the DRC.

Figure 16: Mining exploration budget of South Africa against other African countries in 2024



Source: Statista, 2025

Latest developments about exploration

For the 2025/26 financial year, government has allocated R200 million from National Treasury to establish the Junior Mining Exploration Fund. This amount is matched by the Industrial Development Corporation (IDC), bringing the total funding available to R400 million for junior miner exploration

projects. The fund is specifically designed to unlock new mineral discoveries and supporting black–owned junior mining companies. The first funding call has already resulted in legal contracts being signed with some beneficiaries.

The Department of Mineral and Petroleum Resources (DMPR) has been allocated a total of R2.86 billion for the 2025/26 financial year. Of this amount, R1.16 billion will go towards transfers for public entities, municipalities and implementing agencies. The projects include R134.7 million for rehabilitation of derelict and ownerless mines (implemented by Mintek), R22.4 million for a mine Rehabilitation Research Project (led by the Council for Geoscience) and R46.1 million for the implement of rehabilitation and closure plans supporting municipalities and mining affected communications.

4.4 Illegal Mining

Illegal mining refers to prospecting and extraction of metals with high economic value (mainly gold, silver, platinum, palladium, diamonds, chrome, coal and iridium), undertaken without appropriate land rights, exploration and mining licenses or mineral transportation and other permits. Illegal mining can be linked to trespassing on active or decommissioned mining sites and it can apply to mining in protected areas.

Illegal mining is increasingly referred to as mining activities conducted by organized criminal groups, spearheaded by illegal mining syndicates, and is often associated with other criminal activities such as trafficking in firearms and explosives, money laundering, forced labour, human trafficking, financing of terrorism, corruption, the use of violence, extortion and threat, often fuelling armed conflict and/or resulting in heavy damage to the environment, usually in areas not under full control by the state.

There is a difference between Artisanal and Small-Scale Mining (ASM) and illegal mining. In ASM minerals are extracted as a craft, without using advanced machinery or technology, and often in rather precarious conditions; this is often poorly regulated or conducted on the margins of state control. Unfortunately in South Africa the ASM has been infiltrated by the illegal activities, which has led to the compounding of the illegal mining.

Illegal mining is a critical issue that needs to be addressed, not only for the sake of the industry and the Fiscus, but also in the interests of the environment, safety, health, and security of mine employees, communities and in the best interests of illegal miners themselves.

In the medium and long term, rampant illegal mining will undermine the aims of the MPRDA and the Mining Charter and will result in irreparable damage, sterilizing of resources and leaving behind a costly and damaging environmental legacy. The impact of illegal mining is can be economic, environmental and social.

Illegal mining is on the rise in South Africa and takes place on the surface and underground at closed-off, abandoned and operating mines. Illegal mining is often organised and carried out by organised crime syndicates. Whilst individual illegal miners may act out of economic desperation, there is no doubt that illegal mining activities are directly linked to the lucrative illicit trade in precious metals and diamonds.

According to a media release published in SA government news in January 2025, Illegal mining is

waging war on the South African economy, with the illicit trade costing the economy at least R60 billion in 2024. It was estimated that illegal gold mining alone costs the economy more than R70 billion annually. This includes the loss of revenue from taxes and royalties, as well as the damage to the environment and infrastructure. However, this is likely to be an under-estimate as illegitimate activities cannot be accurately quantified.

Illegal mining in Mpumalanga incurs significant economic costs, including billions in lost government revenue from mineral theft and an estimated R6 billion annually in lost national revenue, not including infrastructure damage and security expenses. It also devastates local economies by perpetuating poverty and exploiting communities, while causing extensive environmental damage, such as water and soil pollution, which requires costly state – funded rehabilitation for derelict mines.

5. TRANSFORMATION IN MINING

5.1. South African Mining Charter

The main objective of the Mineral and Petroleum Resources Development Act 2002 (MPRDA) is to facilitate the meaningful contribution of Black people in the mining and mineral industry. The MPRDA provides for the development of the Mining Charter[2] as a vehicle to effect transformation with specific targets. The Mining Charter was developed to primarily facilitate sustainable inclusive transformation and the development of the mining industry. According to the Act, the Mining Charter should be reviewed every five years.

On 27 September 2018, The Broad-Based Socio-Economic Empowerment Charter for the Mining and Minerals Industry, 2018 (Mining Charter III or the Mining Charter, 2018) was promulgated. It was envisaged that the Mining Charter 2018 would be read with the Implementation Guidelines to be gazetted within 2 months from the date of the publication. Table 8 summarises the objectives of the Mining Charter, 2018.

Table 8: The objectives of the Mining Charter III

Mining Charter, 2018 Objectives
1. The affirmation of the internationally recognized principle of State sovereignty; its right to exercise authority and make laws within its boundaries; over the life of its country - including all its mineral wealth;
2. To deracialize ownership patterns in the mining industry through redress of past imbalances and injustices;
3. To substantially and meaningfully expand opportunities of Historically Disadvantaged Persons to enter the mining and minerals industry and to benefit from the exploitation of the nation's mineral resources;
4. To utilize and expand the existing skills base for the empowerment of Historically Disadvantaged Persons;
5. To advance employment and diversify the workforce to achieve competitiveness and productivity of the industry;
6. To enhance the social and economic welfare of South Africans so as to achieve social cohesion;
7. To promote sustainable growth and competitiveness of the mining industry;
8. To enable growth and development of the local mining inputs sector by leveraging the procurement spend of the mining industry; and
9. To promote beneficiation of South Africa's mineral commodities.

Source: DMPR, 2020

[2] The Broad-Based Socio-Economic Empowerment Charter for the South African Mining Industry.

South Africa has had three Mining Charters from 2004 to date. The Mining Charter 2004 was amended in 2010, the Mining Charter 2017 was gazetted but was never used for reporting and then the Mining Charter 2018 is the latest and it became effective as of 1 March 2019. MCSA had taken DMPR to court over some aspects in the 2018 edition in 2019. The judgement was handed down in September 2021 of which DMPR announced its intentions to appeal the judgement.

The court ruling and its implications

In 2022 the High Court ruled the Mining Charter was an instrument of policy and that mines and DMPR were not entitled to make law through it. This ruling automatically declares that currently there is no score card that the mining house can use to track the transformation progress.

The issues of discontent between DMPR and MCSA was that several clauses in the 2018 charter including that mines must procure 70% of goods and 80% of services from Black-owned companies and that Black ownership levels in South African mining companies should increase from 26% to 30%.

Amongst other things, the following aspects of the Mining Charter, 2018 have been found to be unconstitutional:

- provisions which require compliance with the 30% Historically Disadvantaged South African ("HDSA") ownership requirement upon renewals and/or transfers of rights issued under the MPRDA;
- provisions which require the implementation of mandated structures, such as community, employee and HDSA entrepreneur schemes;
- the provisions which render the HDSA ownership requirement applicable to holders of permits under the Diamonds Act, 1986 and the Precious Metals Act, 2005;
- provisions which allow for a beneficiation offset;
- the provision dealing with preferential procurement; and
- the enforcement provisions which allow for suspension and cancellation of rights in the event of non-compliance with the 2018 Charter.

5.2. Progress on key indicators of the Mining Charter

The Mining Charter (2018 version, enforced by DMPR) remains the governing transformation framework for South Africa's mining sector. It mandates 30% black ownership**,** employment equity**,** community development, and local procurement. However, its implementation challenges, court disputes, and impact on investment confidence continue to be major debates in the sector.

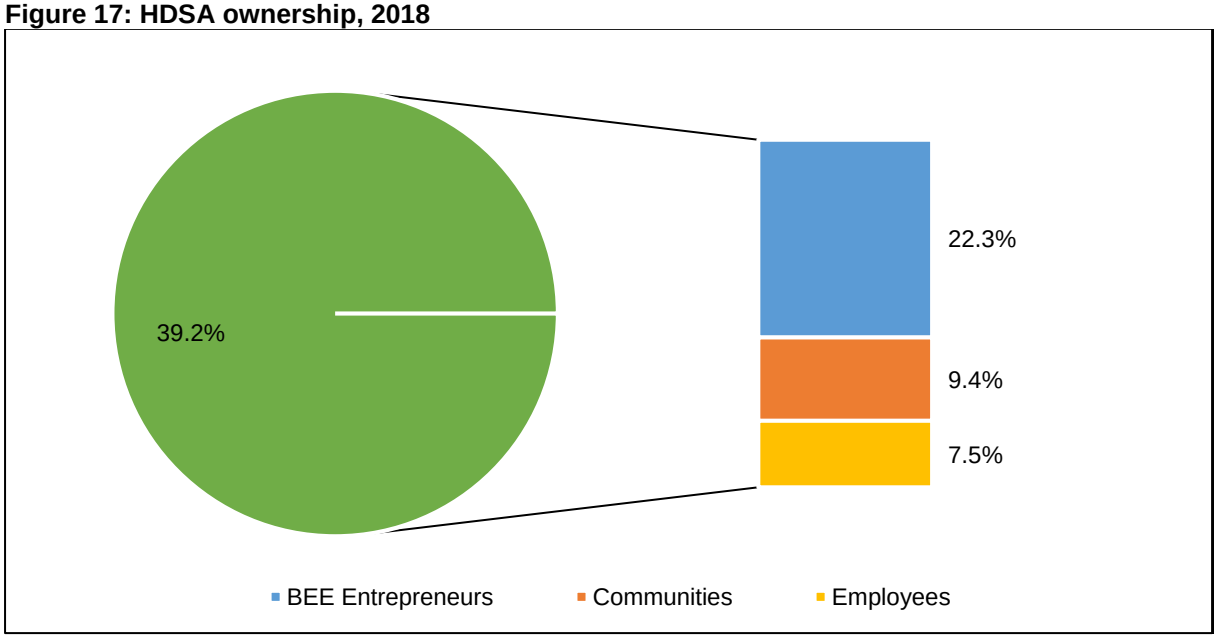
The following section looks at how far the South African mining industry has evolved with respect to complying with the Mining Charter. Unfortunately with the ruling against The Charter there is currently no scorecard and the following analysis is based on the 2010 targets and the years under review are 2016 and 2018 as reported by MCSA.

The analysis is based on the survey conducted by MCSA of the industry's transformation progress amongst its members in 2019. The objective of this survey was to understand where the industry stood and to see how far it, and its individual right holders, had complied with the Mining Charter of 2010.

Figure 17 shows the progress made thus far by the mining industry against the Mining Charter 2010

targets. Based on a weighted average basis, the industry has achieved 39.2% HDSA ownership which comprises of 22.3% BEE entrepreneurs, 9.4% communities and 7.5% based on the number of employees). HDSA ownership increased by 3.2% from the 2016 ownership transformation analysis results (38.0%).

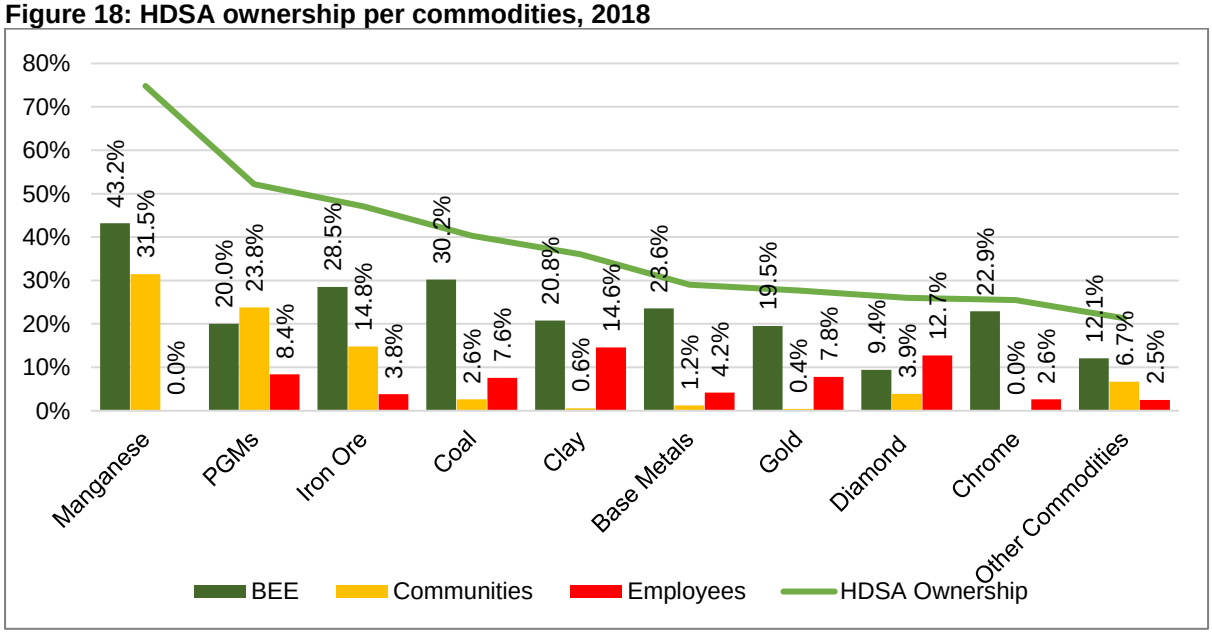
Figure 17: HDSA ownership, 2018



Source: MCSA, 2023

From a commodity point of view, manganese miners have the highest BEE shareholding followed by the PGMs with 74.8% and 52.2% HDSA ownership respectively (on the industry weighted average basis). “Other resources” are 21.4% HDSA owned, falling below the 26% Mining Charter 2010 ownership target, while all other commodity sectors meet or exceed this target. BEE entrepreneurs own a majority of shareholding compared to mining communities and employees. Only manganese, PGMs and iron ore have significant community shareholding while other commodities have limited community representation as shown in Figure 18.

Figure 18: HDSA ownership per commodities, 2018

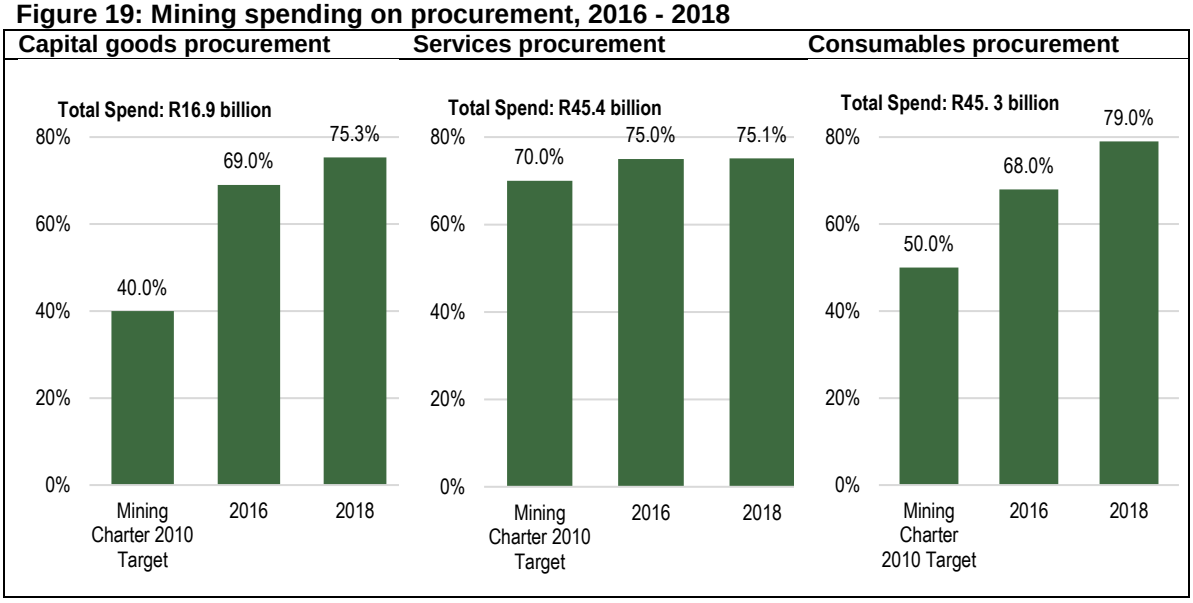


Source: MCSA, 2023

A range of targets for the procurement of capital goods (40%), services (70%) and consumables (50%) from BEE entities were included in the Mining Charter 2010. There has been a gradual increase in spending on the procurement indicator, exceeding the Mining Charter 2010 targets since 2016. In 2018, the mining right holders exceeded the stipulated targets with capital goods at 75.3%, services at 75.1% and consumables at 79.0% (Figure 19).

The Mining Charter 2010 states that mining right holders are required to engage and consult with mining communities to delineate community needs analysis. The MCSA report shows that 89% of the mining right holders were compliant with this stipulation (Table 9). There were 488 programmes worth R1.32 billion invested into various mining communities and labour sending areas in 2018. Even companies that were in development phase and therefore not making profits yet and those that made net losses contributed a total of R130 million towards Mine Community Development (MCD).

Figure 19: Mining spending on procurement, 2016 - 2018



Source: MCSA, 2023

Table 9: Mine Community Development (MCD) data, 2018

Category	Value
Compliance (%)	89%
Total MCD Investment (R bn)	R1.32
Contribution from Development/Loss-making Companies (R m)	R130
Number of Programmes	488

Source: MCSA, 2025

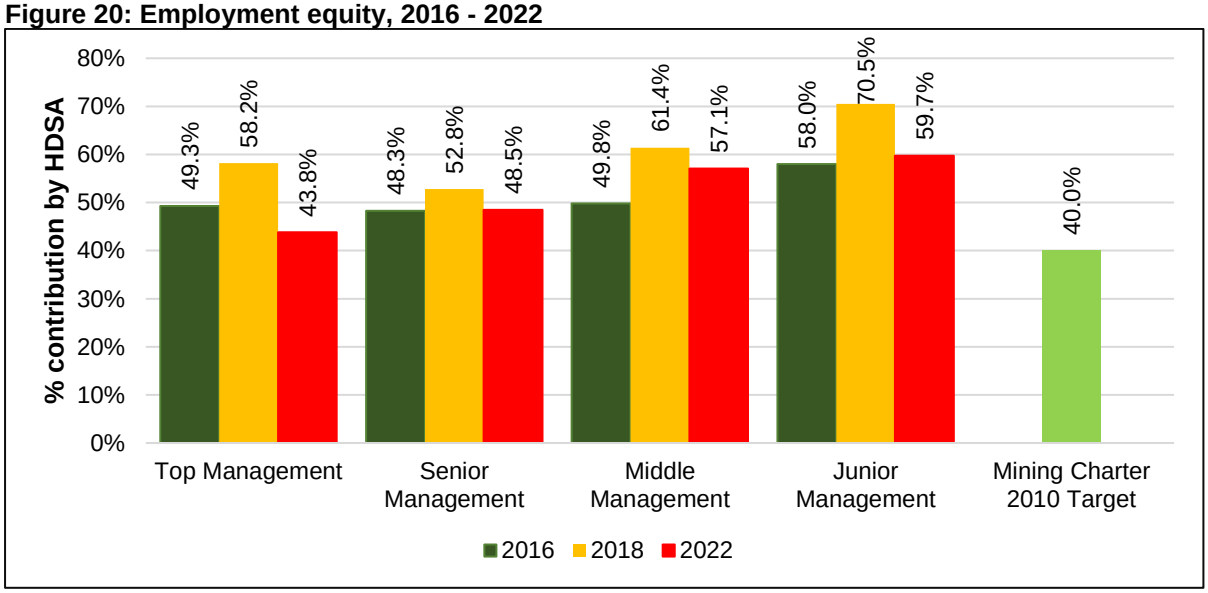
Figure 20 shows a steady increase in the number of HDSA in management positions in the mining industry 2022 since 2016. The Mining Charter 2010 targeted 40% HDSA representation across each of the employment levels from top management to core skilled employees. The industry has achieved the employment equity targets. Representation in junior management was 59.7% in 2022 a decline from 70.5% in 2018 and in middle management was 57.1% in 2022 a decline from 61.4% in 2022. The industry representation for senior management has decline in 2022 from 52.8% to 48.5% and top managers was at 58.2% in 2018 to 43.8% in 2022

Human resources development

Mining companies in South Africa are required under the Mining Charter and B-BBEE framework to

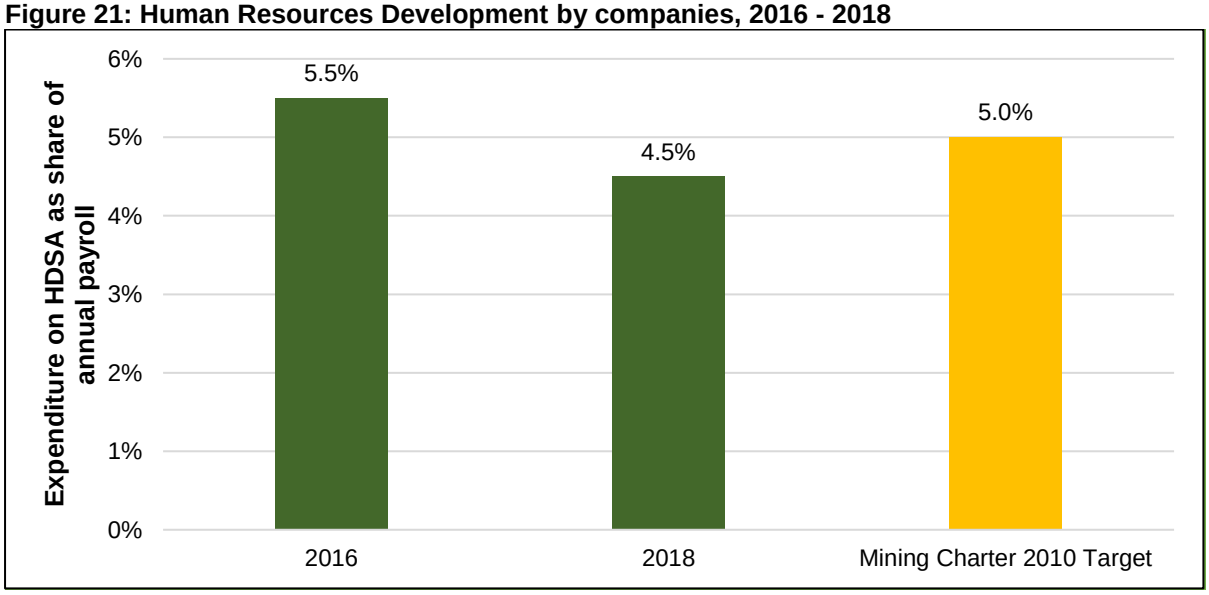
empower Historically Disadvantaged South Africans (HDSAs). Companies must meet minimum targets in ownership, procurement, employment equity, and human resource development (HRD). Specifically, at least 5% of annual payroll must be spent on developing HDSA employees (training, mentorship, apprenticeships). Figure 21 shows the percentage of payroll that companies actually invest in HDSA Human Resource Development (HRD), allowing comparison of compliance. Spending above 5% means a company is meeting or exceeding empowerment requirements, contributing to skills development, representation, and economic transformation.

Figure 20: Employment equity, 2016 - 2022



Source: MCSA, 2024

Figure 21: Human Resources Development by companies, 2016 - 2018



Source: MCSA, 2023

Figure 21 indicates that in 2016 companies spent 5.5% of their annual payroll on Historically Disadvantaged South Africans (HDSA) development. This exceeded the Mining Charter target of 5%, showing a strong commitment to HRD initiatives. The HRD investment was relatively high, signalling that companies prioritized workforce development for HDSA employees that year. In 2018, companies spent only 4.5% of their annual payroll on HDSA development, below the 5% target and the absolute

HRD spend was below the 2016 level.

5.3. Women in Mining

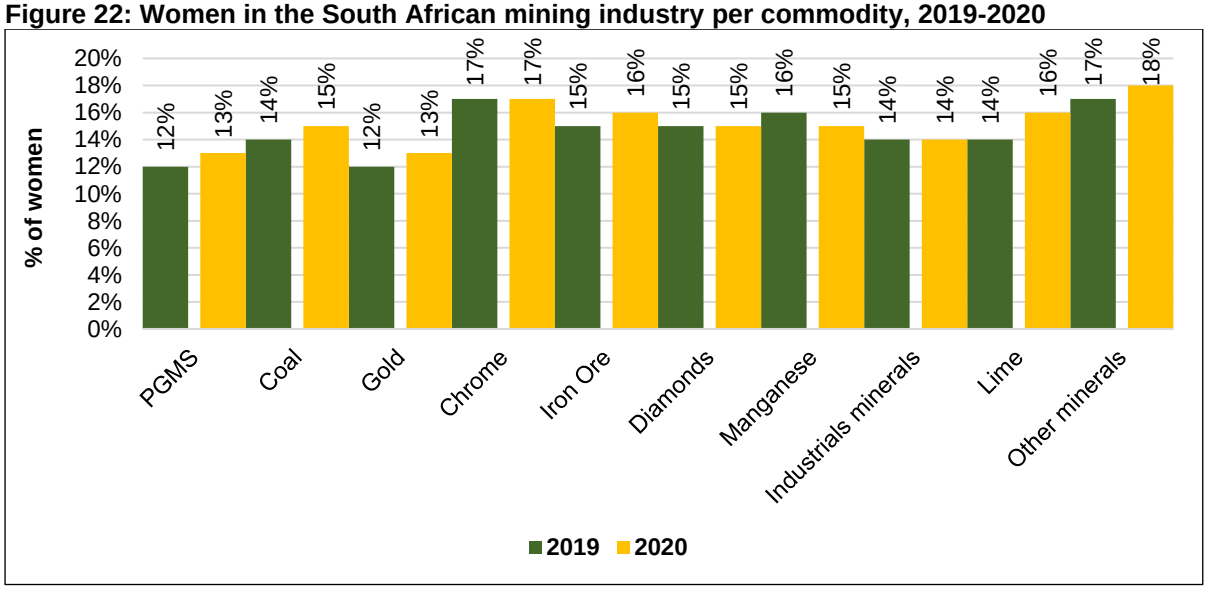
South African women have played a key role in the South African mining industry long before they were legally allowed to work underground (from 1996 onwards). They worked in a range of aboveground jobs before they were able to become underground workers.

Since the promulgation of the MPRDA in 2002 and the first Mining Charter, 2004, the number of women in mining has significantly increased. The number and share of female employees in the mining industry has been growing steadily since 2009 where there were 34 433 female employees employed. In 2021 the industry employed 65 490 female employees, representing 14.3% of the total mining labour force in the country.

Even at the height of the COVID-19 pandemic in 2020, the industry hired 957 female employees, raising the total to 62 315. Increase in representation has been realised across the various job categories. The Mining Charter, 2010 did not have specific targets for women, but the industry has gradually improved representation of women across all managerial levels.

Figure 22 shows that women representation in mining increased marginally in PGMs, coal, gold, iron ore and non-ferrous metals in 2020. It remained flat in the chrome, diamonds, industrial minerals and 'other mineral' industries. Industries that recorded marginal increases in women employment as a share of total employment were:

Figure 22: Women in the South African mining industry per commodity, 2019-2020



Source: MCSA, 2022

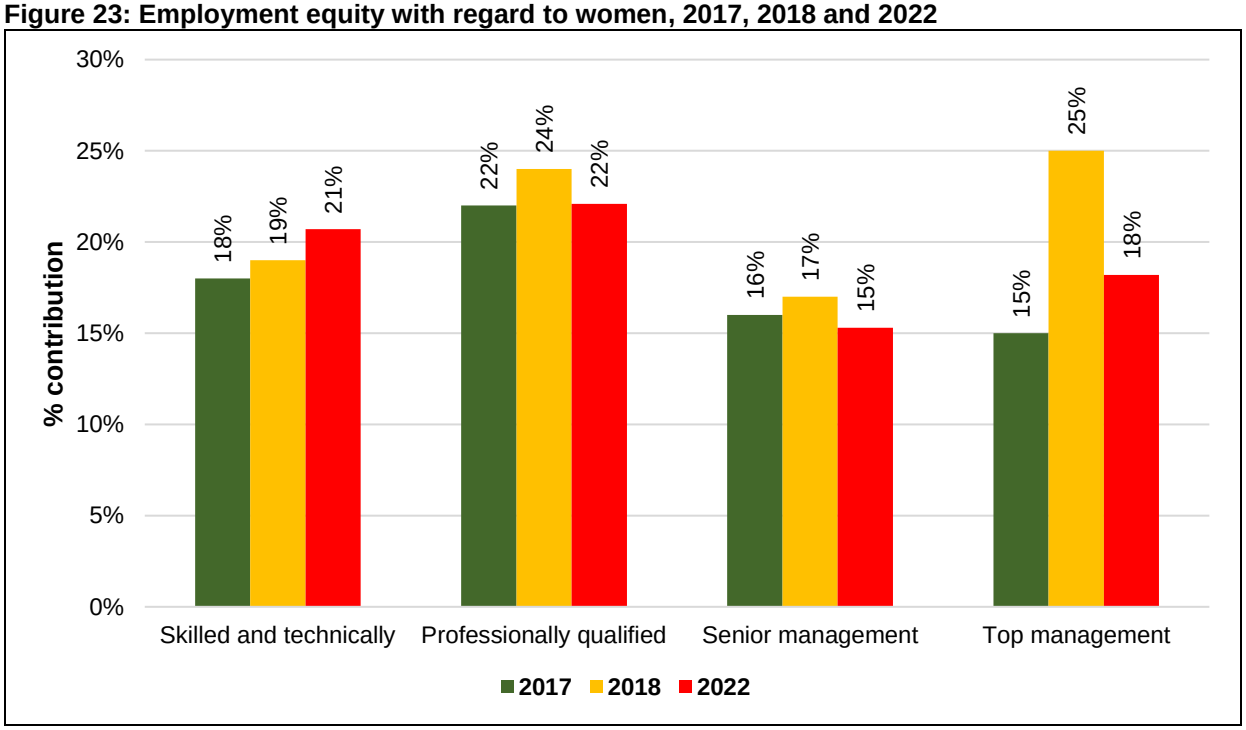
In 2020, there were 20 432 women employed in the PGM industry with 19 799 in 2019. The coal industry also saw a slight increase in the number of women from 14% to 15%. The gold industry employed 12 281 women in 2020, moderately higher than the 2019 total of 11 915. The manganese industry total employed overall increased to 12 627 from 11 394 in 2019, so despite the larger number of females employed at 1 887 in 2020, the overall female employee percentage dropped from 16% to 15%.

The number of women in the diamond industry remained unchanged at 15% since 2018. However, in absolute terms there were 2 001 women (353 fewer) in 2020 compared to the previous year. The

diamond industry, both domestically and globally faces challenges due to competition from synthetics. Iron ore mining also saw a slight increase in the number of women.

Figure 23 indicates that in 2022 there is has been decline in almost all categories of the employment equity with an exception to the skilled and technical where there has been an increase of a percentage of women from 19% in 2018 to 21% in 2022. The highest decline is noted in the presentation of women in top management where the percentage declined by 6% from 25% in 2018 to 18% in 2022. Women contributed 15% in top management in 2022 a decline as compared to 2018 and they were 22% representation of women in who were professionally qualified in 2022 a two percent decline from 2018.

Figure 23: Employment equity with regard to women, 2017, 2018 and 2022



Source: MCSA, 2024

5.4. Social and Labour Plan compliance

According to MPRDA mining companies must submit a Social and Labour Plans (SLP) when applying for mining rights and submit SLP compliance reports annually. The main objective of SLPs is to promote economic growth, employment and advance social welfare through ensuring that mining companies contribute towards the socio-economic development of the communities in which they operate.

The objectives of SLPs are to:

- promote employment and advance the social and economic welfare of all South Africans;
- contribute to the transformation of the mining industry; and
- ensure that holders of mining or production rights contribute towards the socio-economic development of the areas in which they are operating as well as the areas from which the majority of the workforce is sourced.

In 2024 Exxaro invested R8.94 million to support grade 12 academic camps in Belfast and Delmas, and hosted a career expo in Belfast. In Delmas, Exxaro partnered with Go Math's, achieving an overall

performance improvement of 8.5 percentage points for the circuit. One school improved by 22.9 percentage points, increasing its pass rate from 53.7% in 2023 to 76.6% in 2024.

During 2024, Exxaro invested R14 million in Mpumalanga to implement the talent accelerator tool, guiding learners in subject and career selection. The tool assessed grade 9 learners to assist with grade 10 subject choices and grade 11 learners in identifying career paths. Exxaro indicated in a company report, that around 7 500 learners benefited from career path identification initiatives initiated by the company.

6. LABOUR CONDITIONS, SKILLS DEVELOPMENT, HEALTH AND SAFETY MATTERS

Labour conditions

The evidence from a selected number of indicators from the QLFS of Stats SA indicates that, on average, employees in the mining industry experienced better employment conditions when compared with those not employed in Mpumalanga's mining industry (Table 10). For example, in 2025, 95.9% of employees in the mining industry had a written contract compared with 59.9% outside of the mining industry. Some 93.3% of employers in the mining industry made UIF deductions from employees compared with 51.2% outside of the mining industry. Furthermore, 67.1% of employers made a pension fund contribution on behalf of mining employees compared with only 38.7% outside of the mining industry.

Table 10: Comparing relevant labour indicators between those not employed in Mpumalanga's mining industry and those employed in mining, 2025

Labour condition indicator	Employed in mining	Total not employed in mining
Contract		
- **Written contract**	95.9%	59.9%
- **Verbal agreement**	4.1%	18.5%
- **Do not know**	0.0%	21.5%
Pension fund contribution by employer		
- **Yes**	67.1%	38.7%
- **No**	30.2%	58.4%
- **Do not know**	2.6%	2.9%
Medical aid contribution by employer		
- **Yes**	63.4%	22.0%
- **No**	36.6%	77.5%
- **Do not know**	0.0%	0.5%
UIF deductions		
- **Yes**	93.3%	51.2%
- **No**	6.7%	46.6%
- **Do not know**	0.0%	2.2%
Paid vacation leave		
- **Yes**	65.6%	44.9%
- **No**	34.4%	54.3%
- **Do not know**	0.0%	0.7%
Total hours worked per week		
- **Less than 20 hours**	0.0%	6.0%
- **20-40 hours**	32.1%	47.5%
- **41-50 hours**	47.7%	30.3%
- **51-60 hours**	12.8%	10.2%
- **More than 60 hours**	7.4%	5.9%
Trade union membership		
- **Yes**	70.4%	27.1%
- **No**	27.2%	69.0%
- **Do not know**	2.4%	3.9%

Source: Statistics South Africa – QLFS, 2025

Skills development in mining industry

The Mining Charter requires that all mining companies invest 5% of annual leviable payroll into skills

development. This 5% is not inclusive of the 1% skills levy that companies are required to contribute. Mining companies invest in skills development by focusing on high-end skills development, adult education and training in the mining industry as well as providing technical skills and artisan training.

Specialised skills shortage has always been a concern in the mining industry. As part of finding solution to the challenge, Mining Health and Safety Council (MHSC) has collaborated with Wits University, University of Pretoria, Mining Qualifications Authority and Council of Geoscience in building capacity for the mining industry, focusing on the areas of rock engineering and seismicity.

During 2021, 108 local youth from the Malta community participated in the portable skills programme at Matla coal mine. Training areas included basic electricity, plumbing, bricklaying, motor mechanics, welding/boiler making, and property maintenance. Matla mine also provided assertiveness and personal training at Belfast mine to 37 local graduates from Emakhazeni communities (Dullstroom, Machadadorp, Belfast, and Waterval Boven.

Since early 2022, Exxaro has collaborated with the national Youth Employment Services (YES) partnership in Mpumalanga. A number of 259 youth from Mpumalanga have benefitted via work placement. In 2022, 209 youth from Kriel, Witbank, Middelburg, and Delmas were trained in the Lula Rides programme (41% female and 59% male). Participants received helmets, delivery bags, and phones, operated via UberEATS or Mr Delivery.

During 2024 the Mining Qualification Authority funded 89 beneficiaries from Mpumalanga to be trained on small scale mining (NQF Level 2). This was based on the request from the Mpumalanga Department of Economic Development and Tourism. Thirty of the recipients are from Ermelo and 59 are from Steve Tshwete Local Municipality (Komati).

Fatalities in the South African mining industry

Table 11 reports that the industry has improved 2024, with 42 fatalities, compared to 60 recorded in 2020. The platinum and gold sector contributed significantly to the total fatalities with 16 and 19 fatalities recorded respectively. The other commodities recorded the slight improvement in safety performance with 6 fatalities recorded compared to 7 in 2020. The coal industry the other commodities recorded the lowest fatalities in 2024 of 6. The year which had the highest number of fatalities was 2021 with gold reported contributing the highest proportion.

Table 11: Fatalities per commodity in the South African mining industry, 2020-2024

Commodity	2020	2021	2022	2023	2024
Gold	26	30	15	20	11
Platinum	16	21	18	22	19
Coal	11	10	5	7	6
Other	7	13	11	6	6
Total	**60**	**74**	**49**	**55**	**42**

Source: DMPR, 2025

Table 12 shows that fatality trends indicate that general types of accident and fall of grounds were the highest areas of concern between 2020 and 2024, with 21 general types of fatalities reported in 2024 and 13 fatalities caused by fall of grounds. There has been improvement in the number of fatalities caused by fall of grounds, other and transportation reported in 2024 respectively.

Table 12: Causes of fatalities in mining industry in South Africa, 2020 - 2024

Cause	2020	2021	2022	2023	2024
Fall of Grounds	22	20	6	15	13
Transportation and mining	9	16	17	19	2
General	18	22	16	8	21
Other	11	16	3	13	6
Total	**60**	**74**	**42**	**55**	**42**

Source: DMPR, 2025

Table 13 shows the number of fatalities in the mining industry, in Mpumalanga from 2020 to 2024 per commodity. In total, during the period under review 35 people died with coal contributing the highest number of fatalities. The lowest number of fatalities were in 2022 when there were 5 fatalities. The highest number of fatalities was is 2021 when the industry recorded 9 fatalities.

Table 13: Fatalities in mining industry per commodity in Mpumalanga, 2020 - 2024

Commodity	2020	2021	2022	2023	2024
Gold	1	0	0	1	2
Coal	6	9	5	6	4
Platinum	0	0	0	1	0
Manganese	0	0	0	0	0
Other	0	0	0	0	0
Total	**7**	**9**	**5**	**8**	**6**

Source: DMPR, 2025

Similarly, Table 14 shows the causes of fatalities in the mining industry. The majority of accidents were due to transport systems and mining equipment, which had 12 fatalities from 2020 to 2024. The second highest number of fatalities were due to general fatalities and followed by fall of ground/rock fall.

Table 14: Causes of fatalities in mining industry as per classification in Mpumalanga, 2020 - 2024

Causes of fatalities	2020	2021	2022	2023	2024
Fall of ground/rock fall	3	0	1	2	0
Machinery	1	1	0	1	0
Transport and mining	3	2	2	3	2
General	0	5	1	1	4
Electricity	0	1	0	1	0
Fires	0	0	0	0	0
Subsidence or caving	0	0	0	0	0
Explosives	0	0	1	0	0
Miscellaneous	0	0	0	0	0
Total	**7**	**9**	**5**	**8**	**6**

Source: DMPR, 2025

Injuries per commodity

Table 15 shows that in 2022 the South African mining industry saw an increase in the number of injuries from 2014 in 2021 to 2 056 in 2022, which is about 2% decrease in overall injuries in the industry. In general, all commodities saw an increase in the number of injuries, notable in other and platinum.

Table 15: Injuries in mining industry per commodity in South Africa, 2017– 2022

Commodity	2017	2018	2019	2020	2021	2022
Gold	1 018	905	766	620	676	586
Platinum	1 156	1049	1156	782	992	1030
Coal	200	169	224	146	168	180
Other	290	324	306	266	178	260
Total	**2 664**	**2 447**	**2 452**	**1 814**	**2 014**	**2 056**

Source: DMPR, 2023

7. CONCLUSION, CONSIDERATIONS AND LIMITATIONS

The mining industry and more specifically coal mining, remains a key economic driver of Mpumalanga. Coal is not only used for coal-driven power stations in the province, but also for export purposes, earning foreign exchange for the country. The challenges and opportunities of the Mpumalanga mining industry will also be discussed at the Provincial Investment and Mining Conference in Steve Tshwete in October 2025.

Growth over the past 28 years has been slow, averaging only 0.5% annually, and future prospects suggest growth of the same slow magnitude. Mechanisation and structural shifts have further reduced employment, with more than 16 000 jobs lost between 2020 and 2025. While the industry's share in provincial output is still substantial, its capacity to generate jobs has weakened.

Transformation has recorded progress in areas such as ownership, procurement and employment equity, although gaps remain. Reporting under the Mining Charter 2018 is inconsistent, and women and youth are still under-represented, particularly at senior levels. Social and Labour Plan expenditure also varies widely across companies, raising questions about the consistency and sustainability of community development impacts.

The just transition remains a central challenge and opportunity for Mpumalanga. The province's dependence on coal means that the closure of older power stations will have far-reaching economic and social impacts. At the same time, initiatives such as the Mpumalanga Green Cluster Agency and new gas finds provide opportunities for diversification, cleaner energy, and long-term regional development. Effective coordination among government, industry and communities will be essential to ensure that no one is left behind in this transition.

A further consideration is the investment climate underpinning the mining industry in Mpumalanga and South Africa more broadly. Persistent licensing delays, regulatory duplication and policy uncertainty continue to undermine investor confidence. Unless these barriers are addressed through streamlined processes and clearer frameworks, new exploration and investment will remain limited, constraining the sector's growth potential.

The report also highlights skills shortages, workplace safety and environmental sustainability as pressing limitations. Although the number of fatalities has decreased, mine health and safety require ongoing vigilance. Acute skills gaps, particularly in technical and managerial fields, are further compounded by the demands of the Fourth Industrial Revolution. At the same time, the environmental and health costs of mining — especially air pollution and its impacts on communities — remain high, signalling the need for cleaner and more sustainable practices.

In conclusion, mining in Mpumalanga remains both an asset and a challenge. The province retains a strong mineral base and continues to contribute significantly to national output, but its future depends on creating an enabling investment environment, strengthening transformation, and ensuring that skills, safety and sustainability are addressed in tandem with economic growth.