



**MINERALS COUNCIL**  
SOUTH AFRICA



# FACTS AND FIGURES 2022

#MiningMatters



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DRDGOLD - Ergo plant

## MISSION

To play a leadership role in enabling the South African mining sector to achieve its real potential for investment, growth, transformation and development in a socially and environmentally responsible manner.

## VISION

To ensure mining matters for South Africa.

## PURPOSE

The Minerals Council is a mining industry employers' organisation that supports and promotes the South African mining industry. The Minerals Council serves its members and promotes their interests by providing strategic support and advisory input.

## VALUES

Members must conduct their business according to the agreed Minerals Council values, which dictate the minimum standards of conduct required to become or remain a member of the Minerals Council. These five values are:



Responsible citizenship



Trust



Accountability



Respect



Honesty



## INTERACTIVE NAVIGATION

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“The **mining sector** is a primary economic industry. Hence the contribution to South Africa’s GDP, which was 1.9% higher at R483.3 billion, is material.”



Direct GDP contribution

**R483.3bn**

(2021: R474.4bn)

# FOREWORD

**Mining continues to play a significant role in South Africa's economy, and it remains a catalyst for change. Credible, relevant and accessible industry data is vital for stakeholders to better understand the industry, its performance and its value creation.**

Data and statistics not only improve the understanding of the role of mining in the national economy, but also illustrate the importance of good mineral resource governance in ensuring that mineral wealth translates into economic and social progress.

Minerals Council South Africa's economics team has compiled this document to provide insight into what the numbers mean and demonstrate the depth and nuances of the industry's contribution to the country today.

The availability of credible statistics helps paint an accurate picture of the country's mining sector and allows the Minerals Council to fulfil its mandate as the voice of the mining industry in South Africa.

The Minerals Council's economics discipline plays a key role in gathering the data necessary for its internal teams and its members to properly understand the state of the sector and to improve its growth.

This *Facts and Figures 2022* book is a comprehensive statistical reference guide to the South African mining sector.



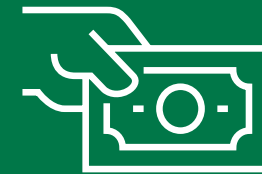
*In compiling the Facts and Figures publication, the Minerals Council South Africa (Minerals Council) relies on various primary data sources such as Statistics South Africa (Stats SA), the Department of Mineral Resources and Energy (DMRE), the South Africa Reserve Bank (SARB), the World Bank and the United States Geological Survey.*

*As the Minerals Council depends on the latest official data as published by the primary data source, this may by extension result in subsequent revisions to our estimates and/or published numbers.*

## The mining sector in 2022



Value of mining production  
**R1.2 TRILLION**



Contribution to national GDP  
**R483.3 BILLION**



Number of people employed  
**469,353**

# MESSAGE FROM THE CEO



**The economic contribution of the mining industry to the fiscus remains a key source of revenue for the Government.”**

**Mzila Mthenjane**

CEO



It is a pleasure to present the Minerals Council's *Facts and Figures 2022* book in which we provide you with the annual contribution of South Africa's mining industry to the nation, the sector's employees and the fiscus.

The most notable milestone achieved in 2022 was the significant step change in the industry's safety and health performance. The number of fatalities reduced to 49 in 2022 from 74 deaths the year before. We are keenly aware that 49 people did not return home to their family and friends. We are doing our utmost to make the industry safer in our quest to achieve zero harm.

The hard work, revitalised focus and commitment by all stakeholders to improve safety, and the tireless work of mining companies to achieve zero harm resulted in the lowest number of fatalities on record. This is the first time the number of fatalities in South African mining has been below 50 and it reverses two years of unacceptable regression in the industry's safety performance after having recorded 51 fatalities in 2019.

The Minerals Council is an advocacy and impact body, representing the voice of its members in all issues of concern and interest to the mining industry. We are proud of the contribution the mining sector makes to the entire country as evidenced in this edition of *Facts and Figures*. However, we must note that the prevailing conditions in the country have contributed to the industry's continued underperformance. The industry has experienced an annual decline of 0.4% per year since 1994 when it contributed 10% to



**“The most notable milestone achieved in 2022 was the significant step change in the industry's safety and health performance.”**

the GDP of the country in 1993, compared to 4.4% in 2022. It is unacceptable.

The economic contribution of the mining industry to the fiscus remains a key source of revenue for the Government at a time when state-supplied electricity and transport logistics are negatively affecting the performance of the mining industry and the viability of many businesses, and threatening the jobs of so many people when unemployment has reached a record high. The electricity and rail crises have shackled South Africa's potential growth rate to a low and narrow range between 0.5% and 1%, limiting the ability of many people to experience a life of dignity and social progress. However, the private sector and the Government are jointly addressing these constraints to unlock the economy. President Cyril Ramaphosa's energy reforms in July 2022 were a welcome gamechanger, but further urgent and significant reforms to enable greater private sector participation in rail and ports are urgently required.

Despite the declining trend, the mining industry remained a trillion-rand industry for the second consecutive year when measured in production value, despite the headwinds in 2022.



**The mining industry grew employment by**

**2%,**

**about 9,400 jobs, during 2022.**

## MESSAGE FROM THE CEO CONTINUED

The mining sector is a primary economic industry. Hence the contribution to South Africa's GDP, which was 1.9% higher at R483.3 billion, is material. Direct payments into the fiscus included company tax generating R73.6 billion, and royalties rising to R25.5 billion according to National Treasury's budget estimates. In an environment of improved logistics performance and electricity security, we could have contributed approximately 35% - 50% more to the fiscus, thus making available the necessary cash flow to invest in much-needed socio-economic infrastructure, such as education, health, roads and railways, that will drive economic development.

Production in the year to December 2022 was 6.9% lower than in 2021. What is more, 2022 production performance was 6.7% lower when compared to pre-COVID levels. As mentioned earlier, our industry is in decline - a trend which should be of concern to the nation.

The value at stake for the nation is too large for the Minerals Council not to play a leading role in reversing this trend. We are working closely with our business peers, government and other stakeholders to ensure sustainable and pragmatic solutions to the infrastructural and logistics constraints faced by the industry, while addressing the deteriorating security environment. If these blockages are resolved, with the inclusion of the private sector, the mining industry's role as a key contributor to the wellbeing of the South African economy and livelihoods of people of South Africa will be fully unlocked. We believe and will continue to uphold our vision of *#MiningMatters* because it really does.

**Mzila Mthenjane**  
Chief Executive Officer



## TRILLION-RAND INDUSTRY

Despite the declining trend, the mining industry remained a trillion-rand industry for a second consecutive year when measured in production value.



Sibanye-Stillwater - South Africa gold operations

# MINING AT A GLANCE



## SNAPSHOT 2022\*

Value of production

**R1.19tn**

(2021: R1.8tn)



Direct GDP contribution

**R483.3bn**

(2021: R474.4bn)



% contribution to GDP\*\*

**R7.3%**

(2021: 7.6%)



Total primary sales

**R883.6bn**

(2021: R857.3bn)



Mineral exports\*\*\*

**R882.8bn**

(2021: R835.2bn)



Employment

**469,353**

(2021: 459,945)



Employee earnings

**R174.2bn**

(2021: R165.0bn)



PAYE by mining employees<sup>1</sup>

**R27.1bn**

(2021: R26.2bn)



VAT (net outflows)

**R28.9bn**

(2021: R34.7bn)



Company tax paid

**R73.6bn**

(2021: R81.1bn)



\* Current rands, based on the latest statistics for fiscal years.

\*\* Measured at current market prices.

\*\*\* Based on SARS data, most of primary mineral sales were designated for the export market.



Anglo American Coal - Greenside

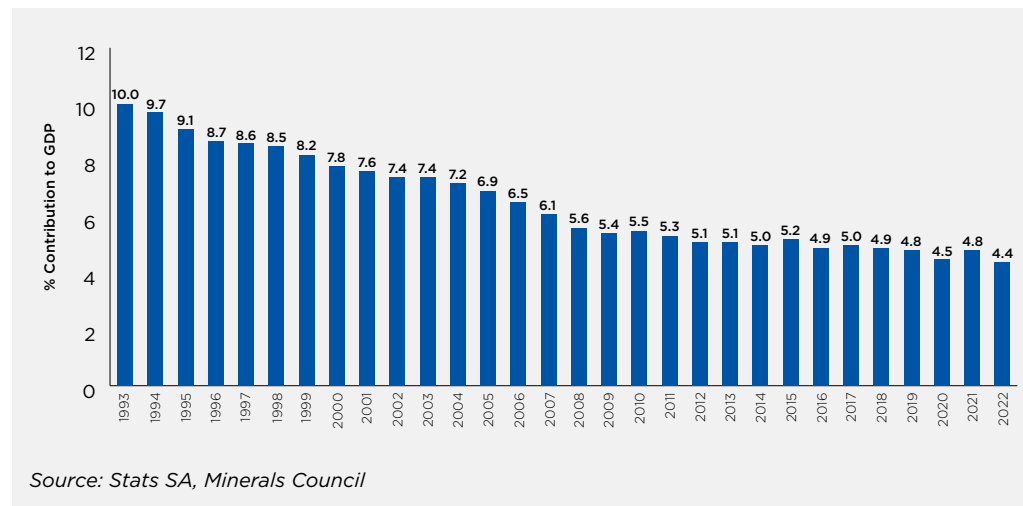
# OVERVIEW OF THE SOUTH AFRICAN MINING INDUSTRY

## Mining GDP

The South African mining industry's contribution to the national economy has significantly decreased in the last two decades.

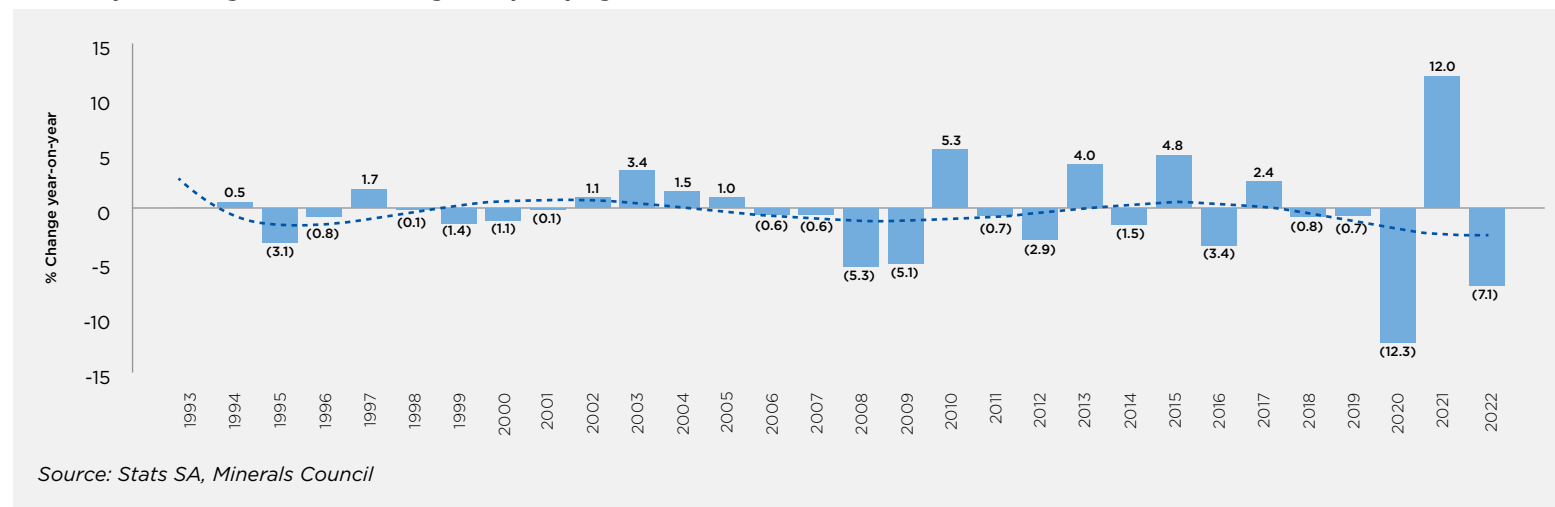
Its share has more than halved, dropping from 10% in 1993 to only 4.4% in 2022, measured at constant 2015 prices. The graph to the right depicts the sector's contribution to GDP since 1993.

Mining's contribution to GDP at constant prices: 1993 to 2022



These significant drops underscore the challenges faced by the sector. In stark contrast to other sectors of the South African economy, mining has consistently struggled to achieve and maintain positive growth. In fact, mining and quarrying is the only sector in the South African economy that has averaged a negative 0.4% growth rate since 1994 – while all other sectors have grown.

Year-on-year GDP growth rate mining and quarrying: 1993 to 2022



In 2022, mining sectoral GDP contracted by 7.1% compared to 2021.



# OVERVIEW OF THE SOUTH AFRICAN MINING INDUSTRY CONTINUED

Although mining's contribution in current terms increased to R483.3 billion in 2022, when accounting for inflation, the contribution has been declining in real terms. Mining contributed R202.6 billion to GDP in 2022, measured at constant 2015 prices. This is less than the R230.6 billion recorded in 1993 and the gradual downward trend has continued.

Unlocking mining and addressing the constraints to growth could see the sector expand, thereby increasing employment and its contribution to the economy.

Mining and quarrying industry GDP (current and constant 2015 prices): 1993 to 2022

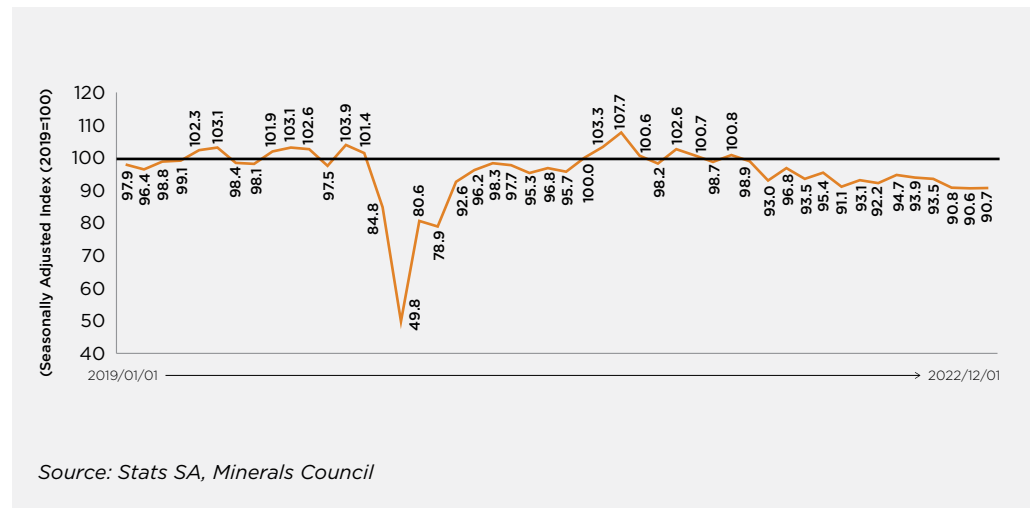


## Mining production

The **value of mining production** reached more than a trillion rand (R1.18 trillion) for the first time in 2021 and grew further during 2022 to R1.19 trillion. However, the **volume of mining sector production** in 2022 is on average below the pre-COVID levels (base year moved to 2019) due to structural constraints.

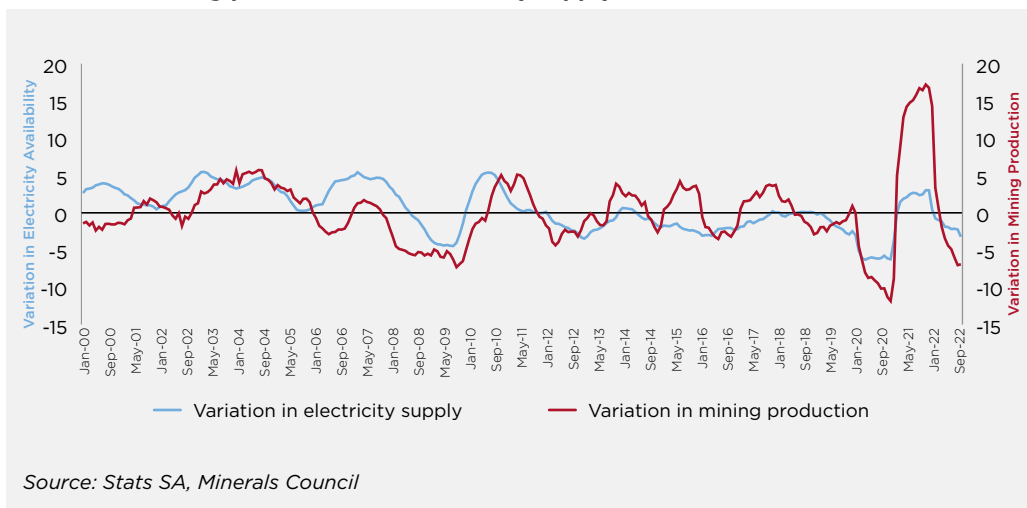


Index of seasonally adjusted mining production



# OVERVIEW OF THE SOUTH AFRICAN MINING INDUSTRY CONTINUED

## Variation in mining production and electricity supply

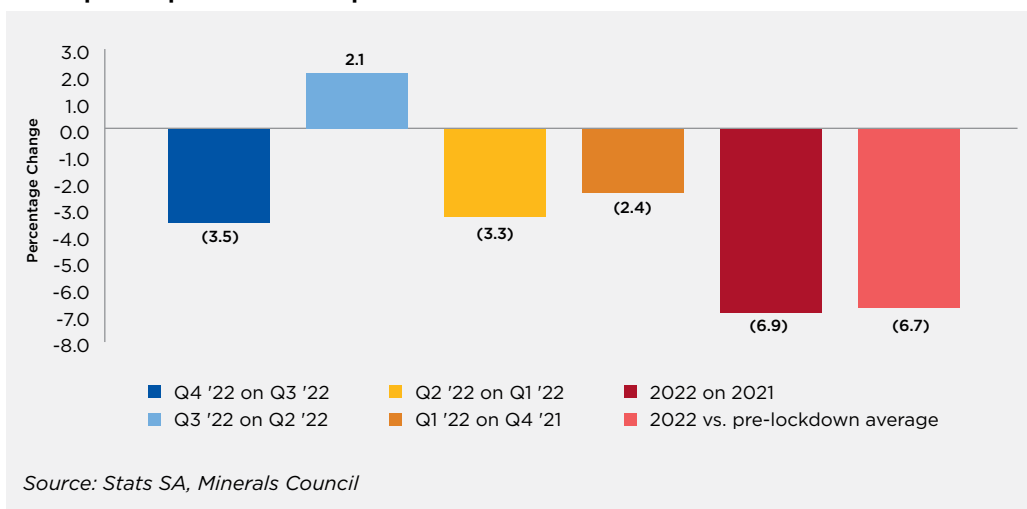


As mining is one of the highest energy-consuming sectors in the economy, the graph on the left illustrates the impact of constrained electricity supply on mining production. The two move in tandem.

Mining uses 'baseload' electricity (i.e., 24 hours a day) and is highly dependent on Eskom's coal-fired power stations. The more than 500% rise in electricity costs over a decade has also had a major impact on cost structures and competitiveness in mining.

Variation in production performance for 2022 over different time periods is illustrated in the graph below.

## Time-specific production comparisons



**Production in the year to December 2022 (full 12 months) was 6.9% lower than in 2021.**

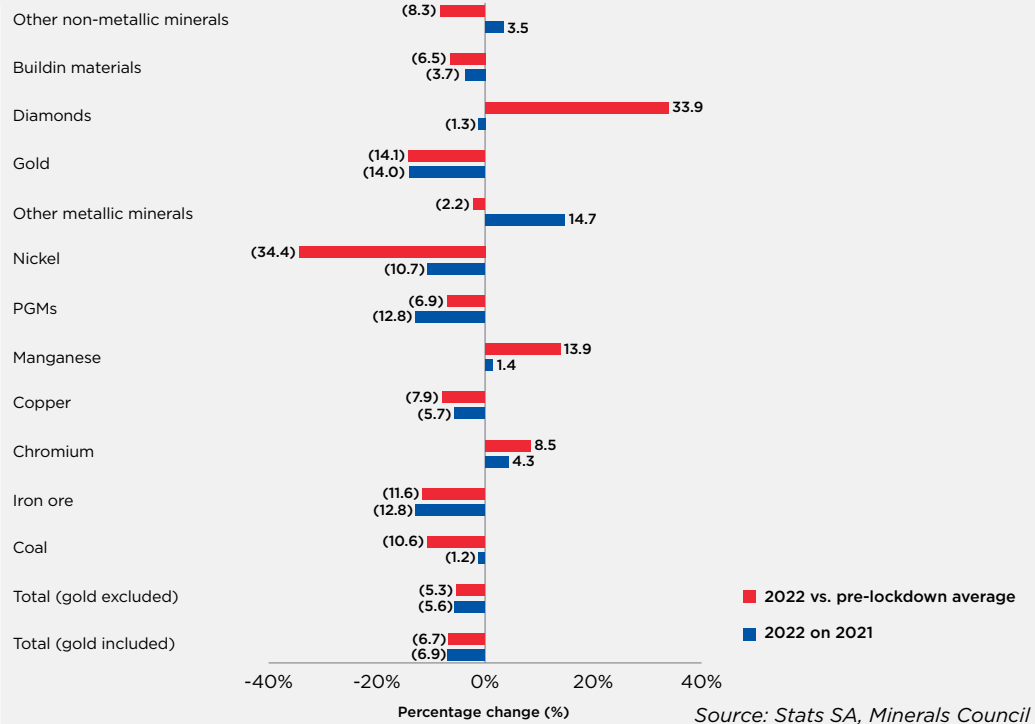
What is more, 2022 production performance was 6.7% lower when compared to pre-COVID levels. Performance across all quarters of the year 2022 was in negative territory, except for quarter 3 (Q3 '22) which saw modest improvements in production of 2.1%. Overall, mining production declined in 2022.

# OVERVIEW OF THE SOUTH AFRICAN MINING INDUSTRY CONTINUED

## Commodity production performance: 2022

The graph depicts individual commodity production performances for the full 12 months of 2022 compared to 2021. The **blue bars** show 2022 production against 2021 where it is clear that all commodities experienced contractions in production except chrome, manganese and other metallic and non-metallic minerals. The **red bars** show production performance for 2022 compared to pre-COVID levels.

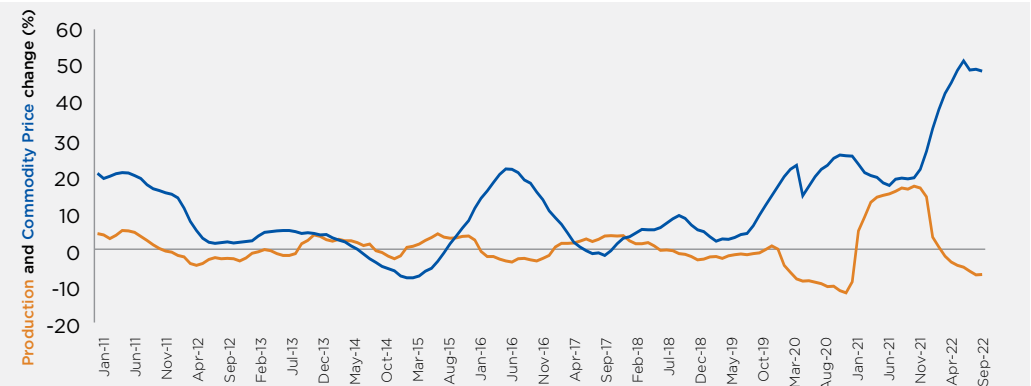
The production of only three commodities, namely, diamonds, manganese and chromium, improved relative to pre-COVID levels. Each commodity experienced unique circumstances that resulted in these outcomes. However, the compounding uncertainties were characterised by logistical bottlenecks (rail, ports and border posts), unsustainably high electricity tariff increases, unreliable supply and pervasive criminal incidents.



### Commodity price trends

The graph alongside shows how production was unable to respond to substantial improvements in commodity prices during 2022. This is mainly due to domestic constraints. A deeper analysis of physical production and export tonnages reveals a relatively strong correlation. A real concern, and growing likelihood, is that the declining 'volume effect' will overtake the 'value/price effect' going into 2023 if production and export constraints intensify or remain unchanged.

### Commodity production and prices rates of change



Source: World Bank, SARB, Stats SA, Minerals Council

# OVERVIEW OF THE SOUTH AFRICAN MINING INDUSTRY CONTINUED

## Dollar price trends

	Coal US\$/t	Iron ore US\$/t	Gold US\$/t	Platinum US\$/t	Dollar index	Chrome Ore US\$/t	Ferrochrome US\$/t
Year to Dec 2022	241	121	1,801	962	471.4	173	1,165
Year to Dec 2021	120	162	1,800	1,091	249.1	134	1,108
Change 2022 on 2021 (%)	↑ 100.7	↓ (25.0)	↑ 0.1	↓ (11.9)	↑ 89.2	↑ 29.0	↑ 5.2
Change on 2022 before lockdown (%)	↑ 238.7	↑ 26.3	↑ 25.2	↑ 7.7	↑ 199.1	↑ 39.4	↑ 46.6
12 month average before lockdown	71	96	1,439	893	157.6	124.3	794.9
Jan 2022	169	133	1,816	994	349.2	141.6	1,138.7
Dec 2022	215	112	1,798	1,011	452.8	172.8	1,139.6
Point change %	↑ 27.6	↓ (15.6)	↓ (1.0)	↓ (1.7)	↑ 29.7	↑ 22.0	↑ 0.1



Source: World Bank, Minerals Council

The variation in rand and dollar prices, as well as the rand exchange rate trends for 2022, are shown here. Although South African commodity prices softened during the latter part of 2022, dollar prices were still around 89% higher than during 2021 and rand prices near 60% higher than during 2021.

## Rand price trends

	Coal US\$/t	Iron ore US\$/t	Gold US\$/t	Platinum US\$/t	Rand index	Chrome Ore US\$/t	Ferrochrome US\$/t	Exchange rate (ZAR cents:US\$)
Year to Dec 2022	3,913	1,963	29,373	15,701	594	2,841	19,041	1,636
Year to Dec 2021	1,776	2,375	26,606	16,107	372	1,986	16,410	1,479
Change 2022 on 2021 (%)	↑ 120.4	↓ (17.3)	↑ 10.4	↓ (2.5)	↑ 59.6	↑ 43.1	↑ 16.0	↓ (9.6)
Change on 2022 before lockdown (%)	↑ 277.6	↑ 40.1	↑ 39.7	↑ 20.4	↑ 141.3	↑ 56.7	↑ 64.2	↓ (10.8)
12 month average before lockdown	1,036	1,401	21,026	13,040	246	1,813	11,594	1,460
Jan 2022	2,615	2,057	28,182	15,428	465	2,198	17,671	1,552
Dec 2022	3,718	1,934	31,083	17,481	589	2,988	19,706	1,729
Point change %	↑ 42.2	↓ (6.0)	↑ 10.3	↑ 13.3	↑ 26.6	↑ 36.0	↑ 11.5	↓ (10.3)

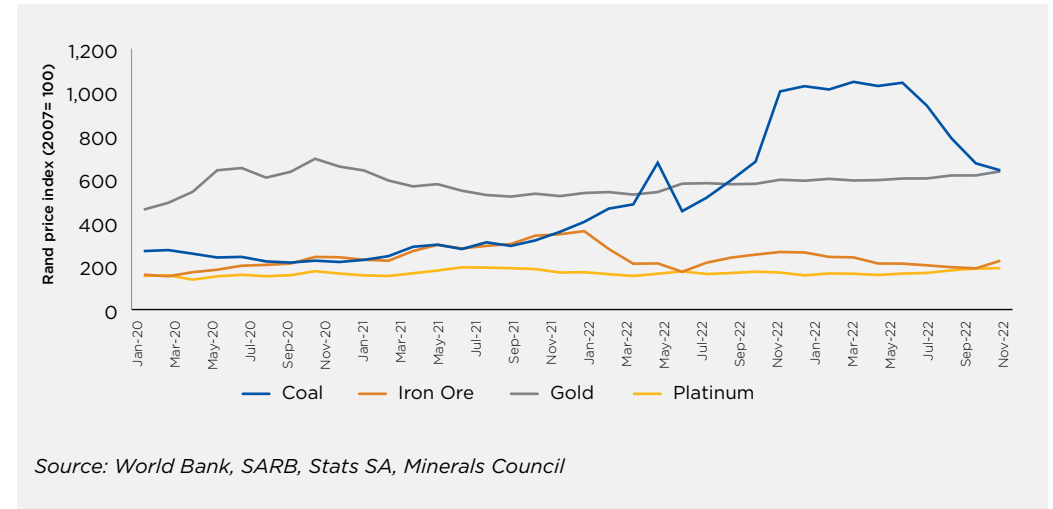
Source: World Bank, SARB, Minerals Council

# OVERVIEW OF THE SOUTH AFRICAN MINING INDUSTRY CONTINUED

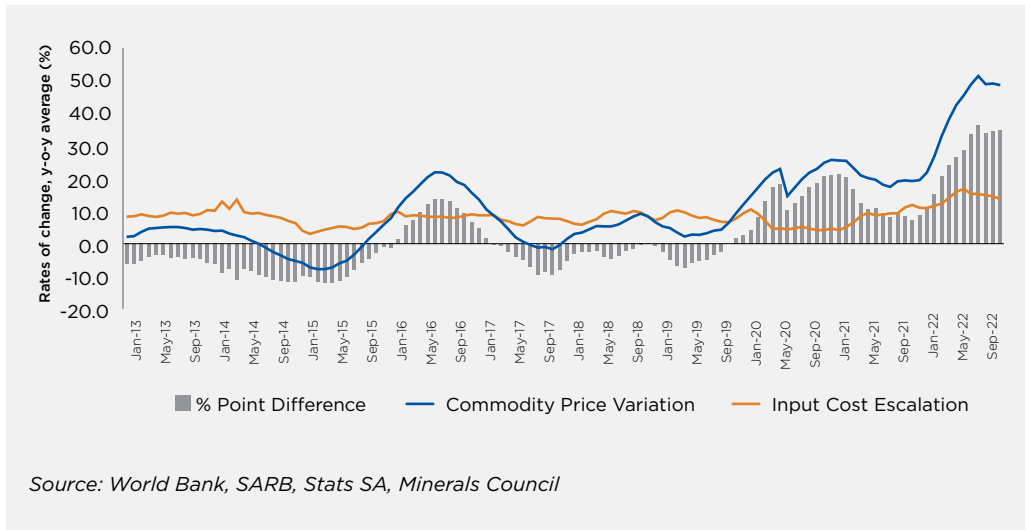


On the right are the individual commodity price patterns showing how and when different commodities experienced strong price movements. Coal prices surged, mainly because of increased demand from Europe.

## Select commodity price movements



## Changes in mining input costs and commodity prices



When overlaying composite input cost index data with commodity price movements, it is indicated that profitability margins in the sector improved in 2022.

However, this was owing solely to the highs in commodity prices, which served to offset the surging input costs, climbing by an average of 13.9% year-on-year. Given that commodity prices are unlikely to accelerate further at current rates, profitability will inevitably be affected by the relentless rise in domestic input costs. In addition, inefficiencies in railway infrastructure and power supply are likely to add to cost pressures.



Input cost index data and commodity price movements indicate that profitability margins in the sector improved in 2022.

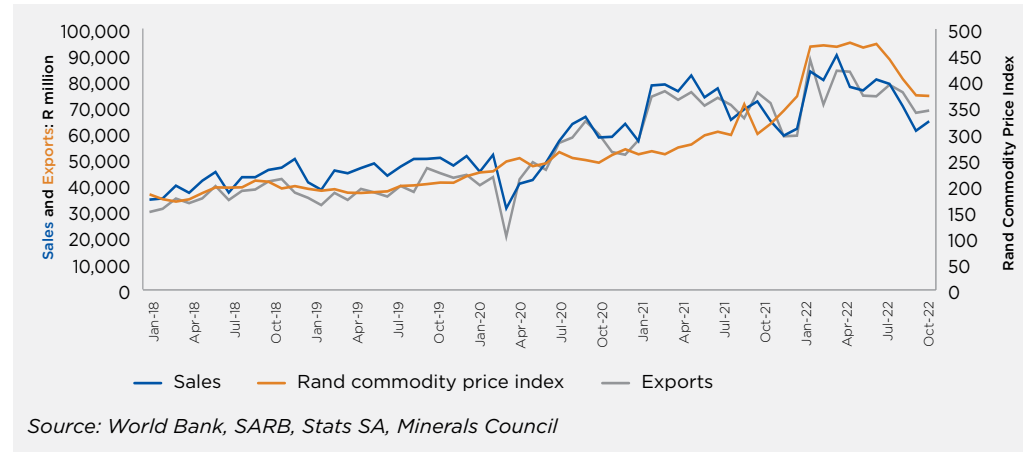
# OVERVIEW OF THE SOUTH AFRICAN MINING INDUSTRY CONTINUED

## Commodity sales and exports

The graph shows total commodity sales (domestic and export) and price trends.

The correlation between the commodity price index (weighted averages for coal, iron ore, gold and platinum) and local and export sales are visible. Mining always aims to realise the benefit of higher commodity prices by bringing their products to the local or export market.

Commodity price performance: export and local sales

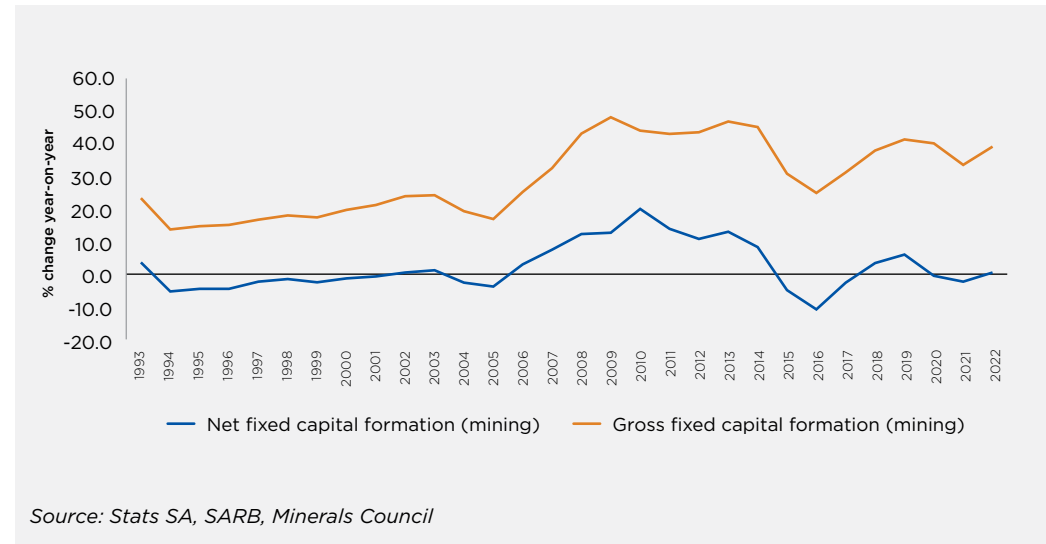


The industry's efforts to maximise sales, thereby taking advantage of improved commodity prices, were hampered by constraints in rail and port capacity and inefficient road transport, which were aggravated also by electricity shortages in the second half of the year. Sales and export capabilities ran into physical limitations, and by the end of the year commodity prices also started tapering off.

### Gross fixed capital formation (GFCF)

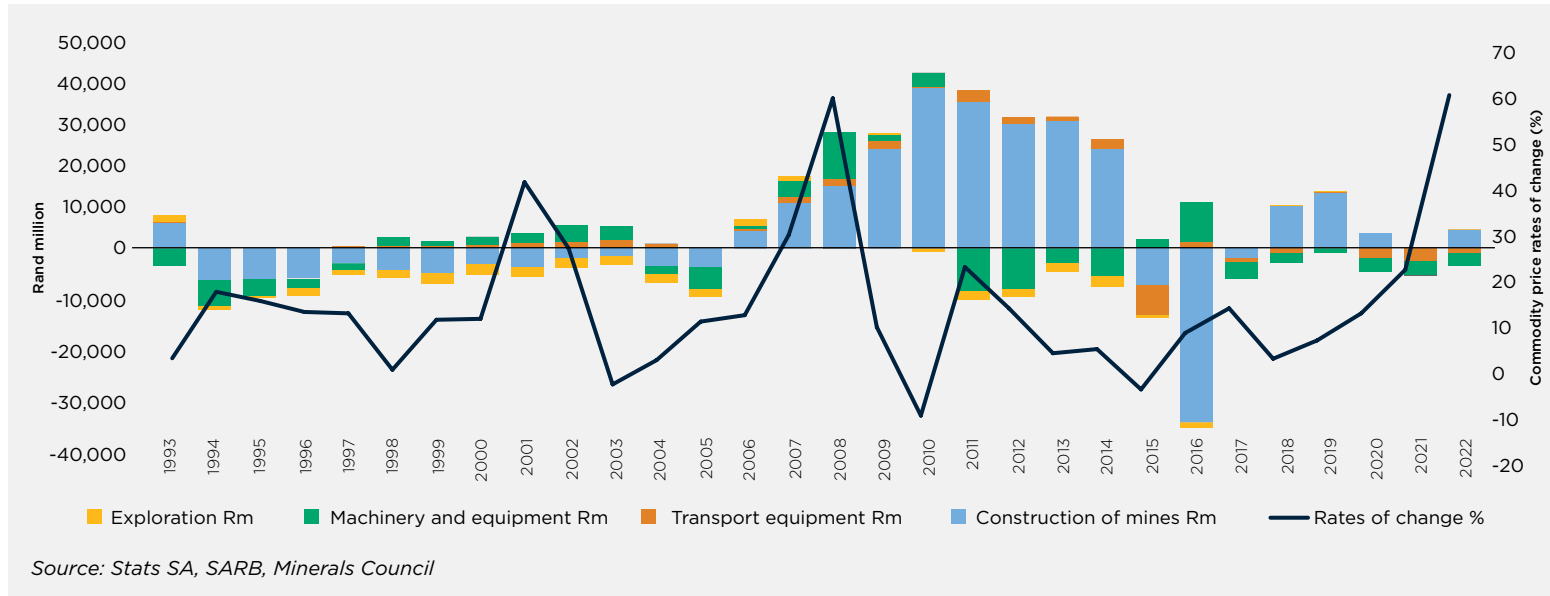
Investment in the mining sector has largely been directed towards maintaining current operations and exploration at existing sites, which is reflected in the gross fixed capital formation data. On the other hand, investment in new projects or expansions (greenfield exploration) is captured by the net fixed capital formation data. The general economic rule of thumb is to invest around 25% of sectoral GDP to ensure growth and expansion. From 1993 to 2022, net fixed investment in the mining sector averaged 4% while gross fixed investment averaged 30% over the same period. This highlights how the consumption of capital drives mining investment through depreciation or stay-in-business expenses.

Gross and net fixed capital formation mining and quarrying: 1993 to 2022



# OVERVIEW OF THE SOUTH AFRICAN MINING INDUSTRY CONTINUED

## Net fixed investment 'deconstructed' for mining and quarrying: 1993 to 2022



Deconstructing net fixed capital formation data indicates that higher commodity prices have not translated into higher fixed investment in mining. This is largely because of structural domestic constraints and uncertainty over the sustainability of elevated commodity prices.

Data seems to indicate that the aftermath of the global financial crisis (which led to a dramatic decline in net fixed investment) and the subsequent COVID disruptions, followed by geopolitical uncertainties, have led to a fundamental shift in fixed investment behaviour. Additionally, owing to the structural constraints, most of the new investment in the sector in 2022 was directed toward renewable energy projects.



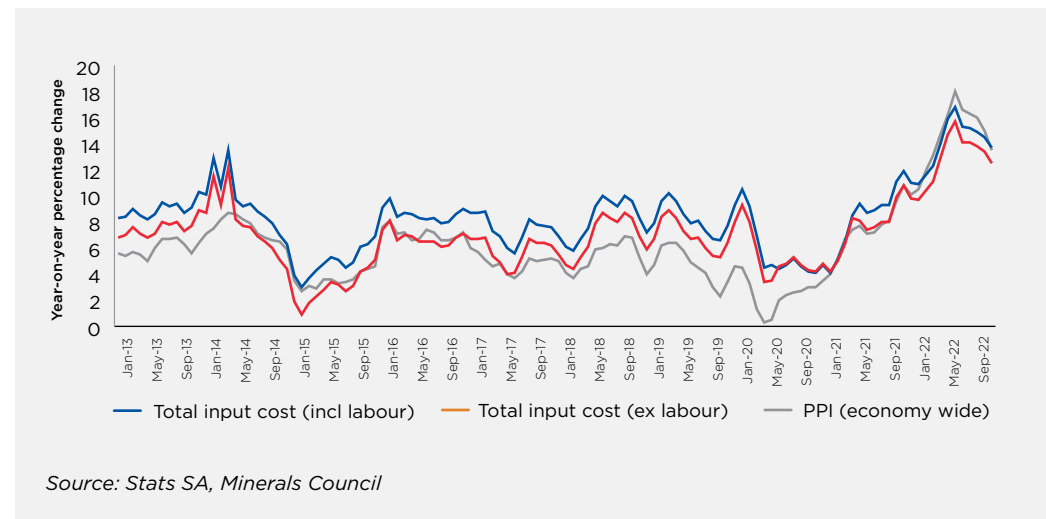
### Input cost inflation

**Input cost escalation in mining is broadly determined by labour and intermediary input costs.**

Due to geopolitical tension, disruption to supply chains and the weak South African economy, both production price and consumer price escalation rose rapidly during 2021 and 2022, which had a negative impact on the industry.

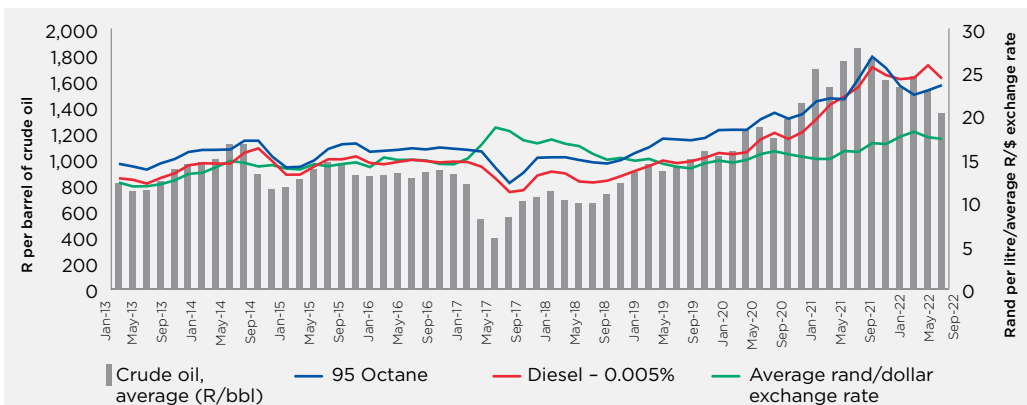
Additionally, rapidly rising administered prices domestically remain a major challenge, which puts pressure on marginal mines' viability. The weakening exchange rate pushed imported machinery and equipment prices higher. For 2022, average input cost inflation for the total mining industry amounted to **13.9%**. This was the highest level in 10 years, resulting in pressure on profit margins in the mining industry.

### Total mining input cost inflation (monthly year-on-year weighted %)



# OVERVIEW OF THE SOUTH AFRICAN MINING INDUSTRY CONTINUED

## Fuel, Brent crude prices and R/\$ exchange rate



Source: Stats SA, World Bank, Minerals Council

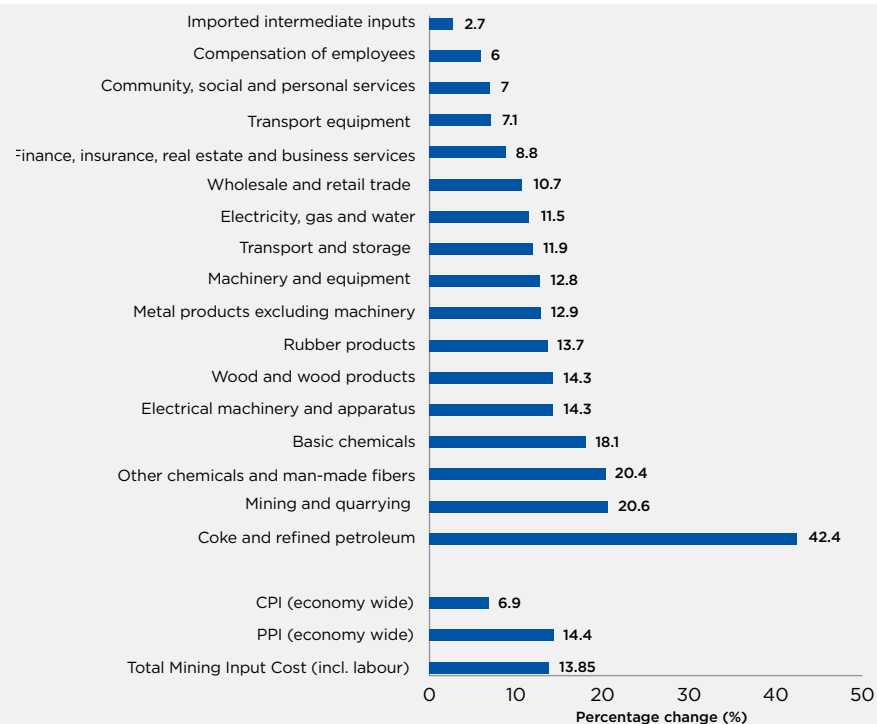


The graph to the left illustrates the relationship between Brent crude oil prices, the rand-dollar exchange rate and fuel prices. South African fuel prices (95 octane and diesel) fluctuate almost in tandem with Brent crude oil prices and are vulnerable to declines in the value of the rand against the dollar. All of these exert pressure on input costs.

## Annual average input cost escalation in the South African mining sector (%)

Total Mining Input Inflation	
Year	%
2013	8.94
2014	9.50
2015	4.90
2016	8.57
2017	7.50
2018	8.25
2019	8.12
2020	6.02
2021	8.13
<b>2022</b>	<b>13.85</b>

## Mining input cost inflation breakdown: 2022



The discernible upward spike in the input cost inflation profile for 2022 is mainly due to coke and petroleum, mining and quarrying and chemical input cost increases. The average year-on-year increase from 8.1% in 2021 to 13.9% in 2022 was primarily driven by these three components.

Source: Stats SA, Minerals Council



Input cost inflation came from the increase in petroleum prices and petroleum-derived products across the mining industry. This, in turn, was driven by global crude oil prices, which on average increased by around 135.4% from 2020 to 2022.

Global crude oil prices increased by around

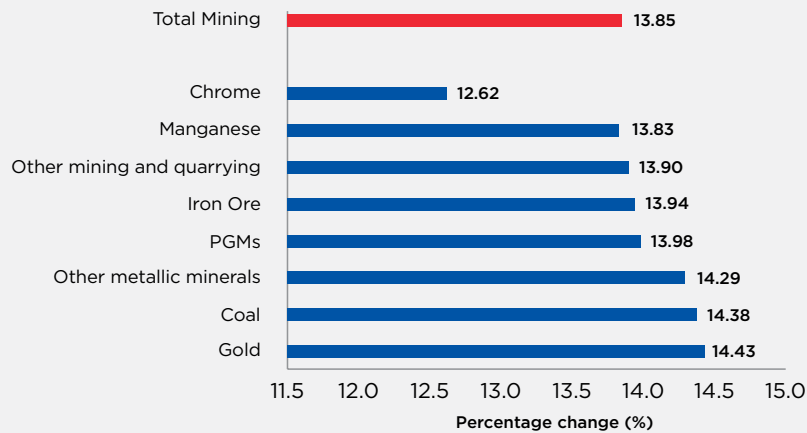
**135.4%**

from 2020 to 2022



# OVERVIEW OF THE SOUTH AFRICAN MINING INDUSTRY CONTINUED

## Commodity input cost inflation: 2022



Source: Stats SA, Minerals Council

For 2022, the sharpest inflationary increase was experienced by the chrome, manganese and other mining and quarrying industries while gold experienced the smallest input price increase in the industry. Rail constraints affected chrome and manganese in particular, which necessitated alternative and more expensive road transport. The erratic electricity supply and the subsequent shift to self-generated electricity using diesel also contributed to input cost inflation.



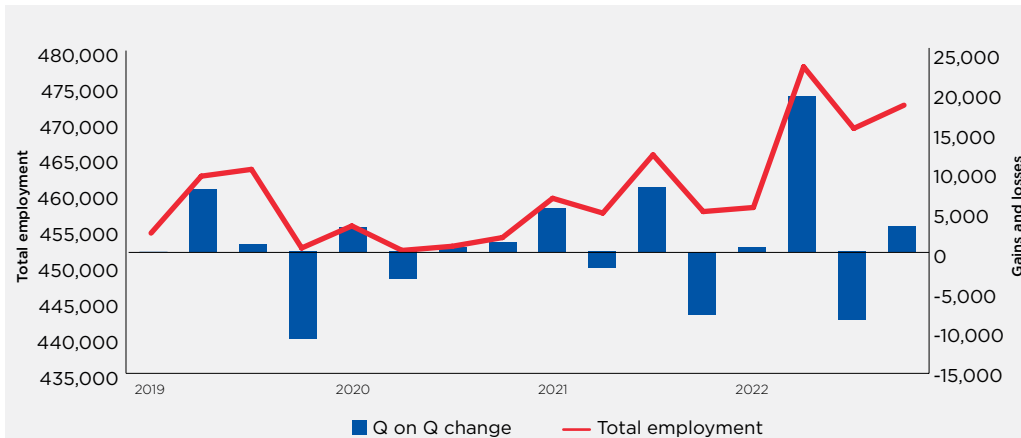
## Employment



Total employment reported by companies in the industry stood at **469,353\*** in 2022. This was 2% higher than the 459,945 reported in 2021.

\* Official employment numbers reported by companies surveyed by Stats SA in the Quarterly Employment Survey.

## Mining and quarrying employment numbers reported by companies



Source: Quarterly Employment Survey, Stats SA, SARB, Minerals Council

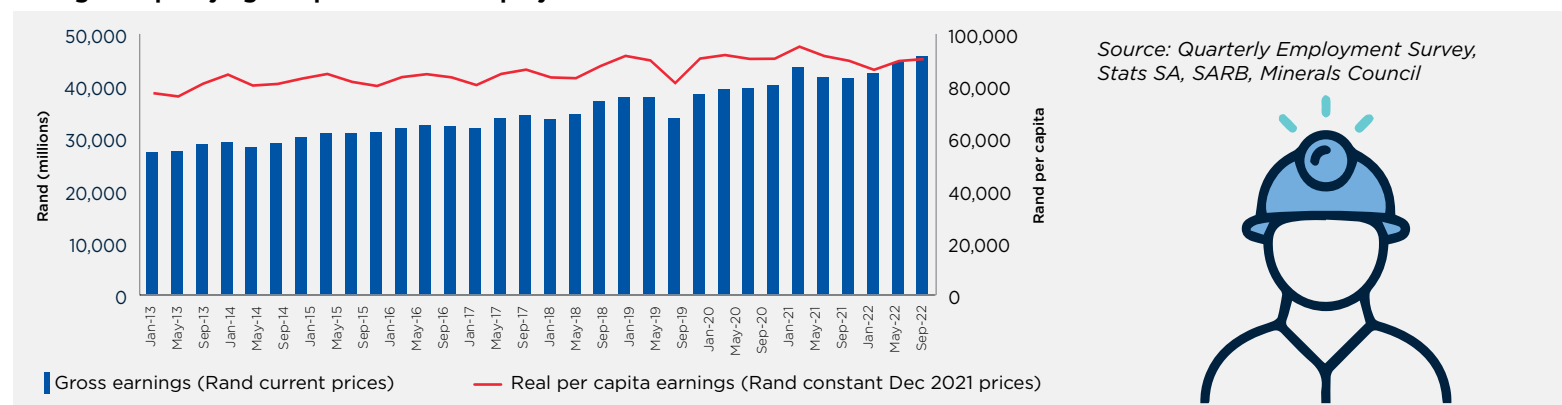


Glencore Coal - Impunzi Colliery

# OVERVIEW OF THE SOUTH AFRICAN MINING INDUSTRY CONTINUED

Compensation of employees has remained relatively constant, rising slowly in both nominal and real terms over time.

Mining and quarrying compensation of employees



Group	Concept	Export sales (Rand)	Local sales (Rand)	Total sales (Rand)
<b>Total mineral sales 2022</b>	Gold	91,184,890,624	5,106,260,486	96,291,151,110
	Silver	709,346,628	20,815,922	730,162,550
<b>PRECIOUS METALS</b>	PGMs	275,604,218,337	22,701,046,528	298,305,264,865
	Diamonds	15,392,540,377	11,300,466,033	26,693,006,410
	<b>Subtotal</b>	<b>382,890,995,966</b>	<b>39,128,588,969</b>	<b>422,019,584,935</b>
	Chrome*	18,974,831,802	14,917,334,643	33,892,166,445
<b>BASE MINERALS</b>	Iron ore	89,125,852,303	3,875,555,140	93,001,407,443
	Manganese	46,265,720,703	2,010,353,703	48,276,074,406
	Copper	4,611,831,357	448,843,228	5,060,674,585
	Lead concentrate	1,241,779,285	4,221,936	1,246,001,221
	Nickel	10,203,058,295	2,642,131,420	12,845,189,715
	Zinc	9,390,241,345		9,390,241,345
	Coal	136,046,162,981	110,694,280,011	246,740,442,992
Other non-metallic	7,022,132,347	3,166,657,807	10,188,790,154	
Miscellaneous**	24,903,883,164	16,010,927,056	40,914,810,220	
	<b>Subtotal</b>	<b>347,785,493,582</b>	<b>153,770,304,944</b>	<b>501,555,798,526</b>
	<b>GRAND TOTAL</b>	<b>730,676,489,548</b>	<b>192,898,893,913</b>	<b>923,575,383,461</b>

Source: DMRE, Stats SA, SARS, Minerals Council

\* The total export and local sales figures differ from official DMRE data because of chrome export and local sales misallocation by the department. The DMRE data allocates export sales as local sales and vice-versa.

\*\* Miscellaneous includes minerals like niobium, tantalum, tin and titanium, etc. These items are not recorded in export sales data by Stats SA, or the DMRE. Instead, these come from SARS and we include them here. The variation in export, sales and total sales values seen elsewhere can, therefore, be attributed to this line item.

# OVERVIEW OF THE SOUTH AFRICAN MINING INDUSTRY CONTINUED

## South Africa's contribution to world mineral reserves: 2022

Commodity	Unit	South Africa's reserves	World	
			South African ranking	%
Chromium	'000 metric tons	200,000	1	35.0
Manganese	'000 metric tons	640,000	1	40.0
Platinum group metals	kt	63,000	1	91.3
Vermiculite	kt	14,000	2	n/a
Zirconium minerals	kt	5,900	2	8.7
Fluorspar	'000 metric tons	41,000	3	15.7
Gold	t	5,000	3	9.6
Vanadium	t	3,500	4	13.5
Titanium mineral concentrates	'000 metric tons	36,500	5	4.5
Phosphate rock (contained concentrates)	kt	1600,000	6	2.2
Uranium	t	279,100	6	5.2
Coal	Mt	53,156	6	3.5
Copper	kt	11,000	17	1.0
Rare earths	t	790,000	11	0.6
Iron ore	'000 metric tons	640	11	0.8

Source: U.S. Geological Survey, Reston, Virginia, DMRE, Minerals Council



Gold Fields - South Deep

# OVERVIEW OF THE SOUTH AFRICAN MINING INDUSTRY CONTINUED

## Key industry statistics for South Africa: 2009-2023

Description	Units of measure	2018	2019	2020	2021	2022	Year-on-year % change
<b>Mining's contribution as % of total GDP nominal terms</b>							
Direct contribution of mining to GDP (value add)	R'millions nominal terms	287,588	314,590	350,796	474,425	<b>483,254</b>	1.9%
Direct contribution of mining to GDP	R'millions constant 2015 prices	223,666	221,217	194,968	218,196	<b>202,605</b>	(7.1%)
Mining GDP growth rate	% year-on-year	(0.8)	(1.1)	(11.9)	11.9	<b>(7.1)</b>	
Direct contribution of mining to GDP	US\$ equivalent	21,731	21,773	21,313	32,102	<b>29,546</b>	(8.0%)
South African GDP (value added at basic prices)	R'millions nominal terms	4,829,603	5,058,166	5,042,558	5,595,306	<b>5,952,708</b>	6.4%
South African GDP (value added at basic prices)	R'millions constant 2015 prices	4,127,833	4,136,884	3,907,890	4,081,378	<b>4,159,695</b>	1.9%
Mining's contribution as % of total GDP nominal terms	%	6.0%	6.2%	7.0%	8.5%	<b>8.1%</b>	
Mining's contribution as % of total GDP real terms	%	5.4%	5.3%	5.0%	5.3%	<b>4.9%</b>	
<b>Minings contribution as % of total investment</b>							
Direct contribution of mining to fixed investment (GFCF)	R'millions nominal terms	95,354	108,005	96,678	95,344	<b>115,696</b>	21.3%
Direct contribution of mining to fixed investment (GFCF)	R'millions constant 2015 prices	84,766	91,823	78,194	73,188	<b>79,130</b>	8.1%
Total private sector fixed investment (private GFCF)	R'millions nominal terms	587,525	619,709	546,606	580,072	<b>673,316</b>	16.1%
Total SA fixed investment (GFCF)	R'millions nominal terms	853,936	870,163	768,839	818,549	<b>941,944</b>	15.1%
Mining fixed investment growth rate	% year-on-year	20.6%	8.3%	(14.8%)	(6.4%)	<b>8.1%</b>	
Direct contribution to fixed investment (GFCF)	US\$ equivalent	7,205	7,475	5,874	6,451	<b>7,074</b>	9.6%
Mining's contribution to private sector fixed investment (GFCF)	%	16%	17%	18%	16%	<b>17%</b>	
Minings contribution as % of total investment	%	11%	12%	13%	12%	<b>12%</b>	
<b>Sales and exports</b>							
Total primary mineral sales	R'millions nominal terms	498,289	552,365	607,547	851,313	<b>882,732</b>	3.7%
Total primary mineral sales	US\$ equivalent	37,652	38,230	36,913	57,604	<b>53,970</b>	(6.3%)
Mining industry primary exports	R'millions nominal terms	296,745	321,794	329,450	438,534	<b>689,632</b>	57.3%
Mining industry primary exports	US\$ equivalent	22,423	22,272	20,016	29,673	<b>42,164</b>	42.1%
Total SA exports (merchandise)	R'millions nominal terms	1,249,348	1,295,145	1,394,959	1,820,395	<b>2,012,344</b>	10.5%
Primary mineral exports as % of total SA exports	%	23.8%	24.8%	23.6%	24.1%	<b>34.3%</b>	

# OVERVIEW OF THE SOUTH AFRICAN MINING INDUSTRY CONTINUED

## Key industry statistics for South Africa: 2009-2023 continued

Description	Units of measure	2018	2019	2020	2021	2022	Year-on-year % change
<b>Employment</b>							
Mining industry direct employment	numbers	456,438	460,015	453,585	448,536	<b>466,245</b>	3.9%
Total SA formal non-agricultural employment	numbers	10,107,030	10,220,218	9,729,156	9,964,480	<b>9,988,072</b>	0.2%
Mining as % of total non-agricultural formal employment	%	4.5%	4.5%	4.7%	4.5%	<b>4.7%</b>	
Remuneration paid to employees in mining	R'millions current	135,374	139,978	133,333	154,999	<b>163,921</b>	5.8%
Average annual remuneration per mineworker	Rand	296,589	304,291	293,955	345,568	<b>351,578</b>	1.7%
<b>Exchange rates</b>							
Rand per US\$	R/US\$	13.2	14.4	16.5	14.8	<b>16.4</b>	10.7%
Rand per Euro	R/Euro	15.6	16.2	18.8	17.5	<b>17.2</b>	(1.6%)
Rands per British Pound (GBP)	R/GBP	17.6	18.4	21.1	20.3	<b>20.2</b>	(0.7%)
<b>Commodity prices</b>							
Coal	US\$/tonne	98	72	66	120	<b>241</b>	1.0
Iron ore	US\$/dmtu	70	94	109	162	<b>121</b>	(25.0%)
Gold	US\$/oz	1,269	1,392	1,770	1,800	<b>1,801</b>	0.1%
Platinum	US\$/oz	880	864	883	1,091	<b>962</b>	(11.9%)
Palladium	US\$/oz	1,037	1,548	2,224	2,416	<b>1,581</b>	(34.6%)
Rhodium	US\$/oz	2,219	3,908	11,221	20,141	<b>9,041</b>	(55.1%)
Copper	US\$/Mt	6,530	6,010	6,174	9,317	<b>8,822</b>	(5.3%)
Nickel	US\$/Mt	13,114	13,914	13,787	18,465	<b>25,834</b>	39.9%
Zinc	US\$/Mt	2,922	2,550	2,266	3,003	<b>3,481</b>	15.9%

Source: South African Reserve Bank, SARS, DMRE, World Bank, Minerals Council, Johnson Matthey

# OVERVIEW OF THE SOUTH AFRICAN MINING INDUSTRY CONTINUED

## Mining sector expenditure: 2022

Expenditure Item	R million	%
Purchases	498,199	44.96
Salaries and wages (includes severance payments)	166,759	15.05
Interest paid	29,865	2.69
Royalties paid	14,947	1.35
Paid rental on land and buildings	27,311	2.46
Paid rental on plant and machinery	7,558	0.68
Depreciation	54,149	4.89
Losses on assets	38,591	3.48
Other expenditure	184,596	16.66
On buildings, improvements and construction works	15,456	1.39
On PPE (includes comp it and software)	66,427	5.99
On vehicles	4,267	0.39
On purchases of land, existing buildings and works	40	0.00
<b>Total expenditure</b>	<b>1,108,165</b>	<b>100</b>

Source: Stats SA, Minerals Council

## Mining royalty payments by commodity type (R million): 2019/20 – 2021/22

Mining royalty by commodity										
Commodity type	2019/20 relative proportions		Year-on-year growth		2020/21 relative proportions		Year-on-year growth		2021/22 relative proportions	
	2019/20	%	%	2020/21	%	%	2021/22	%	%	
Coal	1,741	14.7	(15.4)	1,970	13.8	13.2	3,258	11.4	65.3	
Diamond	95	0.8	(73.9)	29	0.2	(69.7)	101	0.4	254.2	
Gold and uranium	180	1.5	(37.5)	608	4.3	238.2	511	1.8	(15.9)	
Industrial minerals <sup>1</sup>	453	3.8	94.6	596	4.2	31.7	1,355	4.8	127.2	
Iron ore	4,413	37.3	112.3	4,190	29.4	(5.1)	6,907	24.3	64.9	
Manganese	787	6.7	(1.9)	158	1.1	(79.9)	642	2.3	305.2	
Platinum	2,786	23.6	147.2	5,743	40.4	106.1	14,902	52.4	159.5	
Zinc <sup>3</sup>	(9)	(0.1)	(376.4)	23	0.2	(369.5)	24	0.1	0.8	
Other <sup>2</sup>	1,384	11.7	(16.6)	909	6.4	(34.3)	757	2.7	(16.7)	
<b>Total</b>	<b>11,830</b>	<b>100.0</b>	<b>37.4</b>	<b>14,228</b>	<b>100.0</b>	<b>20.3</b>	<b>28,456</b>	<b>100.0</b>	<b>100.0</b>	

<sup>1</sup> Industrial minerals are geological materials that are mined for their commercial value, that are not mineral fuels and are not sources of metallic minerals. They are used in their natural state or after beneficiation either as raw materials or as additives in a wide range of applications (i.e., industrial minerals are all those minerals other than gold, PGMs, coal, iron ore, chrome, manganese, diamonds, etc.).

<sup>2</sup> The commodities grouped under 'Other' are chrome, copper, fluorspar, nickel, oil and gas, phosphates, vanadium and unspecified.

<sup>3</sup> A net refund amount is reflected as refunds paid exceed payments received.

Source: SARS

# OVERVIEW OF THE SOUTH AFRICAN MINING INDUSTRY CONTINUED

## Employment per commodity: 2011-2022

	Total mining	Diamonds	Gold	PGMs	Chromite	Iron Ore	Manganese	Coal	Other Minerals
2011	512,878	12,046	144,799	194,745	16,911	22,361	7,460	78,579	35,977
2012	524,873	12,333	142,201	197,752	19,762	23,380	8,685	83,244	37,516
2013	509,914	13,579	131,738	191,261	18,359	21,126	9,842	88,039	35,970
2014	492,936	15,355	119,007	186,865	18,658	21,794	9,970	86,106	35,181
2015	480,209	18,314	115,030	186,465	18,449	20,554	8,639	77,747	35,011
2016	458,214	18,790	116,572	172,556	15,449	16,601	7,242	77,259	33,745
2017	463,907	18,038	112,902	172,760	16,968	17,510	7,780	82,372	35,577
2018	456,713	16,392	100,793	167,038	18,922	18,614	9,352	89,790	35,812
2019	459,528	15,091	94,731	164,674	20,847	19,778	11,220	95,416	37,771
2020	435,054	13,433	94,262	154,600	18,739	20,489	12,207	90,086	31,238
2021	448,536	12,926	93,983	165,619	18,316	21,440	13,308	90,896	32,048
<b>2022</b>	<b>466,245</b>	<b>14,569</b>	<b>95,051</b>	<b>175,288</b>	<b>19,267</b>	<b>23,295</b>	<b>12,600</b>	<b>91,835</b>	<b>34,340</b>

Source: DMRE

## Employee earnings per commodity (R million): 2011-2022

	Total mining	Diamonds	Gold	PGMs	Chromite	Iron Ore	Manganese	Coal	Other Minerals
2011	86,972	2,141	20,841	30,482	2,755	6,507	1,278	16,069	5,423
2012	93,630	2,408	22,238	34,393	3,434	4,691	1,565	17,446	5,723
2013	100,753	2,871	23,930	37,710	3,841	4,848	1,947	18,949	4,885
2014	102,146	3,663	23,383	35,652	4,047	5,692	2,302	20,595	4,902
2015	114,085	4,678	24,578	44,955	4,417	6,219	2,199	19,932	5,083
2016	120,505	5,073	28,761	45,926	4,214	5,886	2,118	21,112	5,226
2017	128,558	5,430	30,168	49,484	4,734	5,826	2,391	22,442	5,839
2018	134,593	5,199	27,940	51,410	5,517	6,641	3,002	25,949	6,610
2019	143,654	4,940	26,530	55,549	6,389	7,025	3,885	29,173	7,740
2020	146,602	4,477	27,282	57,195	6,164	7,537	4,327	30,374	7,158
2021	162,051	4,912	31,185	63,887	6,036	8,564	5,242	30,629	9,107
<b>2022</b>	<b>174,727</b>	<b>5,961</b>	<b>32,240</b>	<b>70,173</b>	<b>6,697</b>	<b>9,326</b>	<b>5,211</b>	<b>32,217</b>	<b>12,901</b>

Source: Stats SA, Minerals Council

# OVERVIEW OF THE SOUTH AFRICAN MINING INDUSTRY CONTINUED

## Employment gains and losses per commodity: 2012-2022

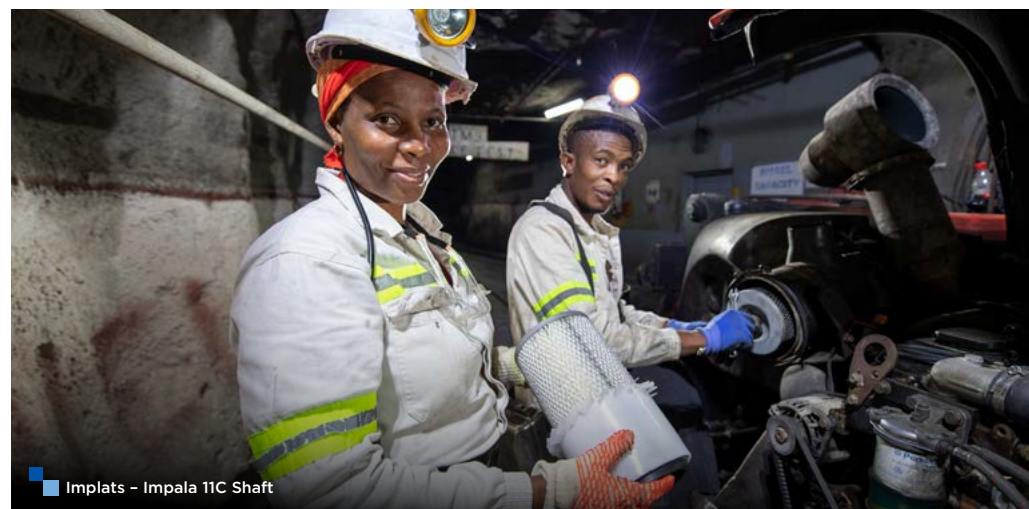
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Total mining	509,914	492,936	480,209	458,214	463,907	456,713	459,528	435,054	448,536	466,245
Diamonds	287	1,533	3,309	6,268	6,744	5,992	4,346	3,045	1,387	880
Gold	(2,598)	(13,061)	(25,792)	(29,769)	(28,227)	(31,897)	(44,006)	(50,068)	(50,537)	(50,816)
PGMs	3,007	(3,484)	(7,880)	(8,280)	(22,189)	(21,985)	(27,707)	(30,071)	(40,145)	(29,126)
Chromite	2,851	1,448	1,747	1,538	(1,462)	57	2,011	3,936	1,828	1,405
Iron Ore	1,019	(1,235)	(567)	(1,807)	(5,760)	(4,851)	(3,747)	(2,583)	(1,872)	(921)
Manganese	1,225	2,382	2,510	1,179	(218)	320	1 892	3 760	4 747	5 848
Coal	4,665	9,460	7,527	(832)	(1,320)	3,793	11,211	16,837	11,507	12,317
Other Minerals	1,539	(7)	(796)	(966)	(2,232)	(400)	(165)	1,794	(4,739)	(3,929)

Source: DMRE

## Mining employment by gender: 2011-2022

	Total	Male	Female
2011	512,878	468,592	44,286
2012	524,873	476,471	48,402
2013	509,914	459,750	50,164
2014	492,936	440,550	52,386
2015	480,209	426,334	53,875
2016	458,214	404,593	53,621
2017	463,907	407,324	56,583
2018	456,713	398,584	58,129
2019	459,528	398,402	61,126
2020	435,054	374,998	60,056
2021	448,536	384,671	63,865
2022	466,245	396,100	70,145

Source: DMRE



Implats - Impala 11C Shaft



# OVERVIEW OF THE SOUTH AFRICAN MINING INDUSTRY CONTINUED

## Contractors

In 2022, South Africa's mining industry hired 187,018 contractors, representing 40% of the sector's total workforce. Contractors' remuneration amounted to R42.5 billion (or 24% of total sector remuneration). Contract mining continues to provide mining companies with some advantages by minimising operational risks such as workforce availability and capital exposure. They also save costs for the mineral right holders and often have higher production rates, which optimises mining, plant and equipment utilisation rates.

The iron ore industry hired the largest number of contractors, not in number but as a percentage of their total workforce with 13,906 contract employees, representing 60% of the workforce. This was followed by the coal sector with 54,413 contractors making up 59% of its total workforce and the manganese sector with 6,630 or 53% of its total workforce contracted.

## Contractors in the mining sector: total remuneration and number of employees

	Remuneration (R)		No. of employees	
	Contractors	As % of industry	Contractors	As % of industry
Gold	5,579,582,035	17	21,404	23
PGMs	17,199,949,601	25	60,854	35
Diamonds	2,224,031,670	37	6,249	43
Chrome	1,083,828,374	16	8,317	43
Iron ore	2,138,149,128	23	13,906	60
Manganese	1,522,512,187	29	6,630	53
Coal	7,975,667,153	25	54,413	59
<b>Total mining</b>	<b>42,476,630,795</b>	<b>24</b>	<b>187,018</b>	<b>40</b>

Source: DMRE

## Mining's contribution to provincial economies

At a provincial level, mining continues to make a significant contribution by not only offering employment, but also supporting the respective provincial economies. Mining contributes more than 30% to the economies of the North West (34.4%) and Limpopo (33.4%) while contributing just under 30% in Mpumalanga (29.1%) and the Northern Cape (28.3%). Aside from direct investment, mining companies work with provincial and local authorities to align development goals, and mining communities continue to benefit from the clinics, schools and social infrastructure established by operations in their province.

## Mining sector contribution to provincial economies: 2022

	Mining sector contribution to provincial economies (GDP basic prices)										
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	
Eastern Cape	0.3%	0.3%	0.3%	0.3%	0.3%	0.2%	0.3%	0.3%	0.6%	0.6%	
Free State	7.7%	8.0%	7.3%	6.9%	7.9%	8.4%	8.6%	10.0%	11.6%	9.9%	
Gauteng	2.1%	2.2%	1.9%	1.8%	2.0%	2.0%	2.0%	2.1%	3.0%	2.3%	
KwaZulu-Natal	1.6%	1.6%	1.4%	1.4%	1.3%	1.3%	1.4%	1.9%	2.2%	2.6%	
Limpopo	26.5%	26.0%	24.1%	25.1%	26.4%	27.6%	28.0%	29.9%	36.6%	33.4%	
Mpumalanga	20.5%	20.6%	18.4%	18.8%	18.6%	18.9%	20.3%	22.7%	22.6%	29.1%	
North West	20.2%	20.9%	18.4%	19.1%	20.3%	21.5%	22.4%	26.0%	30.0%	28.3%	
Northern Cape	30.0%	26.8%	27.5%	26.7%	28.8%	30.7%	30.7%	31.0%	39.6%	34.4%	
Western Cape	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.4%	0.6%	0.7%	
<b>Total SA mining</b>	<b>7.0%</b>	<b>6.8%</b>	<b>6.2%</b>	<b>6.3%</b>	<b>6.6%</b>	<b>6.9%</b>	<b>7.1%</b>	<b>7.9%</b>	<b>9.9%</b>	<b>9.4%</b>	

Source: Stats SA

# SAFETY AND HEALTH IN 2022

## Safety performance

**For the first time in its history, the South African mining industry has recorded less than 50 lives lost in a calendar year.**

The mining industry's safety performance in 2022 showed a marked reduction to below 2019's 51 lost lives, which was the lowest on record. In 2022, 49 employees lost their lives compared to 2021 in which 74 employees died.

The 2022 safety performance bears testimony to the hard work and dedication of all stakeholders in the mining industry towards ensuring the safest possible working conditions in South Africa's mines to achieve zero harm. The heightened focus on safety halted and reversed the two-year regression in safety as the Minerals Council and its members urgently addressed the unacceptable safety performance of the industry during and immediately after the COVID-19 pandemic in 2020 and 2021.

The many collaborative initiatives by the Board of the Minerals Council and the mining industry's leadership through the CEO Zero Harm Forum had a significant impact in the operational safety of member companies. The Minerals Council called an urgent Board meeting in September 2022 to revitalise safety interventions after a worrying regression in August.

The year-on-year reduction in the loss of life is 34%. The platinum and gold sectors were the highest contributors to the overall loss of life with 18 and 15 deaths in 2022, respectively. This is also the first time that the loss of lives in another sector exceeded the number of lives lost in the gold sector. The coal sector recorded 6 deaths while the other commodities accounted for 10 deaths. All sectors reduced their loss of lives by between 14% and 50%, with the gold sector having the biggest reduction of 50%.

An analysis of the loss of life trends indicates that the number of deaths resulting from falls of ground has shown a marked 70% reduction to six in 2022. Transportation and machinery is the only area that saw a regression, with 17 deaths compared to 16 in the previous year.

The Minerals Council Board and the CEO Zero Harm Forum continue to monitor the progress on the Trackless Mobile Machinery project that will address transport-related incidents. The industry continued to implement several "low-hanging fruit" initiatives with a focus on traffic flow and risk analysis.

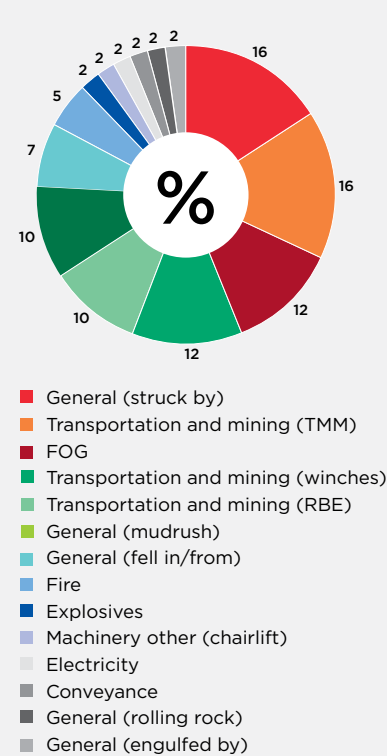
The Fall of Ground Action Plan approved by the Minerals Council Board and the CEO Zero Harm Forum in July 2021 has delivered encouraging results. The programme has six pillars which include the adoption of new leading practices aimed at minimising uncontrolled rock damages, underground visibility and eliminating the risk of working under unsupported rock, skills development

related to rock engineering, including updating of learning material for the Chamber of Mines Strata Control Certificate and Rock Mechanics Certificates. The need for more research and development (R&D) related to barring technology, seismic hazard rating and support designs forms part of the pillar under R&D. The Fall of Ground Action Plan includes an investment of R46 million over five years.

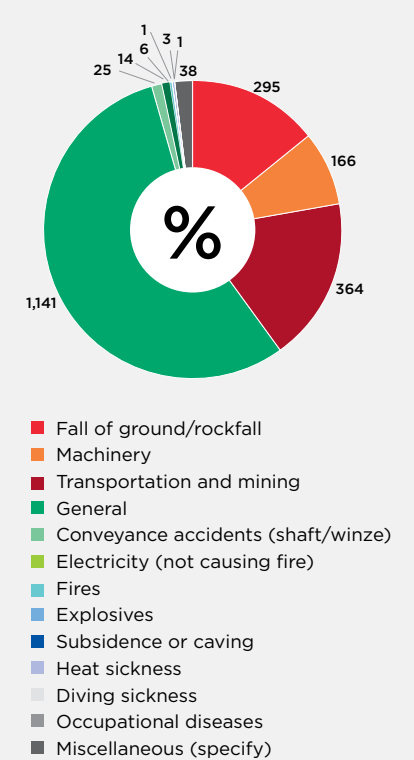
## Reduction in injuries

The industry recorded an 8% reduction in serious injuries with a total of 2054 compared to 2141 in 2021. The gold sector has shown the most improvement with a reduction of 20%. The platinum sector regressed by 1% while coal and other commodities regressed by 1% and 11% respectively.

**All mines percentage fatalities by classification**



**All mine injuries per classification**



Source: DMRE

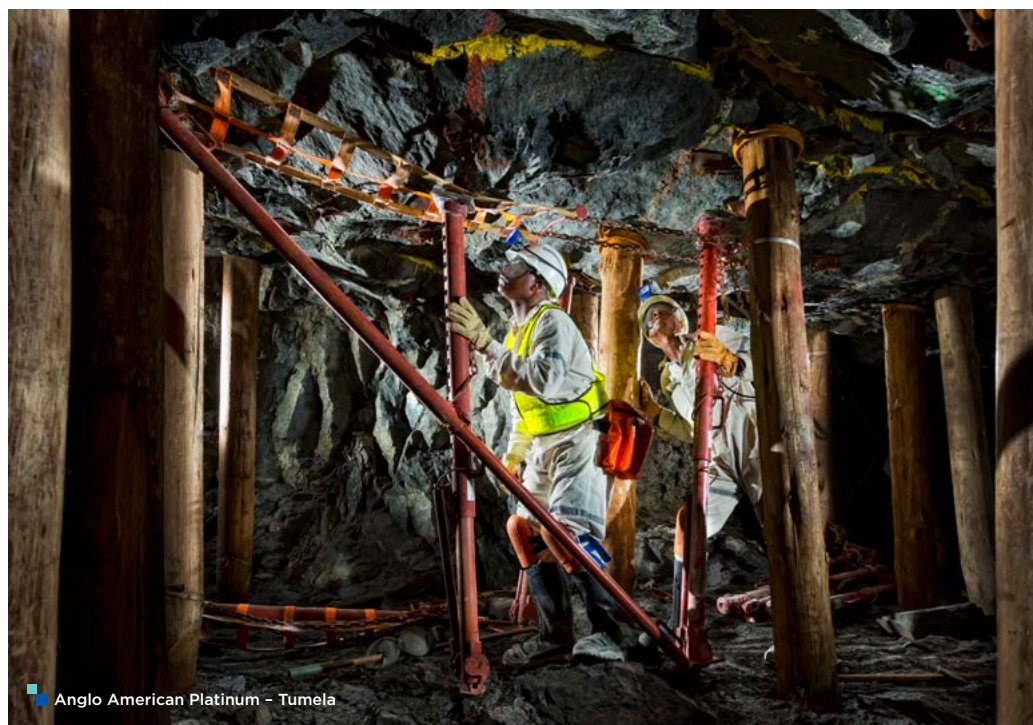
# SAFETY AND HEALTH IN 2022 CONTINUED

## Fatalities and injuries by commodity

Commodity	Fatalities*			Injuries*		
	Actual			Actual		
	Total fatal accidents** 2021	Total fatal accidents** 2022	% change	Total injuries* 2021	Total injuries* 2022	% change
Total	61	44	(28)	2,141	2,054	(4)
Gold	22	12	(45)	736	589	(20)
Coal	7	6	(14)	170	181	6
Platinum	19	16	(16)	1,027	1,031	0
Other	13	10	(23)	208	253	22

\* Provisional figures

\*\* Number of accidents in which persons died, catering for multiple fatalities.



Anglo American Platinum - Tumela

## Health performance

In 2022, 103 companies representing 427,048 employees registered on the Minerals Council Occupational Health Information Management System. This accounted for 390 mines in South Africa, which represent about 90.1% of the estimated 469,353 employees in the mining industry.

### Occupational disease, tuberculosis (TB) and HIV statistics

There has been a steady increase in the reporting of occupational diseases both to the DMRE and to the Minerals Council.

All mines report annually to the DMRE on occupational diseases, TB and HIV. The data for 2022 is currently being reviewed and awaiting approval in Parliament before it is released to the public. The Minerals Council has an Occupational Health Reporting System where any company can report on the Mine Health and Safety Council (MHSC) milestones for 2024 as well as the indicators set by the Masoyise Health Programme.

### Occupational diseases reported to the Minerals Council in 2022

Reports from all mines showed an increase of 27.3% in the total number of occupational diseases reported by mines, from 921 cases in 2021 to 1,172 cases in 2022.

Silicosis and TB increased by 8% and 36.7% respectively while noise induced hearing loss (NIHL) decreased by 41%. There have been a significant number of NIHL cases reported in the industry.

Commodity	Silicosis		Pulmonary TB		Silicosis and TB		NIHL	
	2021	2022	2021	2022	2021	2022	2021	2022
Gold	160	156	5	440	0	0	1	6
Platinum	6	23	1	259	0	0	3	0
Coal	0	0	2	95	3	5	25	7
Diamonds	0	0	0	6	0	0	0	6
Chrome	0	1	53	23	0	2	0	6
Coal	0	0	2	95	3	5	25	7
Manganese	0	0	2	6	0	0	0	0
Iron ore	0	0	1	21	0	0	0	0
Others	0	0	627	2			2	1
<b>Total</b>	<b>166</b>	<b>180</b>	<b>693</b>	<b>947</b>	<b>6</b>	<b>12</b>	<b>56</b>	<b>33</b>

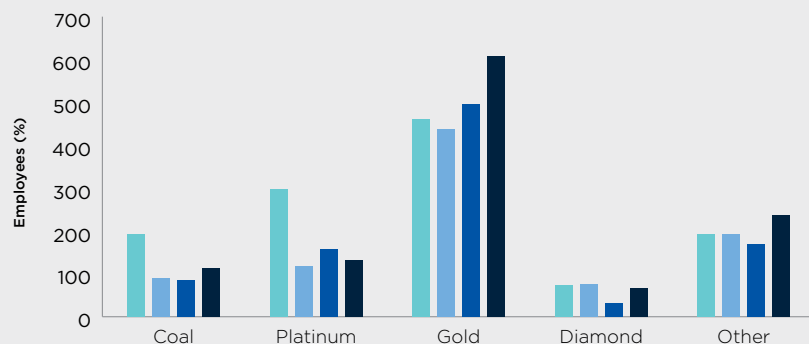
# SAFETY AND HEALTH IN 2022 CONTINUED

## TB and HIV reported to Minerals Council for 2022

Mines are required to report on TB and HIV, and for the 2021/22 financial year 390 mines, representing approximately 427,048 employees, submitted reports. This is compared to the 378 mines, representing approximately 408,577 employees, that reported in 2020/2021.

HIV counselling and TB screening was 83% and 82%, respectively, in 2022. This improved from 75% and 67%, respectively, noted in 2021. There has been a reduction in TB incidence rates year-on-year for most commodities compared to the national TB incidence.

**TB incidence milestone performance**



	2019	2020	2021	2022
Coal	193	89	86	112
Platinum	297	117	158	131
Gold	460	438	495	608
Diamond	73	75	32	67
Other	192	193	170	237



Sibanye-Stillwater – SA gold operation

## Milestone performance

Through the Minerals Council's flagship Masoyise Health Programme, performance against the industry and Masoyise occupational health milestones is monitored, and it is reported below.

### Health performance milestones 2021 vs 2022

Milestone	2021	2022
Employees screened for TB	67%	82%
Employees counselled for HIV	75%	83%
Hypertension screening	59%	79%
Diabetic screening	73%	83%
Pneumoconiosis in novices	0	0
Standard threshold shift (NIHL)	5	19

### Notes:

Mining industry milestone

Masoyise target

## Occupational hygiene milestones

During the 2014 MHSC Summit, all stakeholders agreed that the industry should accelerate the reduction of exposure to respirable crystalline silica dust, respirable coal dust, respirable platinum mine dust and equipment noise as part of the journey toward the elimination of occupational diseases related to these hazards. The Minerals Council Members further agreed to aspirational targets for each milestone per year to progress towards achieving the agreed milestones by December 2024.



**83%** of employees screened for HIV

**82%** of employees screened for TB

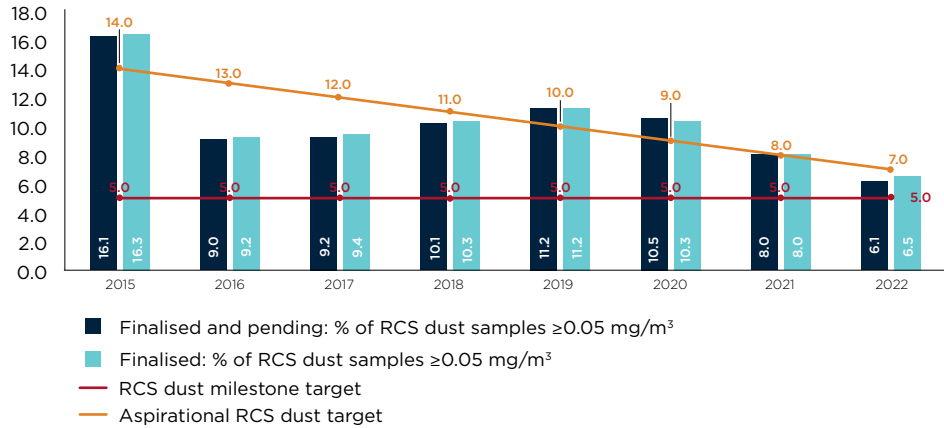
# SAFETY AND HEALTH IN 2022 CONTINUED

## Respirable crystalline silica (RCS) dust milestone

By December 2024, 95% of all RCS particulate dust exposure measurement results will be below the milestone level of 0.05%mg/m<sup>3</sup>.

The data reported within the Occupational Health Reporting System of the Minerals Council indicate that the industry has progressed well toward the achievement of the RCS milestone and achieved the aspirational target of 7% at the end of 2022. The graph below depicts the industry performance on the RCS milestone for the period from 2015 to 2022.

% of Respirable crystalline silica dust samples ≥0.05 mg/m<sup>3</sup>

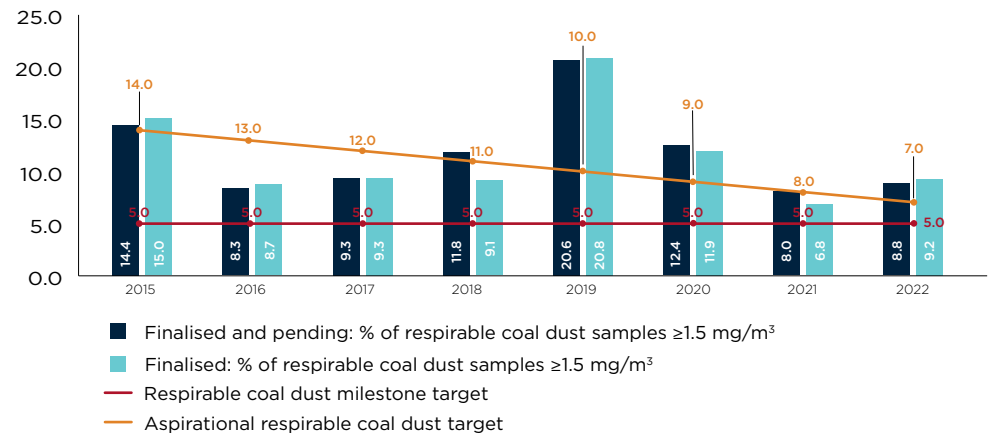


## Respirable coal dust milestone

By December 2024, 95% of all respirable coal particulate dust exposure measurement results will be below the milestone level of 1.5mg/m<sup>3</sup>.

The data reported in the Occupational Health Reporting System of the Minerals Council indicates that the industry progressed well toward the achievement of the respirable coal dust milestone up to the end of 2021, when the aspirational target of 8% was met. The industry performance for 2022, however, regressed and the industry did not achieve the aspirational target of 7% agreed to for the end of 2022. The graph below depicts the industry performance on the respirable coal dust milestone for the period from 2015 to 2022.

% of Respirable coal dust samples ≥1.5 mg/m<sup>3</sup>

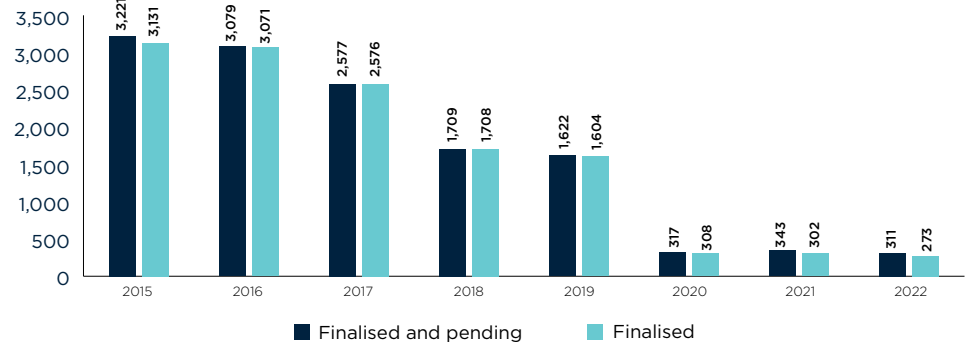


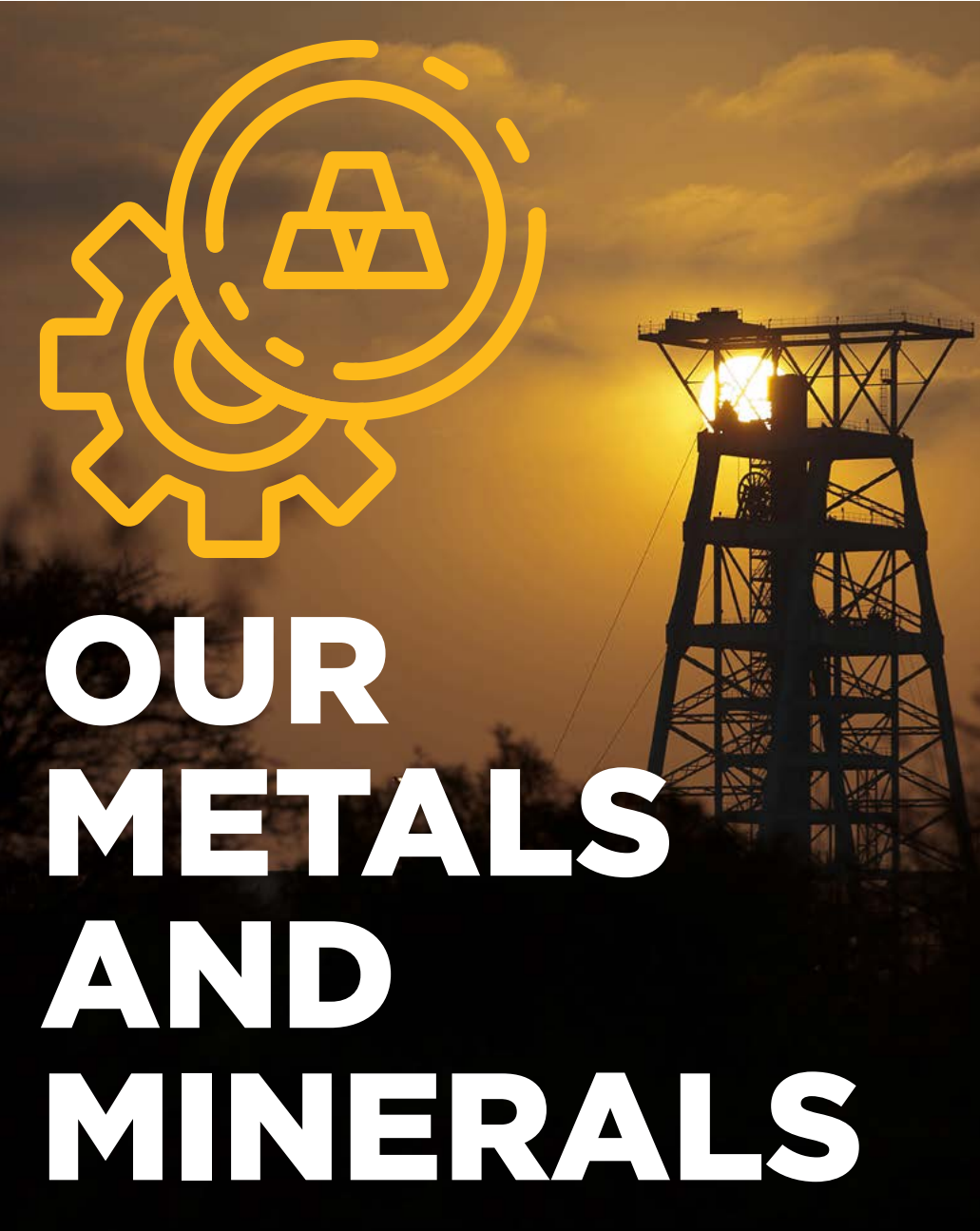
## Noise induced hearing loss milestone

By December 2024, the total operational or process noise emitted by any equipment must not exceed a milestone sound pressure level of 107dB(A).

The data reported in the Occupational Health Reporting System of the Minerals Council indicates that the industry progressed well toward the achievement of the equipment noise milestone up to 2020, with the number of pieces of equipment emitting noise reduced from 3,221 down to 317. The industry, however, made very little progress toward the achievement of the equipment noise milestone, with the number of pieces of equipment emitting noise only being reduced from 317 to 311.

Total number of individual pieces of equipment ≥ 107 dB (A)





PLATINUM GROUP METALS (PGMs)



COAL



GOLD



IRON ORE



MANGANESE



COPPER



CHROME ORE



INDUSTRIAL MINERALS



DIAMONDS



AGGREGATE SANDS

# OUR METALS AND MINERALS

## PLATINUM GROUP METALS (PGMs)



### PGMs

“Employment in the PGM sector increased by 5.9% during 2022 and employee earnings were up by 9.4% in the same period.”

local sales registering R22.7 billion and representing a 10% decrease. The PGM industry is one of the few in the sector that meaningfully increased employment. In 2022, total industry employment stood at 175,288, 5.9% more than in 2021. Labour earnings in the industry also increased in 2022 to R70.2 billion from R63.6 billion the year before.

Overall, PGM prices weakened in 2022 compared to 2021. However, the depreciation of the rand/dollar exchange rate softened the deterioration in prices and benefited local PGM producers.

#### Dollar PGM price movements

Average \$/troy oz	2022	2021	US Dollar change (%)
Platinum	971.1	1,098.2	(11.6)
Palladium	2,138.4	2,414.1	(11.4)
Rhodium	15,480.9	20,046.1	(22.8)
Iridium	4,454.4	5,075.9	(12.2)
Ruthenium	551.5	567.0	(2.7)

Source: Johnson Matthey, Minerals Council

#### Rand PGM price movements

Average rand	2022	2021	Rand change (%)
Platinum	15,887.7	16,241.9	(2.2)
Palladium	34,984.1	35,704.4	(2.0)
Rhodium	253,267.5	296,481.1	(14.6)
Iridium	72,873.9	75,072.4	(2.9)
Ruthenium	9,022.5	8,385.9	7.6
<b>Note:</b> average annual exchange rate	16.4	14.8	

Source: SARB, Johnson Matthey, Minerals Council

The composition of the PGM income split has changed significantly over the years. In 2012 platinum accounted for around 68% of the PGM basket’s income while rhodium accounted for 10%. In 2022, platinum represented 20% of the basket value, rhodium 50%, palladium 24%, iridium 4% and ruthenium 3%.

Production of PGMs in 2022 amounted to 269.5 tonnes, 5.5% lower than the 285.3 tonnes recorded in 2021. Export volumes for the entire basket registered 230.7 tonnes in 2022 from 264.6 tonnes the year before. This represented a 12.8% decrease. Local sales volumes were 15.7 tonnes in 2022, a 24% increase from 12.6 tonnes in 2021.

Export earnings fell by 14.2% to R275.6 billion in 2022 compared to the previous year, with

# 2022

## KEY FEATURES



### 269.5 tonnes

Production



### R298.3 billion

Total sales



### R275.6 billion

Export earnings



### R70.2 billion

Employee earnings



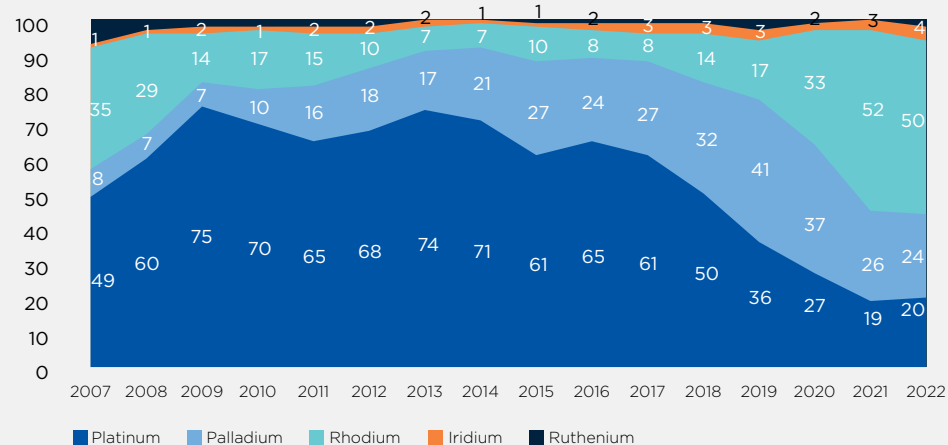
### 175,288

Direct employees

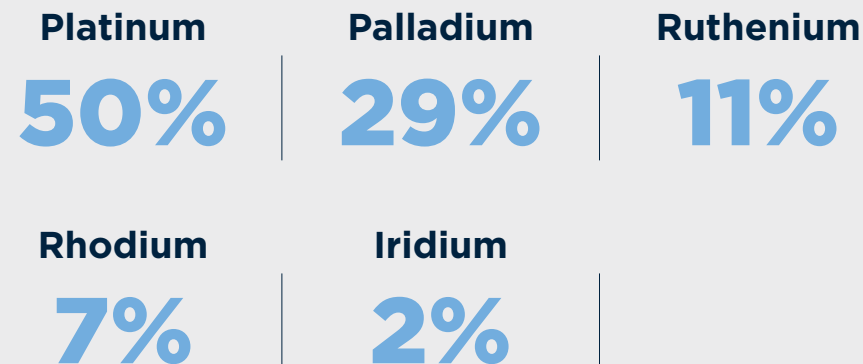
# OUR METALS AND MINERALS

## PLATINUM GROUP METALS (PGMs) CONTINUED

PGM rand income split (%)



PGM 5E production by volume



Source: Johnson Matthey, DMRE, Minerals Council

### South African PGM production and sales

	Production	Local sales		Export sales		Total sales	
	Tonnes	Tonnes	R'000	Tonnes	R'000	Tonnes	R'000
2012	254	-	8,285,235	211	60,918,939	-	69,204,174
2013	264	28	8,886,103	239	75,348,535	266	84,234,637
2014	188	28	10,644,402	202	66,860,760	230	77,505,163
2015	276	32	11,149,886	254	82,988,098	286	94,137,984
2016	264	31	11,093,840	250	85,318,461	282	96,412,301
2017	262	32	11,966,660	251	85,069,237	283	97,035,896
2018	271	24	10,668,195	244	94,228,661	268	104,896,855
2019	268	16	11,441,132	227	124,585,015	243	136,026,147
2020	227	15	17,189,499	178	173,241,908	193	190,431,408
2021	285	13	25,253,878	265	321,271,671	277	346,525,549
<b>2022</b>	<b>270</b>	<b>16</b>	<b>22,701,047</b>	<b>231</b>	<b>275,604,218</b>	<b>246</b>	<b>298,305,265</b>

Source: DMRE



# OUR METALS AND MINERALS

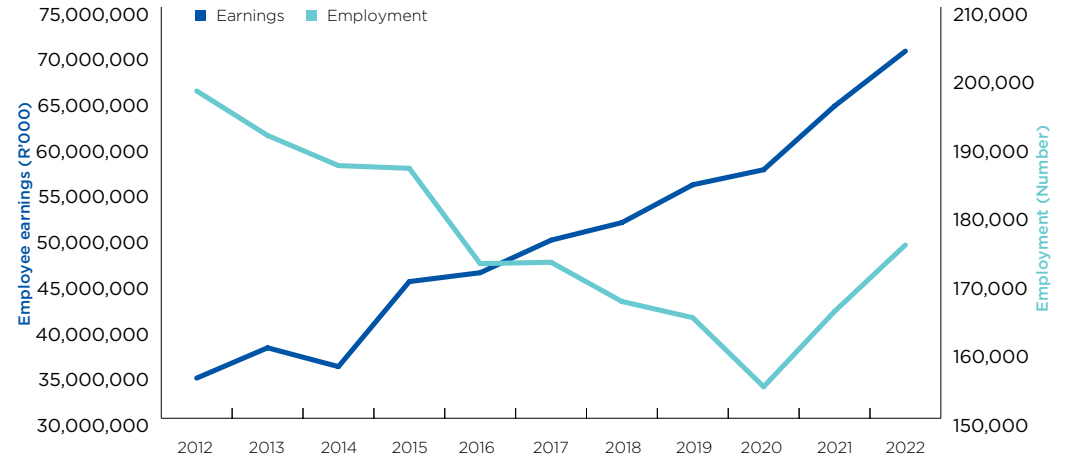
## PLATINUM GROUP METALS (PGMs) CONTINUED

### PGM employment and earnings

	Employment	Earnings (R'000)	Annual earnings per capita (Rand)
2012	197,752	34,393,197	173,921
2013	191,260	37,710,446	197,169
2014	186,864	35,652,303	190,793
2015	186,465	44,955,363	241,093
2016	172,556	45,926,200	266,152
2017	172,760	49,484,308	286,435
2018	167,037	51,409,606	307,773
2019	164,674	55,548,807	337,327
2020	154,600	57,195,044	369,954
2021	165,587	64,162,601	387,487
<b>2022</b>	<b>175,288</b>	<b>70,173,006</b>	<b>400,330</b>

Source: DMRE, Minerals Council

### PGM employment vs earnings



### Hydrogen economy

The hydrogen economy is expected to be a significant driver of PGM demand for the foreseeable future, particularly given the global drive to reduce carbon emissions. Hydrogen, as a clean and versatile energy carrier, is gaining attention for various applications, including fuel cells used in transportation and power generation. PGMs like platinum, palladium, ruthenium and iridium are essential catalysts in electrolysis and hydrogen fuel cells, and these technologies are anticipated to drive demand for PGMs. The role of research and development is also affecting the PGM industry. For example, the use of PGMs such as palladium in fuel cells is waning due to the high cost of the metal, which leads to research into substitution towards other metals such as platinum. Undoubtedly, the hydrogen economy and the drive for clean and renewable energies will rebalance demand for the PGM commodity basket in the long run.



# OUR METALS AND MINERALS

## COAL



# Coal

*“Coal export sales increased by 106.5% in 2022.”*

**In 2022, total coal sales amounted to R246.7 billion compared to R154.8 billion the previous year. Total coal sales volumes continued to decline, from 264.4 million tonnes (Mt) in 2019 (before COVID) to 231Mt in 2022.**

While export earnings more than doubled to R136 billion from R65.9 billion in 2021, export volumes contracted by 14.6%. Comparing 2022 to 2019, export volumes were down by 41.2% highlighting the sharp

decline in rail and port infrastructure and logistics.

Coal mining industry employment increased slightly in 2022 to 91,937 from 90,896 in 2021. Employees in the coal industry earned a total of R29.6 billion in 2022 compared to R30.6 billion the previous year, representing a 3.3% decline in total remuneration. Production volumes were 11.2% lower in 2022 when compared to 2019. Logistical challenges have had serious negative effects, not only on coal, but all the bulk commodities including iron ore, chrome, and manganese.



# 2022

## KEY FEATURES



**229.9Mt**  
Production



**R246.7 billion**  
Total sales



**R136 billion**  
Export earnings



**R29.6 billion**  
Employee earnings



**91,937**  
Direct employees

# OUR METALS AND MINERALS

## COAL CONTINUED

### South African coal production and sales

	Production		Local sales		Export sales		Total sales	
	Tonnes ('000)	Tonnes ('000)	R'000	Tonnes ('000)	R'000	Tonnes ('000)	R'000	
2012	258,576	185,669	43,921,277	76,009	52,226,904	261,677	96,148,181	
2013	256,534	183,914	49,569,211	74,566	51,813,484	258,480	101,382,695	
2014	261,579	183,623	55,043,417	72,107	48,690,298	255,730	103,733,705	
2015	252,077	179,133	56,573,686	74,357	46,669,026	253,491	103,242,712	
2016	250,650	181,324	61,447,034	69,070	50,531,978	250,394	111,979,012	
2017	252,271	181,306	69,055,857	70,049	61,277,987	251,355	130,333,844	
2018	253,385	175,520	70,850,316	76,123	75,054,871	251,643	145,905,188	
2019	258,396	194,742	86,017,742	69,608	54,768,780	264,351	140,786,522	
2020	245,289	185,907	83,953,922	59,661	45,546,301	245,568	129,500,223	
2021	234,080	184,220	88,918,536	47,958	65,879,191	232,179	154,797,727	
<b>2022</b>	<b>229,921</b>	<b>190,003</b>	<b>110,694,280</b>	<b>40,962</b>	<b>136,046,163</b>	<b>230,965</b>	<b>246,740,443</b>	

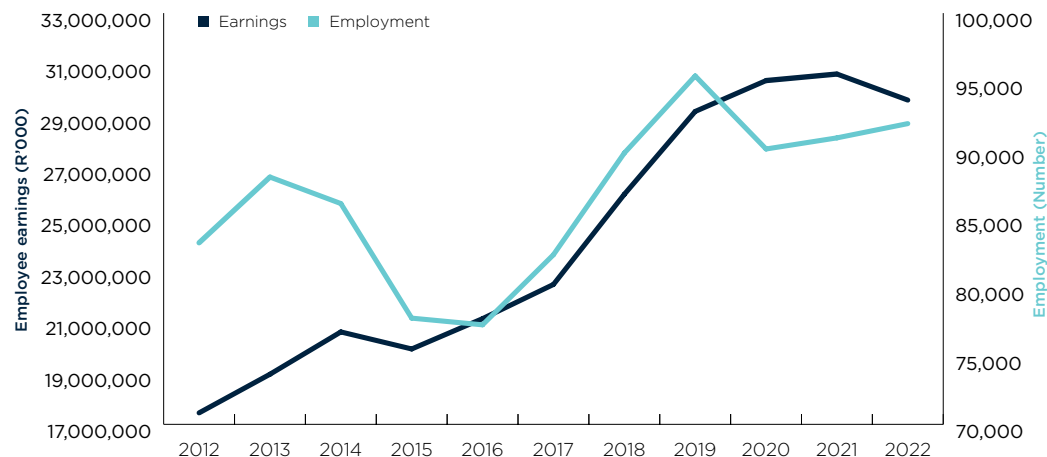
Source: DMRE

### Coal employment and earnings

	Employment	Earnings (R'000)	Annual earnings per capita (rand)
2012	83,244	17,445,779	209,574
2013	88,039	18,949,314	215,238
2014	86,106	20,594,652	239,178
2015	77,747	19,932,153	256,372
2016	77,259	21,111,665	273,258
2017	82,372	22,441,979	272,447
2018	89,790	25,948,907	288,996
2019	95,416	29,173,004	305,745
2020	90,086	30,374,024	337,167
2021	90,896	30,629,459	336,973
<b>2022</b>	<b>91,937</b>	<b>29,614,654</b>	<b>322,120</b>

Source: DMRE, Minerals Council

### Coal employment vs earnings



# OUR METALS AND MINERALS

## GOLD



Gold Fields - South Deep

## Gold

*“Gold export sales decreased by 2% in 2022.”*

South Africa ranks in the top five countries with the most gold reserves in the world. However, the age, depth and declining grades of mines have meant that production volumes continue to decline.

Challenges with electricity inadequacy and double-digit tariff hikes have also impacted production. In 2022, production volumes were down by 8.2% (to 96.4 tonnes) when compared to the year before. Production has still not recovered to pre-COVID levels – it is still 8.4% lower than the 105.2 tonnes recorded in 2019.

Production volumes were down by **8.2%**

## 2022

### KEY FEATURES



**96.4 tonnes**  
Production



**R96.3 billion**  
Total sales



**R91.2 billion**  
Export earnings



**R29.6 billion**  
Employee earnings



**95,060**  
Direct employees

# OUR METALS AND MINERALS

## GOLD CONTINUED

### South African gold production and sales

	Production		Local sales		Export sales		Total sales	
	Tonnes	Tonnes	R'000	Tonnes	R'000	Tonnes	R'000	
2012	154	11	4,862,748	165	71,961,757	176	76,824,504	
2013	160	8	3,312,818	123	53,845,893	131	57,158,710	
2014	152	7	2,918,629	119	52,276,414	126	55,195,043	
2015	145	16	7,385,852	118	55,314,075	134	62,699,927	
2016	142	25	14,919,703	104	60,572,047	129	75,491,750	
2017	137	34	17,799,800	120	65,099,682	154	82,899,482	
2018	117	66	35,201,487	64	34,482,018	130	69,683,505	
2019	105	76	48,296,273	42	28,336,141	119	76,632,414	
2020	96	22	17,580,144	70	68,855,730	92	86,435,874	
2021	105	11	9,155,869	107	93,053,603	117	102,209,471	
<b>2022</b>	<b>96</b>	<b>5</b>	<b>5,106,260</b>	<b>95</b>	<b>91,184,891</b>	<b>100</b>	<b>96,291,151</b>	

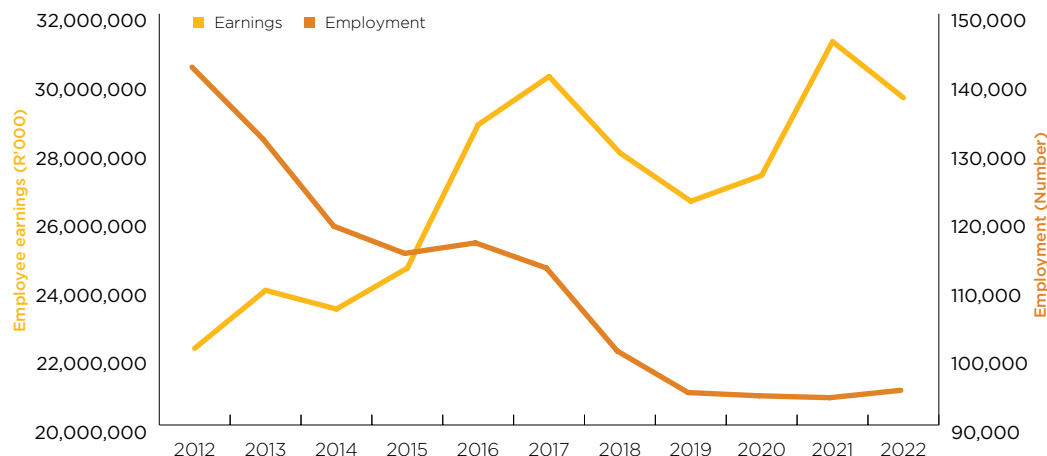
Source: DMRE

### Gold employment and earnings

	Employment	Earnings (R'000)	Annual earnings per capita (rand)
2012	142,201	22,238,338	156,387
2013	131,738	23,930,042	181,649
2014	119,007	23,383,408	196,488
2015	115,030	24,578,384	213,669
2016	116,572	28,760,523	246,719
2017	112,902	30,167,951	267,205
2018	100,793	27,940,254	277,204
2019	94,731	26,529,664	280,053
2020	94,262	27,282,304	289,431
2021	93,983	31,184,749	331,813
<b>2022</b>	<b>95,060</b>	<b>29,549,900</b>	<b>310,857</b>

Source: DMRE

### Gold employment vs earnings



# OUR METALS AND MINERALS

## IRON ORE



Kumba Iron Ore – Kolomela

### Iron ore

*“Employment in the iron ore industry increased by 8.6% in 2022”.*

**In 2022, total iron ore production decreased by 12.9% to 63.7Mt, while export volumes dropped by 7.4% to 56.4Mt and local sales volumes fell by 17% to 6.2Mt.**

Decreased production volumes resulted in lower export and local sales earnings. Export earnings fell 23% to R89.1 billion and local sales earnings dropped 27% to R3.9 billion.

Despite this, employment in the iron ore industry increased to 23,295 in 2022

from 21,441 in 2021. Similarly, total labour remuneration grew by 8.9% to R9.3 billion in 2022 from R8.6 billion in 2021.

The drop in sales and export earnings can partly be attributed to the declining iron ore price per dry metric tonne (dmtu). The average dollar price decreased by 25% to \$121.30/dmtu in 2022 (compared to \$161.71/ dmtu in 2021). However, the depreciation of the rand/dollar exchange rate offset the dollar price declines with the average rand price per dmtu decreasing by 17%.



Kumba Iron Ore – Saldanha

# 2022

## KEY FEATURES



**63.7Mt**  
Production



**R93 billion**  
Total sales



**R89.1 billion**  
Export earnings



**R9.3 billion**  
Employee earnings



**23,295**  
Direct employees

# OUR METALS AND MINERALS

## IRON ORE CONTINUED

### South African iron ore production and sales

	Production	Local sales		Export sales		Total sales	
	Tonnes	Tonnes	R'000	Tonnes	R'000	Tonnes	R'000
2012	67,100,474	8,392,835	4,448,978	57,109,694	48,193,830	65,502,529	52,642,808
2013	71,644,761	9,295,336	5,776,442	58,180,390	57,360,500	67,475,726	63,136,942
2014	80,741,034	9,571,453	5,741,815	61,944,607	52,944,638	71,516,060	58,686,453
2015	72,805,534	7,512,691	5,071,073	64,175,896	34,394,014	71,688,587	39,465,086
2016	66,450,089	6,160,597	3,855,830	58,392,326	39,240,118	64,552,923	43,095,948
2017	74,789,394	7,177,079	5,187,033	60,678,253	44,188,638	67,855,332	49,375,671
2018	74,272,974	8,024,968	5,732,580	61,715,193	45,529,223	69,740,161	51,261,803
2019	72,406,782	7,548,006	5,630,784	60,582,727	65,040,115	68,130,733	70,670,899
2020	55,635,421	5,796,435	3,259,796	60,177,593	83,304,860	65,974,028	86,564,656
2021	73,160,341	7,444,009	5,304,621	60,839,142	115,707,741	68,283,151	121,012,362
<b>2022</b>	<b>63,714,269</b>	<b>6,173,791</b>	<b>3,875,555</b>	<b>56,367,504</b>	<b>89,125,852</b>	<b>62,541,295</b>	<b>93,001,407</b>

Source: DMRE

### Iron ore employment and earnings

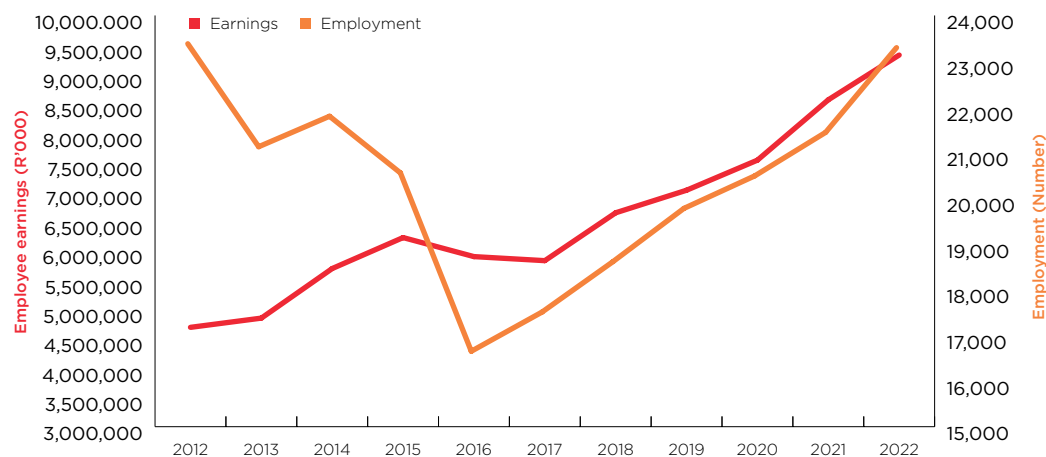
	Employment	Earnings (R'000)	Annual earnings per capita (rand)
2012	23,380	4,690,573	200,620
2013	21,127	4,848,253	229,480
2014	21,794	5,691,818	261,165
2015	20,554	6,218,976	302,571
2016	16,651	5,894,901	354,030
2017	17,510	5,825,750	332,707
2018	18,613	6,641,463	356,814
2019	19,777	7,025,315	355,236
2020	20,489	7,536,725	367,841
2021	21,441	8,564,219	399,441
<b>2022</b>	<b>23,295</b>	<b>9,325,890</b>	<b>400,342</b>

Source: DMRE

Employment in the iron ore industry reached 23,295 in 2022. While this was sixth consecutive year that the iron ore sector grew employment, it still has not returned to its

employment peak of 23,380 in 2012. Perhaps more encouraging is that annual earnings per worker has doubled in the last ten years to R400,342 per annum.

### Iron ore employment vs earnings



# OUR METALS AND MINERALS

## MANGANESE



Rio Tinto – Richards Bay Minerals

## Manganese

*“Export earnings in the manganese industry increased by 35.3% in 2022”.*

**Manganese production increased by 0.2% to 19.1Mt in 2022. Export volumes were up by 7.5% to 17.2Mt (from 16Mt in 2021) and export sales rose by 35.3% to R46.3 billion.**

The significant uptick in sales numbers on the back of marginal improvements in production and export volumes points toward a price effect rather than a volume one. The average price per tonne of manganese rose to R2,692.52 in 2022 from R2,140.38 in 2021. Local sales volumes

decreased by 2.2% and sales were 27.1% lower at R2 billion as companies prioritised exports to capitalise on the higher commodity prices.

Total employment in the manganese industry decreased by 5.5% to 12,600 in 2022, while total labour earnings were down by 0.8% at R5.2 billion.

The average price per tonne of manganese rose to

**R2,692.5**  
in 2022



Tshipi é Ntle Manganese Mining – Tshipi Borwa

# 2022

## KEY FEATURES



**19.1Mt**  
Production



**R48.3 billion**  
Total sales



**R46.3 billion**  
Export earnings



**R5.2 billion**  
Employee earnings



**12,600**  
Direct employees



# OUR METALS AND MINERALS

## MANGANESE CONTINUED

### South African manganese production and sales

	Production	Local sales		Export sales		Total sales	
	Tonnes	Tonnes	R'000	Tonnes	R'000	Tonnes	R'000
2012	8,943,415	937,962	1,134,842	8,005,453	9,685,812	8,943,415	10,820,654
2013	10,957,133	1,140,248	1,506,434	9,816,885	12,969,545	10,957,133	14,475,979
2014	14,051,244	1,408,581	1,641,633	12,642,663	14,734,415	14,051,244	16,376,049
2015	15,952,416	1,015,415	860,474	14,937,001	12,657,775	15,952,416	13,518,249
2016	11,527,524	523,333	896,947	11,004,191	18,860,231	11,527,524	19,757,177
2017	14,349,888	766,150	1,726,702	13,583,738	30,614,192	14,349,888	32,340,893
2018	14,918,236	355,027	1,066,479	14,563,209	43,746,990	14,918,236	44,813,469
2019	17,002,978	661,442	1,751,826	16,341,536	43,280,475	17,002,978	45,032,300
2020	16,678,581	2,141,195	2,846,132	15,230,547	34,451,660	17,371,742	37,297,793
2021	19,063,159	2,450,021	2,757,122	15,980,243	34,203,842	18,430,264	36,960,964
<b>2022</b>	<b>19,103,668</b>	<b>2,395,601</b>	<b>2,010,354</b>	<b>17,183,083</b>	<b>46,265,721</b>	<b>19,578,684</b>	<b>48,276,074</b>

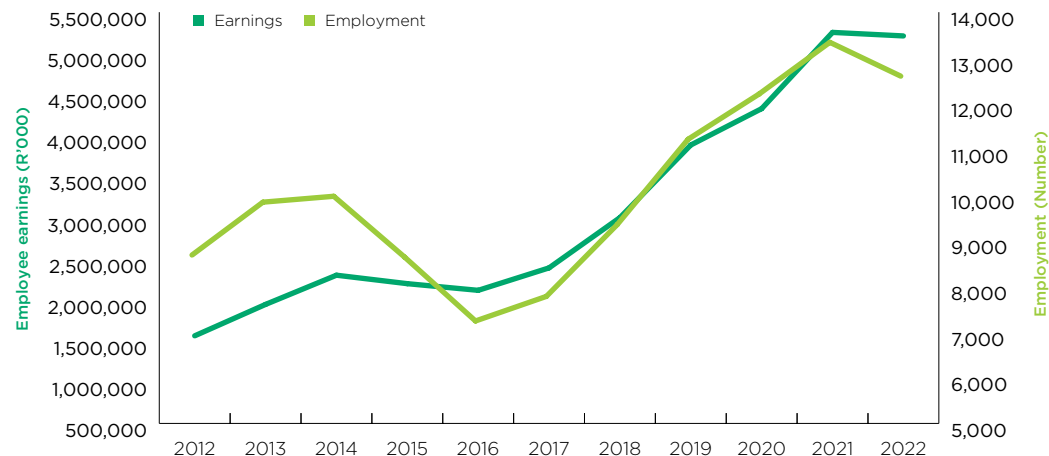
Source: DMRE

### Manganese employment and earnings

	Employment	Earnings (R'000)	Annual earnings per capita (rand)
2012	8,685	1,565,264	180,226
2013	9,842	1,946,529	197,784
2014	9,971	2,302,129	230,894
2015	8,639	2,199,373	254,589
2016	7,242	2,118,157	292,503
2017	7,780	2,390,916	307,306
2018	9,352	3,001,644	320,948
2019	11,219	3,885,419	346,325
2020	12,207	4,327,219	354,479
2021	13,340	5,253,671	393,836
<b>2022</b>	<b>12,600</b>	<b>5,211,463</b>	<b>413,600</b>

Source: DMRE, Minerals Council

### Manganese employment and earnings



# OUR METALS AND MINERALS

## COPPER



Vedanta Zinc International - Black Mountain Mining

### Copper

*“Export earnings in the copper industry increased by 36.6% in 2022”.*

**In 2022, copper production increased by 9.4% to 49,200 tonnes and total sales volumes climbed 33.2% to 41,900 tonnes.**

Export volumes increased by around 43.9% to 38,600 tonnes while local sales volumes fell 28.2% to 3,400 tonnes.

Export sales amounted to R4.6 billion in 2022, an increase of 36.6% compared to 2021. Local sales were down 25.8% to R449 million from R605 million in 2021. Total sales

amounted to R5 billion in 2022, representing an increase of 27.1%.

Employment in the copper industry remained unchanged in 2022 at 3,995 employees. However, labour earnings decreased by 4.1% to R1.5 billion in 2022.

Total sales volumes increased by **33.2%** to 41.9 thousand tonnes



Palabora Mining Company

## 2022 KEY FEATURES



**49,200 tonnes**  
Production



**R5 billion**  
Total sales



**R4.6 billion**  
Export earnings



**R1.5 billion**  
Employee earnings



**3,995**  
Direct employees

# OUR METALS AND MINERALS

## COPPER CONTINUED

### South African copper production and sales

	Production		Local sales		Export sales		Total sales	
	Tonnes	Tonnes	R'000	Tonnes	R'000	Tonnes	R'000	
2012	69,859	54,633	3,575,956	26,593	1,579,105	81,229	5,155,061	
2013	80,821	56,039	4,056,792	26,239	1,760,781	82,278	5,817,573	
2014	78,697	45,004	3,483,784	36,685	2,466,769	81,689	5,950,553	
2015	77,360	37,011	2,703,423	37,567	2,497,528	74,578	5,200,951	
2016	65,257	26,680	1,923,681	27,417	1,821,207	54,097	3,744,887	
2017	65,523	25,731	2,120,088	29,874	2,207,458	55,605	4,327,545	
2018	46,900	23,054	2,027,485	26,975	2,050,357	50,029	4,077,841	
2019	52,516	15,194	1,342,385	24,583	1,887,400	39,777	3,229,786	
2020	29,068	9,325	893,015	16,476	1,517,314	25,801	2,410,330	
2021	44,958	4,686	604,611	26,811	3,376,732	31,497	3,981,343	
<b>2022</b>	<b>49,194</b>	<b>3,363</b>	<b>448,843</b>	<b>38,579</b>	<b>4,611,831</b>	<b>41,942</b>	<b>5,060,675</b>	

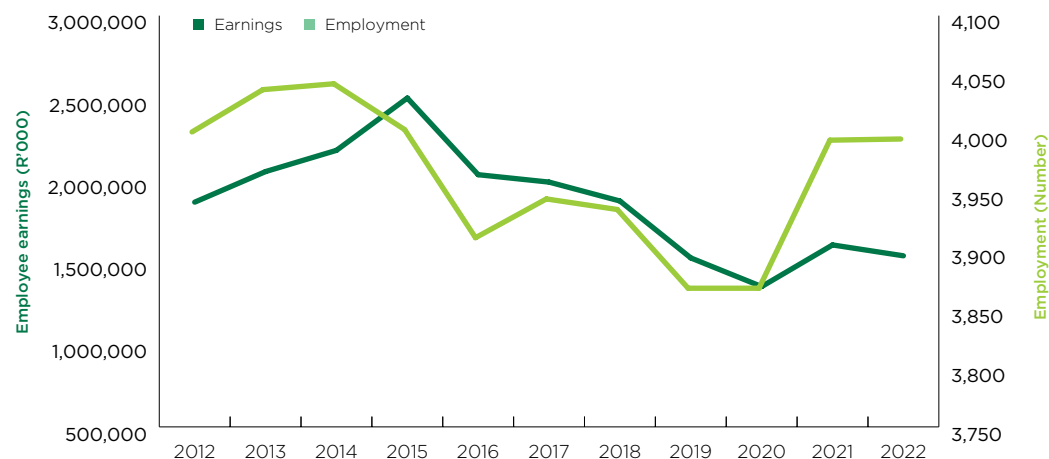
Source: DMRE

### Copper employment and earnings

	Employment	Earnings (R'000)	Annual earnings per capita (rand)
2012	4,001	1,866,304	466,504
2013	4,037	2,051,953	508,267
2014	4,042	2,181,253	539,658
2015	4,003	2,499,310	624,317
2016	3,911	2,032,964	519,763
2017	3,944	1,987,603	503,955
2018	3,935	1,872,768	475,871
2019	3,868	1,526,996	394,741
2020	3,868	1,352,954	349,787
2021	3,994	1,605,701	401,989
<b>2022</b>	<b>3,995</b>	<b>1,540,016</b>	<b>385,476</b>

Source: DMRE, Minerals Council

### Copper employment and earnings



# OUR METALS AND MINERALS

## CHROME ORE



Bauba Platinum - Moeijelijk Chrome Mine

# Chrome

*“Chrome industry total sales revenue was 54% higher in 2022.”*

**Global chrome reserves are estimated to be in the region of 12 billion tonnes. South Africa and Kazakhstan host 95% of the world’s chromium reserves (shipping grade), at 200,000 tonnes and 230,000 tonnes, respectively. South Africa has 72% of the world’s chrome resources.**

In 2022, production volumes were 3.9% higher compared to the previous year and

total sales revenue amounted to R33.9 billion, 54% higher than in 2021. Export sales volumes registered 11.2Mt compared to 10Mt the previous year, representing an 11.5% increase. The industry employed 19,280 people who earned a total of R6.2 billion in 2022.

South Africa has  
**72%**  
of the world’s chrome resources



Bauba Platinum - Moeijelijk Chrome Mine

# 2022

## KEY FEATURES



**19.1Mt**  
Production



**R33.9 billion**  
Total sales



**R19.0 billion**  
Export earnings



**R6.2 billion**  
Employee earnings



**19,280**  
Direct employees

# OUR METALS AND MINERALS

## CHROME ORE CONTINUED

### South African chrome production and sales

	Production	Local sales		Export sales		Total sales	
	Tonnes ('000)	Tonnes ('000)	R'000	Tonnes ('000)	R'000	Tonnes ('000)	R'000
2012	11,310	2,470	3,594,282	6,685	4,683 023	9,154	8,277,305
2013	13,661	4,168	5,891,833	8,483	5,870 717	12,651	11,762,549
2014	14,038	3,695	5,834,876	10,048	7,771 424	13,743	13,606,301
2015	15,653	4,821	8,104,128	9,842	8,098 789	14,662	16,202,917
2016	14,708	4,684	9,541,381	8,726	8,164 657	13,410	17,706,038
2017	16,613	4,687	12,560,328	8,920	10,894 320	13,607	23,454,648
2018	17,793	4,065	10,045,204	9,907	11,693 137	13,972	21,738,341
2019	17,671	5,217	10,389,771	10,333	11,800 801	15,551	22,190,571
2020	13,453	4,738	8,921,120	8,738	10,042 018	13,476	18,963,138
2021	18,381	5,235	10,743,835	10,040	11,219 591	15,275	21,963,427
<b>2022</b>	<b>19,105</b>	<b>5,009</b>	<b>14,917,335</b>	<b>11,189</b>	<b>18,974 832</b>	<b>16,199</b>	<b>33,892,166</b>

Source: DMRE

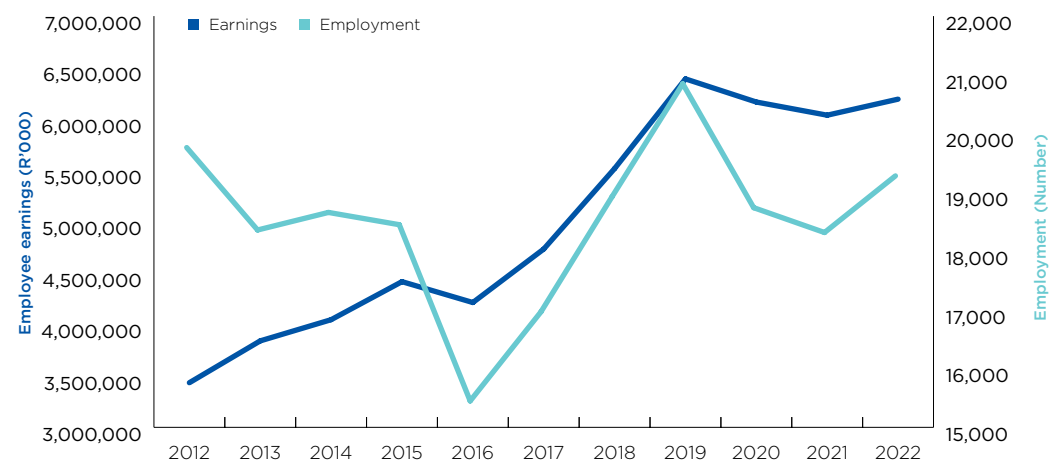
Note: Official chrome statistics published by Stats SA and the DMRE classify "local" sales as "exports" and vice-versa. This creates the impression that the industry sells most of its production locally when the opposite is true. The table presented here is an accurate reflection of the industry's sales.

### Chrome employment and earnings

	Employment	Earnings (R million)	Annual earnings per capita (rand)
2012	19,762	3,434,492	173,793
2013	18,359	3,840,559	209,192
2014	18,658	4,046,774	216,892
2015	18,449	4,416,943	239,414
2016	15,449	4,213,906	272,762
2017	16,968	4,733,924	278,991
2018	18,922	5,517,399	291,586
2019	20,847	6,388,714	306,457
2020	18,739	6,164,089	328,944
2021	18,316	6,035,862	329,540
<b>2022</b>	<b>19,280</b>	<b>6,192,079</b>	<b>321,170</b>

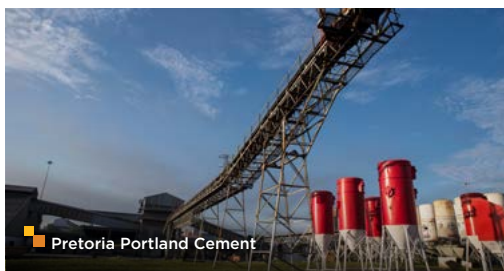
Source: DMRE

### Chrome employment vs earnings



# OUR METALS AND MINERALS

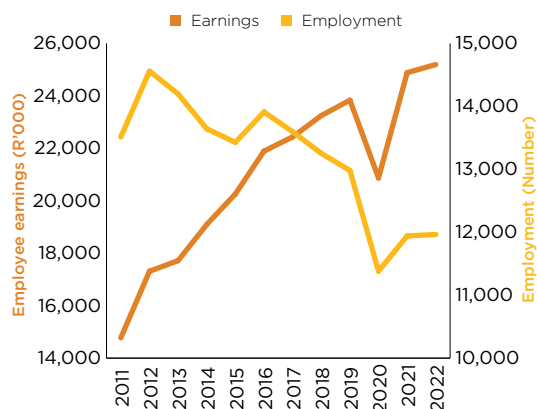
## INDUSTRIAL MINERALS



# Industrial minerals

*“Employment in the industrial minerals sector increased by 93% over the last 10 years.”*

Industrial minerals include salt, special clay, limestone and lime, dimension stone, aggregate and sand, brickmaking materials, and building materials. There are about 65 industrial mineral types that are grouped into eight categories.



### South African industrial minerals production and sales

	Export sales (R'000)	Local sales (R'000)	Total sales (R'000)
2013	2,000,930	12,103,247	14,104,178
2014	2,274,729	13,119,979	15,394,708
2015	3,287,308	13,412,217	16,699,525
2016	2,625,418	14,659,978	17,285,395
2017	2,983,985	14,717,986	17,701,970
2018	3,413,215	14,244,405	17,657,619
2019	3,585,698	14,289,957	17,875,655
2020	4,312,130	12,567,273	16,879,403
2021	4,280,974	14,656,750	18,937,724
<b>2022</b>	<b>7,351,009</b>	<b>15,158,171</b>	<b>22,509,180</b>

Source: DMRE

### Industrial minerals employment and earnings

	Employment	Earnings (R'000)	Annual earnings per capita (rand)
2011	13,513	1,477,419	109,333
2012	14,558	1,731,163	118,915
2013	14,197	1,771,734	124,796
2014	13,643	1,909,404	139,955
2015	13,428	2,025,826	150,864
2016	13,910	2,189,369	157,395
2017	13,597	2,243,553	165,004
2018	13,253	2,324,672	175,407
2019	12,982	2,383,413	183,594
2020	11,382	2,087,158	183,374
2021	11,941	2,488,498	208,399
<b>2022</b>	<b>11,964</b>	<b>2,519,483</b>	<b>210,587</b>

Source: DMRE

# 2022

## KEY FEATURES



**52.3Mt**  
Production



**R22.5 billion**  
Total sales



**R7.4 billion**  
Export earnings



**R2.5 billion**  
Employee earnings



**11,963**  
Direct employees

# OUR METALS AND MINERALS

## DIAMONDS



Petra Diamonds - Ekapa Mining JV

# Diamonds

*“Employment in the diamond industry increased by 12.7% in 2022”.*

**In 2022, South Africa produced 10.5 million carats of diamonds, an increase of 8.4% compared to 2021.**

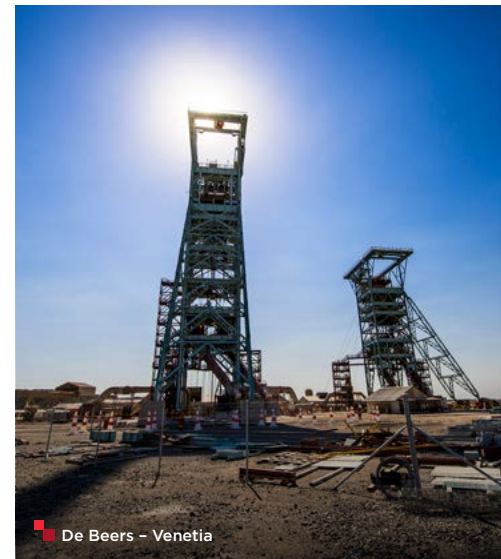
Diamond export volumes, however, decreased by 3.1% in 2022 to 8.0 million carats despite the uptick in production. Similarly, there was a decline in domestic diamond sales volumes by 1.7% to 2.3 million carats when compared to 2021. Overall sales volumes were down 2.8% at 10.3 million carats in 2022.

The diamond industry’s total sales earnings rose by 26.4% to R26.7 billion compared to the R21.1 billion recorded in 2021. Local sales earnings soared, increasing by 44% to R11.3 billion in 2022 compared to the

R7.9 billion recorded in 2021. Export sales also saw a healthy increase of 16% in 2022 coming in at R15.4 billion.

The performance in the diamond industry in 2022 was driven by stronger prices rather than increased sales volumes. On average, local diamond sales came in at around R4,892 per carat in 2022 - up from R3,340 per carat in 2021. Export diamond prices per carat averaged at around R1,917 in 2022 compared to R1,601 in 2021.

In 2022, employment in the diamond industry increased from 12,926 people in 2021 to 14,569, representing a 12.7% increase. Employment earnings grew by 20.8% to R6.0 billion.



De Beers - Venetia

The diamond industry has identified a number of initiatives that could unlock the industry’s potential. The industry, alongside the Minerals Council, is actively pursuing these initiatives. Some of these include addressing the following issues:

- Diamond Export Levy Act
- State Diamond Trader
- The Diamond Exchange and Export Centre
- S74 Exemption
- Focus on creating a conducive investment environment for beneficiating diamonds in South Africa
- Remove the payment of VAT on imports - there is no other major diamond-cutting country that imposes this tax on its beneficiation industry (i.e., the VAT cost with refunds only four months later)

# 2022

## KEY FEATURES



**10.5 million carats**  
Production



**R26.7 billion**  
Total sales



**R15.4 billion**  
Export earnings



**R6 billion**  
Employee earnings



**14,569**  
Direct employees

# OUR METALS AND MINERALS

## DIAMONDS CONTINUED

### South African diamond production and sales

	Production		Local sales		Export sales		Total sales	
	Carats	Carats	R'000	Carats	R'000	Carats	R'000	
2012	7,245,402	-	-	-	-	-	-	-
2013	8,159,531	3,425,339	7,552,445	3,768,082	4,792,191	7,193,421	12,344,635	
2014	8,095,037	3,168,609	8,800,678	5,619,831	7,730,529	7,193,421	16,531,206	
2015	8,229,657	3,138,546	8,613,267	4,650,483	5,811,860	7,789,029	14,425,128	
2016	8,302,110	1,609,160	8,325,338	9,002,389	12,435,825	10,611,549	20,761,163	
2017	9,678,752	1,015,882	7,912,460	9,118,652	10,230,438	10,134,534	18,142,898	
2018	9,914,612	1,427,590	7,186,242	8,869,716	10,074,788	10,297,306	17,261,029	
2019	7,176,996	945,737	5,499,937	6,273,530	7,664,806	7,219,267	13,164,743	
2020	8,437,948	1,275,359	5,087,539	5,901,679	8,119,626	7,177,038	13,207,166	
2021	9,707,673	2,349,828	7,848,780	8,286,642	13,269,000	10,636,470	21,117,780	
<b>2022</b>	<b>10,526,416</b>	<b>2,309,827</b>	<b>11,300,466</b>	<b>8,029,605</b>	<b>15,392,540</b>	<b>10,339,432</b>	<b>26,693,006</b>	

Source: DMRE

### Diamonds employment and earnings

	Employment	Earnings (R'000)	Annual earnings per capita (rand)
2012	12,333	2,408,198	195,274
2013	13,579	2,870,536	211,399
2014	15,355	3,663,455	238,576
2015	18,314	4,677,942	255,439
2016	18,790	5,072,996	269,996
2017	18,038	5,430,360	301,050
2018	16,392	5,198,824	317,171
2019	15,091	4,940,267	327,394
2020	13,433	4,476,575	333,244
2021	12,926	4,911,821	381,794
<b>2022</b>	<b>14,798</b>	<b>7,731,717</b>	<b>409,121</b>

Source: DMRE

### Diamond employment vs earnings





# OUR METALS AND MINERALS

## AGGREGATE SANDS

### Aggregate sands employment and earnings

	Employment	Earnings (R'000)	Annual earnings per capita (rand)
2012	7,718	892,093	115,586
2013	7,510	939,998	125,166
2014	7,421	1,037,945	139,866
2015	7,452	1,115,964	149,754
2016	7,553	1,167,306	154,549
2017	7,425	1,183,633	159,412
2018	7,337	1,252,988	170,777
2019	7,112	1,253,124	176,199
2020	6,075	1,013,209	166,783
2021	6,440	1,246,156	193,502
<b>2022</b>	<b>6,395</b>	<b>998,100</b>	<b>156,075</b>

Source: DMRE

### Aggregate sands employment vs earnings



Tshipi é Ntle Manganese Mining - Tshipi Borwa mine



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