Zambia 2025 Mining Industry Report

Fourth Edition

December 2025

Table of contents

Foreword

Andrew Chibuye
Country Senior Partner
PwC Zambia

The mining sector is central to economic growth in Zambia and across the world. It supplies essential raw materials for construction, manufacturing, energy, and technology. While the presence of mineral resources is a major driver of investment, it is never the only factor that matters. Government policies, including taxation, licensing frameworks, environmental regulation, and political stability, play a decisive role in shaping investor confidence and determining how attractive a country is as a mining destination. A supportive and predictable policy environment is therefore as important as geological potential in driving the pace and direction of investment and development.

The Zambian government's ambition to increase copper production to 3 million tonnes per year by 2031 is both bold and forward looking. Achieving this objective will require consistent and credible policy choices, together with strategic investment in infrastructure, especially in energy and technology. These elements are essential if mining operations are to remain sustainable and competitive in a rapidly changing global market.

This fourth edition of PwC Zambia's mining report provides a clear, data driven assessment of how the sector is evolving and examines whether Zambia is on track to meet its copper production target.

We are grateful to the many individuals and institutions that shared their insights in the preparation of this publication. Their contributions reflect a shared commitment to building a resilient and prosperous mining industry in Zambia.

I would also like to acknowledge the staff at PwC Zambia who contributed to the preparation of this report.

We look forward to your feedback.

01 Introduction

The mining sector remains a cornerstone of Zambia's economy. It contributes significantly to gross domestic product, tax revenues, and export earnings. This report analyses the sector's performance in 2024 and in the period up to September 2025. It highlights recent developments and sets out prospects for the sector. The report also reviews key policy changes and considers their potential impact. The aim is to inform stakeholders, policy makers, investors, mining companies, and other sector participants about the current state and future direction of Zambia's mining industry.

Zambia's real gross domestic product is expected to grow by 5.8 % in 2025, with average growth of 6.5 % projected for 2026 and 2027. This compares with growth of 4% in 2024. The stronger performance in 2025 partly reflects a rebound from the severe drought of the previous year, which depressed output across several sectors. Improved rainfall in the 2024 and 2025 rainy season has supported recovery, especially in agriculture and hydropower.

Although Zambia's macroeconomic outlook has improved, notable risks remain. These include weaker global growth, uncertainty around international trade policy, and the increasing frequency and intensity of adverse climatic events. Over the medium term, growth is expected to be driven by continuing improvements in agriculture, mining, manufacturing, and financial services.

This is PwC Zambia's fourth annual mining sector report. The 2022 edition examined the historical evolution of Zambia's mining industry and the factors behind declining output. The 2023 report shifted the focus to policy developments and their implications for the sector's future. The 2024 report extended this analysis by evaluating both proposed and implemented policy changes, together with their associated risks and benefits. The 2025 edition builds on this foundation and provides deeper analysis of the evolving policy environment and its impact on the mining sector.

This report draws on data up to December 2024 and, where available, up to September 2025.

02 Mining sector facts and figures

Mining from a global perspective - PwC Global Mine 2025

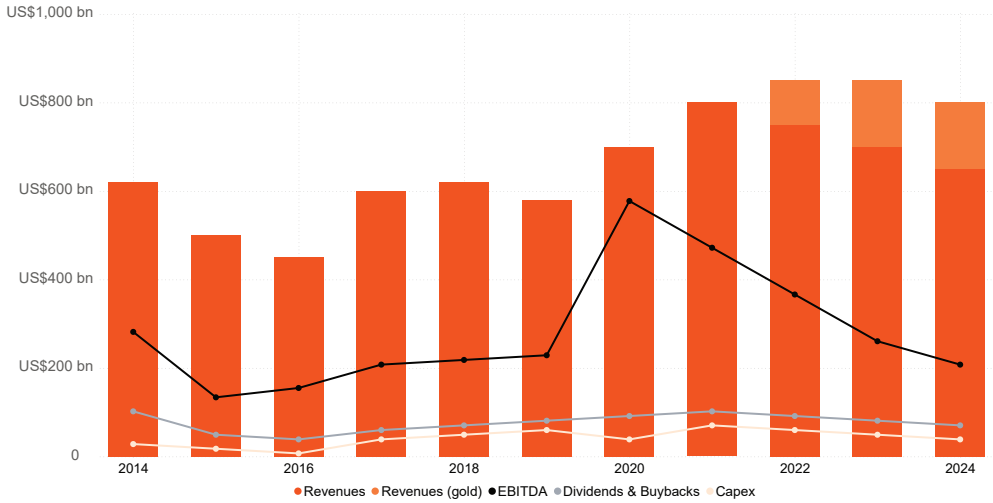
Mining has underpinned economic development across the world for many decades. In today's rapidly changing industrial landscape, its relevance continues to grow, and it touches almost every aspect of modern life. Large structural shifts such as urban expansion, the transition to sustainable energy, and advances in technology are reshaping economies. At the same time, geopolitical tensions and a more fragmented global economy are disrupting traditional value chains and introducing new risks.

These changes are driving a shift away from narrow, industry specific models towards systems that focus on essential human needs such as transport, manufacturing, food security, healthcare, and energy. As a result, demand for raw materials extracted from the earth is increasing, which creates significant economic opportunities for mining companies.

Despite these long-term opportunities, many mining companies found conditions challenging in 2024, especially those that are not focused on gold. The top 40 global mining firms, excluding gold producers, recorded a fall in revenue of 3% and a decline in earnings before interest, tax, depreciation, and amortisation of 10 %. In contrast, gold producers benefited from record prices. Their revenues increased by 15 % and earnings rose by 32 %, supported by improved operational efficiencies such as streamlining production processes, reducing energy consumption, and optimising equipment.

Rising costs across the industry placed pressure on profitability. Earnings margins for the top global miners fell from 24 % in 2023 to 22 % in 2024. Increased capital expenditure and higher distributions to shareholders in the gold sector presented a positive picture, but they also concealed the financial pressures faced by non-gold producers.[1]

Figure 1: A challenging year (revenue)



Source: Mine 2025: concentrating on the future | PwC

[1] Mine 2025: Concentrating on the future | PwC

Overview of the mining sector in Zambia

The Zambian mining sector remains heavily dominated by copper, which continues to be the backbone of the country's economy, contributing significantly to GDP, government revenue, and export earnings. In 2024, copper production in Zambia grew by 12% to 820,676 tonnes. This growth was driven by increased output from major mines such as Lumwana (owned by Barrick Gold), together with the resumption of operations at Konkola Copper Mines (KCM) and Mopani Copper Mines (Mopani).

A handful of large multinational companies continue to account for most of Zambia's copper output. These companies include First Quantum Minerals (FQM), Barrick Gold, Kansanshi Mining, NFC Africa Mining, CNMC Luanshya Copper Mines and Mopani. These long-established companies, many of which have been in operation for decades, remain central to Zambia's mining fortunes. However, recent policy reforms, improved investment incentives and strong global copper prices have reinvigorated the sector, attracting new exploration and expansion activities.

Furthermore, the sector is also diversifying. There has been notable growth in production of cobalt, nickel, gold, and other minerals that are critical for the global energy transition. This diversification, together with increased local participation in mining rights and a stronger focus on sustainability, is helping to position Zambia's mining industry for a more resilient and inclusive future.

Table 1: Number of licences by type 2023-2024

S/NO	Description	2022	2023	2024
1	Artisanal mining rights	34	304	680
2	Small scale exploration licences	70	399	615
3	Large scale exploration licences	79	413	692
4	Small scale mining licence	5	61	77
5	Large scale mining licences	1	12	37
6	Mineral processing licences	1	29	74
	Total	**190**	**1,218**	**2,175**

Source: Ministry of Mines and Mineral Development 2024 Annual Report

Between 2022 and 2024 there was a dramatic increase in the number of mining rights issued by the Ministry of Mines and Mineral Development. In 2022, only 190 licences were granted. This rose to 1,218 in 2023, an increase of more than 540 %. In 2024, the number grew further to 2,175, an additional increase of 78 %.

This rapid growth reflects both rising investor interest and operational reforms. The transition from manual to online licence applications has streamlined and accelerated processing. Targeted awareness campaigns by the Ministry have encouraged formalisation of previously informal activity.

The next section analyses the fundamental aspects of the sector's performance and overall economic contribution.

2.1 Overall mining sector contribution to Zambia's GDP

The mining sector's contribution to Zambia's GDP has fluctuated in recent years but is now showing renewed growth. In 2020, the sector contributed 13% to GDP, rising to 19% in 2021. However, its contribution fell back to 13% in 2022. Since then, the sector's share of GDP has begun to recover, increasing to 14% in 2023 and 17% in 2024. This upward trend has been driven by increased production levels, stronger global commodity prices, policy shifts, and higher investment inflows.

Figure 2: mining sector contribution to Zambia's GDP (K'Millions)

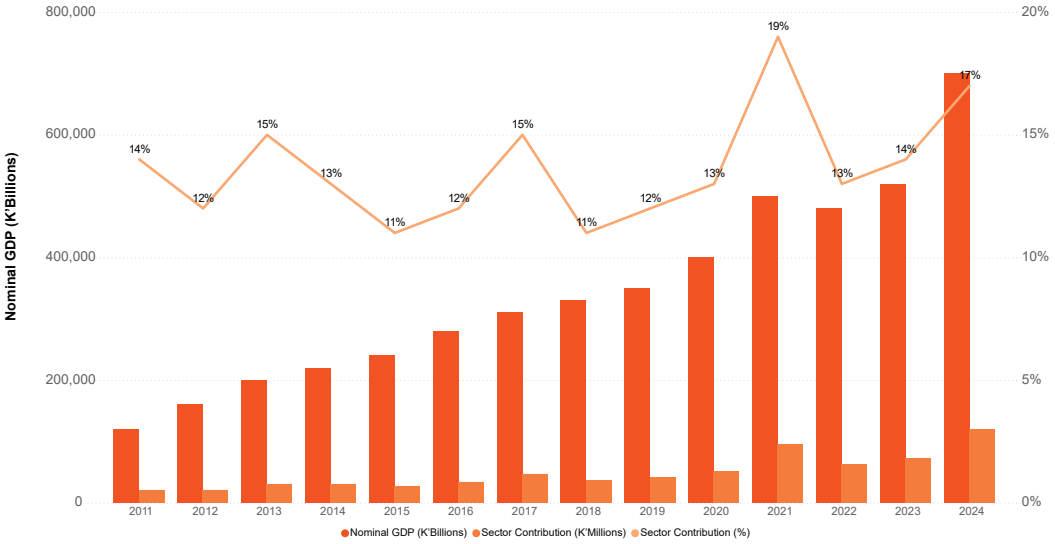
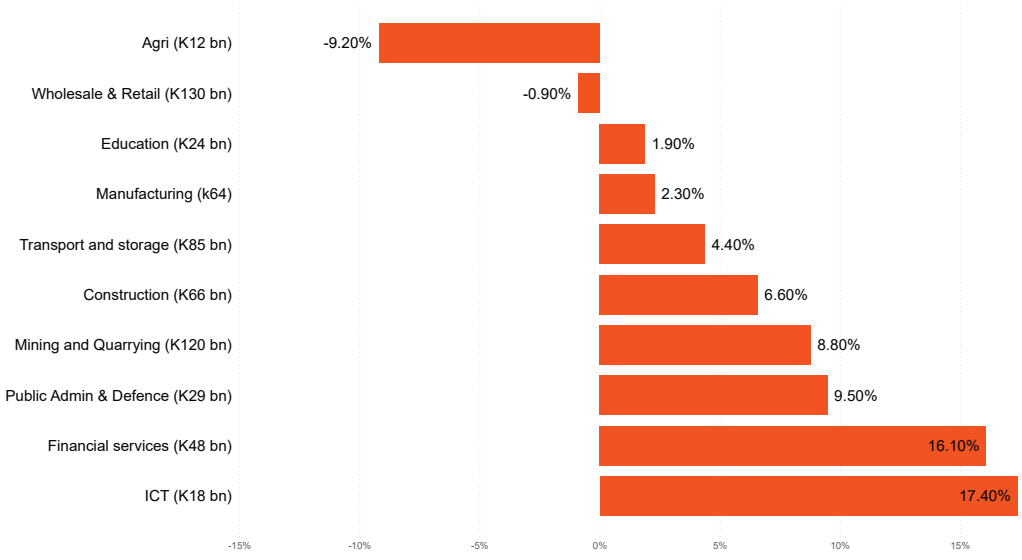


Figure 3: 2024 Real GDP growth by industry (%)



Source: Ministry of Mines and Mineral Development 2024 Annual Report

2.2 Mining production output and commodity prices

2.2.1 Copper

Production

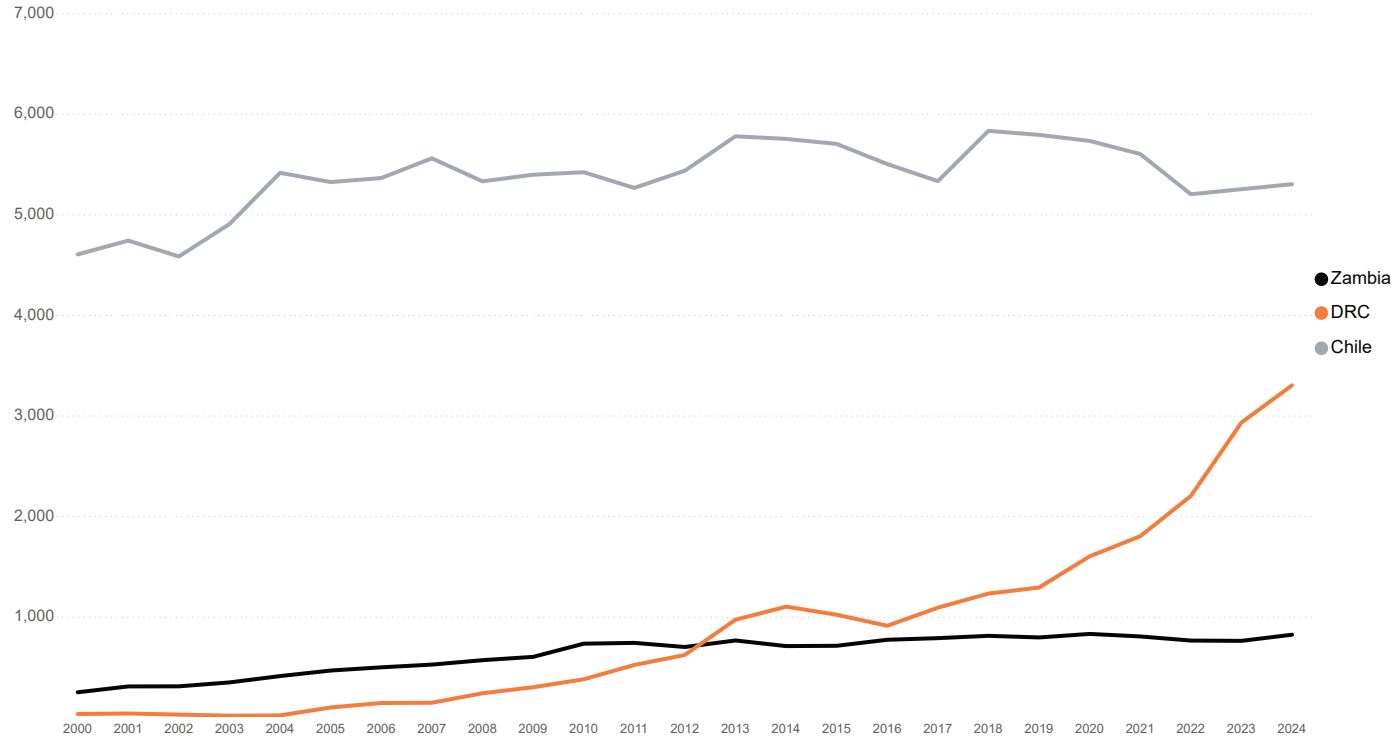
Copper production in Zambia has followed a dynamic path in recent years. Output was approximately 763, 287 tonnes in 2022. This declined to 732, 583 tonnes in 2023, before recovering strongly in 2024 when production rose by 12 % to 820, 676 tonnes. The rebound was driven by increased output at Lumwana and by the revival of operations at Konkola Copper Mines and Mopani. Despite continued challenges such as power shortages, the sector demonstrated resilience and implemented measures to protect and grow production.

As at October 2025, cumulative production stood at 746,679.40 Metric tonne.

According to the Ministry of Mines and Minerals Development, copper production in 2025 is to reach between 950,000 and 1,000,000 tonnes[2]. This reflects Zambia's renewed commitment to expanding mining capacity and its long-term goal of producing 3 million tonnes of copper per year by 2031.

On 2 April 2025, Ivanhoe Mines announced that it had secured a 7,757 square kilometre exploration licence in Zambia's North-Western Province[3]. The licence, which was granted by the Zambian government, allows Ivanhoe to explore for a possible extension of the Central African Copperbelt.

Figure 4: Annual Copper Output: Zambia vs Chile vs DRC (MT'000)



Source: Ministry of Mines and Mineral Development
Source: U.S. Geological Survey Mineral Commodity Summaries 2025

[2] The Ministry of Finance and National Planning.
[3] https://www.ivanhoemines.com/what-we-do/operations-projects/exploration/zambia/

Table 2: A summary of Global Copper Mine Production

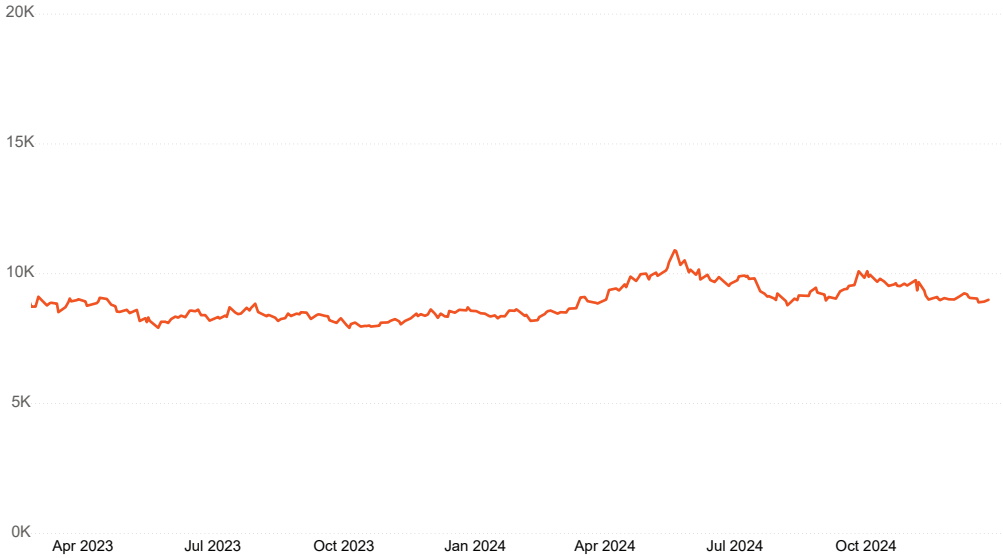
Rank	Country	2024	2023	% Change
1	Chile	5,300	5,250	1%
2	Congo (Kinshasa)	3,300	2,930	13%
3	Peru	2,600	2,760	-6%
4	China	1,800	1,820	-1%
5	United States	1,100	1,130	-3%
6	Russia	930	890	4%
7	Australia	800	778	3%
8	Kazakhstan	740	740	0%
9	Mexico	700	699	0%
10	Zambia*	821	732	12%
11	Canada	450	500	-10%
12	Poland	410	395	4%
	Other Countries	2,700	3,020	-11%
	World total (rounded)	**23,000**	**22,600**	**2%**

Source: U.S. Geological Survey Mineral Commodity Summaries 2025
Source: Ministry of Mines and Mineral Development

Copper prices

Copper prices have shown an upward trend in recent years. The average price was US$8,822 per tonne in 2022 and US$8,490 in 2023. In 2024 the average price increased to US$9,268 per tonne. This recovery presents an opportunity for copper producing countries to strengthen their position by using higher prices to attract investment, expand capacity, and encourage value addition. In the first half of 2025, copper prices averaged US$9,442 per tonne.

Figure 5: Copper Prices



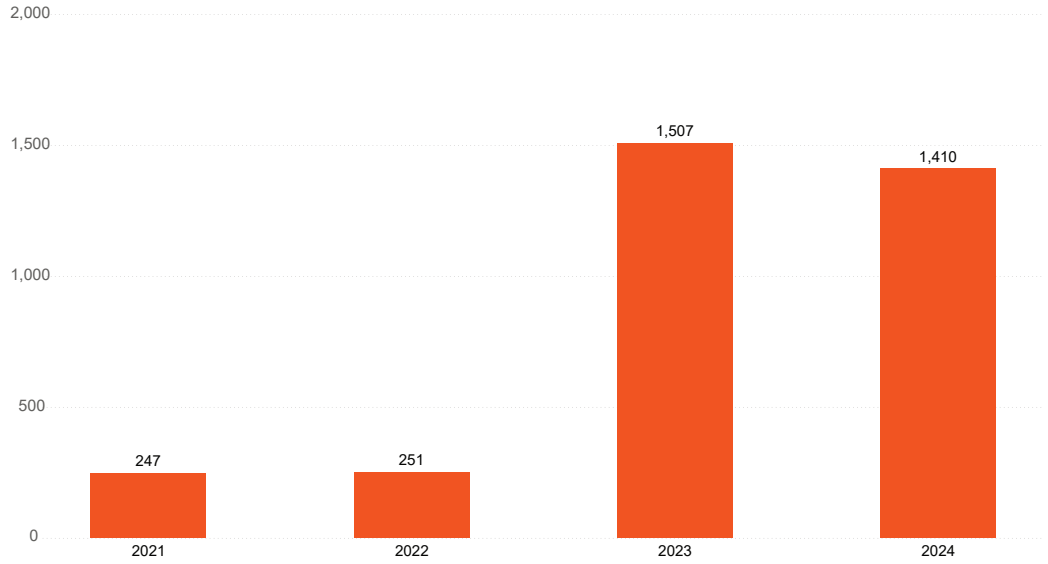
Source: Bank of Zambia

2.2.2 Cobalt

Production

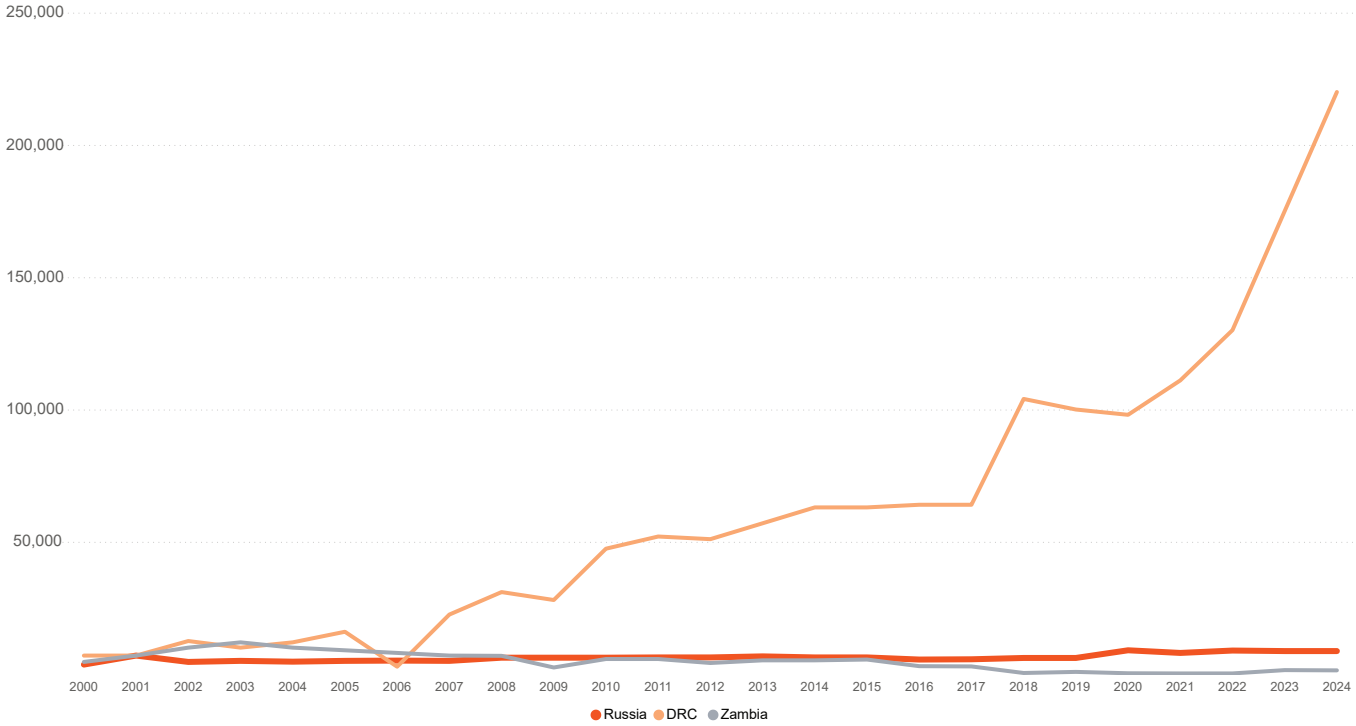
Cobalt production in Zambia fluctuated significantly between 2021 and 2024. Output was 247 tonnes in 2021 and 251 tonnes in 2022. In 2023 production rose sharply to 1,507 tonnes, an increase of around 500 %. In 2024 production declined by 6.4 % to 1,410 tonnes. The reduction is primarily attributed to lower ore grades, which constrained output despite continued operational efforts[4].

Figure 6: Cobalt Production (Mt)



Source: Ministry of Finance and National Planning Annual Reports

Figure 7: Annual cobalt output for Zambia, Russia, and the DRC



Source: Source: U.S. Geological Survey Mineral Commodity Summaries 2025

[4] file:///C:/Users/emonga003/OneDrive%20-%20PwC/Documents/2024%20Annual%20Economic%20Report%20(6).pdf

The table below shows Zambia's annual cobalt production (in tonnes) relative to the world leader, the DRC.

Table 3: Zambia and DRC cobalt production

Year	Zambia	DRC	Zambia/DRC mn3
2019	379	100,000	0.38%
2020	316	98,000	0.32%
2021	247	111,000	0.22%
2022	251	130,000	0.19%
2023	1,507	175,000	0.86%
2024	1,410	220,000	0.64%

Source: Ministry of Finance and National Planning Annual Economic Reports
Source: U.S. Geological Survey Mineral Commodity Summaries 2025

Zambia's cobalt production remained modest compared to the DRC's between 2019 and 2024. The DRC is the world's leading cobalt producer, accounting for approximately 70% of global output. While Zambia produced between 247 and 1,507 tonnes per year between 2019 and 2024, the DRC's production ranged from 98,000 to 220,000 tonnes. Zambia's relative contribution of the DRC's output declined from 0.38% in 2019 to 0.19% in 2022, before rebounding to 0.86% in 2023 due to a sharp increase in production in Zambia. However, this upward momentum waned in 2024, with Zambia contributing 0.64% as a proportion of the DRC's total production, largely due to lower ore grades. Despite recent growth, Zambia's output remains a fraction of the DRC's, underscoring the latter's dominant position in the global cobalt market.

Cobalt prices

In contrast to copper, cobalt has experienced a pronounced downturn in prices over the past 3 years. The average cobalt price fell to US$26 582 per tonne in 2024, compared with US$35 226 in 2023 and US$63 560 in 2022. The decline has been driven mainly by oversupply and weaker demand. By June 2025, cobalt prices were around US$29 575 per tonne[5]. The sustained downward pressure on cobalt prices underscores the challenges facing the cobalt market, including shifts to new battery technology, geopolitical uncertainty, and policy interventions such as the DRC's temporary export ban, which was introduced in February 2025. Together, these issues have contributed to heightened cobalt price volatility.

Although cobalt is a transition metal like copper and plays a role in the global energy transition, oversupply and weakened demand due to several structural and market-specific factors have continued to push prices downward. Cobalt is primarily produced as a byproduct of copper and nickel mining, so its supply increases even when demand does not, particularly as copper production increases to support energy transition needs[6].

Major producers like the DRC and Indonesia have ramped up output significantly in recent years, with global supply growing by 21% in 2024 alone[7]. Meanwhile, demand is weakening due to the rapid adoption of lithium iron phosphate batteries, which do not require cobalt and are increasingly favoured for electric vehicles due to their cost advantages, safety profile, and improved sustainability.

[5] Bank of Zambia

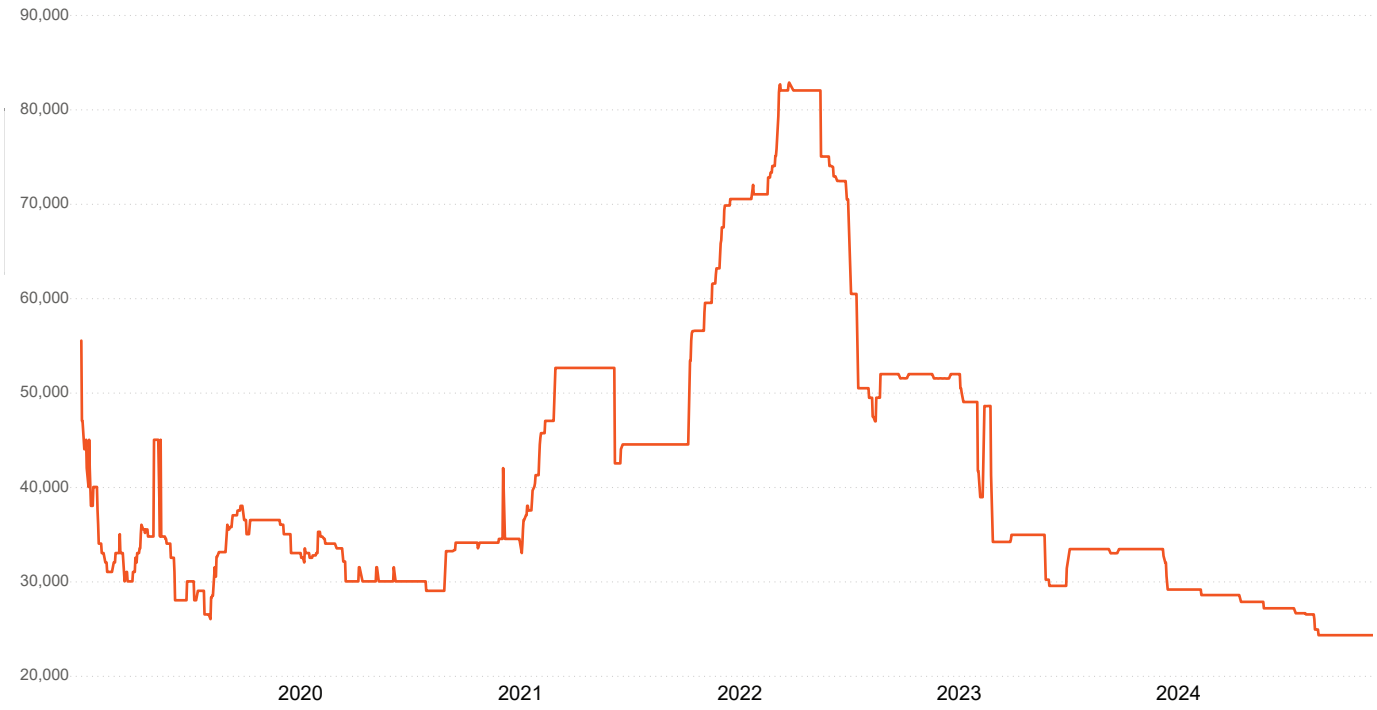
[6] https://www.fastmarkets.com/insights/how-global-copper-nickel-markets-will-drive-the-outlook-for-cobalt-in-2025/

[7] https://www.cmegroup.com/insights/economic-research/2025/cobalts-supply-risks-and-demand-drivers.html

This shift has led to falling cobalt prices, with futures curves remaining flat and spot prices dropping to levels not seen since 2016[8]. Geopolitical factors, including export bans and trade tensions, have further disrupted supply chains and weighed on investor sentiment[9]. In contrast, copper continues to benefit from strong and growing demand across energy infrastructure and electrification, supporting its more optimistic price outlook.

Despite record low prices at the end of 2024, the government of the Democratic Republic of Congo introduced a four-month export ban in February 2025 in an effort to stabilise the market. Prices rose by more than 50% in the weeks that followed[10]. As at November 2025, no detailed follow up measures had been announced, but the episode highlighted the extent to which policy interventions and geopolitical factors contribute to volatility in the cobalt market. Combined with ongoing geopolitical tensions, particularly in the US and other regions, the cobalt market is expected to remain volatile and uncertain throughout the year[11].

Figure 8: Cobalt prices US$/tonne (June 2019 - Nov 2024)



Source: Bank of Zambia

[8] https://investingnews.com/daily/resource-investing/battery-metals-investing/cobalt-investing/cobalt-forecast/
[9] https://www.spglobal.com/commodity-insights/en/news-research/-latest-news/metals/022525-drc-attempts-to-address-surplus-cobalt-supply-declining-price-with-export-ban
[10] https://www.cmegroup.com/insights/economic-research/2025/cobalts-supply-risks-and-demand-drivers.html
[11] Cobalt-Market-Report-2024.pdf

2.2.3 Nickel

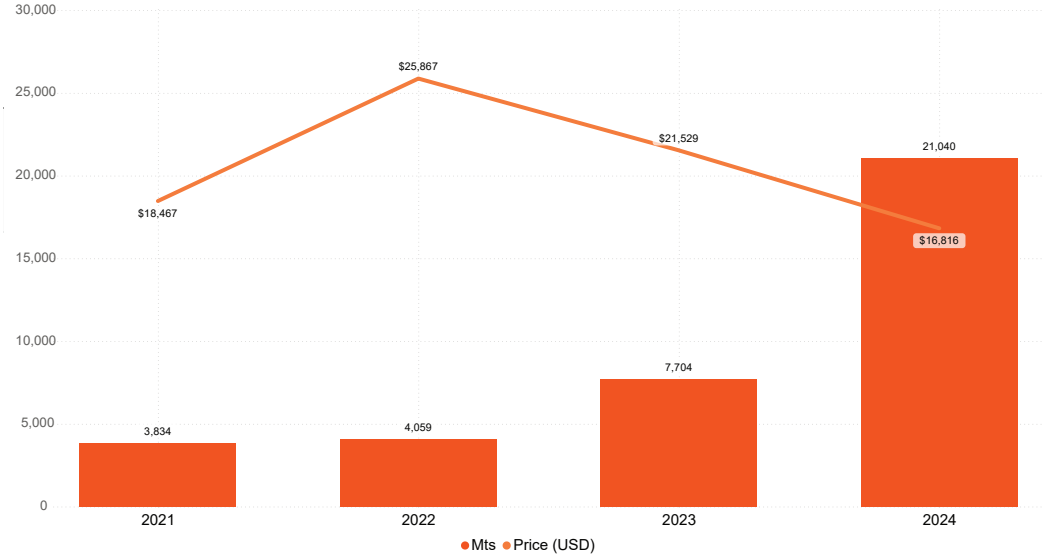
Production

Zambia's nickel production has grown rapidly over the past four years. Output increased from 3,834 tonnes in 2021 to 4,059 tonnes in 2022, 7,704 tonnes in 2023, and 21,040 tonnes in 2024. This represents more than a fivefold increase over the period. The growth is primarily due to the ramp up of First Quantum Minerals' Enterprise nickel mine in Kalumbila, which reached commercial production in June 2024. Production rose steadily from 4,059 tonnes in 2022 to 7,704 tonnes in 2023, before more than doubling in 2024, positioning Zambia as an increasingly significant player in Africa's nickel market.

In the second quarter of 2025, global nickel prices continued to face downward pressure due to a persistent oversupply. This imbalance is largely driven by increased production, particularly from Indonesia, which remains a key contributor to the global supply glut[12]. Although nickel consumption grew by 9% year-on-year in 2024, outpacing the 8% increase in production, the market still recorded a supply surplus. This is because the supply-demand gap has been widening over the past 3 years yet the recent rise in consumption has been enough to absorb excess output

This continued oversupply has implications for pricing, investment decisions, and the viability of new projects, especially in emerging markets. For Zambia and other resource-rich countries exploring nickel opportunities, these global trends underscore the importance of strategic project planning, enhanced cost efficiency, and greater market diversification to remain competitive in a saturated market[13].

Figure 9: Nickel production (Mt)



Source: Ministry of Finance and National Planning Annual Reports

Nickel prices

The average nickel price in 2024 was US$16,400 per tonne, which represented a fall of 21% compared with 2023. Prices briefly rose to around US$19,000 early in the year due to temporary supply disruptions but then retreated. By November 2024 they had dropped to approximately US$16,000 per tonne. As at September 2025, the price on the London Metal Exchange was US$15,380 per tonne, a further decline compared with the previous year.

These trends have implications for investment decisions and the viability of new projects, particularly in emerging markets. For Zambia and other countries that are developing nickel assets, the global environment underscores the need for careful project selection, strong cost control, and diversification.

[12] How Indonesia became the world's nickel powerhouse | Business | valorinternational
[13] Nickel - Global Commodities Markets: Q2 2025

2.2.4 Gold

Production

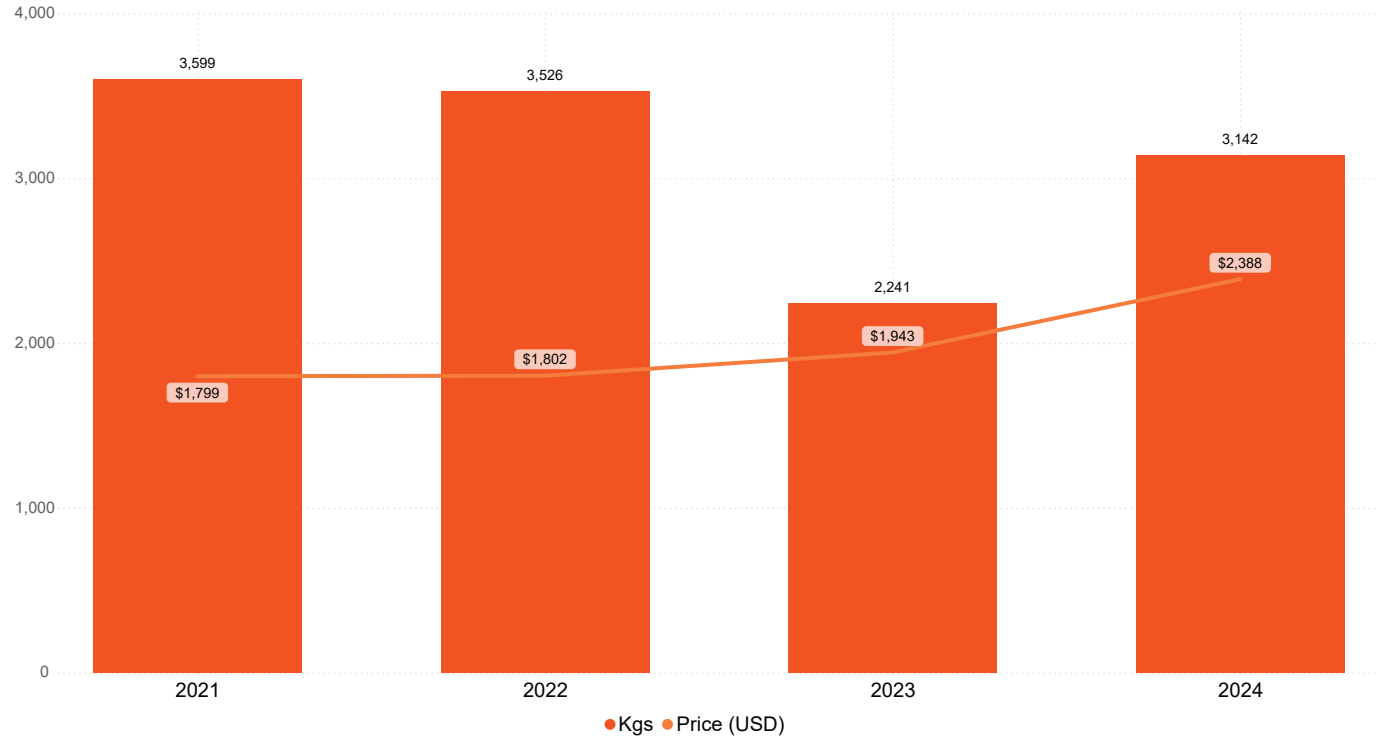
In 2025, Zambia experienced a surge in gold exploration and artisanal mining across several provinces. This followed reports of local discoveries and coincided with extraordinarily strong global gold prices. Districts such as Mufumbwe, Petauke, Vubwi, Serenje, and Mpongwe saw a sharp increase in artisanal activity. In Mufumbwe, sites such as Kambilombilo and Kalengwa attracted large numbers of informal miners, often operating without adequate safety protocols.

The government responded by issuing more than 90 licences to cooperatives in Mufumbwe in an effort to formalise operations, reduce environmental damage, and improve safety. Similar efforts were made in Central Province, where new exploration licences in Serenje and Mkushi stimulated interest and soil testing. While the rush created economic opportunities for some, it also gave rise to challenges including illegal mining, environmental degradation, and smuggling. Through Zambia Gold Company and initiatives such as planetGOLD Zambia, the authorities have sought to formalise artisanal mining, improve traceability, and promote better practices. Furthermore, the Zambian government, through the Bank of Zambia, is actively purchasing local gold to bolster its gold reserves, aiming to increase the total holdings in kilograms by 2025 compared to 2024. This is aimed at enhancing the country's foreign exchange reserves and stabilising the national currency, while providing local gold miners with a reliable and fair market for their production.

Gold output has fluctuated in recent years. Production was 3,599 kilograms in 2021 and 3,536 kilograms in 2022, a modest decline of 1.8 %. In 2023, production fell to 2,241 kilograms, a reduction of 37%. In 2024, output recovered to 3,142 kilograms, an increase of 40% compared with 2023.

These figures mainly reflect formal sector activity. Given the scale of informal and small-scale mining, actual production is likely to be higher than official statistics suggest. This is not a criticism of current reporting systems, but rather a recognition of the difficulty of capturing output from informal operations.

Figure 10: Gold production (kgs)



Source: Ministry of Finance and National planning Annual Economic
Source: Primary Commodity Price System - Search - IMF Data

Gold prices

Gold prices have risen sharply in recent years. The average price increased from US$1,892 per troy ounce in 2021 to just above US$ 2,052 in 2023. The upward trend was driven by concerns over inflation, geopolitical tensions including the war in Ukraine, and increased central bank demand as investors sought to hedge currency risk.

In 2024, gold prices rose sharply to an average of US$2,386 per troy ounce, driven by expectations of monetary easing, ongoing inflation, and global geopolitical tensions. Investor demand for gold-backed ETFs strengthened, reaffirming gold's position. By September 2025, prices had surged further to US$3,694.70, marking a dramatic 54.8% year-on-year increase, one of the biggest increases in the gold price in decades.

Gold is widely recognised as a safe-haven asset during periods of global uncertainty due to its intrinsic value, limited supply, and independence from institutional solvency. Its appeal intensifies during economic downturns, geopolitical tensions, and financial instability as investors seek to preserve wealth amid volatile markets. For example, gold prices rose significantly during the 2008 financial crisis and the Covid-19 pandemic. More recently, gold prices have risen in response to Russia's invasion of Ukraine and growing inflationary pressures. In 2025, gold prices rose nearly 25% in the first half of the year[14], driven by heightened geopolitical risks and strong investment demand, fuelled by record inflows into gold-backed ETFs and central bank purchases.

The World Bank expects gold prices to remain above historical norms through 2026, supported by ongoing global instability. Although gold is not risk free, and its performance is influenced by interest rates and currency dynamics, these trends confirm its standing as a key store of value in turbulent periods[15].

[14] Gold shines amid uncertainty
[15] Commodity Prices to Hit Six-Year Low in 2026 as Oil Glut Expands

2.2.5 Emeralds Production

Zambia's emerald industry, anchored by Gemfields' Kagem together with Grizzly and Pridegems, continues to attract strong global demand, with rough prices that vary significantly by quality. On a per carat basis, Gemfields' commercial quality lots averaged US$6.87 per carat in April 2025, while higher quality auctions across 2024 and 2025 have averaged US$160 to US$170 per carat. This indicates a pronounced quality premium of about twenty-four times when comparing the midpoint of the higher quality range to the commercial average.

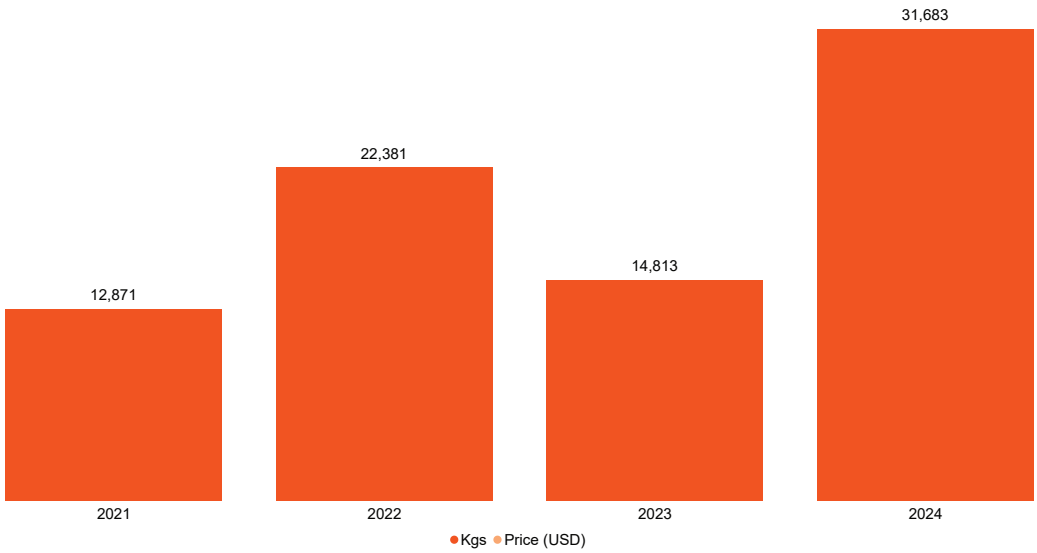
Kagem Emerald Mine Zambia Limited, the largest producer in the country, reported 159,351 carats in 2024 compared with 156,660 carats in 2023. Revenue totalled US$79 million in 2024 compared with US$90 million in 2023. On a per carat basis, this implies an average realized price of approximately US$496 per carat in 2024 and approximately US$575 per carat in 2023, which represents a 13.7% decline year on year. These implied figures are calculated as total revenue divided by carats and are not directly comparable to auction averages because cargo mix and sale formats differ.

Independent producer Grizzly Mining also plays a significant role in positioning Zambia as a leading source of high-quality rough emeralds. Grizzly's 2025 auctions have generated multimillion dollar revenues. One recent Dubai auction realised approximately US$24.8 million, demonstrating how large high-quality parcels or exceptional single stones can materially lift average sale values and headline receipts.

Production has fluctuated in recent years. Total national output reached 34,104 kilograms in 2024, up from 22,118 kilograms in 2023. July 2024 recorded the peak monthly volume at 7,974 kilograms, with February and May also delivering high throughput. By producer in 2024, Grizzly contributed 23,944 kilograms which is 70.2 % of the total, Kagem contributed 9,649 kilograms which is 28.3 %, and Pridegems contributed 511 kilograms which is 1.5 %.

In 2025, as of May, monthly volumes were 573.661 kilograms in January, 839.420 kilograms in February, 797.141 kilograms in March, 2,479.455 kilograms in April, and 4,543.873 kilograms in May. This brings year to date output to 9,234 kilograms at that time, with May contributing approximately 49.2 percent of the total. Over the period through May, Grizzly produced 7,561 kilograms, representing 81.9 percent, and Kagem produced 1,673 kilograms, representing 18.1 percent. These figures indicate continued operational strength at Grizzly and a front-loaded production profile for the sector.

Figure 11: Emerald production (kg)



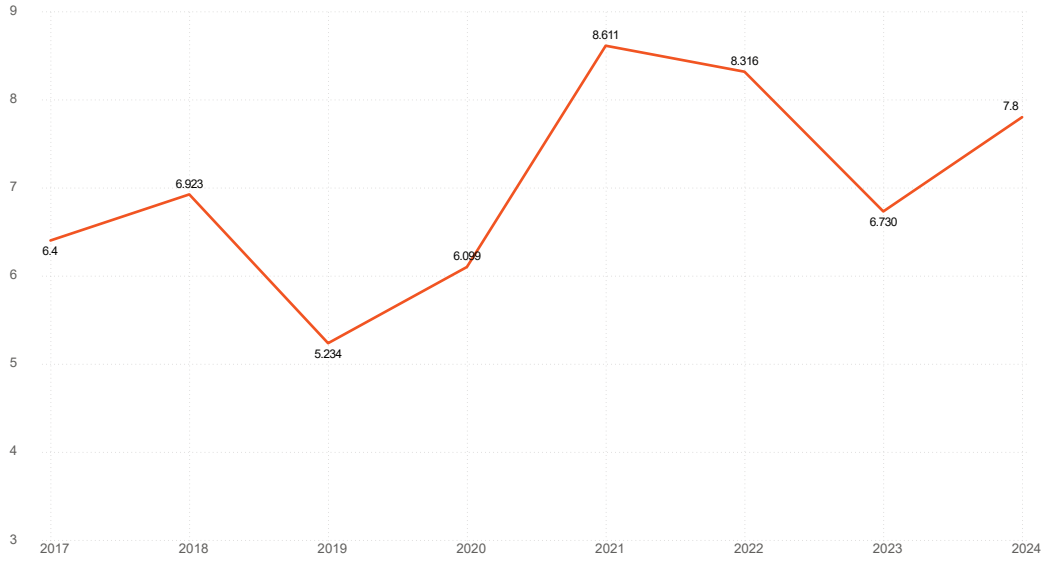
Source: Ministry of Finance and National Planning Annual Economic Reports

2.3 Mineral export earnings

Zambia's total export earnings increased by 8.6% in 2024, rising to US$11.4 billion from US$10.5 billion in 2023. This growth was largely driven by higher earnings from exports of minerals such as copper, cobalt, and gold, which collectively contributed US$7.8 billion in 2024, up from US$6.7 billion the previous year. Minerals accounted for 68% of total export earnings in 2024.

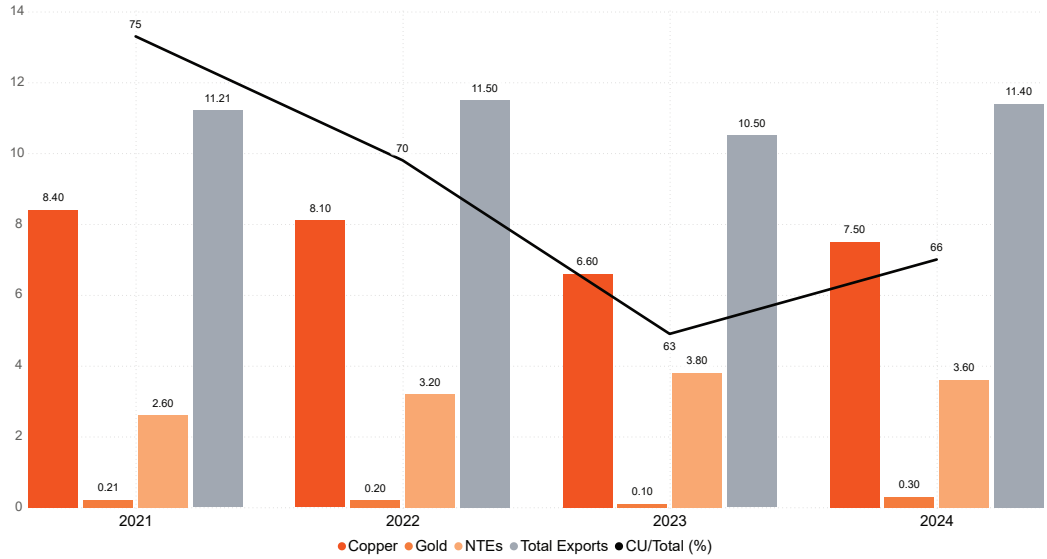
Non-traditional exports declined by 5%, falling from US$3.8 billion in 2023 to US$3.6 billion in 2024. Their share of total exports decreased from 36% to 32%. This shift underscores Zambia's continued reliance on mineral exports and highlights the need to reinvigorate growth in other export segments.

Figure 12: Mineral export earnings (US$'Billion)



Source: Ministry of Finance and National Planning 2024 Annual Economic Report

Figure 13: Export Earnings (US$'Billion)



Source: Ministry of Finance and National Planning 2024 Annual Economic Report

Zambia's total export earnings increased by 8.6% in 2024, rising to US$11.4 billion from US$10.5 billion in 2023. This growth was largely driven by higher earnings from exports of minerals such as copper, cobalt, and gold, which collectively contributed US$7.8 billion in 2024, up from US$6.7 billion the previous year. Minerals accounted for 68% of total export earnings in 2024.

Non-traditional exports declined by 5%, falling from US$3.8 billion in 2023 to US$3.6 billion in 2024. Their share of total exports decreased from 36% to 32%. This shift underscores Zambia's continued reliance on mineral exports and highlights the need to reinvigorate growth in other export segments.

2.4 Mining and quarrying's contribution to tax revenues

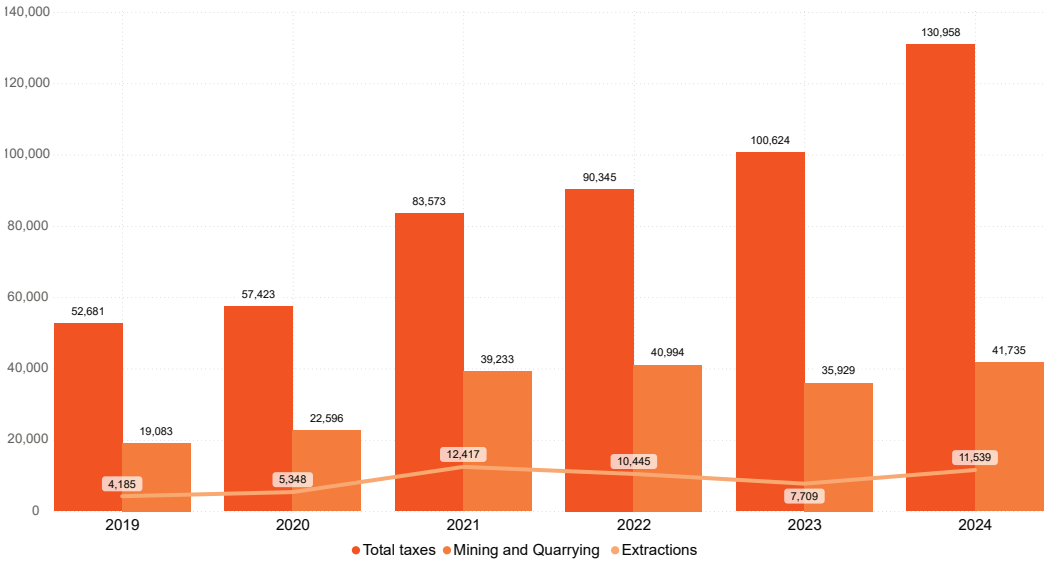
The mining sector in Zambia continues to be the single largest contributor to government tax revenues. In 2024, the mining and quarrying sector generated K34.1 billion in gross domestic tax revenue, underscoring its importance to the national economy. However, after accounting for K15.5 billion in tax refunds, primarily value added tax (VAT) refunds, the sector's net domestic tax contribution stood at K18.6 billion.

The mineral royalty was the main fiscal revenue stream from the mining sector, contributing K11.5 billion to net collections. Meanwhile, income tax from mining companies generated K7.4 billion, while pay-as-you-earn from mining employees contributed K4.6 billion. The sector's tax profile thus reflects a balanced mix of direct and indirect taxes, with mineral royalties and income taxes forming the backbone of fiscal inflows from mining[16].

Year-on-year, the mining and quarrying sector has demonstrated notable resilience and growth in tax revenue. Gross revenue collections increased by K3.2 billion (10.3%) in 2024 compared to 2023, while net revenue rose by K710 million (4%). This performance highlights the sector's fiscal significance, even amid macroeconomic headwinds such as currency depreciation, inflationary pressures and operational challenges linked to energy supply and global commodity price volatility.

The graphs below illustrate total taxes, and the contribution extraction royalties and the mining and quarrying sector contribute to total taxes. Mining and quarrying taxes consist of income tax and mineral royalties.

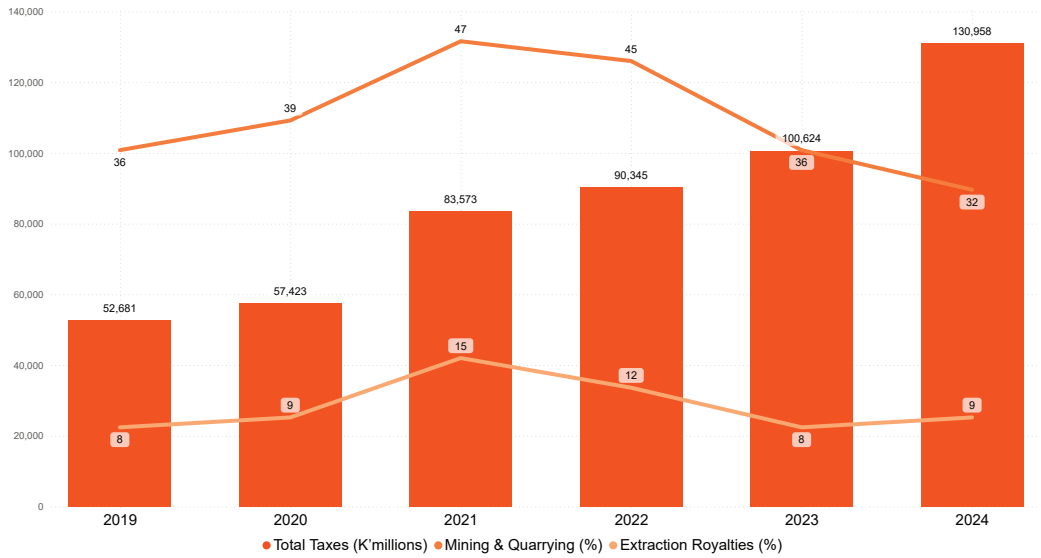
Figure 14: Sector contribution to total taxes (K'Millions)



Source: ZRA Annual Reports

[16] https://www.zra.org.zm/wp-content/uploads/2025/05/Annual-Report-2024.pdf

Figure 15: Sector Contribution to taxes (%)



Source: ZRA Annual Reports

VAT refunds and sectoral impact

VAT refunds remain a critical component of Zambia's tax administration, particularly for the mining sector, which is heavily export-oriented and therefore entitled to substantial input VAT credits. In 2024, the Zambia Revenue Authority (ZRA) disbursed K17.6 billion in total tax refunds, representing a 7.7% increase (K1.26 billion) on the K16.3 billion paid out in 2023. Of this amount, K17.4 billion, or 99.1%, was attributed to VAT refunds, with the remainder comprising K90.2 million for direct taxes and K61.2 million for customs and excise duties.

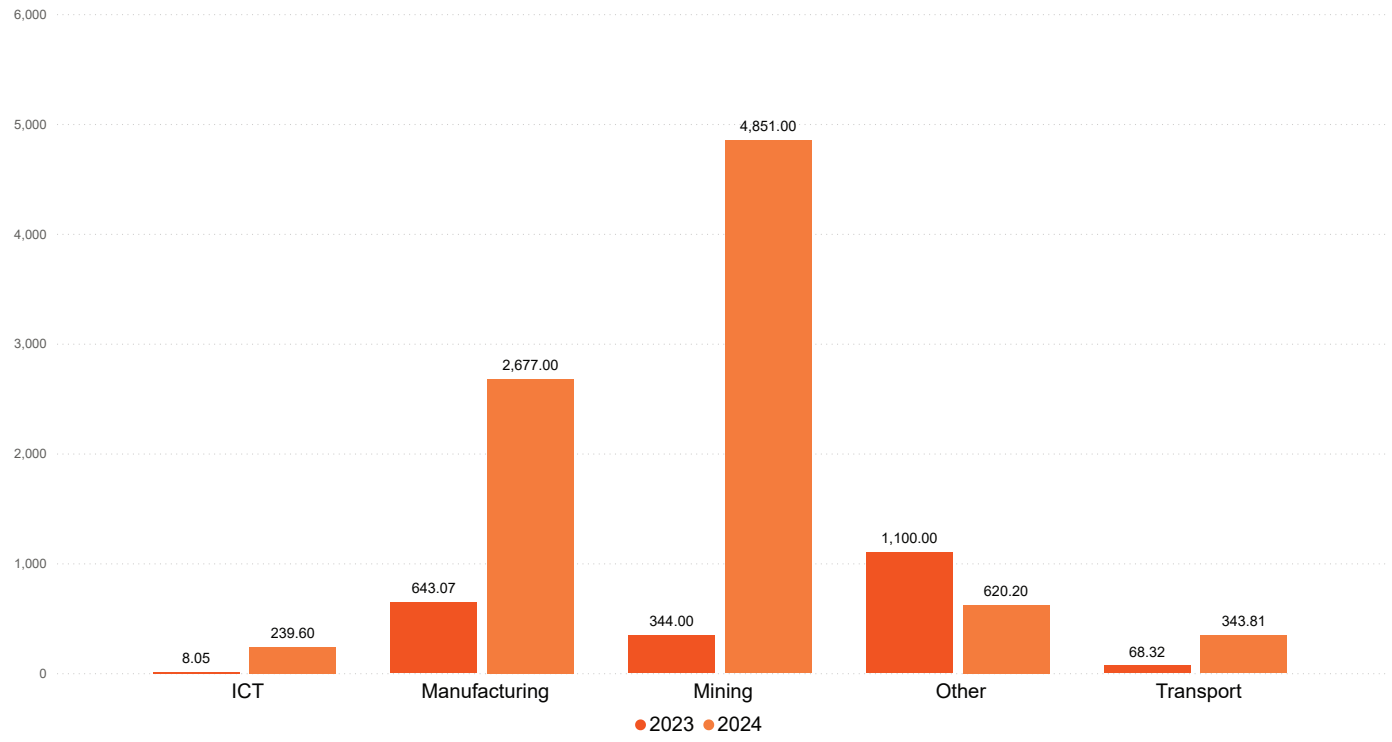
Despite a 3.8% decline in the number of VAT refund claims (14,552 in 2024 vs. 15,103 in 2023) and a 10.1% reduction in the total value of claims (K18 billion in 2024 vs. K20 billion in 2023), actual VAT refund payments increased by 8.2% in 2024 to K17.4 billion. This improvement was largely driven by a policy decision to raise the monthly allocation for VAT refunds to K1.7 billion (from K1.35 billion) starting in September 2024, reflecting the government's commitment to addressing the longstanding VAT refund backlog and supporting sector liquidity.

The mining and quarrying sector was the principal beneficiary of VAT refunds, accounting for 87% (K15.2 billion) of the total VAT refunds paid out in 2024. This underscores the sector's capital-intensive and export-driven nature, as well as the importance of timely VAT refunds in sustaining mining operations and investment flows.

2.5 Share of investment

In 2024, the mining industry in Zambia had US$4.85 billion of actualised investments. This is the highest amount of actualised investments of all the sectors in Zambia and is significantly higher than the US$344 million of actualised investments recorded in 2023. The manufacturing sector followed with US$2.67 billion of actualised investments, up from US$643.07 million the previous year. Investments in the transport and ICT sectors amounted to US$343.81 million and US$239.60 million respectively, showing notable growth from US$68.32 million and US$8.05 million in 2023. All other sectors collectively attracted US$620.20 million in 2024, a decline from the US$1.1 billion recorded in 2023.

Figure 16: Actualised Investment by Sector (US$ million)

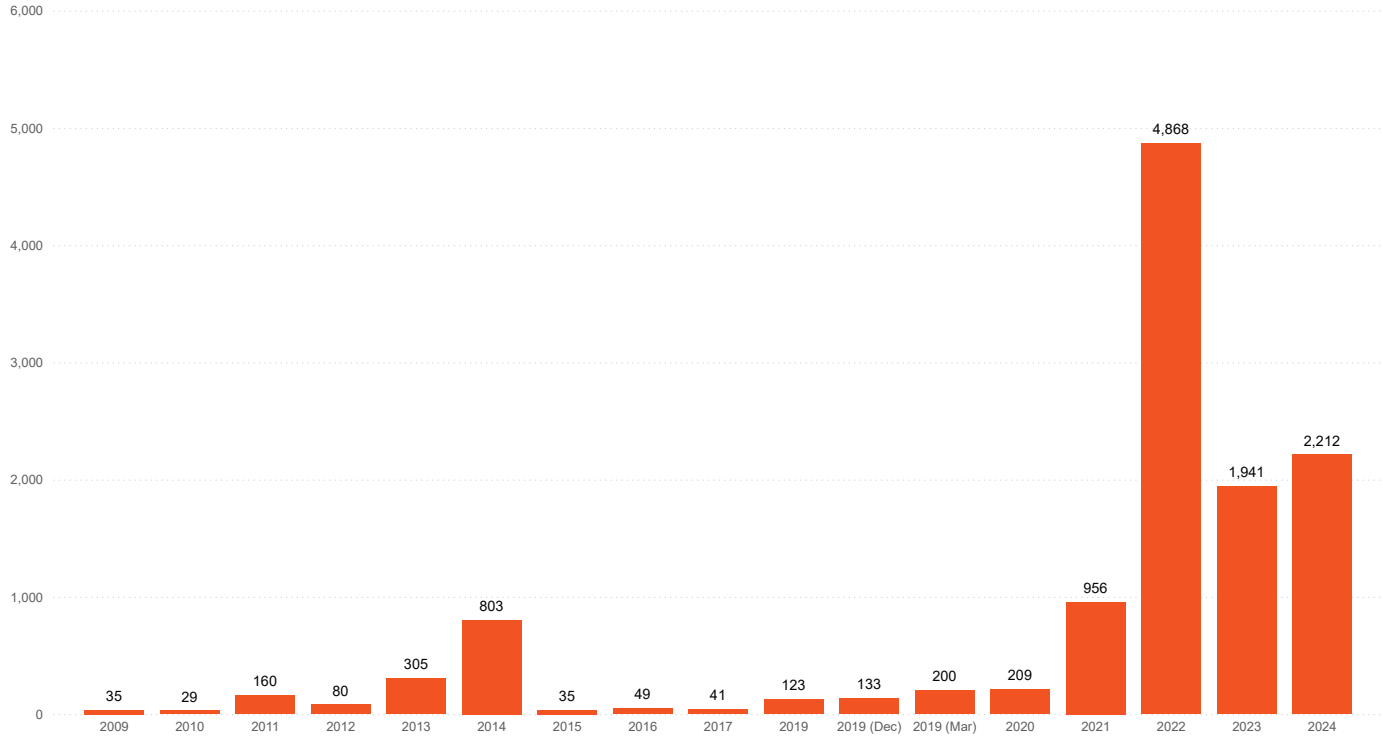


Source: ZDA Annual Reports

2.6 Mining sector dividends and royalties

A massive portion of Zambia's return from the mining sector comes from the investment income, dividends and valuation gains generated through ZCCM Investment Holdings (ZCCM-IH), the vehicle via which the government holds most of its mining investments. ZCCM-IH holds shares in a portfolio of companies in the mining, energy and infrastructure and financial sectors, although income generated is mainly from Kansanshi Mining, CNMC Luanshya Copper Mines and Copperbelt Energy Corporation (CEC). In 2024, ZCCM-IH generated a total of K1,426 million (equivalent to US$54.51 million) from royalties and K787 million (US$30.27 million) from dividends. This reflects an increase from the previous year's figures of K1,201 million (US$58.48 million) in royalty income and K740 million (equivalent US$36.05 million) in dividends.

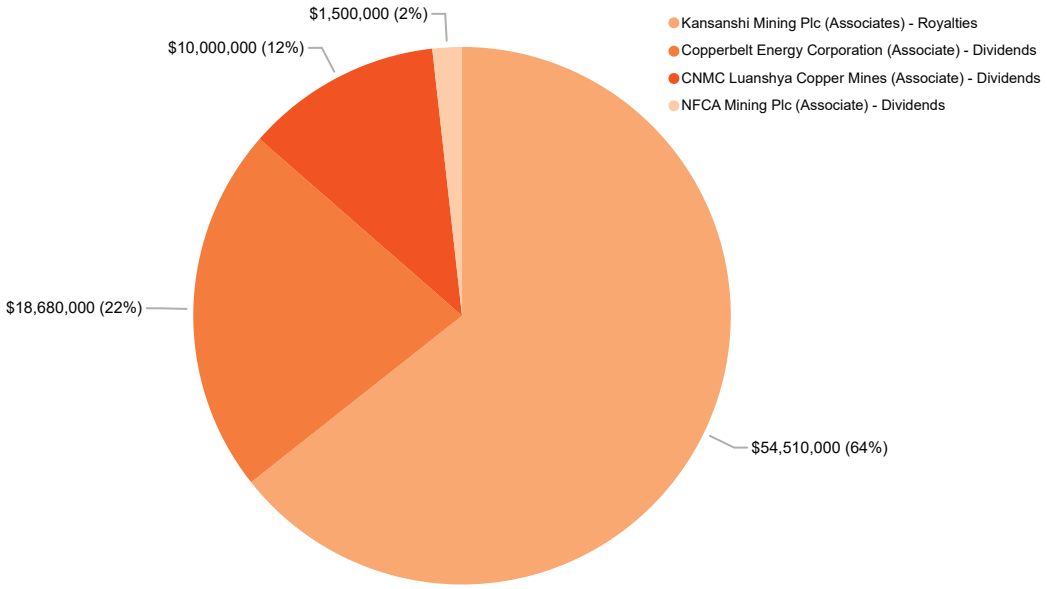
Figure 17: Dividends and royalties received. (K'Million)



Source: ZCCM-IH Annual Reports

The transition from a dividend-based model to a royalty-based revenue structure has significantly enhanced ZCCM-IH's financial returns. Historically, ZCCM-IH relied on dividends from its minority stakes in mining companies, which were often inconsistent due to profit fluctuations and decisions made by majority shareholders. This created uncertainty and limited the government's ability to forecast revenues. To address these challenges and align with global best practices in resource revenue management, ZCCM-IH secured a 3.1% royalty on Kansanshi Mining's gross revenue[17]. This shift has provided a stable and predictable income stream, independent of profit declarations or board decisions, and mitigates the risks associated with fluctuating dividend payouts and minority shareholder limitations. Notably, had the royalty model been in place between 2009 and 2021, ZCCM-IH's earnings from Kansanshi would have nearly doubled, underscoring the model's potential to unlock greater long-term value[18].

Figure 18: ZCCM-IH Dividend and Royalty income (USD)



Source: 2024 Annual Report - ZCCM-IH Investor Relations Portal

ZCCM-IH reached a US$1 billion market capitalisation on the Lusaka Securities Exchange (LuSE) on August 28, 2025, marking a transformative moment for Zambia's mining sector. This milestone reflects growing investor confidence in the country's mineral wealth and ZCCM-IH's strategic role in managing national mining interests. It also strengthens the company's capacity to invest in copper and gold projects, supports government efforts to formalise the mining industry, and signals the success of reforms aimed at improving transparency and revenue generation, positioning Zambia as a more attractive destination for mining investment[19].

[17] ZCCM-IH Shareholders Approve the Kansanshi Royalty Transaction - ZCCM Investments Holdings Plc

[18] This shift mitigates the risks associated with fluctuating dividend payouts and minority shareholder limitations, while aligning with global best practices in resource revenue management. Notably, had the royalty model been in place between 2009 and 2021, ZCCM-IH's earnings from Kansanshi would have nearly doubled, underscoring the model's potential to unlock greater long-term value.

[19] ZCCM-IH Crosses $1billion Market Capitalisation on LuSE - ZCCM Investments Holdings Plc

03 Significant mining sector developments

3.1 The energy crisis

Zambia's energy consumption remains heavily reliant on hydroelectric power, which accounts for approximately 90% of the country's electricity generation capacity. During the first half of 2025, Zambia's installed capacity rose to approximately 3,985.86 MW, a 2.6% increase from the 3,885.86 MW recorded in the same period of 2024. This growth was driven by the addition of the 100MW Chisamba Solar Power Plant. However, overall electricity output from ZESCO and independent power producers declined to 7,051.04 GWh in 2025, compared to 8,113.02 GWh in 2024.

The mining sector managed to sustain and, in some cases, increase output during this period due to market reforms and strategic sourcing. The Electricity Open Access Regulations of 2024 liberalised the power sector by allowing large consumers, such as mines, to purchase electricity directly from independent power producers and regional traders rather than relying solely on ZESCO. This open access framework has enabled power wheeling over the national grid and facilitated participation in the Southern African Power Pool, allowing mines to import electricity when domestic supply is constrained.

Between January and June 2025, ZESCO imported 1,035.65GWh of electricity. Imports from independent power traders, including CEC, Kanona and GreenCo Africa, amounted to 441.13 GWh, while contracted capacity through power-purchase agreements totalled 3,226.06 GWh[20] over the same period.

The Integrated Resource Plan provides the strategic basis for tackling Zambia's energy challenges. It projects future demand, guides infrastructure investment, enables private sector participation, and links energy supply to industrial and economic objectives.

[20] 2025 MID YEAR Statistical bulletin

Key initiatives include:

1. The implementation of the National Energy Compact and the Electricity Cost of Service Study, promoting cost-reflective tariffs and open-access frameworks for independent power producers.
2. Upgrading the 330 kV transmission network in North-Western Province and the commissioning the US$292 million Zambia–Tanzania Interconnector Project[21].
3. Commissioning renewable energy projects, including the 430 MW Solwezi Solar and Wind Hybrid Project and the 100 MW Chisamba Solar Plant.

By integrating renewables into mining operations and modernising the grid, Zambia is strengthening its position as a supplier of sustainable copper and other minerals. Achieving a balanced and resilient energy mix will be essential to mitigate future disruptions and to support progress towards the 3 million tonne copper target.

Mining continues to underpin Zambia's transformation agenda under the Eighth National Development Plan (8NDP). The Government views the sector as a cornerstone for industrialisation, employment creation and inclusive growth, complementing agriculture, construction, and energy as key drivers of GDP expansion. This policy emphasis aligns closely with the 8NDP's economic-diversification pillars, which prioritise copper and critical-minerals production as catalysts for the green-energy transition.

[21] ZESCO Limited - News

3.2 Investment update

Several major international and regional mining companies have committed significant investment to Zambia in the last few years, targeting new mine development, expansion projects, and infrastructure and energy improvements. Below is a list of notable projects that have been announced recently:

Table 4:

Company name	Investment details	Investment estimates (US$)	Date of announcement
First Quantum Minerals	FQM launched the S3 expansion project on 18 August 2025, committing US$1.25 billion to extend the lifespan of Zambia's largest copper mine by 25 years and raise annual copper production to 240,000 tonnes by 2029 (2022 production was 146,282 tonnes)[22].	US$1.25 billion - S3 expansion project US$100 million – nickel project	May 2022
Barrick Gold	The US$2 billion Super Pit Expansion Project at Barrick Gold's Lumwana mine is progressing steadily. Once complete, the expansion will double annual copper output to 240,000 tonnes, powered by a new processing plant with a capacity of 50 million tonnes per year. Construction activities are in full swing, key equipment orders have been secured, and infrastructure enhancements — including a new power transmission system developed in collaboration with ZESCO — are advancing to support both the mine and the surrounding region[23].	US$2 billion	October 2023
Prospect Resources	FQM acquired a 15% ownership stake in Prospect Resources, an Australian junior mining company that holds the Mumbhezi exploration asset in Zambia.	US$9.88 million cumulative	April 2024
Moxico Resources	Moxico Resources is actively expanding, focusing on its Mimbula copper mine in Zambia with a Phase 2 expansion ramping up production towards 56,000 tonnes/year by mid-2026.	US$180 million cumulative	March 2023
KoBold Metals	Exploration is still underway, with production expected to start by 2030. KoBold Metals indicated it has plans to fast track development of the new mine at its Mingomba deposit, which would cost about US$2 billion. According to KoBold Metals, the Mingomba deposit, which is still under exploration, has copper ores grade of about 5%, which could indicate the highest grade among Zambian discoveries in 100 years. The ore grade of 5% deposit quality will place Mingomba alongside Ivanhoe's Kamoa-Kakula copper mine in the DRC.	US$150 million	December 2023

[22] President Hichilema Launches US$1.25 Billion Kansanshi Mine Expansion - STATE HOUSE
[23] Barrick Mining Corporation - Lumwana Expansion in Full Swing as Barrick Builds Tier One Copper Mine

Company name	Investment details	Investment estimates (US$)	Date of announcement
China Nonferrous Metal Mining Company	This investment will be distributed as follows: Chambishi Copper Mine US$450 million; Luanshya copper mine US$600 million; and Sino Metals and warehouse project US$200 million.	US$1.3 billion by the end of 2025.	September 2023
Mopani Copper Mines	In 2024, International Resource Holdings (IRH) completed the acquisition of a 51% stake in Mopani for US$1.1 billion. Under new owner International Resources Holdings (IRH), Mopani Copper Mines is experiencing a major revival, prioritizing a production ramp-up production and creating more jobs, paying suppliers, and rehiring former staff, with early milestones such as the first copper anodes demonstrating strong momentum since the early-2024 takeover	US$1.1 billion	August 2024
Konkola Copper Mines	KCM officially handed over to Vedanta Resources in August 2024. KCM has launched a three-phase high-speed rail rehabilitation project led by Flint Rail Projects at its KCM underground mine in Chililabombwe, starting at the 875m level of No. 4 Shaft and targeting completion by April 2026. This will reduce cycle times and derailments and increase tramming capacity from 850,000 to 1.5 million tonnes annually. The infrastructure supports KCM's goal of producing 300,000 tonnes of copper annually by 2031, which is aligned with Zambia's national target of 3 million tonnes by 2030[24].		2 July 2025

[24] KCM EMbarks on High-Speed... - Konkola Copper Mines - KCM | Facebook

3.3 Exploration update

Geological surveys and licensing

The Ministry of Mines and Minerals Development has confirmed that the high-resolution aerial geophysical survey is progressing on schedule and is expected to be completed by mid-2026. Government said that as of 15 October 2025, 42.6% of Zambia's landmass had been mapped. The survey is intended to generate detailed geological data that will help identify mineral resources, reduce exploration risks, and strengthen the country's investment appeal.

The Survey, undertaken by Xcalibur Smart Mapping, is designed to produce high-resolution airborne geophysical data that will significantly enhance geological understanding across the country. Through the deployment of state-of-the-art airborne geophysical technologies, the project will support the identification of mineral potential, reduce exploration risk, and enhance the overall quality of geological data available to the market[25].

We anticipate that improved geological information will reduce investment risk, enhance transparency, and reinforce Zambia's ambition to build an investment-ready and sustainably managed mining sector. Central to this vision is the adoption of advanced geophysical technologies, which the Ministry emphasises as key to unlocking Zambia's mineral potential and driving long-term economic development. To this end, the Government has reaffirmed its commitment to completing the ongoing high-resolution airborne geophysical survey, aiming for full national coverage by mid-2026. As of 2024, approximately 42–60% of the mapping had been achieved, and its completion is anticipated to stimulate exploration spending and enable the issuance of new, better-defined licences, particularly for small-scale and emerging miners. PwC notes that this initiative will not only enhance transparency in geological data management but also support informed joint-venture participation between the state and private sector.

[25] Official Launch of Zambia's High-Resolution Aerial Geophysical Survey Project - Xcalibur Smart Mapping

3.4 Regulatory and policy developments

3.4.1. The Minerals Regulation Commission Act and The Geological and Minerals Development Act

Zambia's mining industry is undergoing a major transformation with the enactment of the Minerals Regulation Commission Act (2024) and the Geological and Minerals Development Act (2025). These new statutes replace the Mines and Minerals Development Act (2015) and aim to modernize regulation, enhance transparency, and align Zambia's mining governance with global best practices.

Since independence, Zambia has revised its mining laws several times in 1969, 1995, 2008, and 2015 to reflect changing national priorities. The latest reforms are driven by two key objectives: increasing copper production to 3 million tonnes annually by 2030 and reducing speculative activity through stronger oversight and a dedicated regulatory body.

Rationale for Reform

The transition from the 2015 framework to the new Acts seeks to achieve the following:

- Improving institutional efficiency by consolidating regulatory functions under a single authority.
- Enhancing transparency and accountability in licensing and compliance.
- Aligning with global environmental, social, and governance standards to promote responsible mining practices.
- Delivering broader economic and social benefits for local communities.

Minerals Regulation Commission as the Central Authority

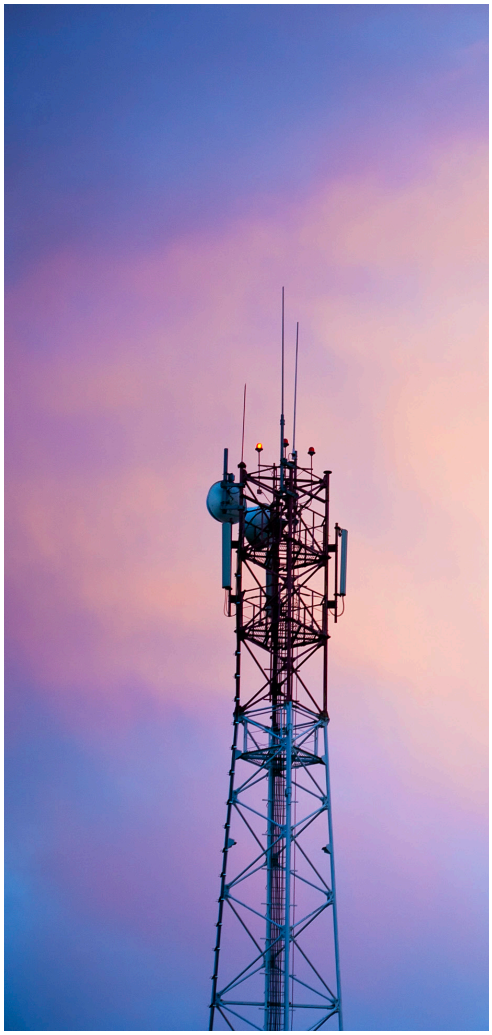
The Minerals Regulation Commission is now the primary regulator responsible for licensing, monitoring, compliance, and oversight. It has authority to grant, suspend, or revoke mining rights, regulate mineral marketing, and coordinate with other agencies on environmental, health, and safety matters. The national budget for 2026 allocates K75.9 million to support its operations.

Licensing and Eligibility Requirements

The categories of mining rights remain largely unchanged, but eligibility criteria are more stringent. Applicants must demonstrate tax compliance, disclose beneficial ownership, and in some cases meet local ownership thresholds. Companies in liquidation, entities without a registered office in Zambia, and those whose directors or shareholders have recent convictions for fraud or dishonesty are disqualified. Individuals under 18 years of age, undischarged bankrupts, and persons with certain recent convictions are also excluded.

Applicants must provide evidence of financial and technical capacity, and compliance with environmental and social obligations is now a prerequisite for both granting and maintaining mining rights. The Commission must process mining licence applications within 45 days compared to 90 days previously. Individuals are limited to holding five mining rights unless they can demonstrate strong compliance and adequate financial resources.

The Commission, in consultation with the Minister, may designate certain areas as priority zones where licences are awarded through competitive bidding under the Public Procurement Act. This measure is intended to increase transparency in the allocation of strategic mineral assets. The Mining Appeals Tribunal is retained and strengthened to provide an independent avenue for challenging regulatory decisions.



Environmental and Social Governance

All mining and processing operations must conduct environmental impact assessments and maintain environmental management plans. Statutory requirements for community development, local content, and benefit sharing are embedded in the new framework, and the Commission is responsible for monitoring compliance.

The Geological and Minerals Development Act strengthens geological survey and mapping and supports better resource management and planning. It also formalises support for artisanal and small-scale mining through the creation of an Artisanal and Small-Scale Mining Fund, which aims to integrate this segment into the formal economy.

Anticipated Impact and Implementation Risks

The new Acts aim to provide greater certainty for investors and strengthen Zambia's ability to attract responsible capital. By embedding environmental and social performance requirements, they should also improve access to ESG-linked financing.

However, major legal reforms often bring transitional uncertainty and administrative bottlenecks. Stricter eligibility and reporting requirements may raise compliance costs, particularly for smaller operators. The success of the new framework will depend on the Minerals Regulation Commission's ability to operate independently, recruit skilled personnel, and maintain adequate funding.

Recent events underscore why capacity matters. In February 2025, a tailings dam at Sino-Metals collapsed, causing severe environmental damage. Less than two weeks later, inspectors discovered acid leaking from a similar dam at Rongxing Mineral Processing Plant, prompting an immediate suspension of operations. These incidents reveal systemic weaknesses in dam design and regulatory oversight, highlighting that legislation alone cannot guarantee safety. Sustained investment in technical capacity and inter-agency coordination is essential.

If implemented effectively, the reforms could deliver measurable improvements in compliance, accelerate licensing decisions, and enhance investor confidence.

3.4.2 The Mining Local Content Statutory Instrument (SI)

The Mining Local Content Statutory Instrument is intended to retain more value from mining within Zambia. It requires mining companies to procure goods and services from local suppliers, supports domestic industry, and promotes job creation. By giving preference to locally owned businesses and employment, it encourages the development of skills and the retention of wealth in the country. The law also promotes reinvestment in communities through infrastructure and social projects.

The SI is designed to move Zambian firms beyond the role of simple vendors toward becoming a fully developed mining engineering and technical services sector. The goal is for local companies to provide reliable, value-adding services that support mine planning, equipment performance, maintenance, and production efficiency. This shift from basic trading to service provision and value addition is expected to create meaningful employment, deepen technical skills, and enhance Zambia's cost competitiveness by localising larger portions of the mining value chain. In turn, this will accelerate the development of new mines as more inputs and capabilities become available domestically.

The legislation strengthens local participation by requiring mining companies to prioritise Zambian goods and services, especially from citizen-owned businesses, and to hire qualified Zambians while implementing training programs aligned with the Employment Code Act No. 3 of 2019. Non-compliance attracts financial penalties starting at 1 million penalty units, approximately K400,000, with additional daily fines for continued violations.

Implementation of the Local Content SI is being phased. During the first year, the focus is on core services directly linked to mining operations such as maintenance, engineering, logistics, and catering, while non-core services including cleaning, printing, and consumables are reserved exclusively for Zambian enterprises. Within six months of commencement, the Government expects the mining industry to channel procurement opportunities worth roughly K13 billion to local suppliers, with thresholds increasing progressively over the next four years. PwC considers these targets ambitious but achievable if supplier development mechanisms and access-to-finance partnerships function as intended.

To anchor this ambition in practice, the SI requires that 0.05 % of the annual turnover of every mining entity be committed to developing local suppliers, regardless of the size or location of the operation. Mining companies are expected to implement supplier development programs that identify high-potential Zambian firms, guarantee them a pipeline of business, and provide business development support, often in partnership with financial institutions offering concessional funding. For operators that lack internal capacity to manage such programs, the framework allows outsourcing to specialised business development organisations and innovation hubs.

Over time, effective implementation of these provisions should broaden participation in the mining economy, support industrialisation, and enable Zambian service providers to become export champions supplying neighbouring mining jurisdictions such as the Democratic Republic of Congo, Malawi, and eventually Angola.

The Government continues to prioritise mineral beneficiation and value addition within Zambia. A forthcoming beneficiation strategy will promote processing of copper, manganese, and other critical minerals into intermediate or refined products. Joint ventures are being pursued to establish regional value chains, notably through the Zambia–DRC Battery Council Partnership, which aims to develop manufacturing capacity for electric vehicle components and battery precursors. These initiatives will strengthen ancillary industries and enhance domestic participation in the continental green industrialisation agenda.

04 The journey to 3 million tonnes of copper

Zambia is making promising progress towards its ambition of producing 3 million tonnes of copper per year by 2031. Copper production in 2025 is projected to reach around 1 million tonnes. Output in the first half of 2025 rose by 17.8% to 439,644 tonnes, up from 373,264 tonnes in the same period of the previous year. This growth reflects higher production at Konkola Copper Mines, Mopani, Kansanshi, and Chibuluma.

The government's efforts to revive dormant mines, improve energy supply and strengthen investor confidence through tax reforms and greater transparency in licensing are laying a foundation for long term growth.

To illustrate Zambia's potential under current conditions, PwC has modelled a best-case scenario in which all known and committed projects operate at their expected capacity immediately. This gives an indication of the maximum capacity without considering the time needed to bring this production online. It represents realistic potential that has been identified. In this scenario, annual copper output could reach approximately 1,785,200 tonnes. This is not a forecast for the near term, but a useful benchmark for understanding the upper bound of current capacity and Zambia's position on the path towards 3 million tonnes.

Government's own segmentation of the 3 million tonne strategy is broadly consistent with this analysis.

The journey can be understood in four layers:

1. Projected
The foundation is the projected 981,300 tonnes of copper output in 2025 from existing operations (brownfields). Source: National Three Million Tonnes Copper Production Booklet, 23 July 2024.

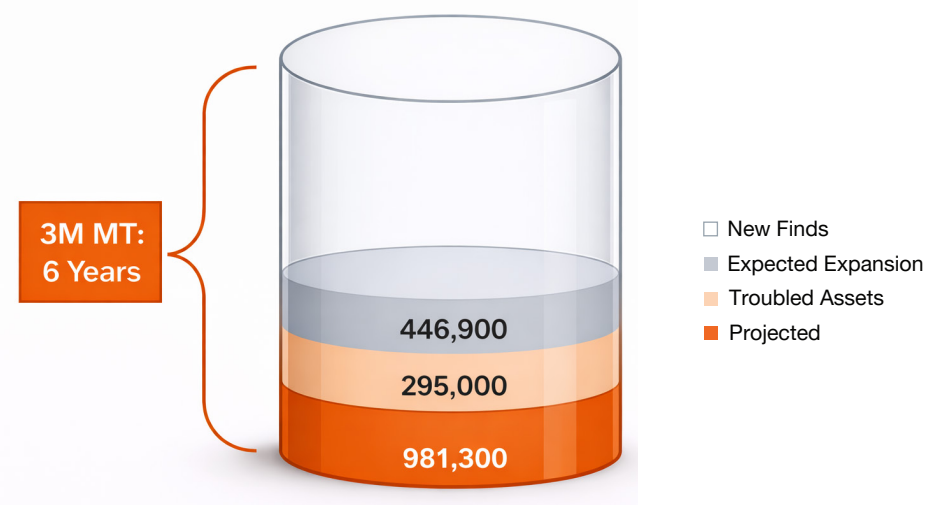
2. Troubled Assets
An additional 295,000 tonnes could come from assets currently below capacity, such as Mopani and Konkola Copper Mines (KCM). These operations are showing positive traction but have not yet reached their stated capacity.

3. Expected expansions
A further 446,900 tonnes is expected from a combination of expansions at existing mines and new greenfield projects. Approximately 125,000 tonnes of this total are expected from greenfield projects such as Mwembeshi Resources and Macrolink Resources (Z) Limited.

4. New Finds
The remaining volume will need to come from new discoveries and advanced exploration projects that are not yet in production.

Together, these layers describe how Zambia can move from 1 million tonnes today to 3 million tonnes by 2031.

Figure 19: Segmentation of the path to 3 million tonnes of copper



Source: Ministry of Finance and National planning Annual Economic

The Ministry of Mines and Minerals Development projects that total copper output will be close to 1 million tonnes in 2025 and then increase steadily as these layers are realised. Brownfield expansions, new greenfield projects such as Mingomba and Mimbula, reprocessing of tailings that could contribute about 100,000 tonnes per year, and more structured growth of artisanal and small-scale mining will all play a role.

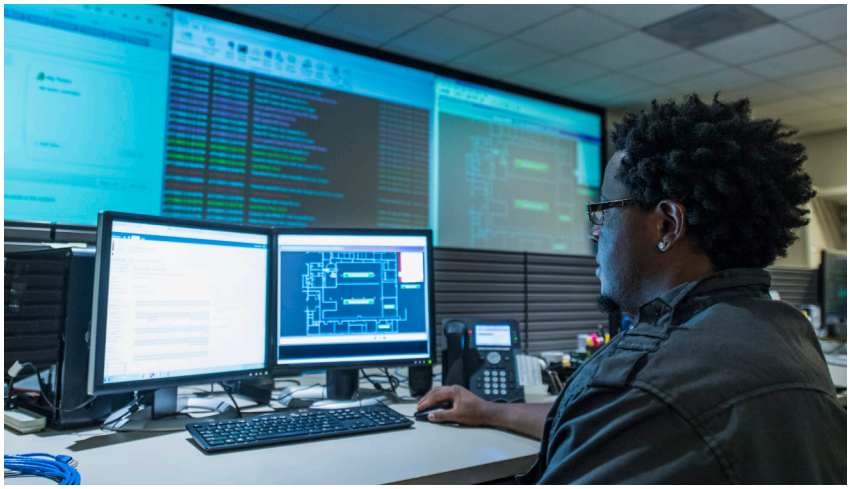
4.1 Key dependencies for achieving the 3 million tonne target

According to the Government's Three-Million-Tonne Copper Strategy, achieving Zambia's ambition of producing 3 million tonnes of copper per year will require more than higher output from existing mines. It depends on a coordinated approach that combines production growth, reliable energy, infrastructure, exploration, and a predictable policy environment. The following dependencies, drawn from the Government's framework, are central to this objective.

1. Ramp up of brownfield expansion projects

Brownfield expansions at existing mines are expected to provide the largest and quickest source of additional production. These projects build on established operations, existing infrastructure, and proven resources, which reduce exploration risk and shortens development timelines. Realising their full potential will require additional smelting capacity, sufficient and stable power supply, and timely regulatory approvals.

Each major expansion should be supported by technical and operational audits to confirm feasibility, identify risks, and ensure that higher production does not compromise safety, environmental performance, or asset integrity. Close coordination between mining companies, the energy sector and government will be essential so that investment in generation, transmission and related infrastructure keep pace with rising output.



2. Greenfield and advanced exploration projects

Greenfield and advanced exploration projects are critical for diversifying Zambia's copper portfolio and sustaining production beyond 2035. Many of these projects are located in remote areas without adequate roads, power lines, or water infrastructure. Unlocking their potential will require early investment in access roads, grid extensions, and essential services.

Feasibility studies will need to meet international technical and financial standards to attract long-term capital. There is also a need to rationalise dormant or speculative licences so that exploration rights are held by companies with the capacity and commitment to invest. This will increase the effectiveness of exploration spending and accelerate the conversion of resources into reserves.

3. Exploitation of mineralised tailings and slag dumps

Zambia has a significant inventory of tailings and slag dumps that contain recoverable copper. With appropriate technology and investment, these legacy materials could contribute an estimated 150,000 tonnes of copper by 2031. Modern hydrometallurgical and bioleaching techniques allow for the recovery of metal from low grade material that was previously uneconomic.

Reprocessing tailings and slag also support environmental rehabilitation. It reduces the footprint of historical waste facilities, lowers dust and water pollution, and contributes to safer long term land use. In this way, waste reprocessing can support both the 3 million tonne target and the broader sustainability agenda.

4. Artisanal and small-scale mining development

Artisanal and small-scale mining can make a meaningful contribution to copper output while promoting inclusive growth and local entrepreneurship. Current estimates suggest that copper production from this segment is about 30,000 tonnes per year, with a target of increasing to roughly 50,000 tonnes by 2030.

To realise this contribution, operators will need to be brought into the formal economy through registration, licensing, and compliance support. This should be accompanied by technical assistance in mining methods, processing, safety, and environmental management. Grouping small operators into cooperatives or shared concessions can make it easier to provide training, attract finance and establish shared processing facilities.

5. Regulatory efficiency and transparency

Efficient and transparent regulation is a key enabler of investment. Investors require predictable timeframes for the granting and renewal of licences, clear compliance criteria, and accessible dispute resolution mechanisms. Full implementation of electronic licensing systems and a digital mineral rights registry will improve transparency and reduce administrative delays.

Publishing service standards for licensing and inspections, and monitoring performance against them, will further strengthen confidence in the regulatory framework. Consistent enforcement of safety and environmental rules across all operators will support a level playing field and enhance Zambia's reputation as a high compliance jurisdiction.

6. High resolution geophysical surveys and geological data

The ongoing high resolution airborne geophysical survey and related geological mapping will provide a much clearer picture of Zambia's mineral potential. To maximise its value, survey data should be integrated with geochemical information and geographic information systems to produce comprehensive mineral prospectivity models.

Establishing regional core sheds for drill core storage and documentation would support scientific collaboration and independent research. Better geological intelligence increases the likelihood of successful discoveries, reduces exploration risk, and gives investors greater confidence when committing capital.

7. Investment promotion and capital mobilisation

The journey to 3 million tonnes will require sustained capital inflows across exploration, mine development, processing and supporting infrastructure. Investment promotion therefore needs to be proactive and well targeted. International platforms such as Mining Indaba in Cape Town and the Prospectors and Developers Association of Canada conference in Toronto provide opportunities to present Zambia's geological potential, policy reforms, and project pipeline to global investors.

Domestic investment forums and sector specific indabas can also play a vital role by linking government, local investors, financial institutions, and communities. Clear communication of Zambia's strategy and project opportunities helps to attract a diversified pool of capital, including long term institutional investors and development finance institutions.

8. Capacity building, research, and development

Reaching and sustaining 3 million tonnes of copper will require strong human capital and ongoing innovation. This includes training geologists, engineers, metallurgists and regulators in advanced exploration techniques, digital mine planning, and automation. Partnerships between mining companies, universities and technical colleges can help align training programmes with industry needs.

The use of data analytics, artificial intelligence and other digital tools can improve resource modelling, optimise production, and enhance safety. Building this capability will position Zambia as a centre of excellence in mining knowledge and technology and will support resilience and competitiveness over the long term.

4.2 Strategic interlinkages and enablers

The dependencies described above are closely interconnected. Progress towards the 3 million tonne target will depend on how effectively they are coordinated and supported by broader enablers in energy, infrastructure, policy, and sustainability.

Energy security

All major growth scenarios assume a reliable and competitively priced power supply. The current electricity deficit, estimated at about 1381 megawatts, presents a material constraint. Addressing this gap will require accelerated investment in new generation capacity, especially in renewable energy, modernisation of the transmission network and deeper interconnection with the Southern African Power Pool. Long term power purchase agreements between mines and independent producers can provide the revenue certainty needed to finance new projects.

Infrastructure support

Many next generation projects are located in remote parts of Northwestern, Luapula and other provinces. Their viability depends on access to roads, bridges, rail links, and logistics corridors to ports. Integrating mining related infrastructure needs into national development plans will be essential to reduce transport costs and improve export efficiency. Shared infrastructure that serves both mining operations and surrounding communities can amplify development impact.

Alignment between government and the private sector

There is a growing expectation that mining companies will invest in enabling infrastructure such as access roads, power lines, and water systems in and around their operations. While private investment is important, it should be complemented by public investment in regional and national networks. Government has a leading role in planning and financing shared infrastructure that supports multiple sectors. Public private partnerships offer a framework for combining public leadership with private capital and expertise, while ensuring that benefits extend beyond mine sites to local communities and other industries.

Policy stability and predictability

Sustained progress towards the 3 million tonne target requires a stable and predictable fiscal and regulatory environment. Sudden changes in tax policy, mineral royalty structures or licensing rules can delay investment decisions and increase the cost of capital. Continued dialogue between government and industry, transparent policy making and clear transition periods for any changes will help to maintain confidence and support long term planning.

Sustainability and environmental, social and governance integration

Global investors increasingly focus on environmental, social and governance performance. Projects that do not meet modern standards for environmental protection, community engagement and governance face higher financing costs and reputational risk. Embedding rigorous environmental, social and governance practices across all projects will therefore be critical for attracting capital and maintaining community support. Strong tailings management, responsible water use, community development agreements, and transparent reporting in line with emerging sustainability standards will position Zambia as a responsible producer of copper and other minerals. This, in turn, can unlock access to green finance and sustainability linked instruments that support both project development and national climate objectives.

05 Environmental, social and governance

5.1 Sustainability in Zambia's mining industry

The mining industry faces increasing pressure to align with global sustainability standards, particularly in the context of climate change, environmental stewardship, and social responsibility. Sustainability challenges, particularly environmental and social ones, have come into sharp focus in Zambia following the failures of a tailings dam at the Sino-Metals copper mine near Kitwe in February 2025, which has had catastrophic environmental consequences.

Sustainability budgeting and policy signals

The 2026 national budget allocated K 1.57 billion to environment and sustainability initiatives, up slightly from K 1.48 billion in 2025. Although the allocation rose in nominal terms, its proportion of total expenditure declined from 0.7% in 2025 to 0.6% in 2026, reflecting competing fiscal priorities.

Given the recent environmental issues that have occurred on account of tailings dam failures, a question can be asked as to whether the budget allocation is adequate.

Tailings management

On 18 February 2025, a tailings dam at the Sino-Metals Leach Zambia mine in Chambishi collapsed, releasing vast quantities of tailings. The spill devastated aquatic ecosystems, contaminated drinking water sources, and destroyed farmland across several districts. Less than two weeks later, the Rongxing Mineral Processing Plant was found leaking acid from a dam of similar design, prompting an immediate suspension of operations. These incidents demonstrate that failures are not isolated but indicative of broader structural weaknesses in tailings management across the sector.

This disaster underscores the urgent need for:

- Stricter tailings management standards that are aligned with global benchmarks like the ICMM Global Standard on Tailings Management.
- Transparent environmental auditing and community engagement.
- Climate-resilient infrastructure, especially given increasing rainfall variability.
- Accountability mechanisms for foreign-owned mining operations.

The Sino-Metals and Rongxing incidents have become cautionary tales, highlighting the risks of inadequate oversight and the consequences of prioritising production over safety and sustainability.

5.2 Climate-related risks and opportunities

According to the UNDP Zambia publication, Climate-Related Risks and Opportunities in Zambia's Mining Sector (2023), the industry is vulnerable to climate-induced risks such as:

- Water scarcity due to changing rainfall patterns, which affect mineral processing and dust suppression.
- Energy insecurity as hydropower, Zambia's primary energy source, is impacted by droughts.
- Increased operational costs from climate adaptation measures and regulatory compliance.

However, the report also highlights opportunities for the sector to transition toward low-carbon operations, including:

- Renewable energy integration (e.g., solar and wind) reduces dependence on hydropower.
- Circular economy practices, such as recycling mine waste and reprocessing tailings.
- Green financing and ESG-linked investments that reward sustainable practices.

5.3 Social and economic sustainability

Mining companies are expected to contribute to local development through community engagement, employment creation, and infrastructure development. The Zambian Extractive Industries Transparency Initiative promotes transparency and accountability in revenue flows, ensuring that mining benefits are equitably distributed.

Moreover, gender inclusion and youth empowerment are emerging priorities, with several mining firms partnering with NGOs and government agencies to support education, health, and vocational training in host communities.

Regardless of the regulatory framework, key stakeholders, including investors, employees and civil society organisations, are increasingly interested in how businesses manage sustainability-related challenges and opportunities. According to PwC's Global Investor Survey 2024 , over 70% of investors believe sustainability should be embedded into corporate strategy.

Additionally, nearly two-thirds expect companies to intensify efforts to lower their carbon emissions.

Policy and regulatory framework

Zambia's mining sustainability is guided by national policies such as:

- The Mines and Minerals Development Act (2015).
- The National Climate Change Policy (2016).
- The Green Growth Strategy under the Ministry of Green Economy and Environment.

These frameworks encourage mining companies to integrate sustainability into their operations and reporting.

06 Conclusion

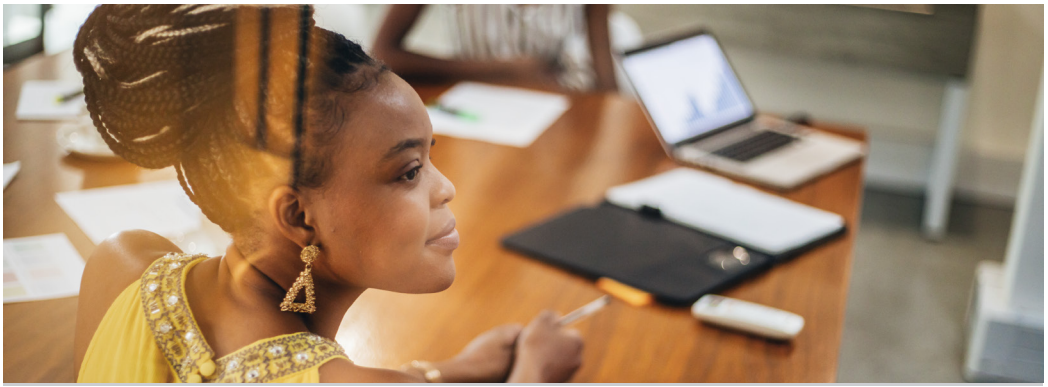
Zambia's mining sector continues to anchor the national economy, contributing significantly to GDP, export earnings, and government revenues. The sector demonstrated resilience in 2024 and 2025, with copper production rebounding strongly and projections indicating output could reach 1 million tonnes in 2025. This recovery has been supported by major investments from global mining companies, ongoing policy reforms aimed at improving regulatory efficiency and diversification into other minerals.

Despite the recent energy crisis, the mining sector was able to sustain and even increase production. This was largely due to the liberalisation of the electricity market through the Open Access Regulations, which has enabled mining companies to secure power via direct purchase agreements with independent power producers and regional traders, helping to mitigate domestic supply shortages.

Progress in geological mapping is further strengthening Zambia's investment proposition. The ongoing high-resolution aerial geophysical survey has now mapped almost half of the country. The survey is generating critical data to reduce exploration risk and attract investment. Coupled with the enactment of the Minerals Regulation Commission Act and the Geological and Minerals Development Act, the regulatory environment is evolving toward greater transparency, efficiency, and alignment with global ESG standards.

Zambia's evolving tax policy landscape continues to reflect a pragmatic balance between revenue mobilisation and sectoral growth, with the mining industry at its core. The government and the ZRA have intensified efforts to streamline tax administration, enhance compliance, and address longstanding challenges such as VAT refund backlogs. The increase in monthly VAT refund allocations and the adoption of digital solutions like the Smart Invoice system signal a clear policy commitment to improving operational efficiency and fostering a more predictable fiscal environment for mining companies.

Challenges remain, however, including price volatility for transition minerals, climate-related risks, and the need for better tailings management. Sustainability and social responsibility must become central to the mining sector's strategy, ensuring that companies adhere to global best practices and that the benefits of Zambia's rich natural resources are shared equitably.
Overall, Zambia's mining industry is on a promising trajectory. With continued policy support, strategic investment and focus on sustainability, the sector is well-positioned to drive inclusive economic growth, support the global energy transition and deliver long-term value for all stakeholders.



Appendix 1

Name of company	2025 projected production (MT)	Trouble shooting (MT)	Expected additional production from new investments (MT)	Total at full capacity (MT)	Mineral
Lumwana Mine	155,000	–	85,000	240,000	Copper
Kalumbila Mine	265,000	–	35,000	300,000	Copper
Kansanshi Mine	185,000	–	115,000	300,000	Copper
Lubambe Mine	25,000	–	13,000	50,000	Copper
Chibuluma Mine	3,500	–	500	4,000	Copper
Mopani Copper Mine	115,000	85,000	–	200,000	Copper
NFCA Chambishi mine	71,100	–	38,900	110,000	Copper
Sino Kasempa	450	–	1,250	1,700	Copper
Luanshya Copper Mines	43,700	–	31,800	75,500	Copper
KCM	90,000	210,000	–	300,000	Copper
Kasisi Copper mine	550	-	1,450	2,000	Copper
Sino Metals	12,000	-	–	12,000	Copper
Macrolink	–	–	12,000	12,000	Copper
Mimbulu Minerals (Moxico)	10,000	–	40,000	50,000	Copper
Mwembenshi Resources	–	–	40,000	50,000	Copper
Kashime Copper	–	–	–	15,000	Copper
Kitumba	5000	–	20,000	25,000	Copper
Euro-Africa (Kalengwa)	–	–	5,000	5,000	Copper
Mwekera Copper Mine	–	–	8,000	8,000	Copper
Mokambo Copper Project	–	–	–	10,000	Copper
Changfa Resources Limited	–	–	–	15,000	Copper
Total	***981,300**	**295,000**	**446,900**	**1,785,200**	Copper

*Copper Production of 981,300 from Brownfields as per National Three (3) Millions Tonnes Copper Production Booklet July 23rd, 2024

07 Contributors

Andrew Chibuye
Country Senior Partner
PwC Zambia

Malcolm Jhala
Partner
Tax Services

Nsansa Mkonda
Associate Director
Assurance Services

Emmanuel Chulu
Associate Director
Tax Services

Ndanji Simukoko
Manager
Assurance Services

Kaunda Mwenya
Senior Manager
Assurance Services

Evelyn Tembo
Manager
Clients Markets Development

Butemwe Nshimbi
Senior Associate
Assurance Services

Alex Musale
Senior Associate
Tax Services

David Manda
Senior Associate
Assurance Services

Kasongo Lufuma
Senior Associate
Clients Markets Development

Elizabeth Monga
Associate
Assurance Services

Elisha Simutami
Associate
Assurance Services

Precious Ngenda
Associate
Consulting & Risk Services

Zambia 2025 Mining Industry Report

www.pwc.com/zm