

NAMIBIAN Mining Compass



July - September 2026 - ENERGY & POWER FOR MINING EDITION

Namibia Strengthens SADC Gateway Role Amid Regional Infrastructure Surge

Powering People and Productivity

**How Namibia is Redefining Bulk
Transport from Pit to Port**

**Walvis Bay Corridors: Strengthening
Regional Supply Chains**

**Northern Graphite: Plant Relocation
Reaches 60% Completion**

**Midstream Payoff: Africa's First Lithium
Sulphate Export**

From Defeat To Opportunity



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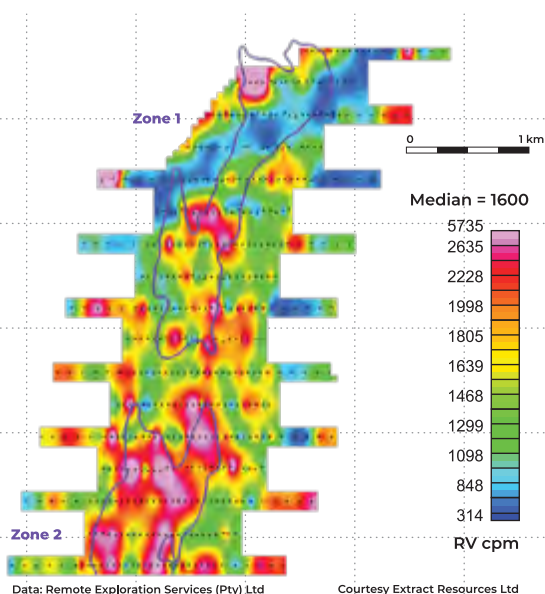


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Powering People and Productivity:

An Introduction to the Q3 2026 Edition

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Welcome to the Q3 2026 – "Energy, Workforce & Local Industry Development" Edition of the Namibian Mining Compass.

Operational excellence in mining is not achieved by geology alone. It is the product of three critical, interdependent pillars: reliable energy, skilled people, and robust local supply chains. This edition is dedicated to examining exactly these interconnected themes that are shaping the future of Namibia's mining sector.

Energy Security: The Foundation for Industrial Growth

Namibia's mining operations are energy-intensive, and a stable, cost-effective, and increasingly green power supply is non-negotiable for competitiveness. Across the country, mines are pioneering innovative solutions that go beyond the national grid.

In this edition, we profile the Maxwell Solar Plant, which began supplying 10MW of renewable power to B2Gold's Otjikoto gold mine via Namibia's national grid—a landmark project under the "wheeling" framework that showcases how private producers and corporate off-takers can collaborate with NamPower. Further innovation is underway at the Oshivela green iron plant, Africa's first industrial-scale facility powered entirely by renewable energy, demonstrating how Namibia can move up the value chain in critical minerals processing using its abundant solar resources.

These case studies illustrate a clear pathway: solar, hybrid, and battery storage solutions are not just environmental choices; they are strategic decisions that enhance operational reliability and reduce long-term costs.

Safety, Skills, and Workforce: Investing in Namibia's Greatest Resource

A mine's performance ultimately depends on its people. Yet, the sector faces persistent challenges in building a workforce that is both skilled and representative. Our coverage of the workforce landscape reveals both urgent challenges and strategic opportunities.

A recent parliamentary committee inquiry found that subcontracting practices across the sector have led to inferior wages, benefits, and job security for many workers, while also raising serious concerns about occupational health and safety. This highlights the critical need for "decent work" principles to be embedded in operational strategies.

The skills gap remains a major constraint. Forecasts indicate significant shortages of professionals such as mining geologists and engineers, as well as technicians like diesel mechanics, welders, and foremen, limiting

industry capacity. This edition examines how mining companies, in partnership with vocational training institutions, are working to address this through targeted apprenticeship programmes and skills transfer initiatives.

Crucially, we also highlight the need for greater inclusion. Women make up only 18% of the formal mining workforce, and their participation in artisanal and small-scale mining (ASM) and executive roles remains low. As Namibia expands into new frontiers like lithium and rare earths, harnessing the full potential of women and youth is not just a moral imperative but a strategic necessity for innovation and sustainability.

Local Content and Supply Chain: Building a Resilient Economy

The third pillar of this edition focuses on the creation of a robust local economy that benefits from and supports the mining industry. The statistics are impressive: mining-related MSMEs supplied more than N\$24 billion in goods and services to the sector in 2024. Our coverage delves into how this local procurement is being scaled and strengthened.

A key tool is the Mining Inputs Database, designed to provide entrepreneurs with clear data on consumption patterns, import specifics, and quantities, connecting them directly to opportunities. We also examine the innovative partnerships being forged by "mining captains," who are driving empowerment through direct contracts, supplier finance, and skills transfer, de-risking local businesses and creating lasting capacity.

This edition also shines a light on the Artisanal and Small-Scale Mining (ASM) sector, which supports over 35,000 livelihoods but remains largely trapped in informality due to complex licensing and limited access to finance. We explore the proposed solutions to formalise this sector and integrate it into the national economy.

A Spotlight on Operational Excellence

The "Energy, Workforce & Local Industry Development" theme is about achieving operational excellence by focusing on the core elements that drive productivity. This edition is designed for everyone invested in Namibia's mining future—from mine managers and policymakers to suppliers and local entrepreneurs. We hope the insights and case studies within these pages will inform your strategies and inspire collaboration as we work to build a resilient and prosperous mining industry for all Namibians.

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BUSINESS TRAVEL WITH CHARACTER

Along Namibia's Atlantic coastline, where desert landscapes meet the ocean, Swakopmund has long served as an important gateway to the country's coastal industries and mining operations. For executives, suppliers, contractors and investors travelling to the Erongo region, the town offers not only strategic access to key business hubs such as Walvis Bay and Arandis, but also a distinctly relaxed coastal atmosphere that makes business travel feel considerably more rewarding.

At the centre of this experience is the Swakopmund Hotel & Entertainment Centre — a property that combines heritage architecture, modern conferencing infrastructure and resort-style hospitality in one of Namibia's most iconic coastal settings. As part of the Legacy Hotels & Resorts portfolio, the hotel blends internationally recognised hospitality standards with the rich cultural character and history of Swakopmund itself.

Built around the original German railway station dating back to the early 1900s, the hotel preserves an important piece of the town's colonial history. Intricate woodwork, elegant verandas and carefully restored architectural details create an atmosphere unlike that of a conventional business hotel, offering guests an authentic sense of place while still delivering the modern comforts expected by international travellers.



Accommodation at the hotel has been designed to support both short corporate visits and longer business stays. Spacious rooms combine classic elegance with contemporary convenience, creating calm, comfortable environments where guests can work, relax and recharge after demanding days of meetings, travel or site visits. The hotel's central location also allows visitors easy access to Swakopmund's restaurants, shops and seaside attractions.



Conferencing and corporate events remain an important part of the hotel's appeal. Its flexible meeting spaces and professional conferencing facilities make it well suited to executive strategy sessions, networking events, presentations and industry gatherings. For businesses operating across Namibia's mining and logistics sectors, the hotel offers a polished and practical environment for conducting business on the coast.

Dining and entertainment further enhance the experience for travelling professionals. From relaxed meals at the Whistle Stop Café to more refined dining experiences showcasing both international cuisine and Namibian flavours, the property caters to a wide range of tastes and occasions. The on-site entertainment centre and casino also provide guests with opportunities to unwind and socialise after business hours, contributing to

the hotel's lively yet sophisticated atmosphere.



Increasingly, corporate travellers are seeking destinations that allow them to combine work with leisure experiences — a trend often referred to as “bleisure” travel. Swakopmund Hotel & Entertainment Centre is particularly well positioned in this regard. Guests can seamlessly extend a business trip into a coastal escape, taking advantage of the area's extraordinary mix of adventure and natural beauty.

From quad biking across towering desert dunes and scenic flights over the Skeleton Coast to marine cruises, sandboarding and ocean excursions, Swakopmund offers experiences unlike anywhere else in the region. The contrast between the Atlantic coastline and the Namib Desert creates a destination that is both visually striking and professionally rewarding for visiting executives and international delegates.

As investment and business activity continue to grow within Namibia's mining sector, the demand for accommodation that combines professionalism, comfort and destination appeal has never been greater. Swakopmund Hotel & Entertainment Centre successfully answers that demand — offering corporate travellers a refined coastal base where business efficiency meets history, hospitality and adventure.

For those travelling to Namibia's coast, it remains one of the region's most distinctive and strategically positioned hospitality destinations.



Namibia Strengthens SADC Gateway Role Amid Regional Infrastructure Surge

Windhoek, Namibia – Namibia is solidifying its position as the preferred trade gateway for the Southern African Development Community (SADC), with a series of corridor developments, infrastructure upgrades, and strategic stakeholder engagements driving cross-border trade growth across the region.

Record Volumes and Strategic Vision

The Walvis Bay Corridor Group (WBCG) has reported record-breaking cargo volumes, with corridor throughput surpassing 2.5 million tonnes during the 2024/25 financial year. This milestone reflects sustained growth in trade flows to and from key regional markets including Angola, Botswana, the Democratic Republic of Congo (DRC), Malawi, Mozambique, South Africa, Zambia, and Zimbabwe.

The achievement comes as the WBCG transitions into its 2026–2031 strategic period, with a clear mandate to position Namibia as the Logistics Hub for the SADC Region—a vision aligned with Namibia's National Development Plan 6 (NDP6).

"Our record throughput and the diversification of commodities demonstrate that the Walvis Bay Corridors are not just transport routes, they are enablers of regional trade, economic growth and investment," said Edward Shivute, Acting CEO of the WBCG.

The Corridor Network: Connecting Landlocked Markets to the Atlantic

Namibia's strategic advantage lies in its geographic position on the Atlantic seaboard, offering the shortest and most efficient access route for several landlocked

SADC countries. The corridor network comprises four primary trade routes:

Corridor	Route	Key Markets
Trans-Kalahari Corridor (TKC)	Walvis Bay → Botswana → South Africa	Botswana, South Africa
Walvis Bay–Ndola–Lubumbashi Development Corridor (WBNLDC)	Walvis Bay → Zambia → DRC	Zambia, DRC, Zimbabwe, Malawi
Trans-Cunene Corridor	Walvis Bay → Northern Namibia → Angola	Angola
Trans-Oranje Corridor	Lüderitz → South Africa's Northern Cape	South Africa

Trans-Cunene Corridor: Angola Trade Strengthens

The Trans-Cunene Corridor, linking the Port of Walvis Bay to Southern Angola via Tsumeb, Ondangwa, and the Oshikango/Santa Clara border post, is increasingly central to regional trade. The corridor carries a diverse range of goods between Namibia and Angola, including petroleum and fuel products, vehicles, mining inputs, construction materials, consumer goods and general retail items.

A key milestone was the introduction of 24-hour operations at the Oshikango/Santa Clara border post in June 2024, implemented by the governments of Namibia and Angola. The round-the-clock service has improved cargo flow, reduced delays, and boosted cross-border trade activity. Discussions are also underway on the possible establishment of a One-Stop Border Post, a development expected to streamline

customs procedures and improve regional trade efficiency.

WBNLDC: Strategic Partnership for the Copperbelt

The Walvis Bay–Ndola–Lubumbashi Development Corridor serves the mineral-rich Copperbelt regions of Zambia and the DRC, providing direct Atlantic access for copper, cobalt, and zinc exports. A major milestone was the operationalisation of the permanent secretariat for the corridor, with Namibia introducing a user levy of 90 cents per tonne on cross-border cargo to finance corridor operations.

The introduction of zinc exports from the DRC via the WBNLDC in the 2024/25 financial year reflects growing market confidence in the route.

Mining Indaba 2026: Investor Confidence and Cargo Pipelines

At the Investing in African Mining Indaba, held in Cape Town in February 2026, the WBCG and Nampor engaged in high-level discussions with leading global mining houses, commodity traders, and logistics investors. Several firms indicated interest in establishing operational bases, warehousing facilities, and value-adding processing operations in Walvis Bay and Lüderitz.

"Through the Walvis Bay Corridor Group, Namibia connects key regional corridors... offering direct access to the Atlantic Ocean, reducing cargo transit times by days, and supporting heavy mineral logistics and bulk exports," said Deputy Minister of Industries, Mines and Energy, Hon. Gaudentia Kröhne.

Discussions explored the expansion of commodity flows, including potential imports of sulphur, fertiliser, ammonium nitrate, and clinker, alongside exports of nickel (both containerised and bulk), zinc, cobalt, manganese, copper, and iron ore.

Regional Infrastructure Transformations

Kazungula Bridge: A Game-Changer for the North-South Corridor

The US\$259 million Kazungula Bridge across the Zambezi River has transformed regional trade, increasing the daily number of cargo trucks crossing between Botswana and Zambia. Before the bridge was constructed, crossing the river was done on a slow, low-capacity ferry that often led to delays of several days. This process now takes a matter of hours.

Japanese Ambassador to Namibia Shinichi Asazuma, who visited the 923-metre road-and-rail bridge at the world's only quadripoint where four countries—Botswana, Namibia, Zambia, and Zimbabwe—meet, highlighted its significance:

"Jica established border management facilities, simplified customs procedures, significantly reduced border crossing times and eliminated logistics bottlenecks," he said.

The bridge aligns with the SADC Infrastructure Vision 2027 and the SADC Protocol on Trade, supporting intra-regional trade and the African Continental Free Trade Area (AfCFTA).

North-South Economic Corridor: A \$16 Billion Opportunity

The North-South Corridor (NSC), the busiest trade route in the SADC region moving over 60% of SADC trade and serving seven countries and over half the region's population, is being transformed into a smart economic corridor.

Seven SADC member states—Botswana, DRC, Malawi, Mozambique, South Africa, Zambia, and Zimbabwe—have endorsed the concept of the NSC Economic Corridor Pilot Programme. The programme is estimated to unlock \$16.1 billion in GDP within the region and generate approximately 1.6 million jobs through local manufacturing, value chains, and other economic activities. The pilot is expected to kick off in 2026 following approval by the Council of Ministers and Summit of Heads of State.

Mmamabula-Lephalale Rail Link: Unlocking Botswana's Coal and Mineral Exports

A new era of economic growth and regional integration is on the horizon with the development of the Mmamabula-Lephalale Rail Link, connecting Botswana's mining region with South Africa's Lephalale area. The rail system is expected to play a pivotal role in the efficient movement of goods, including coal, soda ash, copper, manganese, and other vital exports.

"This project will reduce transportation costs, improve supply chain efficiencies, and strengthen the region's competitive position on the global stage," said Charles Siwawa, CEO of the Botswana Chamber of Mines. The project, costing approximately US\$1.125 million per annum in rail capacity for Botswana, is technically and financially viable, with private sector participation seen as essential for successful implementation.

Shared Infrastructure Models: Lessons from the Bakwena Platinum Corridor

The World Economic Forum highlights the Bakwena Platinum Corridor—a 385 km toll route connecting Pretoria to the Botswana border—as a successful model of shared transport infrastructure supporting mineral exports. The corridor has facilitated the transport of platinum group metals and other commodities across the region, delivering efficiency gains, traffic control for overloading, employment creation, and social uplift.

The model—combining public-private partnerships, debt refinancing, the user-pay principle, and electronic tolling—is seen as replicable for lithium corridors in Zimbabwe, copper corridors in Zambia-DRC, and rare earth corridors in Namibia with development bank support.

Health and Safety: Maintaining Corridor Resilience

In May 2026, the WBCG confirmed that transport and trade activities along the corridors continued to operate normally despite a reported outbreak of the Ebola disease in parts of the DRC. However, cross-border transport operators, logistics personnel, and border agencies were urged to remain highly alert and implement health protocols to

protect regional trade routes.

The WBCG's roadside wellness clinics located along the transport corridors provide health services to cross-border transport operators, contributing to corridor safety and resilience.

Outlook: Strengthening Regional Integration

The WBCG's strategic engagements throughout early 2026, including a high-level stakeholder mission in January and the strategic planning session in March, have reinforced the organisation's commitment to addressing operational bottlenecks, strengthening stakeholder collaboration, and expanding market reach.

As Shivute noted, corridor competitiveness will increasingly be driven by efficiency upgrades, digitalization, harmonized border procedures, and strategic public-private partnerships.

"As mining production expands across the region, Namibia stands ready to provide reliable port access, multimodal connectivity, and a supportive policy environment that enables volume growth and long-term industrial development," he stated.

With the Trans-Kalahari Railway feasibility study nearing completion, the Lobito Corridor Secretariat operationalised, and regional economic corridor programmes advancing, Namibia is poised to play an increasingly central role in facilitating SADC trade and regional integration.



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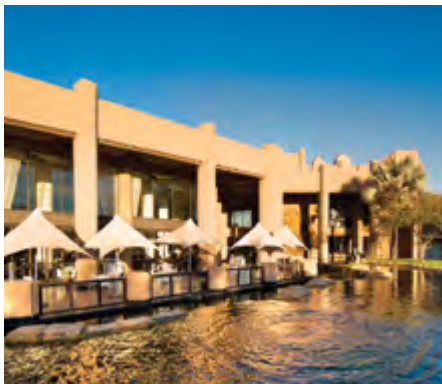
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WHERE BUSINESS MEETS PLEASURE IN WINDHOEK

For business executives travelling to Namibia, efficiency matters. A work trip needs more than just a convenient location; it requires reliable connectivity, professional meeting facilities, quality accommodation and an environment that allows travellers to unwind after demanding days of negotiations, networking and site visits.

This is where the Windhoek Country Club Resort continues to distinguish itself as one of Namibia's premier business travel destinations. A member of the Legacy Hotels & Resorts collection, the resort reflects the group's longstanding reputation for delivering premium hospitality experiences across Africa.



Located just minutes from central Windhoek and within easy reach of both Eros Airport and Hosea Kutako International Airport, the resort offers the ideal base for corporate travellers attending the Namibian Mining Expo or conducting business across the country's mining regions. Its accessibility makes it particularly attractive for executives flying in for short meetings, while its resort-style setting encourages longer stays for those balancing business with relaxation.

Unlike conventional city hotels, Windhoek Country Club Resort delivers a tranquil, spacious environment that feels removed from the pressures of the capital, yet remains close to Windhoek's commercial hubs. Set among landscaped gardens and overlooking Namibia's leading championship golf

course, the property offers guests a sense of calm and privacy that is increasingly valued by today's business traveller.



The resort's accommodation offering is tailored to modern corporate needs. Spacious rooms with work-friendly layouts and strong WiFi connectivity create comfortable environments for both rest and productivity. For extended corporate stays, guests benefit from an atmosphere that combines the convenience of a business hotel with the comfort of a resort retreat.

Conferencing and events remain a major strength of the property. With nine versatile indoor venues and the capacity to host everything from executive board meetings to large-scale corporate gatherings and gala functions, the resort has become a preferred destination for conferences, strategy sessions and industry events in Namibia. Dedicated event support teams and integrated resort amenities simplify planning for organisers, particularly those managing multi-day conferences or hosting international delegates. For mining sector professionals attending the Expo, this creates a seamless experience where accommodation, meetings, dining and networking can all take place within one secure, professionally managed environment.

Dining also plays an important role in the guest experience. The resort's Kokerboom Restaurant offers refined bistro-style cuisine inspired

by Namibian flavours and European influences, providing an ideal setting for both business lunches and relaxed evening dinners. Locally sourced ingredients and carefully curated wine selections add a distinctly Namibian touch to the culinary offering.

Another culinary option on site is the Oasis Restaurant where guests can enjoy a relaxed yet refined dining experience centred around seasonal, Mediterranean inspired cuisine. Dishes offer bold flavours served on beautifully presented ala carte dishes. Set in the lush surrounds of the country club, the eatery offers meals perfect for long leisurely lunches, sundowners and dinners.

Beyond the boardroom, the resort caters to the growing demand for "bleisure" travel — the blending of business and leisure. After a day of meetings or mine visits, guests can unwind beside the pool, enjoy a spa treatment, fit in a workout at the gym, or take advantage of the renowned 18-hole golf course. These experiences have become increasingly important for corporate travellers seeking balance during extended trips.



As Namibia's mining industry continues to attract global investment and international business travel, Windhoek Country Club Resort remains uniquely positioned to meet the evolving needs of the sector. Combining professional infrastructure with genuine hospitality and a relaxed resort atmosphere, it offers more than simply a place to stay — it provides a sophisticated business travel experience in the heart of Namibia.



How Namibia is Redefining Bulk Transport from Pit to Port

Namibia's logistics sector is demonstrating remarkable innovation in supporting the region's growing mining industry. Through technology-driven efficiencies, public-private collaboration, and strategic infrastructure development, the Walvis Bay corridors are transforming how minerals move from landlocked mines to global markets.

Pindulo Logistics: Technology-Driven Efficiency on the Copper Corridor

Pindulo Logistics, a Namibian company, has emerged as a standout example of how data-driven solutions are revolutionising mining logistics. The company recently moved its 25th shipment of copper concentrate from Botswana to the Port of Walvis Bay – a journey spanning approximately 1,030 kilometres.

Measurable Efficiency Gains

Through a combination of advanced load optimisation software and a strategic shift from breakbulk to bulk operations, Pindulo has achieved an 18% improvement in payload efficiency. This means fewer trucks on the road, lower costs, and reduced congestion along the corridor.

The company's impact extends beyond payload optimisation:

- Patented vessel loading equipment has achieved a 350% efficiency improvement in vessel loading at Walvis Bay, enabling the same volume to be loaded in 24 hours compared to the industry standard of four to five days – with zero spillage and no product loss
- An automated documentation system

has reduced border clearance times by 20% for major mining clients

- Pindulo estimates it has reduced annual trips by approximately 1,044, saving over 2 million kilometres of wear and tear on trucks and roads, and 728,000 litres of fuel – translating to annual cost savings of around \$2.5 million that are passed on to clients

End-to-End Logistics Solutions

Pindulo has distinguished itself as "the only logistics provider currently offering a true end-to-end solution" for a mine client. The company manages all aspects of the process for copper concentrate movement:

- Cross-border clearance and paperwork
- Port warehousing
- Bulk loading via specialised patent skips



This integrated approach has been developed through responsiveness to client needs. When the company secured a fertiliser client without the necessary equipment, it "developed a tailored solution and brought in one of the most advanced bagging machines on the market" within months.

Walvis Bay Corridor Group: Strategic Collaboration Drives Regional Trade

The Walvis Bay Corridor Group (WBCG) has been instrumental in facilitating logistics solutions through public-private partnerships. The results speak for themselves: Botswana's cargo volumes through Walvis Bay increased by 40% during the 2024/25 period, driven largely by copper mining and fuel sectors.

Copper Concentrate Flows from Botswana

The Trans-Kalahari Corridor (TKC) has become a key route for Botswana's copper exports. The WBCG reports handling six vessel calls for copper exports in the 2024/25 period, with an additional three vessel calls and cargo throughput already in the pipeline.

Investment in handling equipment has been critical to this success. Modernised equipment such as shore cranes paired with a patented closed skip system enables:

- Faster loading
- Zero spillage
- Safer quayside operations
- Quicker vessel turnaround times

Zambia and DRC Copperbelt Integration

The Copperbelt region is driving significant growth on the Walvis Bay-Ndola-Lubumbashi Development Corridor (WBNLDC). The WBCG has observed increasing volumes "driven by the expansion in mineral production by existing mines and investments in new mining ventures, such as KoBold Metals in Chingola and Kalengwa in Mufumbwe".

A key milestone was the introduction of zinc exports from the Democratic Republic of Congo via the WBNLDC. A new strategic corridor – Kolwezi-Kambimba-Lumwana-Mangu-Katima Mulilo-Walvis Bay – is being championed by the Sandstone Consortium, which will be 235 kilometres shorter than the existing route and up to seven days faster.

The Silica Quarry: A Local Supply Chain Success Story

A newly approved silica quarry near Tsumeb demonstrates how strategic logistics planning can deliver tangible benefits for the mining value chain.

The quarry supplies silica to the Tsumeb smelter, Namibia's only copper smelter – a critical input for furnace chemistry. Located just 15 kilometres from the smelter, the quarry sharply reduces transport costs and ensures stable supply.

This small-scale operation is a vital link in the copper value chain, ensuring the smelter can efficiently process copper concentrate from regional mines into blister copper for export.

Xaudum Iron Ore: A Future Corridor in the Making

The Xaudum iron ore project near Shakawe, Botswana, with 441 million tonnes of iron ore discovered, presents the next major logistics opportunity for the region.

Both Namibia and Botswana are positioning for this development. Namibia's Minister of Works and Transport, Veikko Nekundi, confirmed that the country is at an "advanced stage of developing the Trans-Zambezi railway line" linking Grootfontein to Katima Mulilo via Divundu – just 35 kilometres from Shakawe.

Tsodilo Resources, the project developer, is evaluating transport routes including Walvis

Bay and a future port facility near Cape Fria in the Kunene Region. The company has expressed interest in connecting through either Divundu or Katima Mulilo, creating a "world-class logistics hub linkage to international markets" benefiting Namibia, Botswana, Zambia, Zimbabwe, Angola, and the DRC.

Northern Graphite: Relocating Infrastructure for Efficiency

Northern Graphite has reached the 60% completion milestone in relocating processing infrastructure to its Okanjande graphite mine, expected to be fully completed by June 2026.

The processing plant is being moved from the former Okorusu mine site to Okanjande, a strategy expected to lower operating costs and improve project sustainability. The mine benefits from proximity to the Port of Walvis Bay and is set to supply graphite concentrate to a proposed Battery Anode Material facility in Saudi Arabia – a joint venture targeted to commence production in 2028.

Lessons Learned and Best Practices

These case studies reveal several common success factors that underpin effective mining logistics in Namibia:

1. **Technology and Data-Driven Efficiency:** Pindulo's 18% payload improvement and 350% vessel loading efficiency demonstrate the power of investing in technology and data analytics.
2. **Integrated End-to-End Solutions:** The move toward comprehensive logistics solutions that manage every stage from mine to port creates predictability and reduces costs.
3. **Public-Private Partnerships:** The WBCG model of collaboration between government agencies and private logistics providers has been critical to corridor success.
4. **Infrastructure Investment:** The development of the Angra Point Deepwater Port at Lüderitz and proposed rail upgrades are essential for future growth.
5. **Border Efficiency:** One-Stop Border Posts and 24-hour operations at key crossings have significantly reduced congestion and improved vehicle turnaround times.

Outlook

As the WBCG's Edward Shivute noted, "sustained regional growth in mine-related cargo is increasing demand for efficient, reliable transport and logistics services across regional corridors". With new mining projects across Botswana, Zambia, and DRC – and the development of the Trans-Kalahari Railway and Trans-Zambezi line on the horizon – Namibia is well-positioned to continue its role as the preferred logistics gateway for Southern Africa's mineral wealth.



A convergence of major infrastructure developments, strategic corridor expansions, and innovative logistics solutions is transforming Namibia into Southern Africa's premier gateway for mining exports. From the eagerly anticipated completion of the Trans-Kalahari Railway feasibility study to the establishment of a permanent corridor secretariat and significant port developments, the building blocks are being assembled for a new era in regional mineral logistics.

Walvis Bay Corridors: Strengthening Regional Supply Chains

U.S. Recognition of Strategic Importance

In a significant endorsement of Namibia's logistics ambitions, a senior U.S. delegation led by Deputy Assistant Secretary of State for Southern Africa Nick Checker concluded a four-day visit to Namibia in mid-June 2026, with the Port of Walvis Bay emerging as a central topic of discussion.

U.S. Ambassador John Giordano described the port as a "rapidly emerging terminus of a Southern African energy security and logistics corridor" — not merely a gateway for Namibian exports, but "a strategic hub linking the region's mineral, energy, and agricultural flows to global markets". The discussions, which included Walvis Bay Corridor Group CEO Edward Shivute and Chamber of Mines CEO Fabian Shaanika, underscored Namibia's competitive advantages in logistics and critical minerals, with the U.S. framing the relationship not around aid, but as a "commercial partnership driving integration with global supply chains".

The visit reflects growing international interest in Namibia's role as a logistics hub, particularly as the U.S. seeks to diversify critical mineral supply chains and strengthen ties with stable, rule-of-law jurisdictions.

Walvis Bay-Ndola-Lubumbashi Corridor: Permanent Office Established

A major milestone for regional integration was achieved in April 2026 with the opening of a permanent secretariat for the Walvis Bay-Ndola-Lubumbashi Corridor (WBN-LDC), linking Namibia's Atlantic port to the mineral-rich Copperbelt regions of Zambia and the Democratic Republic of Congo.

The corridor is of strategic importance for landlocked Zambia and the DRC, providing a direct and efficient route to international markets for copper, cobalt, and other critical minerals. To fund ongoing operations and maintenance, a modest levy of approximately 90 cents per tonne of goods moved along the corridor has been introduced. The new secretariat is expected to improve coordination, reduce border delays, cut costs, and make trade smoother, supporting the broader objectives of the African Continental Free Trade Area (AfCFTA).

The establishment of the secretariat was welcomed by representatives from all three countries, though they acknowledged ongoing challenges including security concerns, administrative delays, and the need for harmonized policies and improved digital systems at border crossings.

Rail & Bulk Transport Developments: The Trans-Kalahari Railway Nears Reality

Feasibility Study Completion Expected

June 2026

The most transformative infrastructure project on Namibia's horizon remains the Trans-Kalahari Railway (TKR), a proposed 1,500-kilometre line connecting Botswana's coal fields and mineral-rich regions to the Port of Walvis Bay. After decades of discussion and delays, the project is now at a critical juncture.

The feasibility study, initially scheduled for completion in April 2026, was extended by two months to June 2026 to allow for essential technical assessments, including hydrological studies, geotechnical analyses, and route alignment checks. Both Namibia and Botswana have reaffirmed their unwavering political commitment to the project. As Namibia's Minister of Works and Transport Veikko Nekundi stated: "This is no longer a dream. It is an engineering and economic imperative whose time has come".

The project is estimated to cost more than US\$16 billion (approximately P164.6 billion) and will be developed as a major public-private partnership. Construction is planned to begin around 2027, following the completion of the feasibility study. The railway is expected to reduce pressure on regional road networks and provide a more efficient, fuel-efficient, low-impact alternative to road transport for bulk commodities. It will also create jobs along the route and support mining, agriculture, and manufacturing sectors.

TransNamib's Fleet Modernisation and Hydrogen Pilot

While the Trans-Kalahari Railway represents the long-term future, TransNamib is imple-

menting immediate measures to strengthen its existing rail capacity. The state-owned rail operator has issued a tender to lease diesel-electric locomotives as a temporary measure to address operational capacity constraints while its multi-billion-dollar fleet modernisation programme is implemented.

The long-term plan remains firmly on track, with funding secured through the Development Bank of Namibia and the Development Bank of Southern Africa. An independent technical evaluation of locomotive manufacturers has been completed, and the company is moving forward with a programme to remanufacture 20 locomotives at an estimated cost of N\$978 million—approximately 60% of the cost of purchasing new units. This forms part of a broader N\$1.7 billion investment in 23 new locomotives.

In a pioneering move, TransNamib also announced in April 2026 that it had obtained board approval for a six-month pilot of a dual-fuel hydrogen-diesel locomotive, conducted in partnership with maritime group CMB.TECH. The trial, which will run for approximately 50 return trips along the Walvis Bay-Windhoek corridor, is designed to test hydrogen technology under real-world conditions across a range of performance indicators including fuel consumption, reliability, and cost-effectiveness. If successful, the pilot could position Namibia as an African leader in sustainable rail transport.

Shifting Coal from Road to Rail

TransNamib is also targeting a short-term shift of coal exports from Botswana off the road and onto rail, with first shipments expected from Gobabis to Walvis Bay by February or March 2027. The plan aims to move approximately 50,000 tonnes of coal per month initially, with the potential to increase to 100,000 tonnes or more. While trucks will still carry coal from Botswana mines to Gobabis, the rail leg will significantly reduce costs and enable higher export volumes.

Government Budget Commitment

Transport infrastructure has received substantial budget allocations in the 2026/27 fiscal year, with Finance Minister Erica Shafudah announcing R2.1 billion for road infrastructure, supplemented by external loans and grants totalling R1.6 billion and fuel levy revenues of R2.4 billion. This follows progressive budget increases for rail operations and projects, from R455 million in 2023/24 to an estimated R1.3 billion in 2027/28, funding major capital projects.

Mining Supply Chain Optimization

Northern Graphite: Plant Relocation Reaches 60% Completion

In a significant development for Namibia's emerging graphite sector, Northern Graphite has reached the 60% completion milestone in relocating processing infrastructure to its Okanjande graphite mine, with the project expected to be fully completed by June 2026. The processing plant is being moved from the former Okorusu mine site to Okanjande, a strategy expected to lower operating costs and improve project sustainability.

The relocation positions Okanjande for a planned restart in late 2027, with the mine set to supply graphite concentrate to a proposed Battery Anode Material (BAM) facility in Saudi Arabia—a joint venture with the Obeikan Investment Group, targeted to commence production in 2028. The company highlighted that Okanjande benefits from high-quality graphite resources, proximity to the Port of Walvis Bay, and a relatively short development timeline compared to competing global projects.

Haib Copper: Optimising Supply Chains for Bulk Production

Koryx Copper's Haib Copper Project in southern Namibia is advancing toward a Pre-feasibility Study publication expected in late 2026, with significant developments in processing optimisation and infrastructure planning. The project is evaluating the application of Coarse Particle Flotation (CPF), a technology that could reject up to 25% of run-of-mine feed as coarse tailings with limited copper loss, effectively increasing processing throughput and reducing energy and water consumption.

On the infrastructure front, Haib's power supply will be drawn from the Namibian national grid, augmented by a hybrid solar PV system with battery storage, designed to meet a peak demand of 152MVA and annual usage of 1,131GWh. A new double-circuit 220kV overhead transmission line from the Harib Substation (68km away) will provide grid connection, with capacity designed for future expansion to 200MVA. Water supply will be sourced from the Orange River, combined with significant on-site storage to address seasonality, with the option of connection to the Neckartal Dam for future expansion.

Klein Aub: Tapping Namibia's Tailings Opportunities

Unicorn Mineral Resources is advancing its proposed acquisition of a controlling stake in the Klein Aub copper mine, with completion now expected by the end of June 2026. The company is pursuing an innovative processing route utilising Draslovka's glycine leaching agent for the 5.5 million tonne tailings facility, estimated to grade 0.26% Cu and 7.4g/t Ag.

In a development with broader implications for Namibia's mining sector, the Ministry of Industries, Mines and Energy has provided information on an additional 150+ tailings facilities resulting from mining activity pre-independence in 1990. These facilities present both a significant remediation challenge and an opportunity for metal extraction using the technologies being developed at Klein Aub.

Export Infrastructure and Supply Chain Investments

Airport Upgrades and Airfreight Capacity

The Namibia Airports Company (NAC) and Ministry of Works and Transport are pursuing significant airport upgrades, including a proposed third terminal at Windhoek's Hosea Kutako International Airport incorporating solar power and energy-efficient

facilities. Approximately R29 million is being invested in feasibility studies for upgrading airports at Lüderitz, Walvis Bay, Rundu and Katima Mulilo, aimed at improving regional connectivity and supporting green hydrogen and mining logistics.

New or expanded routes from airlines including South African Airways, Airlink, Air Angola, FlySafair, and Eurowings are boosting belly cargo capacity, with the NAC explicitly framing route development as a lever for higher passenger volumes and "diversification into cargo".

Road Fund and Cross-Border EV Infrastructure

The Road Fund Administration (RFA) is exploring additional revenue streams to address a 46% funding gap between user fees and planned expenditure. Plans include enforcing new regulations mandating that used vehicles be transported "off-wheel" to protect infrastructure, and boosting cross-border electric vehicle traffic by placing charging stations along key corridors.

Cross-Border Trade and Regional Integration

The infrastructure investments underway are designed to support the broader objectives of the Southern African Development Community and the African Continental Free Trade Area. The Trans-Kalahari Railway, in particular, is expected to enhance regional connectivity, support intra-African trade, and provide a more efficient export route for landlocked SADC countries that have long relied on congested single corridors through South Africa.

Both Namibia and Botswana are contributing equally to the project's funding, with Botswana's Minister of Transport and Infrastructure Noah Salakae noting that "the largest part of the railway is in Botswana," and that the project will "cement and deepen the relationship between Botswana and Namibia".

Outlook: From Gateway to Global Logistics Hub

As the Trans-Kalahari Railway feasibility study reaches completion and the Walvis Bay-Ndola-Lubumbashi Corridor secretariat becomes operational, Namibia is moving decisively to transform its logistics sector from a national gateway into a global supply chain hub.

The combination of port expansion, rail modernisation, hydrogen innovation, and corridor management positions Namibia to capture a significant share of the growing demand for critical minerals logistics. The recognition from international partners, particularly the United States, of Namibia's strategic importance in this area adds a new dimension of geopolitical significance to the country's infrastructure ambitions.

As Ambassador Giordano observed during his visit, "The countries that produce energy, control critical minerals, and build reliable supply chains will shape the balance of economic and industrial power in the decades ahead". Namibia is positioning itself firmly to be one of those countries.



How Technology, Procurement and Local Links Are Optimising Namibia's Mining Supply Chains

Namibia's mining supply chains are being optimized through a multi-pronged strategy that focuses on technology-driven efficiency, strategic procurement, and developing end-to-end logistics solutions. While infrastructure challenges persist, new technologies and cross-sector collaborations are delivering measurable improvements in payload efficiency, border clearance times, and local economic impact.

Technology-Driven Efficiency at Logistics Nodes

Technology is playing a key role in enhancing the efficiency of Namibia's supply chains. For example, logistics service provider Pindulo Logistics has implemented a data-driven approach for moving copper concentrate from Botswana to the Port of Walvis Bay, achieving an 18% improvement in payload efficiency. This approach is supported by an automated documentation system that has reduced border clearance times by 20% for their major mining clients. Patented vessel loading equipment deployed at the port has also achieved a 350% efficiency improvement in vessel loading, significantly enhancing the economic viability of Walvis Bay for bulk exports.

Local Procurement as a Strategic Supply Chain Pillar

Supply chain optimization in Namibia is not solely about logistics efficiency; it is also deeply intertwined with government and industry goals for local economic empowerment. Major mining companies like B2Gold, Swakop Uranium, and Navachab Gold Mine are driving a strategic shift to direct contracts and capability-building, recognizing procurement as a tool for quick, tangible empowerment.

- **Scale of Impact:** Between 60% and 80% of industry spend already goes to Namibian suppliers, representing roughly 45% of total industry revenue

flowing onshore. Swakop Uranium alone accounts for about N\$7 billion of an estimated N\$23 billion in local spend by the industry.

- **Targeted Interventions:** To address the capital gap faced by local suppliers, mines are closing the financing gap. For instance, Navachab provided equipment financing to a group of retrenched workers, enabling a contracting business that now generates approximately N\$120 million per year. Similarly, a worker at Swakop Uranium transitioned from being a cleaner to running an on-site car wash generating N\$3 million annually after the company invested in the required equipment.

A cross-sector collaboration initiated in late 2022 between B2Gold Namibia, Dundee Precious Metals, Ohorongo Cement, and Navachab has focused on streamlining supply chains, such as sharing road transport resources to improve distribution efficiency and reduce costs. This collaboration also provides a platform for combating vendor fraud.

End-to-End and Specialized Logistics

Logistics providers are evolving to offer more comprehensive services. Pindulo Logistics has successfully developed a true end-to-end logistics solution for a mine client, managing the entire process—from cross-border clearance and paperwork to port warehousing and bulk loading—for

copper concentrate transported approximately 1,030 km from Botswana to Walvis Bay.

This integrated approach extends to specialized supply chains. The safe and secure transport of uranium and other radioactive material is a critical specialization for Namibia, a significant uranium-producing nation. While national regulations and some industry operators have robust internal procedures, systemic gaps exist, including a shortage of specialized transport containers and a lack of specialized training for first responders and customs personnel. There is a recognized need for strengthening regulatory guidance, investing in tracking infrastructure, and expanding specialized training to ensure safety in this strategic supply chain.

Linking the Supply Chain: The Silica Quarry Example

A mining supply chain is a connected network, and disruptions at one point can affect the entire system. The story of a newly approved silica quarry near Tsumeb illustrates this. This small operation is a critical link in the copper value chain, supplying silica to the Tsumeb smelter, Namibia's only copper smelter. The quarry is located just 15 km from the smelter, sharply reducing transport costs and ensuring furnace chemistry remains stable. This ensures the smelter can efficiently process copper concentrate from regional mines into blister copper for export.



Namibia's Export Infrastructure Surges:

Record Port Volumes and Green Minerals Terminal Signal New Era for Mining Logistics



Windhoek, Namibia – Namibia is cementing its position as a pivotal logistics hub for Southern Africa through a coordinated strategy of port modernisation, strategic infrastructure development, and international partnerships. With record cargo volumes and a focus on critical minerals, the country is aggressively investing in its export infrastructure to support its growing mining sector and attract regional trade.

Record Cargo Throughput and Regional Growth

Namibia's ports are demonstrating robust growth, underscoring their increasing regional relevance. For the 2024/25 financial year, the Ports of Walvis Bay and Lüderitz handled a record 8.42 million tonnes of cargo, a 4.8% increase that set a new decade-high. This achievement is largely attributed to cargo diversification and the export of key minerals, including copper, zinc, and uranium oxide concentrate, positioning Namibia as an emerging player in the global mineral supply chain.

"Sustained regional growth in mine-related cargo is increasing demand for efficient, reliable transport and logistics services across regional corridors," said Edward Shivute, acting CEO of the Walvis Bay Corridor Group (WBCG). A significant milestone was the introduction of zinc exports from the Democratic Republic of Congo via the Walvis Bay-Ndola-Lubumbashi Development Corridor, reflecting growing market confidence.

Port of Walvis Bay: Modernisation and Capacity Expansion

A wave of public and private investment

is modernising the Port of Walvis Bay to handle larger cargo volumes and improve efficiency.

- **New Multipurpose Terminal:** African Global Logistics (AGL) has commenced operations at a US\$200 million terminal, enhancing bulk and breakbulk cargo handling. The facility is expected to minimise ship turnaround times and reduce freight costs, positioning Walvis Bay as a "global gateway to Africa".
- **Container Terminal Upgrade:** Terminal Investment Namibia (TIN) is undertaking a N\$2.1 billion (approx. US\$126.5 million) modernisation of the container terminal, receiving an initial batch of six rubber-tyred gantry cranes to boost productivity and throughput.
- **Expanded Warehousing:** Logistics companies are expanding their footprint. Grindrod opened a 4,000m² warehouse, and Manica Group Namibia and the Frans Indongo Group are constructing the 9,000m² Rennies Indongo Port Terminal (RIPT) to address rising cargo volumes.

The Walvis Bay Corridor Group is also strengthening regional links, including the Trans-Kalahari Corridor (TKC) and the Trans-Cunene Corridor, with investments in modern equipment and 24-hour border operations to improve efficiency.

Port of Lüderitz: A Gateway for Critical Minerals

In a strategic move to unlock Southern Namibia's potential and export processed minerals, the European Union (EU) and the Port of Rotterdam have partnered with Namport

to develop a new Green Minerals Terminal at Angra Point in Lüderitz.

The EU, through its Global Gateway initiative, has committed N\$13 million to fund the planning phase, which includes a high-level environmental impact assessment. The project aims to create a multi-user terminal for the export of processed critical minerals like lithium, manganese, and graphite to global markets, positioning Namibia as a key player in clean energy supply chains. Significantly, the development will address the 8.75-metre draught limitation at the existing Lüderitz port by offering access to deep water up to 30 metres, enabling it to accommodate larger, more efficient vessels.

The agreement marks a significant shift for Namport, expanding its role from a traditional logistics operator to a facilitator of strategic clean-energy trade.

Outlook: Investing for the Future

While the progress is substantial, industry leaders warn that further investment is critical to maintain competitiveness. There is a growing call for expanded rail solutions, dry bulk facilities, and flexible port rate structures to remain competitive against other regional trade routes.

"There is a need for a dry port facility to support growing mining export volumes," noted Frans Visser of Grindrod, highlighting the disproportionate pressure on road freight. As the Lobito Rail Corridor and port infrastructure in Angola are developed, Namibia must ensure it retains its advantage as the preferred Atlantic gateway for the region's mineral wealth.





Rail & Bulk Transport Developments

Namibia's rail sector is undergoing a transformative period marked by two parallel developments: a pioneering green hydrogen locomotive trial and the advanced stages of the massive Trans-Kalahari Railway project. These initiatives aim to modernize domestic freight capacity, decarbonize logistics, and create a new export corridor for the region's mineral wealth.

Hydrogen-Powered Rail: A World-First Trial

A groundbreaking six-month trial of a dual-fuel hydrogen-diesel locomotive is set to begin, positioning Namibia as one of Africa's first countries to deploy hydrogen technology in heavy freight rail.

The Partnership and Technology

The project is a strategic collaboration between three entities: TransNamib (the national rail operator), CMB.TECH Namibia (a maritime hydrogen specialist), and Africa Global Logistics (AGL), which manages the Walvis Bay Multipurpose Bulk Terminal.

The locomotive, being assembled by South African firm Traxtion, features a 2,250-horsepower BeHydro dual-fuel engine. This allows it to operate on diesel, green hydrogen, or a combination of both, ensuring service reliability. If the hydrogen system is unavailable, the locomotive automatically switches to diesel, maintaining seamless operations.

Feature	Specification
Engine	BeHydro Dual-Fuel (Hydrogen/Diesel)
Power	2250 hp
Fuel Storage	Two 20-foot units with up to 360kg compressed hydrogen each
Route	Walvis Bay – Windhoek (414 km)
Trial Duration	Six months, ~50 return trips

The Walvis Bay-Windhoek Route: A Demanding Test

The 414-kilometre corridor is an ideal testing ground. It climbs from just 6 metres above sea level at the coast to 1,601 metres in the Windhoek highlands, providing a meaningful real-world test for traction performance, fuel substitution, and system robustness under continuous load.

Strategic Impact and Future Plans

The project uses green hydrogen produced off-grid at CMB.TECH's plant in Walvis Bay, demonstrating how green hydrogen can be integrated into an existing logistics corridor.

For TransNamib, the trial is part of a broader modernisation strategy. CEO Desmond van Jaarsveld noted that the pilot would allow the company to evaluate fuel consumption, reliability, and cost-effectiveness. If successful, the company may consider transitioning portions of its fleet to dual-fuel technology.

Trans-Kalahari Railway: A Transformative Mega-Project

While the hydrogen trial represents immediate innovation, the Trans-Kalahari Railway (TKR) is the long-term game-changer. The proposed 1,500-kilometre line will connect Botswana's mineral-rich hinterland to the Port of Walvis Bay.

Feasibility Study Reaches Final Stages

The project has been decades in the making, but is now at a critical juncture. The feasibility study, initially scheduled for completion in April 2026, was extended by two months to June 2026 to allow for essential technical assessments, including hydrological studies, geotechnical analyses, and route alignment checks.

Both nations have reaffirmed their commitment. Namibia's Minister of Works and Transport, Veikko Nekundi, stated: "This is no longer a dream. It is an engineering and economic imperative whose time has come". Botswana's Minister, Noah Salakae, noted the project will "cement and deepen the relationship between Botswana and Namibia".

Technical Specifications and Funding

The project is estimated to cost more than US\$12 billion (approximately P164.6 billion) and will be developed as a major Public-Private Partnership (PPP) under a Design, Build, Own, Operate, and Transfer (DBOOT) arrangement.

The line is predominantly intended to transport coal from Botswana's Mmamabula coal fields to Walvis Bay, with plans to export around 90 million tonnes of coal per year to markets in India and China. The route will involve constructing a new line in Botswana to the existing railhead at Gobabis in Namibia, as well as rehabilitating the existing TransNamib line from Gobabis to Walvis Bay.

The Immediate Shift from Road to Rail

As a short-to-medium-term solution to move more bulk freight by rail, TransNamib is planning to shift coal exports from Botswana off the road and onto rail, with first shipments expected from Gobabis to Walvis Bay by February or March 2027. The plan aims to move approximately 50,000 tonnes of coal per month initially, with the potential to increase to 100,000 tonnes or more. TransNamib is securing significant funding from the Development Bank of Southern Africa (DBSA) to acquire new locomotives and wagons to support this capacity.

Capital Investment and Funding

The rail sector is seeing substantial financial commitment. The government budget for rail operations and projects has risen progressively:

Financial Year	Rail Budget Estimate
2023/24	R455 million
2024/25	R614 million
2025/26	R990 million
2026/27	R1.2 billion
2027/28	R1.3 billion

Note: This excludes the Trans-Kalahari Railway project's multi-billion dollar funding.



Walvis Bay & Logistics Corridors:

Namibia's Strategic Gateway to Southern Africa

"Our record throughput and the diversification of commodities demonstrate that the Walvis Bay Corridors are not just transport routes, they are enablers of regional trade, economic growth and investment".

Overview: A Quarter-Century of Corridor Success

The Walvis Bay Corridor Group (WBCG) stands as one of Africa's most effective models of corridor-led regional integration. Established in 2000 as a public-private partnership, the WBCG's mandate is to facilitate the free flow of trade to and from Southern Africa, increase cargo volumes through the Ports of Walvis Bay and Lüderitz, and position Namibia as the preferred trade route for the SADC region.

Over 25 years, cargo volumes have grown from zero to over 1 million tonnes per annum, reaching a record high of 2.5 million tonnes during the 2024/25 financial year—a testament to sustained business development and trade facilitation. The network supports cargo flows to and from key regional markets including Angola, Botswana, DRC, Malawi, Mozambique, South Africa, Zambia, and Zimbabwe.

The Four Strategic Corridors

Under WBCG coordination, the corridor framework comprises four primary trade

- Walvis Bay recorded notable gains in bulk salt, copper and lead concentrates, charcoal, and first-ever shipments of nickel and zinc concentrates, positioning Namibia as an emerging player in the global critical mineral supply chain

Strategic Developments and Milestones

WBNLDC Permanent Secretariat (April 2026)

A major milestone was the operationalisation of the permanent secretariat for the Walvis Bay-Ndola-Lubumbashi Development Corridor in April 2026, following a tripartite high-level ministerial meeting in Swakopmund. Namibia's Minister of Works and Transport Veiko Nekundi emphasised that the corridor remains critical for facilitating safe and efficient movement of goods and people across borders.

To ensure institutional sustainability, Namibia introduced a user levy of 90 cents per tonne on cross-border cargo to finance corridor operations.

New Commodities and Expanding Markets

The 2024/25 period recorded the successful

Infrastructure and Handling Upgrades

The WBCG works closely with transporters handling bulk copper using modernised equipment such as shore cranes paired with a patented closed skip system, enabling faster loading, zero spillage, safer quayside operations, and quicker vessel turnaround times.

Border efficiency has also improved with the opening of One-Stop Border Post operations at the Trans-Kalahari/Mamuno border and 24-hour operations at the Oshikango-Santa Clara border post, significantly enhancing trade facilitation along the Trans-Cunene Corridor.

Strategic Planning: 2026-2031 Vision

In March 2026, the WBCG convened a two-day Strategic Planning Session in Walvis Bay to shape the 2026-2031 direction. The session marked the conclusion of the previous Strategic Plan (2021-2026) and focused on aligning with Namibia's national priorities under NDP6, positioning Namibia as the Logistics Hub for the SADC Region.

WBCG Acting CEO Edward Shivute highlighted the operational impact: "Our record throughput and the diversification of commodities demonstrate that the Walvis Bay Corridors are not just transport routes, they are enablers of regional trade, economic growth and investment".

Future Outlook

As mining ventures across the region expand—driven by global energy transition demand for uranium, lithium, copper, and zinc—demand is increasing across the entire logistics value chain, from construction materials and machinery to processed or semi-processed mineral exports. The WBCG's focus is now on:

- Strengthening strategic partnerships with transport and logistics industry stakeholders
- Developing intermodal transport, particularly rail linkages and connectivity with neighbouring countries
- Supporting the Namibia Logistics Hub initiative to position the country as a premier regional gateway for trade

With the Angra Point Deepwater Port development at Lüderitz set to unlock additional manganese exports and continued investment in corridor efficiency, Namibia's role as the Atlantic gateway for Southern Africa's mineral wealth is set to strengthen further in the years ahead.

Corridor	Route	Strategic Importance
Trans-Kalahari Corridor (TKC)	Port of Walvis Bay → Botswana → South Africa	Links Botswana's copper-producing mines to Walvis Bay; supports bulk mineral exports
Walvis Bay–Ndola–Lubumbashi Development Corridor (WBNLDC)	Port of Walvis Bay → Zambia → DRC	Connects Copperbelt region to Atlantic; critical for copper, cobalt, and zinc exports
Trans-Cunene Corridor	Port of Walvis Bay → Southern Angola	24-hour Oshikango-Santa Clara border post operational; enhances trade with Angola
Trans-Oranje Corridor	Port of Lüderitz → South Africa's Northern Cape	Supports Lüderitz port growth and manganese exports

routes:

Record-Breaking Cargo Throughput

The ports of Walvis Bay and Lüderitz handled a record-breaking 8.42 million tonnes of cargo for the 2024/25 financial year, a 4.8% increase from 8.03 million tonnes the previous year. The mining sector has been instrumental to this performance:

- Lüderitz saw the strongest year-on-year rise, with cargo volumes increasing by 21.7% to 1.47 million tons, driven by petroleum imports, machinery, and steady exports of zinc ore

introduction of new commodities including sugar, coal, copper concentrate, zinc, and avocado exports, demonstrating growing confidence in the Walvis Bay Corridors and expanding trade diversification across the region. Key milestones include:

- Zinc exports from DRC via the WBNLDC
- Copper concentrate shipments from Botswana's mines via Trans-Kalahari Corridor
- First-time exports of nickel and zinc concentrates through Walvis Bay



The 2027 Chokepoint:

How Zimbabwe Is Forcing Local Lithium Refining

By Rukudzo Rose Musari

Zimbabwe is no longer debating beneficiation. It is enforcing it.

The country has deliberately engineered a 50% reduction in raw lithium exports between 2026 and 2027, creating a

state-mandated chokepoint designed to force miners into midstream chemical processing. The policy is already reshaping the nation's export profile—less raw ore leaving the country, more lithium sulphate entering global supply chains.

The Policy Cliff: From Export Ban to Quotas

The shift began on 25 February 2026, when the government suspended all exports of raw lithium concentrate, moving a planned 2027 deadline forward by nearly a year. The intent was unambiguous: close the "dig-and-ship" pathway that for years had allowed low-value ore to leave the country with minimal domestic benefit.

Zimbabwe's experiment is a test of enforcement. If quotas are applied consistently and power constraints are managed, the country can lock in midstream capacity before 2030. If deadlines slip or policy shifts again, the 50% cut in ore could become revenue loss without the planned chemical upside.

By April 2026, authorities had introduced a quota system. Under the new regime, compliant producers may export limited volumes only if they meet three conditions: publish annual financial statements, comply with labour, safety and environmental standards, and submit binding timelines to build lithium sulphate plants by January 2027. A 10% transitional export tax applies during the phase-in period.

The impact on volumes is sharp. According to Zimbabwe Lithium Association (ZLA) projections, spodumene concentrate output will fall 48% to 636,090 tonnes in 2027 from 1.22 million tonnes in 2026. Raw spodumene ore is set to drop 51.5% to 467,000 tonnes from 963,049 tonnes over the same period.

Midstream Payoff: Africa's First Lithium Sulphate Export

The chokepoint is already producing a tangible shift in the country's product mix. In April 2026, Zimbabwe dispatched Africa's first commercial export of lithium sulphate from the US\$400 million Prospect Lithium Zimbabwe facility in Goromonzi, owned by Huayou Cobalt. The plant has 50,000 tonnes per annum capacity and has created over 2,000 direct jobs and a further 2,000 indirect positions.

Output projections reflect the pivot. Lithium sulphate production is forecast to rise from 130,000 tonnes in 2026 to 169,000 tonnes in 2027. By 2030, domestic output is expected to reach 344,000 tonnes, nearly tripling production in four years.

Lithium sulphate is an intermediate chemical. It is less complex to produce than carbonate or hydroxide, but it positions Zimbabwe closer to battery-grade chemicals and higher-value markets. It is a bridge, not the destination—but a critical one.

Who Is Affected

The policy targets the country's large Chinese-backed operations. The February 2026 ban and subsequent quota regime apply to Sinomine Resource Group at Bikita Minerals, Zhejiang Huayou Cobalt at Arcadia, Chengxin Lithium Group at Sabi Star, Sichuan Yahua at Kamativi, and Tsingshan Holding Group at Gwanda. All have been required to submit plant build-out schedules to retain export access.



Risks to the Model

The strategy is high-risk. Producers report pressure from high taxes, operating costs, and frequent policy changes. The February ban disrupted supply chains and led some companies to request extensions to the January 2027 plant deadline.

Infrastructure is the other constraint. Lithium sulphate refining is energy intensive. ZESA load-shedding and grid reliability could limit throughput if new generation does not keep pace with plant capacity. Without reliable power, the plants will struggle to deliver the volumes the policy envisions.

Risks and Opportunities

The main risks are regulatory uncertainty, power shortages, investor pushback on deadlines, and cost inflation. The oppor-

tunities include establishing Africa's first commercial lithium sulphate base, creating new industrial jobs, lifting export value per tonne, and positioning Zimbabwe for battery chemical markets.

Outlook to 2027

Zimbabwe's experiment is a test of enforcement. If quotas are applied consistently and power constraints are managed, the country can lock in midstream capacity before 2030. If deadlines slip or policy shifts again, the 50% cut in ore could become revenue loss without the planned chemical upside.

As January 2027 approaches, the government's ability to hold the line will determine whether the "chokepoint" becomes a refining base or a supply shock. The stakes could not be higher—for Zimbabwe, for its Chinese partners, and for the global lithium supply chain watching closely.



When Good Oils Go Bad Part 2

Oxidation: When Oil Gets Old

By Steven Lumley, technical manager, WearCheck

Oxidation - the focus of part 2 of WearCheck's "When Good Oils Go Bad" series - is one of the most common chemical reactions we encounter in everyday life. It occurs when fuel burns, when steel rusts, when wounds are cleaned with hydrogen peroxide and even when a cut apple turns brown. In lubricating oils, oxidation is no less familiar and no less damaging.

Put simply, oxidation is the chemical reaction between a lubricant and oxygen. Over time, this reaction alters the oil's chemistry, leading to degradation of both the base oil and its additives. While oxidation occurs at all temperatures, it accelerates dramatically as operating conditions become more severe, making it one of the primary causes of lubricant failure in service.

In lubricating oils, oxidation involves the sequential addition of oxygen to the base-oil molecules, producing a range of reactive - and often harmful - by-products, including aldehydes, ketones, hydroperoxides and carboxylic acids.

As these oxidation by-products accumulate, the lubricant's physical and chemical properties begin to change. The oil thickens, acids form, additives are depleted and insoluble materials can precipitate out as sludge or varnish. Left unchecked, oxidation compromises the lubricant's ability to protect equipment, increasing wear, corrosion and the risk of deposits.

Oxidation is unavoidable, but its rate is highly dependent on operating conditions such as temperature, oxygen exposure, catalytic metals and contaminants. Let's take a closer look at these factors:

Temperature



The oxidation rates increase exponentially, with temperature following the Arrhenius rate rule. As a rule of thumb for mineral oils, the rate of oxidation roughly doubles for every 10°C increase in temperature above ±75 °C. This is why oils in hot-running systems age far faster than those operating under cooler conditions.

Oxygen Exposure

Poorly sealed systems, aeration and excessive air entrainment increase the availability

of oxygen accelerating oxidative reactions.

Catalytic Metals

Wear metals such as iron and copper act as powerful oxidation catalysts, and even small concentrations can significantly speed up oil degradation.

Water Contamination

Water not only promotes corrosion but also accelerates oxidation reactions and additive breakdown, particularly at elevated temperatures.

The Oxidation Chain Reaction

Oxidation in lubricants takes place through a complex series of chain reactions that consists of three key stages: initiation, propagation and termination.

Initiation

In the initiation stage, external stress factors like heat, wear metals or contamination break a chemical bond within the lubricant, generating a free radical - a highly reactive molecule with an unpaired electron.

Propagation

The free radical quickly reacts with oxygen to form peroxide radicals, which in turn attack other lubricant molecules. This creates additional free radicals, a process known as branching, which allows the reaction to spread and accelerate throughout the oil.

Termination



Oxidation slows only when free radicals are neutralised. This occurs when either two radicals combine to form a stable compound, or when antioxidant additives in the oil sacrifice themselves to interrupt the chain reaction. Once antioxidants are depleted, oxidation can proceed rapidly and uncontrollably. Remember, antioxidants delay oxidation, but they do not prevent it indefinitely.

The Consequences of Oxidation



As oxidation progresses, its effects become increasingly damaging. Viscosity increases due to the polymerisation of oxidised molecules, while acid formation leads to corrosion of metal surfaces. Sludge and varnish deposits impair oil flow and heat transfer, and additive depletion reduces anti-wear, anti-foam and corrosion protection. Together, these changes lead to a progressive loss

of lubricant performance, ultimately leading to higher friction and increased wear.

In severe cases, oxidation-related deposits, particularly varnish, can cause sticking valves, blocked filters and overheating - often long before the oil appears visibly degraded.

Detecting Oxidation Through Oil Analysis

Oxidation is one of the most closely monitored degradation mechanisms in oil analysis and is assessed using a range of application-specific laboratory tests.

Used together, these techniques provide early warning of accelerated oxidation - often long before catastrophic lubricant failure occurs. The key tests used to assess oxidation are summarised below.



Final Thought

The reality is, oxidation is the inevitable ageing process of lubricating oils. While it cannot be eliminated, it can be managed effectively through correct lubricant selection, contamination control, temperature management and a well-designed oil analysis programme. Understanding how oxidation occurs and recognising its early warning signs allows operators to intervene early, extend oil life and ultimately protect critical equipment from avoidable damage.

After all, oils don't fail simply because they age, they fail when the effects of ageing are left unchecked.

The next instalment of this WearCheck series moves from oxidation to nitration - a different pathway, but one that can be just as damaging.

Please visit www.wearcheck.co.za or contact WearCheck on marketing@wearcheck.co.za or +27 (31) 700-5460.

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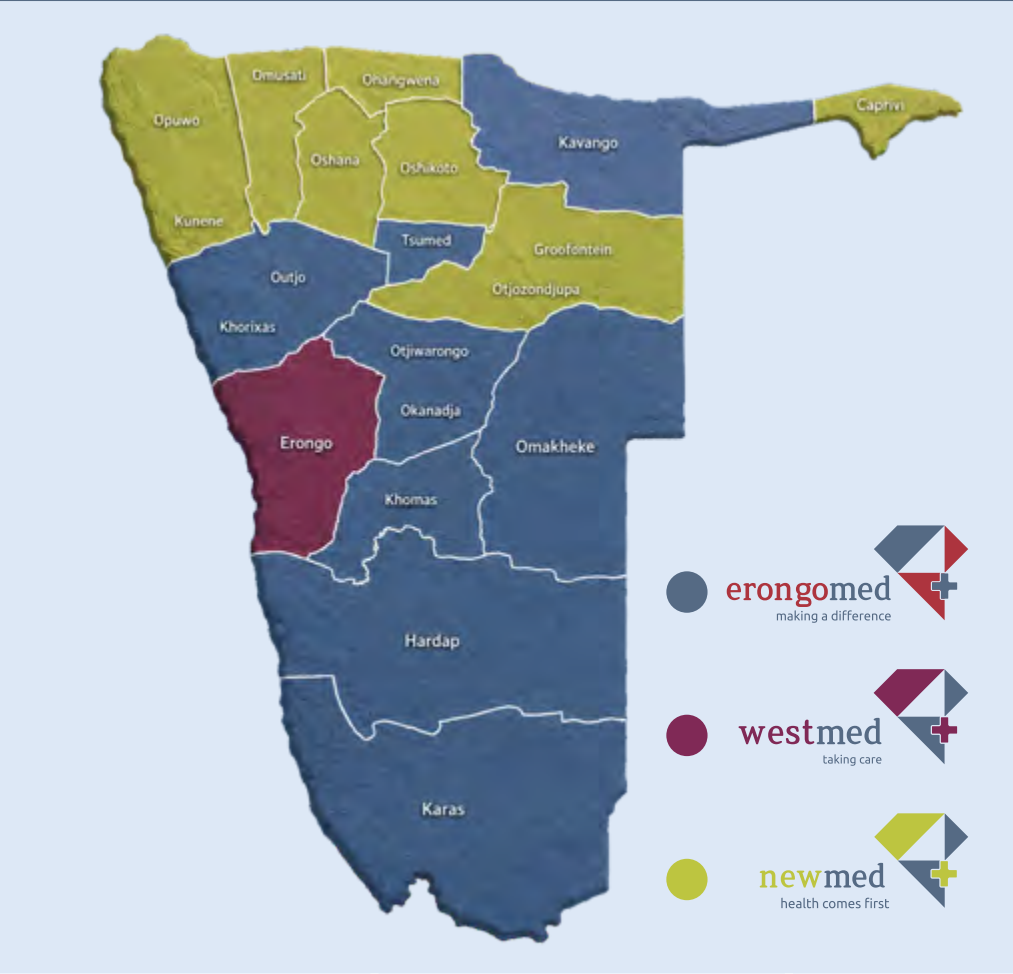
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Steven joined WearCheck in 2008 as a diagnostician and worked her way up to the position of senior diagnostician, during which time she diagnosed her millionth used-oil sample in addition to running oil analysis training courses for customers in several countries. In 2015, Steven was promoted to the position of technical manager.

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As Namibia's mining industry continues to grow, the need for dependable healthcare and medical supply partners will grow with it. Erongomed, Newmed and Westmed provide more than products—they provide confidence, continuity and partnership.

For mining companies where safety, health and operational reliability are non-negotiable, Erongomed, Newmed and Westmed remains committed to its mission: **Making a Difference.**

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DID YOU KNOW?

AMAZING FACTS ABOUT NAMIBIA

A land of ancient deserts, incredible wildlife, rich mineral wealth and warm resilient people. Discover the extraordinary things that make Namibia truly unique.



1. HOME TO THE WORLD'S OLDEST DESERT

The Namib Desert is estimated to be over 55 million years old, making it the oldest continuously existing desert on Earth. Its conic red dunes at Sossusvlei attract photographers and adventurers from around the globe.



2. A GLOBAL MINING POWERHOUSE

Mining contributes significantly to Namibia's economy. The country is among the world's leading producers of:

- Gem-quality Diamonds
 - Uranium
 - Zinc
 - Copper
 - Lead
- Namibia also has growing deposits of lithium, rare earth minerals, graphite, and green hydrogen resources.



3. ONE OF THE LEAST DENSELY POPULATED COUNTRIES

Although Namibia covers 824,292 km², it has a population of just over 3 million people, making it one of the least densely populated countries in the world.



4. CONSERVATION LEADER

Approximately 45% of Namibia's land is under conservation management, including national parks, communal conservancies, and protected areas—the highest percentage in Africa.



5. THE SKELETON COAST HOLDS MANY SECRETS

The legendary Skeleton Coast has claimed hundreds of shipwrecks over the centuries due to its dense fog, rough seas, and shifting sandbanks, earning it the nickname "The Gates of Hell."



6. A RENEWABLE ENERGY GIANT IN THE MAKING

Namibia enjoys more than 300 sunny days per year, giving it some of the highest solar irradiation levels globally. This positions the country as one of Africa's leading destinations for solar energy and green hydrogen investment.



7. WILDLIFE WITHOUT BORDERS

Namibia is one of the few countries where you can encounter:

- Desert-adapted elephants
- Free-ranging cheetahs
- Desert lions
- The world's largest population of free-ranging cheetahs
- Black rhinos



8. MINING INNOVATION

Namibia's mining industry is increasingly adopting:

- Artificial intelligence (AI)
- Digital mine planning
- Drone surveying
- Renewable-powered mining operations
- Autonomous drilling

These technologies are improving safety, productivity, and environmental performance.

NAMIBIA AT A GLANCE

	CAPITAL	Windhoek
	OFFICIAL LANGUAGE	English
	AREA	824,292 km²
	POPULATION	~3.1 million
	CURRENCY	Namibian Dollar (N\$)
	HIGHEST MOUNTAIN	Käinikstein (2,673 m)
	LONGEST RIVER	Okavango River (shared)
	LARGEST NATIONAL PARK	Etocha National Park
	MAJOR EXPORTS	Diamonds, Uranium, Zinc, Copper, Gold

“Namibia is where ancient landscapes, world-class mineral wealth, and modern innovation come together to shape Africa's mining future.”



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REWRITING THE KOMBAT MINE STORY

From Defeat To Opportunity

A new chapter of Investement, Innovation and Community partnership is set to secure Kombat mine's future

Kombat Mine is a legacy Namibian copper operation situated in the Otjozondjupa Region in the north of the country.

In any good storybook, there are supporting chapters filled with challenge, compelling characters and a meaningful resolution. For Kombat Mine, the next chapter for this legacy Namibian copper asset, is arguably the most exciting, and one which is finally set to bring about lasting sustainability.

A Strategic Reset

Backed by Horizon Corporation, the ownership transition of Kombat Mine from Trigon Metals to New Horizon Copper came about in late 2025 following the January 2025 pump failure, subsequent water ingress and the previous owner's capital constraints.

New Horizon Copper, or 'NHC' as employees collectively refer to the business, formally broke ground in February 2026 with a redevelopment programme announced to restart and expand the mine. This was a

significant milestone for Namibia and for the surrounding communities, effectively moving Kombat from "care and maintenance" back into active development.

With a major capital investment reported at around N\$390 million for the initial restart phase and with a broader investment plan approaching N\$1 billion over time, funding is currently focused on mine and process plant expansion, a completely overhauled dewatering strategy, processing upgrades including optical sorting and infrastructure improvements.

With a targeted copper production restart in Q4 2026, NHC is prioritising dewatering solutions aimed at reopening underground workings at their Asis West Shaft, whilst improving mine stability and access to higher-grade ore zones.

Turning the Tide: Dewatering to

Unlock the Copper (and Community) Potential

It is ironic that Namibia is one of the driest countries in the world and yet is home to some of the wettest underground mines, due to the presence of extensive karstic dolomite aquifers. As a result, continuous dewatering through sustained pumping is a common requirement across much of the country's mining sector, and Kombat Mine is no exception.

Kombat Mine sits on top of a large, highly productive karst aquifer within the Otavi Mountain Range. This results in constant water ingress into the underground workings, making dewatering essential, not only for safe and efficient mining operations, but also for managing broader environmental, agricultural, and socio-economic impacts across the Otavi region.



The scale of the dewatering challenge required to bring the mine back into production is substantial. Approximately 3,000 m³ of water per hour will be removed over an initial six-week period using six newly acquired, state-of-the-art stainless steel KSB submersible pumps. This first phase will lower the water level to approximately 450 metres below surface, enabling the installation of a second pumping station over the following two months. Once commissioned, the second station will assume primary dewatering responsibilities. Importantly, the initial six pumps will remain in place as a fully redundant backup system, providing additional operational resilience. The second pumping station will then maintain a continuous dewatering rate of approximately 2,400 m³ of water per hour, establishing a stable, long-term dewatering regime that will enable underground mining operations to commence.

In tackling this challenge, NHC has taken a refreshed approach to dewatering. Drawing on lessons from the past, the new strategy focuses on increasing pumping capacity with greater redundancy, using readily available off-the-shelf equipment to minimise spare part delays, and deploying additional smaller pumps throughout the mine. This distributed system is designed to reduce flood risk and improve overall operational resilience.

More importantly, prevention is better than a cure. A rigorous cementation campaign will also run in parallel to mining, sealing off known and any new intercepted water sources underground. With these new measures in place, NHC hopes to reduce the ingress further to less than 1,000m³ of water per hour.

However, dewatering at Kombat is about more than mining alone. The water extracted from the mine is also a vital lifeline for surrounding communities and farmers, many of whom rely on a consistent and reliable supply for their daily needs and livelihoods. Through a partnership with the Kombat Settlement Office, collaboration with local government helps ensure that these community water requirements continue to be met alongside mining operations. Beyond the local community, Kombat's water also feeds into NamWater's central area water supply system, contributing to the broader infrastructure that serves Windhoek and surrounding regions.

A New Technology Introduced to Advance Efficiency and Sustainable Growth

Another significant chapter in Kombat Mine's production journey is the modernisation of ore sorting through advanced technology. Supplied by STEINERT GmbH, the introduction of a state-of-the-art XRT sorting system aligns the operation with world-class engineering standards, improving operational efficiency while unlocking additional value from existing mineralised material at Kombat Mine. Having already successfully deployed this technology at its Milford Mining Company Utah (MMCU)



Namibia's extensive aquifer networks create challenging hydrogeological conditions, making some underground mining operations particularly water-intensive.

operation in the United States, Horizon Corporation identified an early opportunity to replicate that success at Kombat, further strengthening the mine's long-term operational performance and value creation.

At the heart of the new system is Sensor-Based Sorting (SBS) technology, which uses X-Ray Transmission (XRT) sensors to analyse individual rocks along a conveyor belt. By measuring atomic density, the system can distinguish between valuable mineralised material and barren waste in real time, enabling early rejection of waste rock before it enters the processing circuit. The result is a more efficient plant feed and a more selective approach to ore processing.

For NHC, the benefits extend well beyond efficiency gains. The introduction of SBS supports the company's sustainability objectives by reducing energy consumption, water usage, and reagent demand in downstream processing, while also lowering tailings volumes. The investment also aligns closely with NHC's long-term "Sustainable" and "Future" values, reinforcing its commitment to responsible resource development and long-life operations.



New Horizon Copper is unlocking additional value from its mineralised material through the introduction of advanced ore-sorting technology, enhancing recovery and improving operational efficiency.

Operationally, the technology will play a crucial role in supporting the next phase of expansion at Kombat. As NHC progresses toward increasing plant throughput at their Asis West deposit, existing hoisting constraints will eventually present a capacity gap. The SBS system provides a practical solution by enabling the reprocessing of historic surface stockpiles containing low-grade ores and mineralised waste.



The introduction of ore sorting technology will support the targeted expansion phase of Kombat's Asis West mining area

These legacy stockpiles, remnants of earlier open-pit mining, will now be valorised by using XRT sorting to recover economically viable material. This additional feed source will help achieve the desired production rate while maximising the value of previously mined material that would otherwise remain underutilised.



There are two expansion phases planned for Kombat Mine, aimed to yield over 90ktpm of ore.

Commissioning of the new SBS unit has started following construction of a new surface facility, which will include a crushing plant, screening circuit, and the sorting system itself. Initially deployed on surface for approximately two years, the technology also offers future flexibility, with the potential to be relocated underground to support ongoing mining operations as the Kombat Mine continues to evolve or to treat other ore sources in the Otavi area.

'Kombat'ing Community Decline

Mining operations and their surrounding communities naturally develop a close interdependence. This is especially pronounced at Kombat Mine, where the local community is far removed from alternate economic activities. Closely tied to Kombat's long-term viability, with livelihoods, local enterprise and community wellbeing rising and falling alongside its fortunes. Today, however, Kombat stands at the beginning of a new exciting chapter - one defined not by uncertainty, but by commitment, renewed hope, fresh investment and the promise of lasting economic opportunity.



The local community stands to gain the most from the sustainable future planned for Kombat Mine.

To create sustainable social, economic and environmental value for its communities, NHC has adopted a four-pillar approach in its corporate social responsibility agenda to guide the delivery of its vision. Implement-

ed through partnership-driven programmes and shaped by the needs of the community, these four pillars focus on education and skills development, community wellbeing and development, economic empowerment, and environmental stewardship.

Several notable successes have already been achieved in a relatively short period.

These include the completion of a water reconnection project at Kombat Pre-Primary School, which restored access to a reliable water supply and delivered a critical improvement to the safety, health and overall learning environment for young learners. Under the economic empowerment pillar, the introduction of a vendor registration office in Kombat is also designed to support small and medium enterprises (SMEs) operating in and around Kombat. In addition, ongoing partnerships with local law enforcement and community volunteers have strengthened public service delivery and enhanced the impact of various community outreach initiatives.



Kombat Mine is more than an operation beneath the earth - it is the heartbeat of its community, where shared prosperity creates opportunity, dignity, and lasting progress.

Beyond growing economic and service delivery opportunities, the community is already beginning to experience tangible improvements in wellbeing. As part of its commitment to community health and emergency preparedness, NHC has expanded its emergency medical response services to support the residents of Kombat. In addition, the mine has recently invested



in a dedicated bus service to transport local employees to and from work each day, improving accessibility and enhancing daily convenience for its workforce in the broader regional community catchment area.

The Final Chapter, a Model for Modernised Mining in Namibia

As Kombat Mine enters this renewed phase

of development, the combination of large-scale investment, technical rehabilitation and community-focused initiatives signals a clear shift from past uncertainty toward a more resilient and sustainable future. Backed by Horizon Corporation and driven operationally by New Horizon Copper, the redevelopment of Kombat Mine is not simply about restarting production, but about re-establishing long-term viability through

improved infrastructure, responsible resource management and stronger community integration. If successfully delivered, this next chapter has the potential to reposition Kombat as a model for modernised mining in Namibia where operational performance, environmental stewardship and local prosperity are developed in parallel rather than in competition.

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THE 61% WARNING: WHY ZIMBABWE'S CHROME COLLAPSE IS A BELLWETHER FOR THE ENTIRE MINING SECTOR

Alluvial reserves exhausted, export bans create monopsony, and small-scale miners can't afford the transition to hard-rock

By Rukudzo Rose Musari

Zimbabwe's chrome production collapsed by 61% in the first quarter of 2026. From 465,638 tonnes in Q1 2025, output cratered to just 178,425 tonnes.

That is not a correction. That is a structural crisis.

And it is a warning shot for every miner, investor, and policymaker betting on Zimbabwe's resource-led industrialisation.

THE ALLUVIAL CLIFF: WHAT JUST HAPPENED

For years, alluvial chrome was the backbone of Zimbabwe's chrome industry, particularly for artisanal and small-scale miners. Unlike lumpy chrome locked in hard-rock deposits, alluvial chrome occurs in loose surface sediments extractable with picks, shovels, and

basic equipment. Its accessibility enabled thousands of small-scale miners to enter the sector with minimal capital.

Those deposits are now exhausted.

"Chrome production declined by 61% because the alluvial chrome, which contributed to most of the chrome production, is now exhausted, and it requires a long time to be replenished through sedimentary deposition," said Shelton Lucas, Chairperson of the Chrome Miners Association of Zimbabwe.

The industry is now being forced into a transition it is not equipped to make: from low-cost surface scooping to capital-intensive hard-rock mining requiring drilling, blasting, crushing, and heavy mechanisation.

THE ECONOMICS THAT DON'T WORK

The shift to hard-rock mining has broken the economics of chrome production.

"The cost of mining lumpy chrome doesn't

match the price," Lucas told Mining Zimbabwe. "Since there was a ban on ore exports, miners have been left susceptible to predatory pricing from Chinese companies that own smelters."

The numbers:

Foreign-owned beneficiation plants buy chrome ore at around US\$70 per tonne.

Meanwhile, the cost of extracting lumpy chrome from hard rock—with drilling, blasting, crushing, and greater mechanisation—has risen sharply.

The margin has evaporated.

The chrome ore export ban, imposed in February 2026 to promote local beneficiation, has had the perverse effect of reducing competition for ore. With a limited number of smelters controlling the market, producers have fewer buyers and weaker bargaining power.

"We are subjected to predatory price regimes within Zimbabwe," Lucas said.



THE POLICY PARADOX

Zimbabwe's beneficiation push is progressive and necessary for long-term industrial growth. The global ferrochrome market is valued at approximately US\$22.02 billion by 2035. Capturing that value chain is exactly what industrial policy should aim for.

But the current implementation has created a market structure where a handful of foreign-owned smelters dictate prices to thousands of small-scale miners who can no longer afford to extract the ore.

Lucas has proposed a solution:

"We should have government-owned smelters that can do toll smelting for chrome."

Under a toll-smelting arrangement, miners pay a processing fee while retaining ownership of their chrome.

The government has signalled willingness to intervene. In June 2026, it announced preparations for a major intervention in

the chrome sector, including a proposed toll-processing model. But action has yet to match rhetoric.

THE DATA DEFICIT

The chrome collapse exposes a broader problem: Zimbabwe's mining data remains fragmented and unreliable. The Ministry of Mines itself has acknowledged that comprehensive statistics on the sector's actual production and energy consumption are lacking.

When the government cannot accurately measure what is being produced—or by whom—it cannot effectively regulate, tax, or plan. The chrome numbers from Q1 2026 are a wake-up call. If the sector is contracting this sharply, how many other mineral segments are quietly bleeding out?

WHAT THIS MEANS FOR INVESTORS

For institutional allocators and project developers, the chrome collapse offers four critical lessons:

1. Alluvial Resources Are Finite

The assumption that easily accessible deposits will continue to supply production indefinitely is flawed. Zimbabwe's alluvial chrome boom was always going to end. That time is now.

2. Beneficiation Without Competition Creates Monopsony

Export bans that reduce buyer competition can backfire. When a handful of smelters control the market, producers lose pricing power even as their costs rise.

3. Small-Scale Miners Are Systemic Risks

Thousands of small-scale operators dominate chrome production. They lack the capital to transition to hard-rock mining. When they fail, production collapses.

4. Infrastructure Is the Binding Constraint

The transition to hard-rock mining requires mechanisation, which requires power. Zimbabwe's grid is already strained by the 2,600MW mining demand problem. Without reliable electricity, the shift from alluvial to hard-rock is not just expensive—it may be impossible.

THE COMPASS BOTTOM LINE

Zimbabwe holds the world's second-largest known chrome ore deposits, with approximately 900 million tonnes of untapped ore against total world reserves estimated at 7.5 billion tonnes. The resource is not the problem.

The problem is the economics. The problem is the market structure. The problem is the infrastructure. And the problem is the policy implementation gap between noble intentions and practical outcomes.

The Ministry of Mines has acknowledged that addressing production contractions through targeted investment in mining infrastructure, energy supply, and operational efficiency will be essential. But words are not watts. And they are not smelters.

The 61% chrome collapse is not an anomaly. It is a forecast. Every mineral segment in Zimbabwe that depends on easily accessible deposits, dominated by undercapitalised operators, and subject to concentrated buyer power faces the same trajectory.

The question is not whether more collapses will come. The question is which mineral will be next.

ZIMBABWE CHROME BY NUMBERS

Metric	Value
Q1 2025 Production	465,638 tonnes
Q1 2026 Production	178,425 tonnes
Decline	61%
Ore Price from Smelters	~US\$70/tonne
Global Ferrochrome Market 2035	US\$22.02 billion
Zimbabwe Chrome Reserves	900 million tonnes (2nd largest globally)



NAMIBIA'S NEW MINERALS BILL: PROCESS HERE OR LOSE LICENSING PRIORITY

With zero-tariff access to China now in force, early movers on processing will secure market and license advantage

By Rukudzo Rose Musari

When President Netumbo Nandi-Ndaitwah stood before Chinese investors in Beijing last week, her message was unflinching: Namibia will no longer export poverty.

"Come and manufacture in Namibia. Come and process in Namibia. Come and innovate in Namibia," she declared.

It was not rhetoric. It was policy. And for mining companies still shipping raw concentrate, the implications are immediate and far-reaching.

Namibia's new Minerals Bill, currently before parliament, places beneficiation at the very centre of licensing decisions. Combined with China's zero-tariff regime for African goods, which came into force on 1 May 2026, the economics of processing in Namibia have fundamentally shifted. For Chinese investors, the question is no longer whether to process in Namibia. It is whether

to move before competitors do.

Policy Clarity Creates First-Mover Advantage

Regulatory uncertainty has long been a stumbling block for investors in Namibia's mining sector. The new Minerals Bill, however, removes much of that ambiguity.

The legislation mandates a minimum 5% Namibian equity in mining companies and requires that a portion of production be retained for domestic value addition. For early movers, this presents a distinct advantage. The Bill explicitly prioritises applicants with committed processing plans for licensing and environmental approvals. Late entrants, by contrast, will face longer timelines and stiffer competition for permits.

Deputy Minister Gaudentia Kröhne has been blunt about the government's intentions. Beneficiation, she says, is now a "national strategic priority". In practice, that means it is a condition for doing business.

"The Bill gives preference to applicants with processing plans," Kröhne explained. "Late movers will wait."

The Cost of Delay

Three major developments in 2026 have made delay expensive for mining companies.

First, licensing priority will go to projects with downstream commitments. Companies without processing plans will find themselves at the back of the queue.

Second, the margin arithmetic has shifted. Exporting lithium concentrate instead of battery-grade chemicals sacrifices an estimated 35% to 45% of potential value. That margin is currently being captured by refiners offshore, money that Namibia is determined to keep within its borders.

Third, and perhaps most significantly, market access has been transformed. Since 1 May 2026, China has granted zero-tariff treatment to all 53 African states with diplomatic relations. Processed goods from



Namibia now enter the world's largest industrial market duty-free, while concentrate exports continue to face tariff barriers.

One Location, Three Trade Blocs

Namibia's domestic market may be just 3 million people, but the investment case extends far beyond its borders.

Through the Southern African Development Community (SADC) and the Southern African Customs Union (SACU), investors gain preferential access to 300 million consumers. Through the African Continental Free Trade Area (AfCFTA), that reach extends to 1.2 billion people across the continent.

"When you invest in Namibia, you are investing in 300 million consumers in SADC, and 1.2 billion across Africa," said Selma Ashipala-Musavyi, Minister of International Relations and Trade. "We are the gateway to the southern African interior."

The Port of Walvis Bay, recently upgraded with Chinese technical support, has

emerged as the primary logistics corridor for Botswana, Zambia, and Zimbabwe. A processing plant in the Erongo region can serve all three markets from a single location, offering logistical efficiencies that competitors elsewhere cannot match.

Zero-Tariff Entry to China

The 1 May 2026 tariff elimination by Beijing marks a watershed moment for African industrialisation. For Namibia, the removal of duties ranging from 12% to 25% on processed minerals and manufactured goods effectively rewrites the investment equation.

President Nandi-Ndaitwah has described the zero-tariff regime as "a strategic instrument for industrialisation", not a concession. For Chinese investors, the implication is straightforward: value-added products made in Namibia can be re-exported to China without tariff barriers. Unprocessed concentrate cannot.

A Resource Base of Global Significance

Namibia is already a major player in global mineral markets. The country accounts for 12% of global uranium output and ranked third worldwide in 2024 with production of 7,333 tonnes. Almost all of it was exported as unprocessed concentrate, primarily to China.

But the pipeline runs much deeper. Lithium projects are advancing rapidly, with SQM committing N\$646 million to the Uis project. The Omitomire copper development targets N\$6.6 billion in capital expenditure. Rare earths drilling continues at Lofdal, while deposits of gold, zinc, cobalt, graphite, and manganese add further depth to the resource base.

Chinese companies are already deeply entrenched. CNNC controls the Husab uranium mine and has committed up to US\$6.1 billion to the Etango project. Rössing Uranium is also Chinese-controlled. Disclosed Chinese investment in Namibian mining over the past 12 months exceeds US\$5.54 billion, with total Chinese uranium investment approaching N\$50 billion.

The resource is proven. The missing link, as the government sees it, is processing capacity.

Capturing Value in the Chain

The numbers tell a story of missed opportunity. Mining contributed N\$64.7 billion to the Namibian economy in 2025/26. Manufacturing, meanwhile, contracted by 5.9% in the first quarter of 2026.

That gap is the opportunity.

A study by the United Nations Economic Commission for Africa identified 353 products Namibia could produce competitively, representing over US\$900 million in potential new output and 26,400 jobs. A prioritised subset alone could deliver 26,000 direct and indirect jobs.

For investors, the logic is compelling. The company that builds the lithium hydroxide plant, the copper refinery, or the uranium conversion facility in Namibia captures margin that currently leaves the country.

It also secures preferential licensing status and tariff-free access to the world's largest industrial market.

Infrastructure Is Closing the Gap

Processing minerals at scale requires water and power in abundance. Both challenges are being addressed.

The N\$2.1 billion Erongo SUNAM desalination plant is targeting financial close in July 2026. Once operational, it will deliver 20 million cubic metres of water per year, providing industrial water security independent of rainfall patterns.

NamPower has awarded a N\$1.4 billion contract to a Chinese consortium for a 100MW solar plant, due online in the second quarter of 2026. With over 300 days of sunshine and strong coastal winds, Namibia is well-positioned to support energy-intensive industry. Long-term, dollar-denominated power purchase agreements are available to investors.

Stability and Predictability in an Uncertain Region

In a continent where political risk often complicates investment decisions, Namibia offers what is increasingly scarce: political stability and policy predictability.

"We are a logistical spine, an energy hub, a mineral resource hub, and a stable democracy," Minister Ashipala-Musavyi said.

The country provides investment protection, free repatriation of profits and capital, and a functional tax and legal regime. In a volatile region, that stability matters.

The Bottom Line

The era of exporting raw materials is ending. Namibia's new Minerals Bill makes that explicit.

For investors who build processing capacity in Namibia, the payoff is measurable. A single processing plant offers tariff-free access to China, SADC, and AfCFTA markets simultaneously. Infrastructure projects are de-risking water and power constraints. And the new licensing regime rewards first movers with priority treatment.

As President Nandi-Ndaitwah said in Beijing: "Come and manufacture in Namibia. Come and process in Namibia. Come and grow with Namibia."

For Chinese investors, the invitation is clear. The window will not stay open indefinitely.

NAMIBIA BY NUMBERS

Uranium Output: 12% of global production | 7,333 tonnes in 2024

Chinese Mining Investment: Approaching N\$50 billion to date

Zero-Tariff to China: Effective 1 May 2026

Job Potential: 26,400 from value-addition per UNECA study

Water Security: N\$2.1 billion Erongo desalination, 20 million cubic metres per year

A Continent at the Center of Global Gas Growth



With exports surging 27% in early 2026 and major expansion projects advancing from Senegal to Mozambique, Africa's liquefied natural gas sector is entering a decisive new chapter. For investors, operators, and policymakers, the question is no longer about potential—it's about execution.

The Big Picture: A Continent on the Rise

Africa's LNG story has shifted fundamentally. What was once a narrative of untapped potential is now one of tangible growth. In the first quarter of 2026, African LNG exports climbed 27% year-on-year to reach 11.32 million tons, accounting for nearly 10% of global LNG supply. This surge has been accelerated by global energy dynamics—particularly supply disruptions in the Middle East following the 2026 Strait of Hormuz crisis—which have forced European and Asian buyers to diversify their sources.

But the real story lies beneath these headline numbers. Across the continent, a new wave of projects is moving from discovery to production, from expansion to optimization, and from ambition to delivery.

West Africa's LNG Powerhouse: The GTA Success Story

The Grand Tortue Ahmeyim (GTA) project, straddling the maritime border of Senegal

and Mauritania, has emerged as the crown jewel of Africa's new LNG wave. Following first LNG delivery in 2025, the project delivered a record-breaking first quarter in 2026, with Kosmos Energy announcing net quarterly production of 17,000 barrels of oil equivalent per day—exceeding the floating liquefaction unit's nominal capacity.

The numbers tell the story of operational excellence:

9.5 gross LNG cargoes loaded in Q1 2026, in line with forecasts

32 to 36 cargoes targeted for the full year

Operating costs down more than 50% year-on-year, driven by FPSO refinancing completed in January 2026

LNG cargo volumes expected to nearly double compared with 2025's 18.5 gross cargoes

The project's success has had an immediate impact on export statistics. Mauritania's LNG exports surged from just 42,000 tons

in Q1 2025 to 703,000 tons in Q1 2026—a staggering 1,574% increase. Senegal, while not yet a direct exporter, is poised to benefit from domestic gas allocations as Phase 1+ focuses on supplying local markets.

Kosmos Energy, serving as Diamond Sponsor and Opening Ceremony Host for African Energy Week 2026, has positioned GTA as the centerpiece of its Africa growth strategy. The company is now advancing Phase 2 expansion plans aimed at roughly doubling liquefaction capacity before the end of the decade—representing one of the clearest near-term LNG growth opportunities on the continent.

Beyond GTA: A Continent-Wide Expansion

While GTA captures headlines, LNG activity is accelerating across multiple African frontiers.

Senegal's Yakaar-Teranga: The Next Giant

Senegal's Yakaar-Teranga discovery remains one of the world's largest undeveloped



gas resources. Still in pre-final investment decision phase, the project's commercial structure—particularly the balance between domestic supply and LNG exports—is currently under negotiation. The resource has the potential to underpin future LNG trains, long-term gas-to-power supply, and industrial feedstock development, making it a focal point for upstream financiers evaluating scalable, long-life reserves.

Nigeria: Doubling Down on Gas

Nigeria, already Africa's largest LNG exporter with 4.99 million tons shipped in Q1 2026 (up 45% year-on-year), is accelerating its gas monetization agenda. A 2026 gas master plan targets an additional 1.8 billion cubic feet per day of supply, part of broader ambitions to reach 10 bcf/d by 2027 and 12 bcf/d by 2030, alongside more than \$60 billion in sector investment.

Beyond traditional export LNG, Nigeria is rolling out mini-LNG and small-scale liquefaction facilities to serve off-grid industry, transport, and distributed power—creating multiple entry points for midstream investors across the value chain.

Congo LNG: Fast-Track Success

The Republic of Congo has rapidly positioned itself as a new LNG exporter through an innovative floating LNG model. Phase 2 began operations in December 2025,

adding 2.4 million tons per year of capacity and lifting total output to approximately 3 million tons annually. Built around floating LNG units and modular upstream tie-ins, the project demonstrates a replicable, lower-cost commercialization model that shortens development timelines compared with conventional onshore terminals.

Congo's exports nearly doubled in Q1 2026, rising 98% to 273,000 tons.

Libya: A Potential Mediterranean Comeback

Libya is working to raise gas production to nearly one billion cubic feet per day in the second half of 2026 through offshore redevelopment and rehabilitation of legacy infrastructure. The strategy aims to stabilize domestic electricity supply while rebuilding export capacity. Should financing conditions and political alignment continue to improve, Libya could re-emerge as a major Mediterranean gas supplier later this decade.

Mozambique: The Elephant in the Room

While not featured prominently in the latest export data, Mozambique remains a critical piece of Africa's LNG future. TotalEnergies is expected to be fully on site and in the heavy construction phase of its 13 million tonnes per annum LNG project in the Rovuma Basin by Q3 2026. Alongside ExxonMobil's proposed 18 MMTA facility, Mozambique represents one of the largest gas monetization efforts on the continent.

South Africa Emerges as an LNG Destination Market

South Africa is making strategic moves to become a significant LNG import market. In late May 2026, Transnet National Ports Authority signed a landmark 25-year agreement with Ukwanda LNG—a joint venture between Tamasa Energy Group and the Strategic Fuel Fund—to develop an onshore LNG regasification facility at the Port of Ngqura.

The R22 billion project includes:

A dedicated R2 billion LNG berth to be constructed by TNPA

A temporary Floating Storage and Regasification Unit, alongside permanent onshore infrastructure

Capacity to enable approximately 3,500 MW of electricity generation within the Coega Special Economic Zone

Support for South Africa's planned 6,000 MW gas-to-power pipeline as part of the Just Energy Transition programme

Full operations are targeted for 2035, with the project expected to create over 500 jobs during the approximately 36-month construction period and 50 permanent positions thereafter.

Investment Implications: Where the Opportunities Lie

For investors and industry stakeholders,

several key themes emerge from Africa's LNG expansion:

Infrastructure is the New Frontier

As S&P Global and African Energy Chamber analysts noted in their State of African Energy 2026 Outlook, "Africa's primary constraint in 2026 is no longer subsurface potential, but rather the ability to deliver infrastructure, regulatory clarity and coordinated financing at scale to convert reserves into sustained production".

This means opportunities across the value chain: pipelines, storage terminals, regasification facilities, and distribution networks.

Floating LNG is a Game-Changer

The success of Congo's floating LNG model—and GTA's FLNG approach—demonstrates that modular, lower-cost commercialization can shorten development timelines and reduce risk. This creates opportunities for technology providers, EPC contractors, and specialized service companies.

Domestic Gas Ecosystems are Emerging

Nigeria's pivot toward mini-LNG and small-scale liquefaction for domestic markets signals a broader trend: the development of integrated domestic gas ecosystems with diversified revenue streams. This creates entry points for midstream investors beyond traditional export-focused models.

Global Market Dynamics Favor African Supply

The 2026 Middle East crisis has introduced new volatility into global energy markets, increasing pressure on African import-dependent economies while accelerating efforts to diversify supply routes. African LNG—particularly from Atlantic Basin sources—is increasingly viewed as strategic, non-Russian supply by European and Asian buyers.

Challenges and Considerations

Despite the momentum, significant hurdles remain. Regulatory uncertainty, financing constraints, and political instability continue to shape risk assessments. The AEC has called for a fundamental reorientation of global energy policy that recognizes African fossil fuels as essential to energy security, industrial growth, and poverty alleviation.

As African Energy Week 2026 approaches in October, industry leaders will gather in Cape Town to continue the conversation. The agenda will explore exploration breakthroughs, development challenges, and the crucial balance between investment attractiveness and technical complexity.

The Bottom Line

Africa's LNG sector is no longer defined by isolated projects but by a continent-wide investment reset that could shape global gas supply well into the next decade. For investors willing to navigate the complexities, the opportunities are substantial—and growing.



African Innovation Reshapes Namibia's Mining Landscape

From Windhoek to Silicon Valley, a new generation of technology startups is transforming how minerals are discovered, financed, and extracted across Namibia and the broader African continent. Driven by artificial intelligence, blockchain, and homegrown innovation, these ventures are solving mining's oldest problems—and attracting global attention.

Geosynth: Namibia's Homegrown AI Success Story

The most compelling narrative to emerge from Namibia's mining technology scene is Geosynth, a Windhoek-based startup founded by three young entrepreneurs: Dennis Heita, Even Hashikutuva (Namibia), and Ayomikun Dina (Nigeria).

The Problem They Solve

Mineral exploration is one of the most expensive gambles in industry. Companies pour millions into surveys, sampling, and drilling with no guarantee that anything viable lies beneath the surface. The global industry has accepted this as simply "the cost of doing business" for over a century.

Geosynth saw it differently. Their platform uses data-driven intelligence and analytical tools to give exploration teams the ability to make smarter decisions before capital is committed—reducing failed drill programmes, sharpening targeting, and bringing precision to early-stage exploration.

Breaking Through at Mining Indaba

At the 2026 African Mining Indaba in Cape Town—historically not a room that looks

to Africa for its technology—the Geosynth team walked in and earned the respect of seasoned mining executives.

The room, filled with veterans who have drilled on every continent, listened. Senior geologists praised the platform's ability to process complex geological data in ways that localized software handles better than any imported alternative—precisely because it is built by people who understand the terrain.

But they also pushed back hard. Robust offline functionality for sites deep in the Namib Desert or the Democratic Republic of Congo interior is not optional. Seamless integration with legacy geological databases is not a feature request—it is a prerequisite.

The Geosynth team absorbed every word and returned to Windhoek with a sharper product roadmap, investor interest, and follow-up meetings.

A Pan-African Statement

As the founders wrote following Indaba: "Our story is a signal to every young technologist across Africa. The mining industry is not closed to them, and Africa's greatest resource has never been buried underground. It has always been its people. And with Geosynth, those people are just getting started".

KoBold Metals: The Billionaire-Backed AI Mining Juggernaut

While Geosynth represents grassroots

African innovation, KoBold Metals brings Silicon Valley firepower to the continent's mineral exploration. Backed by billionaires Bill Gates, Jeff Bezos, Richard Branson, and Ray Dalio, the California-based startup closed a \$537million Series C round in early 2025, valuing the company at nearly \$3 billion.

How KoBold Works

KoBold uses artificial intelligence to search for copper, cobalt, nickel, and lithium—the critical minerals essential for electric vehicle batteries and renewable energy systems. The company's AI tools analyze decades of geological data to pinpoint exactly where to drill, making exploration both faster and more accurate.

African Operations

Leading KoBold's Africa arm is Mfikeyi Makayi, a Zambian CEO named to the TIME100 AI list in 2025 for her work deploying AI in mining. Makayi is tasked with fast-tracking what is estimated to be a \$2 billion underground copper mine in Zambia's Chililabombwe district for production by the early 2030s.

Beyond Zambia, KoBold is actively exploring opportunities in Namibia, Botswana, and the Democratic Republic of Congo.

The Mingomba deposit in Zambia—discovered using KoBold's AI—has a defined resource of approximately 247 million tons of ore with an average grade of 3.64% copper, or an estimated 9 million tons of copper.

Strategic Significance

KoBold's projects in Africa have taken on geopolitical importance. China currently controls more than 80% of certain portions of the EV battery chain. By accelerating critical mineral discovery in Africa, KoBold hopes to tip the scales.

As Makayi told TIME: "If the world wants to transition to clean energy, we're going to need to mine within the next half-century as much as we've mined in the history of mankind. If there's a word for more than exponential, it's more than exponential. We've got a climate to save".

TEA Labs: Building Local Analytical Capacity

Not all mining tech startups focus on exploration. Trace Elements Analysis Laboratories (TEA Labs), owned by Wensia Ruiters from Namibia and Kevin Mwashuma from Kenya, is building essential laboratory infrastructure for the sector.

The Gap They Fill

The metallurgical laboratory, located in Swakopmund in the Erongo Region, provides specialized support to uranium mining operators and regulators. As Ruiters explained: "The gap in the market is very small, simply because the infrastructure is not there. What we basically did was just create a platform for a lot of scientists that have gone to school for a long time to come and practice their trade".

Expanding Capabilities

The newly inaugurated TEA laboratory specializes in geochemical and environmental analyses, enabling the facility to serve all mining and environmental industries—a first for Namibia. The lab currently employs 17 people.

Building the Next Generation

TEA Labs is focused on capacity building. The company wants to improve collaboration with tertiary institutions by offering internships to students and has a "Discovery Gap" programme for school-going children curious about careers in the sector.

Erongo Governor Neville Andre praised the facility as "a vital hub for collaboration between industry, academia, and government" that will "facilitate the exchange of ideas, expertise, and resources, fostering a culture of cooperation".

DAMREV: Tokenizing Namibian Mining Assets

Blockchain technology is also finding applications in Namibia's mining sector. DAMREV, a real-world asset tokenization company, has secured a N6billion (US\$6billion (US\$330 million) agreement to tokenize a Namibian copper mine.

How Tokenization Works

The project will convert the copper mine's assets into digital tokens on a secure blockchain platform. These tokens represent fractional ownership of the mine, enabling investors to seamlessly buy, sell, and trade them. This innovative approach is expected to attract a diverse pool of investors and enhance liquidity for the mine.

Project Timeline and Ambition

The 24-month implementation timeframe

positions this as a potential game-changer for both the mining and blockchain industries in Africa.

CEO Duane Herholdt emphasized the company's commitment to collaborating with local stakeholders throughout the implementation phase. "This project not only exemplifies the immense potential of tokenisation in unlocking value from real-world assets but also solidifies Damrev's position as a pioneer in African blockchain innovation".

Regulatory Context

The Bank of Namibia's stance on the project's regulatory implications remains to be determined. However, the project represents a significant step toward modernizing mining finance on the continent.

UNDP timbuktoo MineTech Accelerator: Building a Pan-African Ecosystem

Beyond individual startups, a continent-wide initiative is working to build the mining technology ecosystem from the ground up.

The Programme

The timbuktoo MineTech Accelerator Programme, part of UNDP's pan-African initiative, selected ten startups from a competitive pool of over 350 applications for an intensive bootcamp. Following Demo Day presentations, five winners were awarded critical seed financing to scale their solutions and prepare for market access.

The Five Awardees (2025)

- Arthur Abaliwano – Anchor Machines (Uganda)
- Chitula Lukonde – Zanfi Enterprise Ltd (Zambia)
- Taslim Olawale Salaudeen – Milsat Technologies (Nigeria)
- Tukupala Mussa Mwalyolo – Tukutech Company Ltd (Tanzania)
- Walter Mbonyimwami – SYN-CHROS (Democratic Republic of Congo)

Scale and Ambition

The timbuktoo initiative has established 10 sector-specific Tech Hubs and 14 University Innovation Pods across Africa in under two years, with a moonshot target of impacting 100 million lives.

Speaking at the event, UNDP Resident Representative Dr. James Wakiaga noted: "The visionary leadership of Africa's youth is what inspired the UNDP's establishment of the timbuktoo initiative".

Tukupala Mwalyolo, one of the awardees, captured the spirit: "This is only the beginning. Let us carry forward this spirit of inclusion, resilience, and collaboration as we continue to build solutions that matter for our communities and our continent. Together, we will prove that Africa's brightest days are not ahead of us by chance, but they will be built by us with courage, creativity, and unity".

Ecosystem Enablers: Supporting Mining

Tech in Namibia

StartUp Namibia

StartUp Namibia is a non-profit organization improving conditions for startup establishment and growth. Its Basecamp incubation and innovation centre aims to build a thriving Namibian startup ecosystem where new, innovative ideas flourish. The organization specifically targets mining and quarrying among its specialization sectors.

Namibia Business Innovation Institute (NBII)

- Formerly known as the Namibia Business Innovation Centre, NBII is a national leader in research, entrepreneurship, and innovation. It operates through four pillars:
- Innovation Marketplace (I'M)
- Entrepreneurship and Incubation (E&I)
- Research and Development (R&D)
- RLabs Namibia project

The NBII supports young entrepreneurs with innovative ideas to kick-start their businesses through training and mentoring, with mining and quarrying among its specialization sectors.

Venture Capital Interest

Transvaal VC, a venture capital firm operating in South Africa, Botswana, and Namibia, invests 250,000to250,000to1.5 million in mining and energy startups based in the SADC region. Their focus includes battery metals, industrial metals, and renewable energy.

The Broader Trend: African MineTech on the Rise

What these ventures collectively demonstrate is a broader trend: African entrepreneurs are building technology solutions for African mining challenges, rather than waiting for imported software to be adapted.

The Geosynth story is particularly instructive. Built on African soil by founders who understand the terrain, the platform addresses specific local challenges—offline functionality for desert sites, integration with legacy databases, and the pressure of delivering results to investors.

As the founders wrote: "The mining industry is not closed to them, and Africa's greatest resource has never been buried underground. It has always been its people".

With KoBold's AI-powered exploration expanding into Namibia, local startups like Geosynth and TEA Labs building essential tools and infrastructure, blockchain projects like DAMREV transforming mining finance, and UNDP-backed accelerators cultivating the next generation, Namibia is positioning itself at the center of Africa's mining technology revolution.

The message to global investors and industry partners is clear: the future of mining will be digital, data-driven, and increasingly built in Africa.



Company Profile:

WearCheck Africa

For the Namibian Mining Compass

Overview

WearCheck Africa stands as the continent's pre-eminent condition monitoring specialist, with a proud 50-year legacy in predictive maintenance and reliability solutions. Founded in 1976 by Lesley and Wally Crawford and Gary Brown, the company began as a modest home laboratory operation processing fewer than 500 samples per month. Today, WearCheck processes over 800,000 samples annually through a network of 14 world-class laboratories spanning nine countries across Africa and beyond.

The company is a member of the International WearCheck Group (IWG), an association of independent laboratories dedicated to oil and wear particle analysis, enabling the exchange of advanced technical information and the provision of a truly global service.

Quality Credentials

WearCheck holds a unique position in the African market as the only oil analysis company with the trifecta of internationally recognised certifications: ISO 9001:2015 (Quality Management), ISO 14001:2015 (Environmental Management), and ISO/IEC 17025:2017 (Laboratory Competence). The company first earned ISO 9001 certifica-

tion in 1996 and added ISO 14001 in 2005, maintaining an unbroken record of successful recertification for nearly three decades.

Services for the Mining Sector

WearCheck's comprehensive service portfolio addresses the full spectrum of mining equipment reliability needs:

Fluid Analysis Services

- Used oil, fuel, coolant and grease analysis for predictive maintenance
- Transformer oil testing and dissolved gas analysis (DGA)



- Scientific water testing for wastewater, groundwater and surface water compliance

Reliability Solutions

- Vibration analysis and thermal imaging
- Laser alignment and balancing
- Non-destructive testing (NDT)
- Rope condition assessment
- Lubrication-enabled reliability programmes

The company's underlying philosophy is that any good proactive maintenance programme boosts both plant availability and reliability, directly impacting the bottom line.

WearCheck in Namibia

WearCheck has established a significant presence in Namibia, operating two strategically located laboratories serving the country's growing mining and construction sectors.

Hubab Uranium Project Laboratory – Established in 2016 under a five-year contract with Swakop Uranium, this on-site laboratory supports one of the world's

largest uranium mining operations through comprehensive oil analysis and reliability solutions.

Skorpion Zinc Laboratory – Opened in 2018 near Rosh Pinah, this facility is fully equipped with the latest instrumentation and backed by its own uninterrupted power supply. The lab offers a 24-hour sample turnaround time, enabling maintenance managers to make rapid, informed decisions.

Both Namibian laboratories are open to all industries, including quarrying, industrial, transport, power generation and shipping operations.

Recent Developments

WearCheck continues to expand its African footprint. In early 2026, the company partnered with Tanzania-based Technical and Engineering Solutions (TES) to extend its reliability and condition monitoring services into East Africa. This partnership combines local on-the-ground expertise with WearCheck's advanced laboratory infrastructure, ensuring customers receive globally recognised analysis essential for international insurance compliance and warranty validation.

The company also maintains a strong presence at industry events, including the 2026 Investing in Africa Mining Indaba, where it showcased its full suite of mining-focused predictive maintenance solutions.

Training and Capacity Building

WearCheck offers more than 15 practical, hands-on courses covering oil analysis, transformer maintenance, thermography and other reliability solutions. These programmes are designed to address skillset gaps in the heavy industry, empowering maintenance crews to prevent avoidable failures and extend asset life.

Contact Information

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As WearCheck celebrates five decades of service to African industry, the company remains committed to helping mining operations across the continent reduce unplanned downtime, extend component life, and improve overall operational performance through data-driven, proactive maintenance strategies.



Powering the Erongo:

Inside Africa's First Digital Substation

The recent inauguration of the N\$394 million Sekelduin Substation near Swakopmund is more than just a successful infrastructure project, it is a major milestone in Namibia's electricity infrastructure development and a clear signal that the nation's energy strategy is evolving to match its industrial ambitions.

Speaking at the official inauguration

this past Monday, NamPower Managing Director Kahenge Simson Haulofu highlighted the project's strategic necessity. "Sekelduin is NamPower and Africa's first digital substation," Haulofu noted. "Built by Africans for Africa, it demonstrates that the continent can design and deliver world-class digital grid infrastructure."

Developed as a direct response to the

region's surging electricity demand, the facility addresses the pressures of rapid industrial expansion and population growth. This project aligns with Namibia's broader national objectives under the Harambee Prosperity Plan II, which prioritizes energy self-sufficiency and the expansion of key economic sectors to stimulate national growth. For the Erongo region, the heartland of our uranium and base-metal mining



residents who rely on the Swakopmund and Tamarisk substations downstream. Together, these users make up the core of Erongo's mining and municipal load.

For too long, the stability of our coastal operations has been tethered to aging infrastructure, susceptible to the corrosive combination of coastal salt and desert dust. The Sekelduin facility flips this narrative. By moving critical switchgear indoors and using fibre-optic IEC 61850 standards, NamPower has hardened the grid against environmental degradation and introduced real-time remote diagnostics. That shifts operations from reactive maintenance to proactive excellence.

The cost and the payoff

At N\$394 million, or roughly N\$6.6 million per MW added, Sekelduin is capital-intensive compared to traditional analogue substations. NamPower funded part from internal reserves and part through a DBSA loan, meaning the cost will be recovered over time via the national tariff. The bet is that reduced outages, lower maintenance costs, and support for new mining investment will deliver ROI within 8-10 years. For Erongo residents, the immediate benefit should be fewer outages, though NamPower has not yet confirmed any direct tariff relief.

Built by Africans, but with caveats

NamPower partnered with South Africa's ACTOM to deliver the project, with local engineers and technicians making up roughly 60% of the project team. That represents real skills transfer, but critics note Namibia still imports most of the specialized fibre-optic and SCADA components. The substation is "AI-ready" and future-proofed for wind and solar integration key as Namibia targets 70% renewable energy

by 2030. However, a fully digital grid also raises new cybersecurity risks. NamPower says it has layered cyber defenses, but has not released details of independent security audits.

Environmental and community lens

The substation's environmental impact assessment highlighted minimal land disruption, but the embodied carbon from concrete and copper remains significant. On the community side, while the primary beneficiaries are industrial, Erongo RED confirms the added capacity has already stabilized supply to Swakopmund's residential areas. During construction, over 200 local jobs were created, though most were temporary.

Context matters

While marketed as "Africa's first fully digital substation," Morocco and South Africa have piloted IEC 61850 digital bays in recent years. Namibia's achievement is scale and integration making Sekelduin the first complete greenfield digital substation on the continent. That distinction matters, but the real test will be replicating this model in other regions without similar mining-backed demand.

Namibia is proving that African engineering expertise can deliver world class infrastructure. The message is clear that Namibia energy sector is aligning with the sophisticated, technology-driven future of mining industry. The digital revolution in Namibian mining hasn't just arrived, it is now powered by a grid as intelligent as the mines it serves. The challenge ahead is ensuring that intelligence benefits not just industry, but every Namibian household it powers.

sectors, this is the reliable, forward-thinking "digital backbone" the industry has been waiting for.

Project Details

The Sekelduin Substation carried a total project cost of N\$394 million, funded through a mix of NamPower's capital budget and a loan facility from the Development Bank of Southern Africa. Construction began in July 2021 and was completed in March 2023 after minor delays linked to global supply-chain issues.

The facility adds 60 MW of new capacity to the national grid about 8% of Namibia's peak demand and was built to the IEC 61850 standard using fibre-optic, digital technology. That makes it the first fully digital substation on the continent.

The primary beneficiaries are industry and public: Husab Uranium Mine, the NamWater South bulk water scheme, Erongo RED's distribution network, and Swakopmund



ZIMBABWE'S 2026 REGULATORY CRACKDOWN: BIKITA SHUTDOWN SIGNALS "PROCESS LOCALLY OR CLOSE"

*With \$200M invested and new 2026 rules in force, foreign miners face a choice:
build local capacity or risk shutdown*

By Rukudzo Rose Musari

Just two days ago, Bikita Minerals Zimbabwe's oldest lithium mine and a crown jewel of Chinese investment in Africa was forced to shut its gates.

The seven day suspension, ordered by Zimbabwean authorities to "address administrative concerns," is the latest and loudest warning shot in a regulatory crackdown that is rapidly redefining the rules of engagement for foreign miners in the country.

For the Chinese investor who has poured US\$200 million into expanding Bikita including the construction of two lithium processing plants capable of producing 250,000 tonnes of spodumene concentrate and 480,000 tonnes of petalite annually the message is unmistakable: compliance is no longer optional. It is the price of survival.

THE SHUTDOWN: A PATTERN, NOT AN ISOLATED INCIDENT

This is not Bikita Minerals' first encounter with regulatory enforcement.

In 2023, the mine was ordered to suspend operations until it complied with legal provisions covering labour, environmental, and immigration laws. Despite surges in production, workers were allegedly subjected to ill-treatment, poor remuneration, inhumane accommodation and critically, they were not registered with statutory bodies such as the National Social Security Authority (NSSA).

The 2026 shutdown follows the same playbook. An inter-ministerial audit team conducted inspections, identified deficiencies, and issued a suspension order. Bikita Minerals manager David Mwanza confirmed the company would address the issues within seven days, stating: "This release serves to inform our stakeholders and partners that we have put operations at our plant on hold for seven days to address administrative concerns raised by authorities".

But the pattern raises a troubling question: Why do the same compliance failures keep recurring?

THE REGULATORY TSUNAMI: WHY ZIMBABWE IS CRACKING DOWN NOW

The Bikita shutdown is not happening in a vacuum. It is part of a sweeping regulatory transformation that has accelerated dramatically in 2026.

The Lithium Export Ban
On February 25, 2026, Mines Minister Polite Kambamura imposed an immediate ban on the export of all raw minerals and lithium concentrates. The ban was enforced with unusual speed applying even to shipments already at the border. The stated rationale: curb smuggling, stop resource depletion, and force the sector toward local beneficiation.

The Critical Minerals Declaration
On May 22, 2026, Kambamura signed the Mineral Classification and Declaration, formally classifying 14 minerals including lithium, nickel, cobalt, graphite, copper, rare earth elements, and uranium as critical. The new rules mandate that:

- No person may export any listed mineral in raw or unbeneficiated form without a ministerial-approved beneficiation plan
- Mandatory minimum state shareholding through Special Purpose Vehicles (SPVs)
- Mining rights applications now require prior ministerial approval

"The era of shipping raw rock for marginal returns is over" Polite Kambamura, Minister of Mines

The 98% Local Management Directive
In May 2026, the government issued a bold directive that 98 per cent of all senior and middle management positions at mines must be held by Zimbabwean citizens with immediate effect.

RBZ Export Compliance
The Reserve Bank of Zimbabwe has warned that compliance with export regulations is "non-negotiable", citing concerns over overdue export receipts, transfer pricing, and undervaluation of exported minerals.

THE NUMBERS THAT EXPLAIN THE URGENCY

Zimbabwe is now one of Africa's leading lithium producers, backed primarily by Chi-

nese investment. Major producers include Bikita Minerals, Prospect Lithium Zimbabwe's Arcadia Mine, Kamativi, Sabi Star, Sandawana and Gwanda.

The country exported 1.5 million tonnes of lithium in 2025, with values jumping 106% despite modest volume growth. Mining is the backbone of the economy, supplying around three quarters of export earnings. Mineral export revenue reached \$8.01 billion in 2025.

Yet for all this wealth, Zimbabwe's citizens remain poor. The infrastructure remains broken. The currency remains volatile.

The government has concluded that the extract-and-ship model has failed. The new model is extract-process-export and foreign investors who cannot adapt will be left behind.

THE CHINESE RESPONSE: BEIJING SPEAKS

Perhaps the most significant development is Beijing's own response.

The Chinese miner invested a further USD 200 million to expand existing operations at Bikita, including the construction of two lithium processing plants to produce 250,000 tonnes of spodumene concentrate and 480,000 tonnes of petalite per year.

In a formal advisory, Chinese enterprises were urged to "strengthen risk prevention measures and fully align their operations with Zimbabwe's regulatory framework". The advisory warned companies to prepare for financial losses arising from "sudden policy changes".

For Chinese firms, which have poured more than US\$1.4 billion into Zimbabwe's lithium sector since 2021, the stakes could not be higher.

WHAT THIS MEANS FOR INVESTORS

The Bikita Minerals shutdown is a microcosm of a much larger shift. For investors whether Chinese, Namibian, or global the lessons are clear:

1. Compliance Is Now a Core Competency
Licensing, permits, and operational continuity depend on demonstrable compliance



with labour, environmental, immigration, and social security laws. The era of "asking for forgiveness later" is over.

2. Benefaction Is Mandatory, Not Optional
Raw mineral exports are being systematically phased out. The 2026 critical minerals declaration codifies what the 2026 lithium ban started. Investors without credible local processing plans will find themselves locked out of export markets. Arcadia Mine's \$400m facility has already dispatched its first lithium sulphate export.

3. Localisation Is Non-Negotiable
From 98% local management to mandatory state shareholding, the new regulatory framework demands genuine partnership with Zimbabwean citizens and institutions. Token compliance will not suffice.

4. Reputation Matters

The Bikita shutdown has drawn attention from civil society groups. In an era of heightened ESG scrutiny, reputational damage can be as costly as regulatory fines.

THE COMPASS BOTTOM LINE

Bikita Minerals survived its seven-day shutdown. It resumed operations after addressing the identified issues. But the underlying vulnerabilities remain.

The mine employs 860 workers. Sinomine has invested US\$200 million to expand it. The company is now planning a US\$500 million lithium sulphate plant. These are not small bets.

But in Zimbabwe's new regulatory landscape, past investment is no shield against

future enforcement. Compliance or closure is not a rhetorical choice—it is the operating reality.

For every Chinese miner in Zimbabwe, and for every investor watching from Namibia, the message is the same: the rules have changed. Adapt. Comply. Or prepare to shut your gates.

ZIMBABWE BY NUMBERS

Lithium Exports 2025: 240,826t

Mining Export Revenue 2025: US\$8.01B

Chinese Investment Since 2021: US\$1.4B+

Bikita Expansion: US\$200M | 250,000t spodumene + 480,000t petalite

2027 Deadline: Raw lithium concentrate ban in effect

Power Demand from Mining: 2,600MW by 2030

NAMIBIA'S NEW MINERALS BILL:

PROCESS HERE OR LOSE LICENSING PRIORITY

With zero-tariff access to China now in force, early movers on processing will secure market and license advantage

In Beijing last week, President Netumbo Nandi-Ndaitwah delivered a clear message to Chinese investors: Namibia will no longer export poverty.

"Come and manufacture in Namibia. Come and process in Namibia. Come and innovate in Namibia."

It was not rhetoric. It was policy.

For mining companies still shipping concentrate, the implications are immediate. The new Minerals Bill puts beneficiation at the centre of licensing. And with China's zero-tariff regime for African goods now in force, the economics of processing in Namibia have shifted.

For Chinese investors, the question is no longer whether to process in Namibia. It is whether to move before competitors do.

POLICY CLARITY CREATES FIRST-MOVER ADVANTAGE

Regulatory uncertainty has been a long-standing complaint in Namibia. The new Minerals Bill removes it.

Currently before parliament, the Bill mandates a minimum 5% Namibian equity in mining companies and requires that a portion of production be retained for domestic value addition.

For early movers, this is an advantage. The Bill explicitly prioritises applicants with committed processing plans for licensing and environmental approvals. Late entrants will face longer timelines.

Deputy Minister Gaudentia Kröhne framed it directly: beneficiation is now a "national strategic priority". In practice, that means it is a condition for doing business.

"The Bill gives preference to applicants with processing plans. Late movers will wait."

THE COST OF DELAY

Three developments in 2026 make delay expensive:

Licensing. Priority will go to projects with downstream commitments. Others will wait.

Margins. Exporting lithium concentrate instead of battery-grade chemicals sacrifices an estimated 35-45% of value. That margin

is currently captured by refiners offshore.

Market access. Since 1 May 2026, China has granted zero-tariff treatment to all 53 African states with diplomatic relations. Processed goods from Namibia now enter the world's largest industrial market duty-free.

MARKET ACCESS: ONE LOCATION, THREE TRADE BLOCS

Namibia's domestic market is 3 million people. The investment case is bigger.

Through SADC and SACU, investors have preferential access to 300 million consumers. Through AfCFTA, that extends to 1.2 billion.

"When you invest in Namibia, you are investing in 300 million consumers in SADC, and 1.2 billion across Africa. We are the gateway to the southern African interior."

— Selma Ashipala-Musavyi, Minister of International Relations and Trade

The Port of Walvis Bay, upgraded with Chinese technical support, is now the primary logistics corridor for Botswana, Zambia and Zimbabwe. A processing plant in Erongo can serve all three markets from one site.

ZERO-TARIFF ENTRY TO CHINA

On 1 May 2026, China eliminated tariffs on imports from Africa. For Namibia, that removes duties of 12% to 25% that previously applied to processed minerals and manufactured goods.

President Nandi-Ndaitwah called it "a strategic instrument for industrialisation", not a concession.

For Chinese investors, the implication is straightforward: value-added products made in Namibia can be re-exported to China without tariff barriers. Concentrate cannot.

RESOURCE BASE: SCALE IN CRITICAL MINERALS

Namibia is already a major producer. It accounts for 12% of global uranium output and ranked third worldwide in 2024 with 7,333 tonnes. Almost all of it was exported as unprocessed concentrate, primarily to China.

The pipeline is deeper:

Lithium: SQM has committed N\$646 million to the Uis project.

Copper: The Omitiwire development targets N\$6.6 billion in capital.

Rare Earths: Drilling continues at Lofdal.

Other: Gold, zinc, cobalt, graphite and manganese.

Chinese companies are already entrenched. CNNC controls Husab and has committed up to US\$6.1 billion to Etango. Rössing is also Chinese-controlled. Disclosed Chinese investment in Namibian mining over the past 12 months exceeds US\$5.54 billion. Total Chinese uranium investment is approaching N\$50 billion.

The resource is proven. The missing link is processing.

CAPTURING VALUE IN THE CHAIN

Mining contributed N\$64.7 billion to the economy in 2025/26. Manufacturing contracted by 5.9% in Q1 2026.

That gap is the opportunity.

A UNECA study identified 353 products Namibia could produce competitively, representing over US\$900 million in potential new output and 26,400 jobs. A prioritised subset could deliver 26,000 jobs.

For investors, the logic is simple. The company that builds the lithium hydroxide plant, the copper refinery, or the uranium conversion facility in Namibia captures margin that currently leaves the country.

INFRASTRUCTURE IS CLOSING THE GAP

Processing requires water and power at scale. Both are being addressed.

The N\$2.1 billion Erongo SUNAM desalination plant is targeting financial close in July 2026. It will deliver 20 million cubic metres per year, providing water security independent of rainfall.

NamPower has awarded a N\$1.4 billion contract to a Chinese consortium for a 100MW solar plant, due online in Q2 2026. With over 300 days of sunshine and strong coastal winds, Namibia can support ener-



gy-intensive industry. Long-term, dollar-denominated PPAs are available.

STABILITY AND PREDICTABILITY

Namibia offers what is increasingly scarce: political stability and policy predictability.

"We are a logistical spine, an energy hub, a mineral resource hub, and a stable democracy."

— Selma Ashipala-Musavyi, Minister of International Relations and Trade

The country provides investment protection, free repatriation of profits and capital, and a functional tax and legal regime. In a volatile region, that matters.

THE BOTTOM LINE

The era of exporting raw materials is ending. The new Minerals Bill makes that explicit.

For investors who build processing capacity in Namibia, the payoff is measurable:

One plant, three markets. Tariff-free access to China, SADC and AfCFTA.

Infrastructure in place. Water and power projects de-risking operations.

Policy preference. First-mover advantage

As President Nandi-Ndaitwah said in Beijing: "Come and manufacture in Namibia. Come and process in Namibia. Come and grow with Namibia."

For Chinese investors, the invitation is clear. The window will not stay open indefinitely.

NAMIBIA BY NUMBERS	
Metric	Value
Uranium Output	12% of global production 7,333t in 2024
Chinese Mining Investment	~N\$50 billion to date
Zero-Tariff to China	Effective 1 May 2026
Job Potential	26,400 from value-addition per UNECA
Water Security	N\$2.1B Erongo desalination, 20M m ³ /year

under the new licensing regime.

THE 61% WARNING:

Why Zimbabwe's Chrome Collapse Is A Bellwether For The Entire Mining Sector

Alluvial reserves exhausted, export bans create monopsony, and small-scale miners can't afford the transition to hard-rock



By Rukudzo Rose Musari

Zimbabwe's chrome production just collapsed by 61% in the first quarter of 2026. From 465,638 tonnes in Q1 2025, output cratered to just 178,425 tonnes.

That is not a correction. That is a structural crisis.

And it is a warning shot for every miner, investor, and policymaker betting on Zimbabwe's resource-led industrialisation.

THE ALLUVIAL CLIFF: WHAT JUST HAPPENED

For years, alluvial chrome was the backbone of Zimbabwe's chrome industry, particularly for artisanal and small-scale miners. Unlike lumpy chrome locked in hard-rock deposits, alluvial chrome occurs in loose surface sediments extractable with picks, shovels, and basic equipment. Its accessibility enabled thousands of small-scale miners to enter the sector with minimal capital.

Those deposits are now exhausted.

"Chrome production declined by 61% because the alluvial chrome, which contributed to most of the chrome production, is now exhausted, and it requires a long time to be replenished through sedimentary deposition," said Shelton Lucas, Chairperson of the Chrome Miners Association of Zimbabwe.

The industry is now being forced into a transition it is not equipped to make: from low-cost surface scooping to capital-intensive hard-rock mining requiring drilling, blasting, crushing, and heavy mechanisation.

THE ECONOMICS THAT DON'T WORK

The shift to hard-rock mining has broken the economics of chrome production.

"The cost of mining lumpy chrome doesn't match the price," Lucas told Mining Zimbabwe. "Since there was a ban on ore exports, miners have been left susceptible to predatory pricing from Chinese companies that own smelters."

The numbers:

Foreign-owned beneficiation plants buy chrome ore at around US\$70 per tonne.

Meanwhile, the cost of extracting lumpy chrome from hard rock with drilling, blasting, crushing, and greater mechanisation has risen sharply.

The margin has evaporated. The chrome ore export ban, imposed in February 2026 to promote local beneficiation, has had the perverse effect of reducing competition for ore. With a limited number of smelters controlling the market, producers have fewer buyers and weaker bargaining power.

"We are subjected to predatory price regimes within Zimbabwe," Lucas said.

THE POLICY PAR-

ADOX

Zimbabwe's beneficiation push is progressive and necessary for long-term industrial growth. The global ferrochrome market is valued at approximately US\$22.02 billion by 2035. Capturing that value chain is exactly what industrial policy should aim for.

But the current implementation has created a market structure where a handful of foreign-owned smelters dictate prices to thousands of small-scale miners who can no longer afford to extract the ore.

Lucas has proposed a solution: "We should have government-owned smelters that can do toll smelting for chrome." Under a toll-smelting arrangement, miners pay a processing fee while retaining ownership of their chrome.

The government has signalled willingness to intervene. In June 2026, it announced preparations for a major intervention in the chrome sector, including a proposed toll-processing model. But action has yet to match rhetoric.

"We are subjected to predatory price regimes within Zimbabwe"

— Shelton Lucas, Chairperson, Chrome Miners Association of Zimbabwe

THE DATA DEFICIT

The chrome collapse exposes a broader problem: Zimbabwe's mining data remains fragmented and unreliable. The Ministry of Mines itself has acknowledged that comprehensive statistics on the sector's actual production and energy consumption are lacking.

When the government cannot accurately measure what is being produced—or by whom—it cannot effectively regulate, tax, or plan. The chrome numbers from Q1 2026 are a wake-up call. If the sector is contracting this sharply, how many other mineral segments are quietly bleeding out?

WHAT THIS MEANS FOR INVESTORS

For institutional allocators and project developers, the chrome collapse offers four critical lessons:

Alluvial Resources Are Finite

The assumption that easily accessible deposits will continue to supply production indefinitely is

flawed. Zimbabwe's alluvial chrome boom was always going to end. That time is now.

Beneficiation Without Competition Creates Monopsony

Export bans that reduce buyer competition can backfire. When a handful of smelters control the market, producers lose pricing power even as their costs rise.

Small-Scale Miners Are Systemic Risks

Thousands of small-scale operators dominate chrome production. They lack the capital to transition to hard-rock mining. When they fail, production collapses.

Infrastructure Is the Binding Constraint

The transition to hard-rock mining requires mechanisation, which requires power. Zimbabwe's grid is already strained by the 2,600MW mining demand problem. Without reliable electricity, the shift from alluvial to hard-rock is not just expensive—it may be impossible.

THE COMPASS BOTTOM LINE

Zimbabwe holds the world's second-largest known chrome ore deposits, with approximately 900 million tonnes of untapped ore against total world reserves estimated at 7.5 billion tonnes. The resource is not the problem.

The problem is the economics. The problem is the market structure. The problem is the infrastructure. And the problem is the policy implementation gap between noble intentions and practical outcomes.

The Ministry of Mines has acknowledged that addressing production contractions through targeted investment in mining infrastructure, energy supply, and operational efficiency will be essential. But words are not watts. And they are not smelters.

The 61% chrome collapse is not an anomaly. It is a forecast. Every mineral segment in Zimbabwe that depends on easily accessible deposits, dominated by undercapitalised operators, and subject to concentrated buyer power faces the same trajectory.

The question is not whether more collapses will come. The question is which mineral will be next.

ZIMBABWE CHROME BY NUMBERS	
Metric	Value
Q1 2025 Production	465,638 tonnes
Q1 2026 Production	178,425 tonnes
Decline	61%
Ore Price from Smelters	~US\$70/tonne
Global Ferrochrome Market 2035	US\$22.02B
Zimbabwe Chrome Reserves	900M tonnes 2nd largest globally

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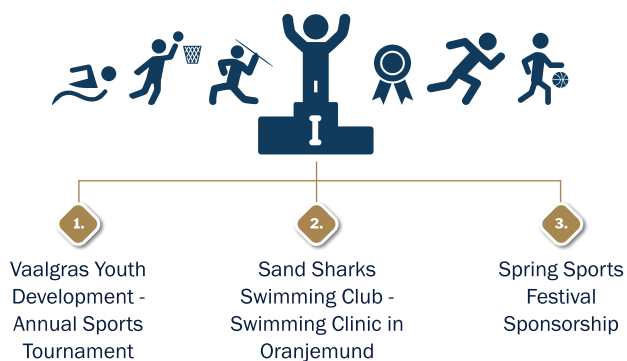
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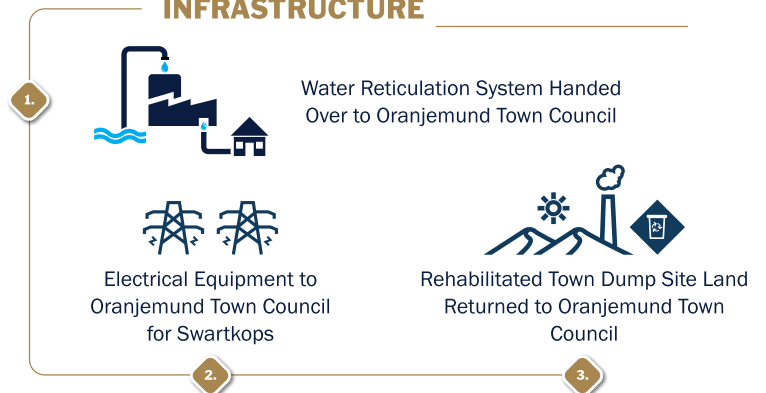


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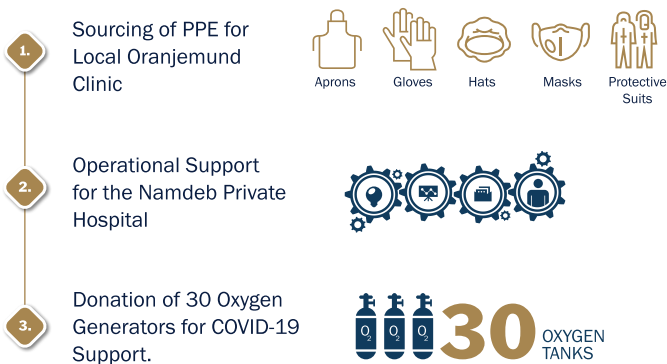


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