GSR ANALYTIX

MINING MAGAZINE

WORLD MINING OUTLOOK

CRITICAL MINERALS • TECHNOLOGY • INVESTMENT • SUSTAINABILITY





World of Mining

KAZAKHSTAN & SOUTH KOREA TARGET CRITICAL MINERALS



$1.1 BILLION TUNGSTEN PROJECT MOVES FORWARD



KAZAKHSTAN EXPANDS GOLD PROCESSING CAPACITY



US STEPS UP THE CRITICAL MINERALS RACE

$2 BILLION TUNGSTEN DEAL RESHAPES SUPPLY SECURITY

COPPER SUPPLY TIGHTENS AS PRICES TEST NEW HIGHS

DEEP-SEA MINING MOVES CLOSER TO REALITY

GSR ANALYTIX

MINING MAGAZINE

WORLD MINING OUTLOOK

CRITICAL MINERALS • TECHNOLOGY • INVESTMENT • SUSTAINABILITY

	PAGE
INDEX	1
Headline 1 — Kazakhstan & South Korea	2
Headline 2 — $1.1B Tungsten	3
Headline 3 — Gold Processing	4
Local News	5
Local Snapshot / By the Numbers	6
Local Outlook + Küper küçük reklam	7
Investment Opportunities	8
KÜPER FULL PAGE AD #1	
Global News 1	9
Global News 2	10
Global News 3	11
Global News 4	12
Top 10 Countries by Mineral Production Value	13
KÜPER FULL PAGE AD #2	
Mine Safety & Digital Operations	14
In Focus — The Rise of Smart Mines	15
Exploration & Geoscience 1	16
Exploration & Geoscience 2	17
KÜPER FULL PAGE AD #3	
Smart Mining & Automation 1	18
Smart Mining & Automation 2	19
Mineral Processing & Metallurgy 1	20
Mineral Processing & Metallurgy 2	21
MINE SAFETY	22
KÜPER FULL PAGE AD #4	
About Nature	23
GOOD BYE	24
Finish / Closing Page	25

IMPRINT

Published by **GSR ANALYTIX**

Founder & Managing Editor: **Gürkan Sever**

Editorial & Research: GSR ANALYTIX Mining Editorial Team

Art Direction & Design: **GSR ANALYTIX Creative Studio**

Digital Publishing: **GSR ANALYTIX Media**

www.GSRANALYTIX.com

© 2026 **GSR ANALYTIX. All rights reserved.**

GSR ANALYTIX

MINING MAGAZINE

WORLD MINING OUTLOOK

CRITICAL MINERALS • TECHNOLOGY • INVESTMENT • SUSTAINABILITY



KAZAKHSTAN & SOUTH KOREA TARGET CRITICAL MINERALS

Kazakhstan and South Korea are deepening cooperation in critical minerals, energy and advanced technology as both countries look to strengthen strategic supply chains.

During talks in Seoul on September 15, the two sides signed a series of cooperation documents covering peaceful nuclear energy, crude oil, science and technology, while also exploring broader partnerships in critical minerals and high-tech industries. South Korea is particularly interested in Kazakhstan's resource base, including lithium and other minerals needed for batteries, electronics and advanced manufacturing.

For Kazakhstan, the partnership supports its strategy of moving beyond raw material exports toward processing, technology transfer and higher-value industrial development. For South Korea, closer ties with resource-rich Central Asia could help diversify supply sources and reduce vulnerability in increasingly competitive global mine markets.

The cooperation highlights Kazakhstan's growing role as a strategic bridge between mineral resources and Asia's technology-driven industries

.

Source: Reuters — 15 September 2026



GSRANALYTIX

$1.1 BILLION TUNGSTEN PROJECT MOVES FORWARD

Kazakhstan has launched the practical implementation phase of the **Northern Katpar tungsten project** in the Karaganda Region, marking one of the country's largest new investments in critical minerals.

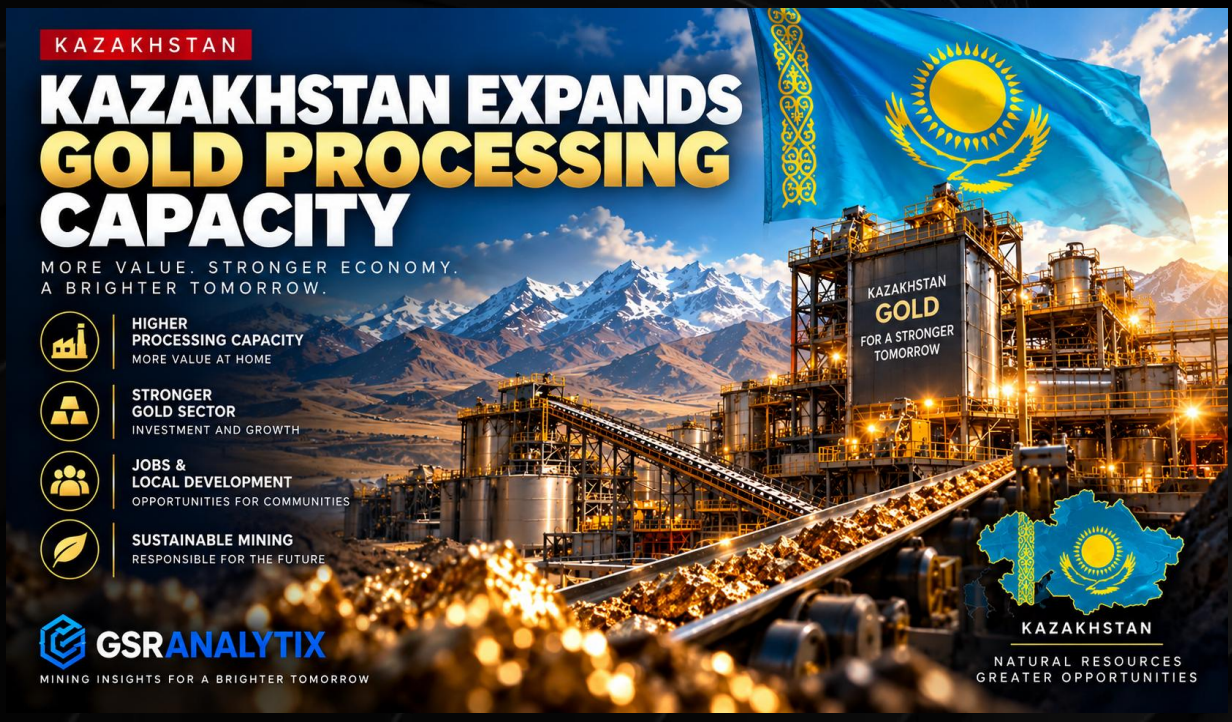
The project represents approximately **$1.1 billion in planned investment** and is expected to create around **2,000 jobs**. Northern Katpar LLP is owned by US-based **Cove Capital through Cove Kaz Capital Group with a 70% stake**, while Kazakhstan's national mining company **Tau-Ken Samruk holds 30%**.

Development will cover the **Northern Katpar and Upper Kairakty deposits**, together with new processing facilities. The project is designed as a full production chain — from mining and beneficiation to deep processing — with **ammonium paratungstate** planned as the final product. Copper, molybdenum and bismuth are also expected to be recovered as by-products.

Mining at Northern Katpar is currently scheduled to begin in **2030**, with average annual production projected at around **5,000 tonnes of tungsten trioxide**. The definitive feasibility study is expected to be completed by the end of 2027.

The development reinforces Kazakhstan's ambition to become a more important supplier of **strategic and critical minerals**, while moving beyond raw-material exports toward higher-value domestic processing.

Source: KAZAKH INVEST — 31 August 2026



KAZAKHSTAN EXPANDS GOLD PROCESSING CAPACITY

Kazakhstan is strengthening its position in the global gold industry with a major expansion of processing capacity in the Akmola Region, the country's leading gold-producing centre.

On **7 September 2026**, Zijin RG Gold launched a new gold processing plant project at the Raygorodok deposit in Burabay District. The planned facility will have capacity to process around **10 million tonnes of ore per year**, lifting the site's total mining and processing capacity to approximately **16 million tonnes annually**.

Akmola Region currently accounts for around **54% of Kazakhstan's total doré alloy production**, supported by major producers including RG Gold, Altyntau Kokshetau and Altynalmas. The new project is therefore significant not only in scale, but also because it reflects Kazakhstan's broader strategy of moving from raw-material extraction toward **deeper domestic processing and higher-value production**.

The expansion is expected to strengthen the local gold value chain, support new investment and employment, and reinforce Kazakhstan's role as one of Central Asia's most important precious-metals producers.

Source: KAZAKH INVEST — 7 September 2026



NEWS

- **RARE-EARTH OXIDE PLANT PLANNED FOR STEPNOGORSK**
  Kazakhstan is advancing plans for a new rare-earth oxide separation facility in Stepnogorsk, strengthening domestic processing capacity for strategic minerals

.

- **ENDEAVOUR & EAST STAR EXPAND GOLD EXPLORATION**
  East Star Resources and Endeavour Mining are expanding gold exploration activities in northern Kazakhstan, supported by new licence applications and technology-driven targeting.

- **RULIKHA COPPER PROJECT MOVES TOWARD DEVELOPMENT**
  The Rulikha copper project is progressing toward resource definition, feasibility studies and future development as Kazakhstan continues to attract investment into its copper sector.

- **AI & BIG DATA TRANSFORM KAZAKHSTAN'S GEOLOGY**
  Kazakhstan is accelerating the digitalisation of geological exploration, using AI, Big Data and advanced modelling to identify new mineral opportunities and improve project development.

- **CHINA & KAZAKHSTAN PUSH DEEP PROCESSING INVESTMENTS**
  Kazakhstan and Chinese partners are exploring new investments in deep processing, supporting the country's strategy to retain more value from its mineral resources.

GSR ANALYTIX

MINING MAGAZINE

WORLD MINING OUTLOOK

CRITICAL MINERALS • TECHNOLOGY • INVESTMENT • SUSTAINABILITY

Snapshot



Kazakhstan is evolving from a resource-rich mining economy into a strategic processing and critical-minerals hub

WORLD URANIUM PRODUCER
Kazakhstan remains the world's leading uranium producer.

9,500+
MINERAL DEPOSITS
A vast geological resource base across the country.

100+
RARE & RARE-EARTH DEPOSITS
Growing strategic importance in critical minerals.

COPPER • GOLD • URANIUM • TUNGSTEN
CORE MINERAL STRENGTHS
Four commodities driving investment and exploration.

$1.1 BILLION
NORTHERN KATPAR TUNGSTEN PROJECT
One of Kazakhstan's major new critical-mineral investments.

10 MT / YEAR
NEW GOLD PROCESSING CAPACITY
Planned capacity of the new Zijin RG Gold processing project.

KAZAKHSTAN MINING — OUTLOOK

TREND — FROM EXTRACTION TO VALUE CREATION

Kazakhstan is moving beyond traditional raw-material exports. New investment is increasingly focused on exploration technology, mineral processing, critical minerals and higher-value production inside the country.

RISK — PROJECT EXECUTION & INFRASTRUCTURE PRESSURE

Large mineral resources do not automatically translate into profitable mines. New projects face challenges including infrastructure requirements, energy demand, financing, permitting and the long development cycle from discovery to commercial production.

OUTLOOK

Kazakhstan's next mining chapter will be defined not simply by what it can extract — but by how much value it can create from its resources.



OPPORTUNITY — TECHNOLOGY, PROCESSING & LOCAL VALUE CREATION

Kazakhstan's next major opportunity lies in transforming its vast mineral resources into higher-value industrial production. As the country expands mining activity across uranium, copper, gold, tungsten and critical minerals, the focus is increasingly shifting from extraction alone toward beneficiation, refining, advanced processing and more sophisticated industrial applications.

This transition is creating new demand for modern mining equipment, engineering services, automation systems and digital technologies. AI-supported exploration, autonomous machinery, remote operations, predictive maintenance, ore sorting and advanced metallurgical processes can all help improve productivity, reduce costs and increase recovery rates across new and existing projects.
At the same time, greater domestic processing offers Kazakhstan the chance to retain more value before minerals enter international markets. Developing local processing capacity can support industrial diversification, strengthen supply-chain resilience and create new opportunities for skilled employment and technology transfer.

For international equipment manufacturers, EPC contractors, processing specialists and technology providers, the opportunity extends far beyond mine development. Kazakhstan is increasingly becoming a market for the full mining value chain — from exploration and extraction to processing, infrastructure, digitalisation and advanced materials production.

KÜPER®

SCREENING SOLUTIONS FOR A BETTER TOMORROW

MORE THAN SCREENING. REAL PROGRESS.

INNOVATIVE SCREENING TECHNOLOGY FOR ALL APPLICATIONS

- QUARRY & AGGREGATES
- RECYCLING
- STEEL & ORE
- MINING
- FERTILIZERS & SALTS
- SAND & GRAVEL

TOUGHER
SMARTER
MORE EFFICIENT

IDEAL

MAXIMUM OPEN SCREENING AREA. SIMPLY VERSATILE.



VARIA

THE GENIUS PLUG-IN SYSTEM. EASY TO ASSEMBLE, ALWAYS THE RIGHT FIT.



SIEBMATTEN

A PROVEN STANDARD FOR 20 YEARS: RECYCLABLE, WEAR-RESISTANT, SLIP-FRIENDLY.



KERA GIGANT

EXTREME WEAR RESISTANCE WITH UP TO 3,300 % LONGER SERVICE LIFE.



MEASURABLE ADVANTAGES FOR YOUR BUSINESS

+1,100 %
LONGER SERVICE LIFE WITH RUBBER IN DRY PROCESSING
(compared to wire screens)

+400 %
LONGER SERVICE LIFE WITH POLYURETHANE IN WET PROCESSING
(compared to wire screens)

+50 %
LARGER OPEN SCREENING AREA
with KÜPER MAX systems

+50 %
HIGHER THROUGHPUT
with CLEAN rubber
(for critical, sticky materials)

–50 %
SHORTER CHANGEOVER TIMES
with KÜPER plug-in systems

–40 %
LOWER WEIGHT
for reduced operating energy costs

KÜPER
ENGINEERED
FOR A CLEANER, MORE EFFICIENT WORLD.

GET IN TOUCH →

info@gsranalytix.com

WWW.KUEPER.COM

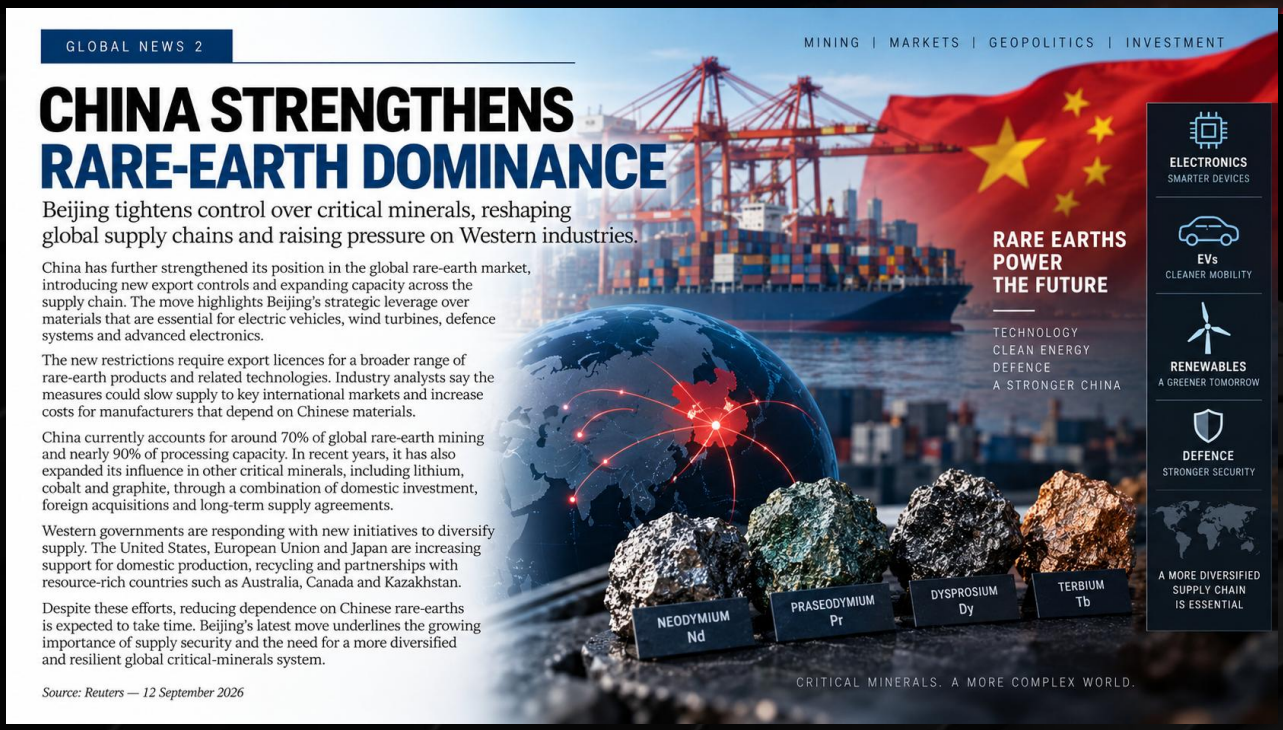


US ACCELERATES THE CRITICAL MINERALS RACE

The United States is intensifying efforts to secure more resilient supplies of critical minerals as competition with China reshapes global mining and processing strategies.
Washington has expanded support for domestic mining, refining and strategic partnerships with allied countries, while backing projects in rare earths, lithium and other materials essential to batteries, defence systems, electronics and advanced energy technologies. Companies such as MP Materials and Lithium Americas have become increasingly important to the effort to rebuild a more independent North American supply chain.

However, China continues to dominate many key stages of global mineral processing. Despite new Western investment, Beijing remains particularly influential in rare-earth refining and has strengthened its position in several other mineral supply chains, including lithium, cobalt and graphite. Export restrictions introduced by China have further highlighted the vulnerability of manufacturers that depend heavily on concentrated supply sources.
For the global mining industry, this shift is creating a new investment cycle. Exploration projects, processing plants and strategic mineral partnerships are increasingly being evaluated not only on economics, but also on **supply security and geopolitical importance**.
The critical-minerals race is therefore becoming one of the defining forces shaping the next generation of global mining investment.

Source: Reuters — 14 September 2026



CHINA STRENGTHENS RARE-EARTH DOMINANCE

China continues to hold a commanding position in the global rare-earth supply chain, particularly in refining and permanent magnet production. According to the International Energy Agency, China accounted for around **60% of mined magnet rare earths, 91% of refined output and 94% of sintered permanent magnet production in 2024**.

That concentration gives Beijing significant influence over materials used in electric vehicles, wind turbines, semiconductors, aerospace systems and defence technologies. Recent export controls and licensing requirements have highlighted how quickly restrictions can affect manufacturers outside China. In early September, several Chinese rare-earth suppliers reportedly paused some shipments to the United States amid geopolitical concerns and uncertainty over compliance requirements.

Western governments are responding with new mining, refining and recycling projects, as well as partnerships with resource-rich countries such as Australia, Canada and Kazakhstan. However, building alternative supply chains will take time because rare-earth separation and magnet manufacturing require specialised technology, large capital investment and established industrial ecosystems.

The result is a more strategic global mining market in which **processing capacity is becoming as important as access to the mineral itself**. For investors and governments alike, rare earths are no longer simply commodities — they are becoming a central part of industrial and national-security policy.

Source: IEA / Reuters — September 2026



COPPER SUPPLY TIGHTENS AS PRICES TEST NEW HIGHS

Copper has returned to the centre of global mining markets as strong demand, constrained supply and geopolitical uncertainty push prices toward record territory.

Copper recently climbed to around **$14,700 per tonne**, highlighting growing concerns over whether new mine supply can keep pace with demand from electrification, power grids, data centres, renewable energy and advanced manufacturing.

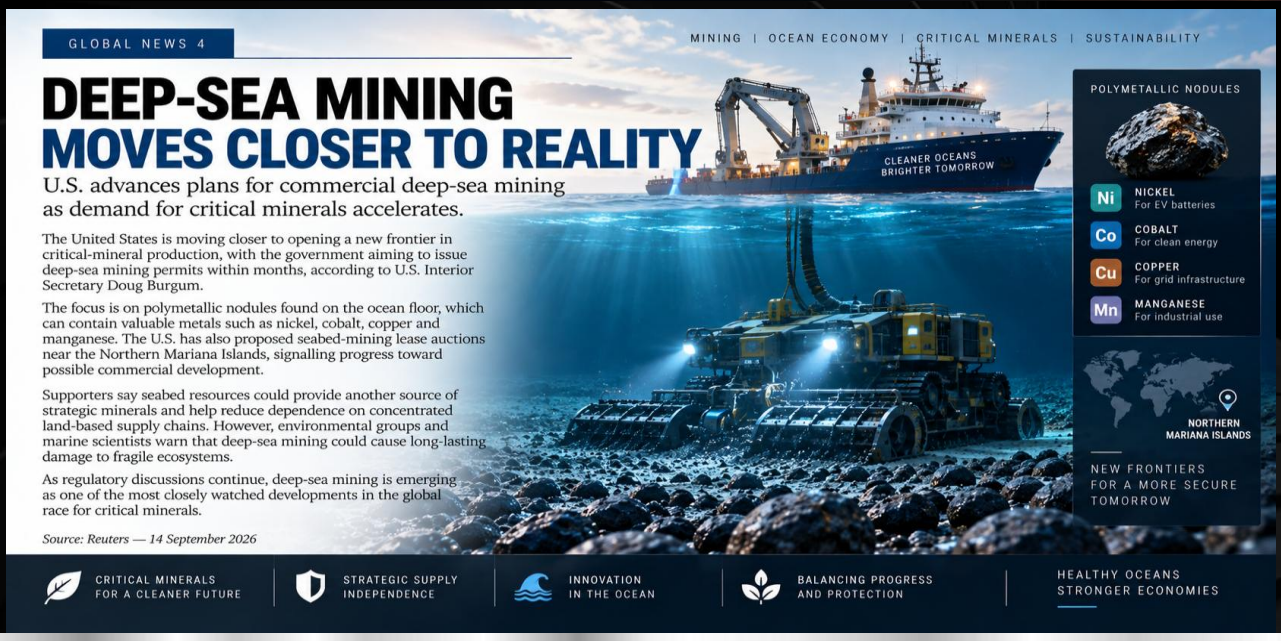
The market is also being affected by strategic stockpiling and uncertainty surrounding potential U.S. tariffs on refined copper. Expectations of new trade measures have encouraged buyers to secure material in advance, tightening availability in other markets and contributing to record price levels.

At the same time, developing new copper mines remains a long and capital-intensive process. Large projects can require years of permitting, infrastructure construction and investment before reaching production, while declining ore grades at mature mines add further pressure to future supply.

For mining companies, the tightening market is increasing the strategic value of high-quality copper deposits and encouraging a new wave of exploration, expansion and consolidation across the sector.

Copper is increasingly becoming not simply an industrial metal, but one of the essential raw materials of the global energy and technology transition.

Source: Reuters — September 2026



DEEP-SEA MINING MOVES CLOSER TO REALITY

The United States is moving closer to opening a new frontier in critical-mineral production as the government advances plans for commercial deep-sea mining.

U.S. Interior Secretary Doug Burgum said on September 14 that deep-sea mining permits could be issued within months, as Washington seeks new domestic and allied sources of minerals used in electric vehicles, defence systems, electronics and advanced technologies.

The focus is on polymetallic nodules found on the ocean floor, which can contain commercially valuable metals such as nickel, cobalt, copper and manganese. The U.S. has also proposed seabed-mining lease auctions near the Northern Mariana Islands, signalling that the sector is beginning to move from exploration toward possible commercial development.

Supporters argue that seabed resources could provide another source of strategic minerals at a time when governments are trying to reduce dependence on highly concentrated land-based supply chains. Companies including The Metals Company and Impossible Metals are among those seeking to develop the emerging industry.

However, deep-sea mining remains highly controversial. Environmental groups and marine scientists warn that disturbing the seabed could cause long-lasting damage to poorly understood ecosystems and biodiversity. The regulatory debate is therefore likely to become as important as the engineering challenge itself.

For the mining industry, the significance is clear: the search for critical minerals is expanding beyond traditional mines and increasingly toward the ocean floor.

Source: Reuters — 14 September 2026

GLOBAL MINING RANKING

MINERALS
PEOPLE
ECONOMIES
A STRONGER
TOMORROW

TOP 10 COUNTRIES BY MINERAL PRODUCTION VALUE (2025)

ESTIMATED VALUE OF TOTAL MINERAL PRODUCTION (METALLIC AND INDUSTRIAL MINERALS)

USD BILLION

RANK	COUNTRY	PRODUCTION VALUE (USD BILLION)
1	CHINA	540
2	UNITED STATES	329
3	AUSTRALIA	289
4	RUSSIA	255
5	CANADA	187
6	CHILE	144
7	INDONESIA	131
8	INDIA	125
9	BRAZIL	114
10	KAZAKHSTAN	96

MINERALS POWER PEOPLE AND PROGRESS

From essential resources to a stronger, more resilient global economy.

TOP 10 COUNTRIES ACCOUNT FOR APPROXIMATELY **72%** OF GLOBAL MINERAL PRODUCTION VALUE.

MINERALS ARE THE FOUNDATION OF **CLEAN ENERGY, DIGITAL TECHNOLOGIES** AND A MORE SECURE TOMORROW.

RESPONSIBLE AND SUSTAINABLE MINING IS CRITICAL TO MEET GROWING GLOBAL DEMAND.



"A SECURE TOMORROW REQUIRES **RESPONSIBLE MINING TODAY.**"

Source: USGS Mineral Commodity Summaries 2026, World Mining Data 2025
Note: Includes metallic minerals, industrial minerals and selected bulk commodities. Values are rounded estimates.

GSR ANALYTIX

MINING MAGAZINE

WORLD MINING OUTLOOK

CRITICAL MINERALS • TECHNOLOGY • INVESTMENT • SUSTAINABILITY

DIGITAL OPERATIONS



MINE SAFETY & DIGITAL OPERATIONS

Mining is becoming increasingly connected, automated and data-driven. Across modern operations, digital technologies are helping companies reduce risk, improve productivity and monitor conditions in real time.

AI and predictive analytics can identify equipment failures, unsafe conditions and operational anomalies before they develop into serious incidents. By analysing sensor data continuously, mining companies can move from reactive maintenance toward prevention.

Remote and autonomous operations are also changing how mines are managed. Autonomous haul trucks, drilling systems and remote-control equipment can keep workers away from hazardous zones while maintaining production across large sites.

At the same time, connected mines create a new challenge: **cybersecurity**. Operational networks, sensors and automated systems must be protected against disruption, data loss and unauthorised access.

Wearable devices, drones and real-time monitoring platforms add another layer of safety by tracking workers, measuring gas levels, inspecting inaccessible areas and supporting faster emergency response.

The result is a new generation of mining operations where **safety, automation and digital** intelligence increasingly work together.

KÜPER®

SCREENING
SOLUTIONS
THAT PERFORM

MORE THAN SCREENING. A CLEAR ADVANTAGE.

Rubber and polyurethane screening media for higher efficiency, lower costs and a more sustainable future.

TOUGHER
SMARTER
CLEANER
GREENER



SCREEN MATS
Durable. Recyclable.
Smooth running.

VARIA
The smart modular system.
Quick installation.
Always the right fit.

IDEAL
Maximum open area.
Simply universal.

PRISMENFELD SP 90
Higher dewatering performance.
Less surface moisture.
Better drying.

PROVEN PERFORMANCE. REAL BENEFITS.

+1,100 %
LONGER SERVICE LIFE
with rubber in dry processing
(compared to wire screens)

+400 %
LONGER SERVICE LIFE
with polyurethane in wet processing
(compared to wire screens)

+50 %
LARGER OPEN SCREEN AREA
with KÜPER MAX systems

+50 %
HIGHER CAPACITY
with CLEAN rubber for critical materials

–50 %
SHORTER CHANGE-OUT TIMES
with KÜPER modular systems

–40 %
LOWER WEIGHT
for reduced operating energy consumption

APPLICATIONS ACROSS INDUSTRIES

QUARRYING | SAND & GRAVEL | RECYCLING | STEEL & ORE | MINING | FERTILIZERS & SALTS

EFFICIENCY TODAY.
A CLEANER TOMORROW.

CONTACT US
info@gsranalytix.com

SCREENING
WEAR PROTECTION
PROCESS EFFICIENCY
SUSTAINABILITY

KÜPER – GERMAN ENGINEERING FOR A STRONGER TOMORROW.

www.kueper.com

THE RISE OF SMART MINES

Automation, AI and Autonomous Operations Are Redefining Mining

From autonomous trucks to AI-driven insights, mining is entering a new era. Smart technologies are making operations safer, more efficient and more sustainable — and they are reshaping the future of the industry.

SMART MINES STRONGER TOMORROW

RESOURCES
PEOPLE
TECHNOLOGY
A CLEANER FUTURE

- REAL-TIME DATA
- HIGHER EFFICIENCY
- LOWER RISK
- SUSTAINABLE OPERATIONS





AUTONOMOUS OPERATIONS

Self-driving trucks, drills and loaders are increasing productivity while keeping people away from high-risk areas.



ROBOTICS IN MINING

Remote-controlled and autonomous equipment are enabling safer, more precise and continuous operations.



AI & PREDICTIVE MAINTENANCE

Artificial intelligence analyses data in real time to predict equipment failures and optimise performance.



DIGITAL TWINS

Virtual models of mines help simulate scenarios, improve planning and reduce operational risks.



CONNECTED DECISIONS

Real-time data from sensors, drones and wearables enables faster, smarter and more informed decision-making.

EXPLORATION & GEOSCIENCE

Finding the Resources for a Changing World

Exploration is the foundation of the mining industry. As demand for critical minerals grows, new technologies and advanced geoscience are helping companies find resources faster, more accurately and with less environmental impact.

DISCOVER
EXPLORE
DEVELOP
A BRIGHTER
TOMORROW

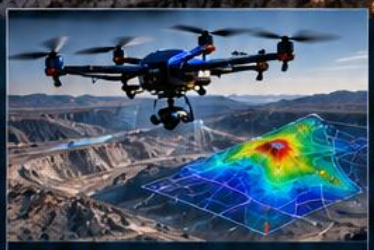
SCIENCE
TECHNOLOGY
PEOPLE
NEW OPPORTUNITIES



SATELLITE & REMOTE SENSING

High-resolution satellite data helps identify geological structures, alteration zones and potential mineral deposits across large and remote areas.

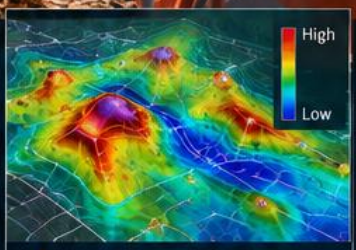
- Multispectral & hyperspectral imaging
- Structural mapping
- Faster, lower-cost reconnaissance



DRONES & AERIAL SURVEYS

Drones provide detailed, high-precision data on topography, geology and site conditions, improving accuracy and safety in the exploration phase.

- 3D mapping and modelling
- High-resolution imagery
- Access to difficult terrain



GEOPHYSICAL SURVEYS

Geophysical methods reveal what lies beneath the surface, helping to detect mineralized structures and reduce drilling risks.

- Magnetic, gravity and seismic surveys
- Electrical & electromagnetic methods
- Deeper insights, smarter targeting

KEY MINERALS DRIVING EXPLORATION



Cu COPPER
Clean energy grids and electrification



Li LITHIUM
Batteries and e-mobility



Ni NICKEL
EV batteries and stainless steel

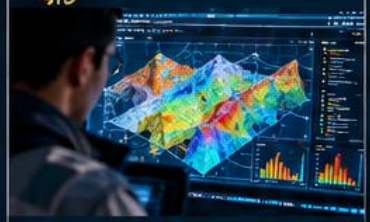


Co COBALT
High-performance batteries



REE RARE EARTHS
Advanced electronics and renewable energy

AI & DATA ANALYTICS



Artificial intelligence analyses large datasets to identify patterns and predict high-potential areas, making exploration more efficient and cost-effective.

- Machine learning models
- Integrated geological data
- Better decision-making

EXPLORATION DRILLING



Drilling remains a critical step to confirm mineralization. Modern drilling techniques are faster, more precise and increasingly sustainable.

- Diamond and reverse circulation (RC)
- Real-time data collection
- Reduced environmental footprint

ENVIRONMENT & COMMUNITIES



Modern exploration focuses on minimizing enviionmental impact and building strong relationships with local communities.

- Responsible exploration practices
- Biodiversity protection
- Shared value and local opportunities

DR CONGO BUILDS A $180 MILLION DIGITAL EXPLORATION MAP

GEOLOGICAL DATA BECOMES A STRATEGIC ASSET

The Democratic Republic of Congo (DRC) has launched a major program to digitalize its geological data, including a $180 million airborne geophysical survey and the creation of a national geological database by 2026, in partnership with UK-based Xcalibur Multiphysics. The initiative aims to attract investment, identify new mineral resources and strengthen state control over strategic data.

A RICHER CONGO
A STRONGER AFRICA

MAPPING TOMORROW'S OPPORTUNITIES



$180 MILLION
AIRBORNE GEOPHYSICAL SURVEY PROGRAM

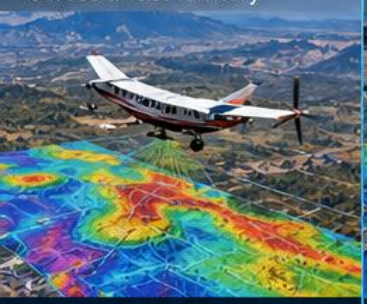
NATIONAL GEOLOGICAL DATABASE BY 2026

ONLY ~20%
OF DRC SYSTEMATICALLY EXPLORED

STRONGER INVESTMENT, MORE TRANSPARENCY, GREATER OPPORTUNITIES

1 AIRBORNE SURVEYS

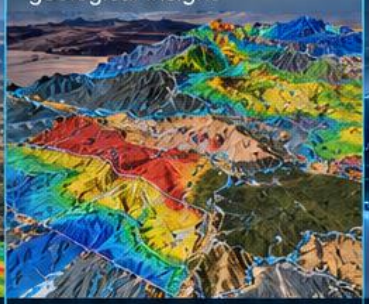
High-resolution data across a vast territory



- Magnetic, radiometric and hyperspectral data
- Covers remote and previously inaccessible areas
- Faster, more efficient than ground surveys

2 DIGITAL MAPPING

Turning data into geological insight



- Advanced data processing and 3D geological models
- Integration of historical and new data
- Identification of high-potential mineral belts

3 NATIONAL DATABASE

A central source for investors and authorities



- Unified, standardized geological data
- Improved transparency and access
- Supports better decision-making and responsible investment

4 NEW EXPLORATION OPPORTUNITIES

From data to discovery



- More accurate targeting
- Reduced exploration risk and cost
- Potential for new copper, cobalt, lithium, gold and rare earth discoveries

> "We are building a modern geological information system for the DRC, using the latest technology to unlock the country's enormous mineral potential."
>
> **DRC MINES MINISTRY**
> *Official Statement, 2026*

VAST RESOURCES. A BRIGHTER FUTURE.

KNOWLEDGE TODAY.
DISCOVERIES TOMORROW.

KEY TAKEAWAYS

- $180 million airborne survey with Xcalibur
- National geological database by 2026
- Only ~20% of DRC explored
- Greater investment opportunities
- Supports sustainable and responsible mining development

GSR ANALYTIX
MINING INTELLIGENCE FOR A STRONGER TOMORROW
PEOPLE | INSIGHTS | OPPORTUNITIES | A MORE SUSTAINABLE WORLD

KÜPER®

SCREENING SOLUTIONS
FOR A TOUGHER TOMORROW

MORE EFFICIENCY
HIGHER UPTIME
A CLEANER FUTURE

THE SMARTER WAY TO SCREEN

Screening media made of rubber and polyurethane.
More performance. Lower costs. A sustainable future.

BUILT FOR REAL CONDITIONS.



UP TO
+1,100%
LONGER SERVICE LIFE
vs. wire screens with rubber in dry processing

UP TO
+400%
LONGER SERVICE LIFE
vs. wire screens with polyurethane in wet processing

+50%
OPEN SCREEN AREA
with KÜPER MAX systems

+50%
HIGHER CAPACITY
with CLEAN rubber for difficult-to-screen materials

–50%
SHORTER CHANGEOVER TIMES
with KÜPER plug-in systems

–40%
LOWER WEIGHT
for reduced energy consumption

PROVEN IN MANY INDUSTRIES


QUARRYING


SAND & GRAVEL


RECYCLING


STEEL & ORE


MINING


FERTILIZERS & SALTS

WEAR RESISTANT
Maximum reliability in demanding applications

SUSTAINABLE
Recyclable materials for a cleaner tomorrow

ENGINEERED IN GERMANY
Precision. Performance. Partnership.

SCREEN TRANSFORMS TOMORROW.

GET IN TOUCH

info@gsranalytix.com

LET'S SCREEN A BRIGHTER TOMORROW.

SMART MINING & AUTOMATION

TECHNOLOGY DRIVES A SAFER, CLEANER AND MORE EFFICIENT MINING FUTURE.

AUTONOMOUS EQUIPMENT & REMOTE OPERATIONS

From autonomous haul trucks to remote control centers, mining is entering a new era of safety, productivity and sustainability.



AUTONOMOUS HAULAGE



- Driverless trucks
- 24/7 operations
- Higher efficiency
- Improved safety

REMOTE OPERATIONS



- Centralized control centers
- Real-time monitoring
- Faster response
- Reduced operational risk

DRONES & AI



- Aerial surveys & mapping
- AI-driven analysis
- Predictive maintenance
- Early risk detection

AUTONOMOUS DRILLING



- Precision drilling
- Optimized blasting
- Lower costs
- Minimal environmental impact

> “Automation is not just about machines, it’s about people, sustainability and a stronger future for mining.”

DIGITAL TWINS & PREDICTIVE MAINTENANCE

A VIRTUAL MINE THAT PREDICTS PROBLEMS BEFORE THEY HAPPEN

By combining real-time data, AI and advanced analytics, digital twins create a live virtual replica of the mine, its equipment and processes — helping operators optimize performance, reduce downtime and make smarter decisions.



1 DIGITAL TWIN

A real-time virtual model of the mine, equipment and production processes.



- Live data integration
- 3D visualisation
- Scenario testing

2 PREDICTIVE MAINTENANCE

Detect potential failures before they occur using AI and sensor data.



- Early fault detection
- Less unplanned downtime
- Longer equipment life

3 FLEET OPTIMIZATION

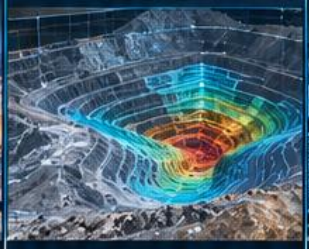
Optimize truck, excavator and loader operations in real time.



- Optimal routing
- Shorter cycle times
- Higher productivity

4 SCENARIO SIMULATION

Test different mine plans and operational changes in a virtual environment.



- Assess production scenarios
- Reduce risk
- Better investment decisions

5 REAL-TIME DECISIONS

All key data in one integrated platform for faster, smarter decisions.



- Unified data platform
- Live performance KPIs
- Improved safety & ESG

HOW IT WORKS

FROM DATA TO ACTION

SENSORS
Collect data from equipment, conveyors, crushers, mills and the environment.

REAL-TIME DATA
Data is transmitted to a central platform via IoT and cloud systems.

DIGITAL TWIN
A live virtual model of the mine is continuously updated.

AI ANALYSIS
AI and machine learning analyze patterns and detect anomalies.

PREDICTION
Potential issues and opportunities are identified early.

ACTION
Operators take proactive action, optimizing operations in real time.



A SMARTER, SAFER AND MORE SUSTAINABLE MINE.

- HIGHER PRODUCTIVITY
- IMPROVED SAFETY
- LOWER OPERATING COSTS
- LOWER EMISSIONS
- MORE EFFICIENT RESOURCE USE

WHY OPERATORS CARE

- Fewer unexpected breakdowns
- Higher equipment availability
- Lower maintenance costs
- Better resource utilization
- Increased production efficiency
- Improved safety for people and assets
- Supports ESG and sustainability goals

DON'T WAIT FOR EQUIPMENT TO FAIL — PREDICT WHAT HAPPENS NEXT.

MINERAL PROCESSING

FROM ORE TO VALUE

Advanced processing turns natural resources into the materials that power our world.

- HIGHER RECOVERY
- GREATER EFFICIENCY
- STRONGER ECONOMIES
- A CLEANER TOMORROW

MINERALS FUEL PROGRESS



1 CRUSHING

Reduces large rocks into smaller, manageable sizes.



2 GRINDING

Further reduces size to liberate valuable minerals.



3 ORE SORTING

Separates valuable minerals using advanced sensor technologies (XRT, AI, optical).



4 BENEFICIATION

Concentrates valuable minerals using physical and chemical processes (flotation, gravity, magnetic separation).



PROCESSING TODAY A STRONGER TOMORROW

Efficient mineral processing maximizes resource value, reduces waste and supports a more sustainable future for generations to come.



- SUPPLYING CRITICAL MINERALS
- SUPPORTING A LOW-CARBON WORLD
- CREATING JOBS AND OPPORTUNITIES
- TURNING RESOURCES INTO LASTING VALUE

NEXT-GENERATION MINERAL PROCESSING

COARSE PARTICLE FLOTATION

MORE RECOVERY, LESS GRINDING

Recovering valuable minerals at larger particle sizes can reduce grinding intensity, lower energy and water use, and capture material that conventional flotation may leave behind.



HIGHER RECOVERY | LOWER ENERGY USE | LESS WATER | GREATER VALUE

TARGETING MORE VALUE FROM EVERY TON OF ORE



1 LESS GRINDING

Coarser particles can enter separation earlier, reducing the need for energy-intensive fine grinding.



2 HIGHER RECOVERY

New flotation cells target coarse particles that may otherwise report to tailings, increasing overall metal recovery.



3 LOWER WATER & ENERGY USE

Simpler flowsheets and reduced comminution can improve the environmental performance of concentrators.



4 EASIER PLANT INTEGRATION

New-generation systems are designed for integration into existing flotation circuits with fewer auxiliary stages.



THE NEXT BREAKTHROUGH IN MINERAL PROCESSING MAY BE DOING MORE — WITH LESS GRINDING.

- MORE EFFICIENT OPERATIONS
- A SMALLER ENVIRONMENTAL FOOTPRINT
- STRONGER ECONOMICS

NEXT-GENERATION MINE SAFETY

FROM REACTIVE PROTECTION TO PREDICTIVE SAFETY

New technologies are transforming mining safety, using real-time data, AI and automation to prevent incidents before they happen — protecting people, equipment and operations.



SAFER PEOPLE
SMARTER MINES
STRONGER FUTURES

TECHNOLOGY TURNS RISK INTO INSIGHT.

1 AI-BASED COLLISION AVOIDANCE

Detects and prevents risks in real time.



- Real-time detection of people and equipment
- AI-powered risk alerts
- Automatic braking and speed control
- Works in open pit and underground mines

2 SMART WEARABLES

Monitoring people, health and environment.



- Real-time health monitoring
- Location tracking
- Exposure to gases and environmental risks
- Emergency alerts (man-down detection)

3 GEOFENCING & PROXIMITY ALERTS

Keeps people out of danger zones.



- Virtual safety boundaries
- Instant alerts when entering restricted areas
- Protects workers and equipment
- Customizable zones for different risk levels

4 DRONES FOR HAZARD INSPECTION

Reaching the places people shouldn't.



- Inspection of high-risk and hard-to-reach areas
- Thermal and visual imaging
- Monitoring of slopes, pits and tailings dams
- Faster and safer inspections

5 PREDICTIVE SAFETY ANALYTICS

Turning data into safer decisions.



- Analyze historical incidents and real-time data
- Identify high-risk situations before they happen
- AI-driven risk prediction
- Support proactive safety management

6 UNDERGROUND CONNECTIVITY

Keeping everyone connected.



- Reliable communication networks
- Real-time location of all personnel
- Emergency response support
- Improved safety in underground operations



THE FUTURE OF MINE SAFETY
IS NOT JUST RESPONDING FASTER —
IT IS PREDICTING RISK BEFORE AN INCIDENT HAPPENS.

- Fewer accidents
- Healthier people
- More efficient operations
- Stronger, more resilient mines
- A more sustainable future

GSR ANALYTIX
MINING INTELLIGENCE FOR A STRONGER TOMORROW
PEOPLE | TECHNOLOGY | SUSTAINABILITY | GLOBAL PERSPECTIVE

KÜPER®

SCREENING SOLUTIONS
FOR A BETTER TOMORROW

TOUGHER
SMARTER
MORE EFFICIENT

MORE THAN SCREENING. A CLEAR ADVANTAGE.

High-performance screening media made from rubber and polyurethane for maximum efficiency in the harshest conditions.

ENGINEERED FOR A WIDER RANGE OF APPLICATIONS

+1,100%
LONGER SERVICE LIFE
vs. wire screens with rubber in dry processing

+400%
LONGER SERVICE LIFE
vs. wire screens with polyurethane in wet processing

+50%
MORE OPEN SCREENING AREA
with KÜPER MAX systems

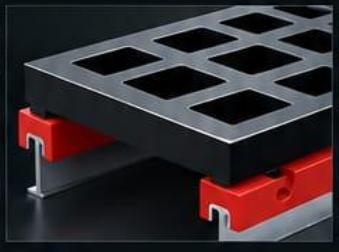
+50%
HIGHER CAPACITY
with CLEAN rubber for critical materials

–50%
SHORTER CHANGEOVER TIMES
with KÜPER plug-in systems

–40%
LOWER WEIGHT
for reduced operating costs



SCREEN MATS
Durable. Recyclable.
Wear-resistant. Smooth running.



VARIA
The clever plug-in system.
Simple assembly,
always the right fit.



IDEAL
Maximum open screening area.
Simple, universal, IDEAL.



SPECIAL SOLUTIONS
Customised designs
for your application.

APPLICATIONS



QUARRYING & AGGREGATES



SAND & GRAVEL



RECYCLING



STEEL & ORE



MINING



FERTILISERS & SALTS

PROVEN IN TOUGH ENVIRONMENTS.
BUILT FOR YOUR SUCCESS.

CONTACT US
info@gsranalytix.com

LET'S SCREEN A BRIGHTER TOMORROW.


SAVE THE
AMAZON


NATURAL RESOURCES
STRONGER PEOPLE
BRIGHTER FUTURES
THANK YOU FOR READING
MINING TODAY. A BRIGHTER TOMORROW.
We bring you global insights, country opportunities and industry trends to support a stronger, more sustainable mining future.
THE EARTH PROVIDES. WE CREATE POSSIBILITIES.
GLOBAL PERSPECTIVE
Facts. Trends. Opportunities.
INDUSTRY INTELLIGENCE
Data that drives decisions.
SUSTAINABLE GROWTH
For people, environment and future generations.
A STRONGER TOMORROW
Through knowledge and collaboration.
RESPONSIBLE MINING
Balancing progress with the planet.
VALUABLE RESOURCES
Powering industries and communities.
CLEANER ENERGY
Critical minerals for a low-carbon world.
LASTING VALUE
For today and generations to come.
DIFFERENT COUNTRIES. A SHARED TOMORROW.
Thank you for being part of our global mining community.
GSR ANALYTIX
GLOBAL INSIGHTS. SMARTER DECISIONS.
See you in the next issue!
PEOPLE
DATA
RESOURCES
INNOVATION
SUSTAINABILITY
OPPORTUNITIES
A BRIGHTER TOMORROW



GSRANALYTIX

is a member of the GSR ANALYTIX family

GSR ANALYTIX
GLOBAL INSIGHTS. SMARTER DECISIONS.