CHAIR OF LONDON METALS EXCHANGE STEPS DOWN

EUROPE’S LARGEST RARE EARTH DEPOSIT FOUND IN SWEDEN

CMA WELCOMES NEWEST MEMBER, KAVANGO RESOURCES
Welcome to our January CMA monthly newsletter featuring updates on the critical minerals space. Read on for:

- Critical Metals and Minerals Conference 2023
- UK and Saudi Arabia Pledge to Deepen Collaboration on Critical Minerals
- Chair of London Metals Exchange Steps Down
- Minviro Raises £2.1M to Expand LCA Services
- Top 10 Business Risks & Opportunities for Mining and Metals in 2023
- Advanced Battery Plant in Oxfordshire to Open This Year
- Tevva gets Green Light to Sell Electric Trucks in the EU
- CMA Welcomes Newest Member, Kavango Resources
- Optiva Resources Completes Mineral Resource Estimate
- WTO settles Indonesian Nickel Dispute in favour of EU
- Europe's Largest Rare Earths Deposit Discovered in Sweden
- Register for Fasken’s Annual Seminar Series before PDAC 2023
- Urbix Signs Offtake Agreement with Evion
- Austrade Releases 2022 Critical Mineral Prospectus
- Aberdeen Minerals Secures Funding for Exploration
- News Roundup on Critical Minerals
- Events Calendar

From Kirsty, Jeff, Olimpia, & Eileen

This month’s newsletter has been put together by Lily Dickson, PhD student at the University of Leeds, and Eileen Maes.

Subscribe to our monthly newsletter by clicking 'contact' on our website.

Would you like to feature in a future edition? Contact Kirsty at kirsty@criticalmineral.org

@CMA_Minerals  www.criticalmineral.org  Critical Minerals Association United Kingdom
In partnership with the Critical Minerals Association, Metals Events Limited is hosting its first Critical Metals and Minerals Conference in London from March 22-23. The conference will examine security of supply in an age of geopolitical uncertainty and how we can restore supply chain certainty for defence and energy. The event will also include discussions and insights on rare earths and energy transition metals.

Register to attend the Critical Metals and Minerals Conference at the County Hall Marriott. We hope to see you there, and look forward to two days of presentations, panel discussions, and networking!

To keep up to date on Metals Events Limited, go to their website and check out their other events, such as the MMTA’s International Minor Metals Conference in April in Charlotte, USA.

REGISTER HERE
At the Future Minerals Forum in Riyadh on 11 January, Secretary of State for Business, Energy and Industrial Strategy (BEIS) Grant Shapps agreed to deepen the UK's collaboration with the Kingdom of Saudi Arabia on critical minerals.

This move will diversify the UK's critical mineral supply sources, in line with the government's ambitions to build more secure critical mineral supply chains. Saudi Arabia plans to invest in the UK as a world-leading manufacturing and finance sector, and UK mining companies benefit from opportunities to do business in Saudi Arabia. Saudi has one of the greatest untapped sources of critical minerals in the world, worth potentially US$1.3 trillion.

The partnership will also build on the importance of rigorous transparency and ESG standards to minimise risk and encourage investment.

The relationship will be formalised in the coming months.

READ THE FULL STATEMENT HERE
On 5 January, the London Metals Exchange (LME) announced that their Chair, Gay Huey Evans, will be stepping down. They declined to disclose the reason for departure, but many suspect it has to do with the poor handling of the nickel short trades last March.

The Bank of England (BoE) and the Financial Conduct Authority (FCA) have launched respective investigations into how the LME suspended nickel trading on March 8 after prices chaotically doubled to a record above $100,000 a tonne in a few hours. Big banks that had shorted nickel (such as JP Morgan, BNP Paribas, Standard Chartered, Tsingshan) lost billions. LME threw them a lifeline by halting all nickel trading and cutting them bailout deals.

But smaller banks and hedge funds that were betting the price of nickel would soar following the invasion of Ukraine-- Russia supplies around 20% of global top-grade nickel-- suffered horrendously. The episode has raised serious questions about the LME's reliability and transparency.

Regulatory reviews are still ongoing. The LME will announce by the end of March how it intends to reform its internal systems to prevent market distortions and improve risk monitoring.
MINVIRO RAISES £2.1M TO EXPAND LCA SERVICES

Last week UK-based life-cycle assessment (LCA) consultancy and software developer Minviro raised £2.1 million in funding to expand their LCA software platform and strategic consultancy services.

Minviro has already succeeded in signing big clients such as Tesla and Pilbara Minerals, but this investment will enable their plans to expand their presence in the global market by developing local operational capacity in key markets such as Asia, Australia and the Americas.

The company's MineLCA offers actors in minerals and metals supply chains to quantify and create mitigation scenarios and action plans for their environmental footprints.

"Without a tool like a lifecycle assessment, miners are fighting blind-- you don't know where your hotspots are," says Founder and Chief Executive, Robert Pell.

READ ON HERE
In September, EY released its list of the top 10 business risks and opportunities for mining and metals in 2023.

Compared to their list from 2022, ESG has remained the top risk and opportunity, with water management and decarbonisation being the ESG issues that face the most scrutiny from investors.

Geopolitics, however, has soared to 2nd place amid global conflict and uncertainty. US-China tensions and the war in Ukraine has intensified supply risk. But conflict and supply chain disruptions also create opportunities to strengthen relationships and promote onshore capacity.

Costs & Productivity has moved from the 10th to the 5th spot as inflation continues to rise, and the industry explores new ways to manage variability and unlock value.

READ ON HERE
ADVANCED BATTERY PLANT IN OXFORDSHIRE TO OPEN THIS YEAR

Britain's battery sector has been delivered some unexpected good news, after an Australian billionaire told Sky News he will be opening an advanced battery plant in Oxfordshire later this year, creating up to 300 new jobs.

Andrew Forrest, the founder of the Australian iron ore giant Fortescue, said he was expanding operations at WAE Technologies, the technical offshoot of the famous Williams Formula 1 team, which he bought last year.

The new plant in Kidlington will work on batteries and fuel cells which could be used in heavy goods vehicles in the coming decades.

The news comes barely 24 hours after the collapse of Britishvolt, the most prominent independent firm hoping to build a so-called gigafactory, mass producing batteries for electric cars manufactured in the UK.

READ ON HERE
On 11 January, UK company Tevva received the European Community Whole Vehicle Type Approval for its 7.5-tonne electric truck model. Any vehicle that is sold within the European Union (EU) requires the Approval to confirm it is compliant with EU safety and environmental standards. Tevva's model is the first pure electric truck of its size to receive it, representing a landmark achievement in the development of electric vehicles.

Tevva's trucks have a range of 180 kilometers per charge, and charge up to 90% of its maximum range within 5 hours. They are currently manufactured in Tilbury, Essex, but the company is contemplating expanding future manufacturing operations to locations within the EU.

Tevva anticipates sales of up to 1,000 electric trucks this year, predominantly to the UK market. Potential customers include Royal Mail, who is working towards establishing a net-zero value chain by 2040.
We are excited to welcome our latest member Kavango Resources Plc to the Association!

Kavango is a mineral exploration company focused on copper, nickel, and platinum group metals in Botswana. Botswana has been repeatedly rated by the Fraser Institute as among the most attractive jurisdictions to mine in Africa, both in terms of policy and mineral potential.

While Botswana is well-established as a significant diamond producer, the nation contains untapped mineral potential below the thick sands of the Kalahari Desert, and is emerging as a significant metals producer. Areas that are highly prospective for mineralisation have been overlooked for exploration because of the thick sand cover, but Kavango and other companies are changing this.

Kavango is listed on the London Stock Exchange and its projects currently consist of the Kalahari Copper Belt Project, the Kalahari Suture Zone Project, and the Ditau Camp Project.

READ ON HERE
Optiva Resources Ltd's Marela Project in Guinea has undergone a Mineral Resource Estimate (MRE) for nickel and cobalt, "marking a significant milestone in advancing and de-risking the project", says Technical Director Charles Douglas-Hamilton.

The MRE quantified nearly 30 million tonnes of 0.81% nickel and 0.08% cobalt. With a contained nickel content of 219,000 tonnes the Marela Project therefore represents US$4.4 billion in assets (according to the current price of nickel at US$20,000 per tonne).

Demand for nickel is expected to intensify as the market for electric vehicles expands for the net zero transition.

Optiva Resources hopes to also conduct an MRE for titanium, vanadium, and scandium.

LEARN MORE HERE
In November 2022, the World Trade Organisation (WTO) settled a large dispute over Indonesia's nickel export restrictions.

Three years prior, the European Union (EU) launched a challenge against Indonesia's export ban and domestic processing requirement on nickel ore for unfairly harming its stainless steel industry. Indonesia was the world's biggest exporter of nickel before it banned ore exports.

Last month the WTO ruled in favour of the EU, citing that Indonesia's export restrictions violate Article XI:1 of The General Agreement on Tariffs and Trade (1994). Indonesia has filed an appeal in response, asserting its right to ban exports of strategically critical resources.

Indonesia is looking to attract foreign investors-- of which China is already a significant source-- and develop downstream capacity onshore. President Joko Widodo has also announced his intentions to restrict the exporting of other raw materials, such as bauxite.

MORE ON THE DISPUTE HERE
Close to Sweden's northernmost town Kiruna, the Swedish state-owned mining company LKAB claims it has discovered Europe's largest deposit of rare earths in Per Geijer-- estimating at 1 million tonnes.

LKAB stresses that work is still in an exploratory phase, and the full extent of the deposit is not known. CEO Jan Mostrom highlights that it will be at least 10 to 15 years before mining in the Per Geiger deposit can commence due to EU planning and permitting laws.

But Mostrom has called on the European Commission to speed up and streamline permitting processes in line with the Critical Raw Materials Act, which considers rare earths to be among the most critical resources for the continent.

“Electrification, the EU’s self-sufficiency and independence from Russia and China will begin in the mine,” says Sweden’s Minister for Business, Industry and Innovation, Ebba Busch.
REGISTER FOR FASKEN'S ANNUAL SEMINAR SERIES BEFORE PDAC '23

This year Fasken’s Global Mining Group is launching their Annual Seminar Series before and during the PDAC 2023 conference, featuring their lawyers and notable guest speakers from the international mining arena.

Their sessions will cover a broad range of current issues, as well as provide recommendations to mining companies on how to minimise risk.

Fasken's virtual sessions from 1-3 March will cover:
- Avoiding Litigation – Litigation Risk Spotting for Mining Companies
- Trends in M&A – Lessons for Mining Companies
- Climate Litigation and Greenwashing Risks in the Mining Sector

Information on Fasken's hybrid sessions, running from 6-7 March, will be released on 30 January. Check out their website to find out more.

REGISTER HERE
Battery anode producer Urbix has signed a non-binding offtake agreement with Evion, a vertically integrated graphite developer with projects in Madagascar, India and Europe.

Evion has agreed to supply 15,000 metric tonnes per annum (mtpa) of graphite concentrate from its Maniry plant in Madagascar. The feedstock will be used for Urbix's early-stage production of advanced Coated Spheredized Purified Graphite (CSPG) for the EV battery industry.

The two companies will continue to discuss commercial terms in order to convert this agreement into a binding agreement in the near-term.

This partnership is part of Urbix's larger ambition to become one of the world's largest producers of advanced green anode material for the rapidly expanding EV battery market, and end Chinese dominance in the industry.

The global market for lithium-ion battery grade graphite is projected to grow from $5 billion to over $27 billion by 2030.
Australia is home to reserves of the world's rarest critical minerals. The nation also offers an alternative supply of critical minerals from China's, and thus global interest is growing. In the coming decades, it will be an important source of the resources needed to manufacture clean energy technologies and bring about net zero.

The Australian Trade and Investment Commission, better known as Austrade, has published their 2022 prospectus detailing 55 advanced critical minerals projects. The prospectus includes geological, technical, and financial data on these projects, as it also highlights under-surveyed areas of Australia that are potential resource sites.

Download and access the Prospectus for free to learn about Australia's world-class mining industry, highly skilled workforce, ESG practices, regulatory environment, and more.

READ THE FULL REPORT HERE
Aberdeen Minerals Ltd has raised approximately £1.1 million to advance their work. The company explores and evaluates mineral deposits in Aberdeenshire, Scotland—primarily nickel, copper, cobalt, palladium, and platinum, of which the latter three are on the UK Critical Minerals List.

The funds will be directed to numerous projects such as a drilling programme at the Arthrath Project, the largest-known nickel deposit in the UK. The programme expands upon previous drilling carried out by Rio Tinto in the 1970s and investigates deeper zones for higher-grade minerals.

The funds were received through the issue of shares to new and existing UK and international investors. In an official statement, Chair of Aberdeen Minerals Patrick Murphy thanks investors and expounds how the company’s projects represent an important opportunity to secure direct supply of critical metals for the UK as the net zero transition gathers pace.

Nickel, copper and cobalt are particularly vital in the production of lithium-ion batteries for renewable energy.

LEARN MORE HERE
The following January news articles from Argus Media, Mining Weekly, Mining Magazine, and others, provide an overview of critical mineral mining for:

- Cobalt
- Copper
- Graphite
- Lithium
- Nickel
- Manganese
- Rare Earth Elements
- Tin
- Tungsten
- Vanadium

*The Critical Minerals Association United Kingdom takes no credit for any articles and makes no endorsement of any of the content.*
Cobalt

• North America
  ○ USA: US Critical Metals Corp. [24.01.23]
    ▪ US Critical Metals Completes Earn-In Commitments for Haynes Cobalt Project.
    ▪ Read the article here.

  ○ Canada: Electra Battery Materials [11.01.23]
    ▪ Electra Battery Materials is advancing Canadian cobalt refinery to serve the rapidly expanding North American EV supply chain.
    ▪ Read the article here.

• Oceania
  ○ Australian: Greenstone Resources [23.01.23]
    ▪ Greenstone shares jump on ‘outstanding’ cobalt, nickel, scandium results.
    ▪ Read the article here.

• Europe
  ○ Norway: Capella Minerals Ltd. [23.01.23]
    ▪ Capella Initiates Scout Drilling at the Kjøli Copper-Cobalt Project, Norway.
    ▪ Read the article here.
Copper

• Africa
  ○ DRC: Ivanhoe Mines [09.01.23]
    ▪ Flagship project Kamoa-Kakula produces 334k tons of copper, an output increase of 212% from 2021
    ▪ Read the article here.

• South America
  ○ Peru: MMG Ltd [14.01.23]
    ▪ Production at Las Bambas copper mine halted to keep workers safe amid political violence.
    ▪ Read the article here.

  ○ Chile: Cochilco [25.01.23]
    ▪ World's largest producer of copper will grow at a slower rate than expected due to project delays.
    ▪ Read the article here.

• Europe
  ○ Serbia: BHP Group [23.01.23]
    ▪ BHP signs deal with Mundoro Capital to explore their copper and base metals assets.
    ▪ Read the article here.
Graphite

• Africa
  ○ Tanzania: Marula Mining [11.01.23]
    ▪ Exploration begins at Bagamoyo graphite project in Tanzania.
    ▪ [Read the article here.]

• North America
  ○ Canada: Mason Graphite Inc [10.01.23]
    ▪ Mason Graphite says preliminary economic assessment of Uatnan Mining project in Quebec showcases one of the largest graphite projects in development.
    ▪ [Read the article here.]

  ○ Greenland: Greenrock Mining [23.01.23]
    ▪ GreenRoc Mining Logs Nearly Threefold Increase in Graphite Estimate at Greenland Project.
    ▪ [Read the article here.]

• South America
  ○ Brazil: South Star Battery Metals [29.12.22]
    ▪ South Star targets Dec. 2023 start for Brazil graphite mine.
    ▪ [Read the article here.]
Lithium

• South America
  ◦ Chile: CleanTech Lithium [05.01.23]
    ▪ Scoping studies for its Laguna Verde project and Francisco Basin announced.
    ▪ Read the article here.
  ◦ Bolivia: [26.01.23]
    ▪ FCDO funds historic partnership between Bolivian Government and Uni of Warwick to develop advanced lithium batteries.
    ▪ Read the article here.

• North America
  ◦ USA & Canada: Piedmont Lithium [03.01.23]
    ▪ Tesla signs offtake agreement for lithium supply through to 2050 using variable pricing mechanism.
    ▪ Read the article here.
  ◦ USA: Lithium Americas [05.01.23]
    ▪ US Judge approves legal challenge on Thacker Pass.
    ▪ Read the article here.
  ◦ USA: Ioneer Ltd [13.01.23]
    ▪ President Biden backs Rhyolite Ridge Lithium-Boron Project in Nevada with US$700mil loan offer.
    ▪ Read the article here.

• Oceania
  ◦ Australia: Tianqi Lithium [09.01.23]
    ▪ A$136m bid for Essential Metals would leave Chinese in control of lithium assets at Pioneer Dome project south of Kalgoorlie
    ▪ Read the article here.
Manganese

• Oceania
  ○ Australia: Element 25 [09.01.23]
    ▪ Carmaker Stellantis signs deal with Element 25 for the supply of manganese sulphite for EV batteries
    ▪ Read the article here.

• North America
  ○ USA: South32 [23.01.23]
    ▪ Study into US battery-grade manganese production making headway - South32.
    ▪ Read the article here.
Nickel

• Asia
  ○ Indonesia [18.01.23]
    ▪ Germany's BASF and French miner Eramet finalise $2.6 billion partnership investment in nickel processing facility in Weda Bay.
    ▪ Read the article here.

• North America
  ○ Canada: Stillwater Critical Minerals [26.01.23]
    ▪ Stillwater expands Ni resource at Montana project.
    ▪ Read the article here.

  ○ Canada: SPC Nickel [24.01.23]
    ▪ SPC Nickel enters agreement with Vale to consolidate deposits in Sudbury camp.
    ▪ Read the article here.

  ○ USA: Talon Metals [19.01.23]
    ▪ Talon Metals strikes new nickel-copper mineralization in Minnesota.
    ▪ Read the article here.

• Europe
  ○ Russia: Nornickel [24.01.23]
    ▪ Nornickel forecasts output drop in 2023.
    ▪ Read the article here.

• Oceania
  ○ Australia: Maximus Resources [30.01.23]
    ▪ Maximus Resources works towards becoming long-term gold producer in WA's nickel mining district.
    ▪ Read the article here.
Rare Earth Elements

• South America
  ○ Chile: Aclara Resources [27.12.22]
    ▪ Aclara resubmits Environmental Impact Assessment (EIA) application for Penco Module project after widespread community opposition; Toyota and Tesla express interest.
    ▪ Read the article here.

• Europe
  ○ United Kingdom: Pensana PLC [21.12.22]
    ▪ Pensana shares jump up 6% following investment from M&G for Saltend and Longonjo projects.
    ▪ Read the article here.

• North America
  ○ Canada: Defense Metals [17.01.23]
    ▪ Defense Metals announces more Rare Earth Assay Results from Wicheeda Project Drilling, including 30 metres of 3.77% TREO.
    ▪ Read the article here.

• Oceania
  ○ Australia: Hastings Technology Metals [17.01.23]
    ▪ Australia raises loan to rare earths developer, announces more grants.
    ▪ Read the article here.
Tin

• Africa
  ◦ Namibia: Andrada Mining [23.01.23]
    ▪ Andrada announces additional inferred MRE for tin in Namibia.
    ▪ Read the article here.

Tungsten

• North America
  ◦ Canada: Happy Creek Minerals [12.01.23]
    ▪ Happy Creek Outlines Plans to Advance Fox Tungsten Project, British Columbia.
    ▪ Read the article here.

• Oceania
  ◦ Australia: Group 6 Metals [16.01.23]
    ▪ Tungsten developer Group 6 Metals has flagged another cost increase at its wholly owned Dolphin mine, in Tasmania.
    ▪ Read the article here.
Vanadium

• Oceania
  ○ Australia: Government of Queensland [26.01.23]
    ▪ Australia’s first critical minerals plant to process vanadium, cobalt, silicon for clean energy.
    ▪ Read the article here.

  ○ Australia: Australian Vanadium [27.01.23]
    ▪ Australian Vanadium and Neometals eye potential partnership.
    ▪ Read the article here.

• Europe
  ○ Austria: Denkstatt [13.01.23]
    ▪ LCA STUDY: Vanadium redox flow batteries beat lithium-ion on carbon footprint.
    ▪ Read the article here.

• North America
  ○ Canada: Phenom Resources [10.01.23]
    ▪ Phenom Resources Proposes a Return to Pure Vanadium Miner with Gold Spin-Out.
    ▪ Read the article here.
EVENTS CALENDAR

FEBRUARY

- HYVE: **Mining Indaba** | Cape Town, SA | 6-9 February
  - Register here

- IRTC 2023: **Raw Materials for a Sustainable Future** | Lille, FR | 15-17 February
  - Register here

MARCH

- PDAC 2023: **The World’s Premier Mineral Exploration & Mining Convention** | Toronto, CA | 5-8 March
  - Register here

- CMA UK & Metals Events: **Critical Metals & Minerals Conference** | London, UK | 22-23 March
  - Register here

NOVEMBER

- CMA UK & GSBF | **3rd Annual Critical Minerals Conference** | UK Parliament | 27 Nov 2023

**Interested in speaking and / or attending?**

Contact our events team for more information at events@criticalmineral.org