CRITICAL MINERALS ASSOCIATION

AUGUST 2020

CMA PODCAST - UK BATTERY SUPPLY CHAINS WITH UK GOVERNMENT & ROSKILL
SOCIAL MOBILITY FOUNDATION & GEOSCIENCES
MINVIRO - SUSTAINABILITY & LITHIUM WEBINAR
CORNISH LITHIUM - BBC COUNTRYFILE
GLOBAL INDUSTRY STANDARD ON TAILINGS MANAGEMENT
Welcome to our August Critical Minerals Association monthly newsletter & updates on the critical minerals space.

Read on for:

- CMA Podcast: UK Battery Supply Chains Discussion
- Social Mobility Foundation - Introducing Geosciences
- Sustainability & Lithium Webinar - Minviro
- Roskill - Rare earths: A not “quite so” bullish forecast
- Global Industry Standard on Tailings Management
- Cornish Lithium - BBC Countryfile
- News Archive
- Engaging a Diverse Workforce - Engineering for the Electric Vehicle Revolution
- FutureGeo 2.0

Kirsty & Jeff

SUBSCRIBE TO OUR NEWSLETTER UNDER 'CONTACT'

Got a suggestion? Want to feature in next month's newsletter?
Contact kirsty@criticalmineral.org

Want to learn more? Check out our website:
https://www.criticalmineral.org/ & follow us on twitter
@CMA_Minerals
Podcast: UK Battery Supply Chains

On August 25th, the Critical Minerals Association hosted its second breakfast chat webinar on 'UK Battery Supply Chains.' We were privileged to welcome:

- Roskill - David Merriman, Battery and Electric Vehicle Materials Manager
- Faraday Battery Challenge - Jacqui Murray, Deputy Director
- UK Government Department for International Trade - Mark Smith, Mining Sector Manager
- BritishVolt - Isobel Sheldon, Chief Strategy Officer

PODCAST & HIGHLIGHTS HERE.
At the Social Mobility Foundation’s Physics and Engineering Virtual Placement on the 10th & 11th August 2020, the Critical Minerals Association’s founding members, Minviro and Cornish Lithium introduced 69 Year 12 & S5 students to Geosciences – 32 of whom were female and 38 from non-white ethnic backgrounds.

Read the article below on the relationship between Geoscience/ Engineering/ Physics/ Chemistry and learn more about the Sustainability aspects of Geoscience and Mineral Exploration.

READ MORE HERE
On Thursday, 3rd of September, Minviro is hosting a webinar in collaboration with the British Embassy Buenos Aires and Cámara de Comercio Argentino Británica, about sustainability in the mining industry with a focus on lithium. Speakers include Minviro's Robert Pell, Cornish Lithium's Lucy Crane, UK Gov DIT's Ros Lund.

**REGISTER HERE**

**Sustainability and Lithium: powering the future**

Presented by:

- **Mark Kent**
  British Ambassador to Argentina

- **Ros Lund**
  Mining Specialist at UK Department for International Trade

- **Aidan Nania**
  Managing Partner at Baker Street Group

- **Robert Pell**
  President of Minviro

- **Lucy Crane**
  Senior Geologist at Cornish Lithium

- **David Deak**
  President of Marbex LLC

**Advance booking required**

**Tuesday 3 Sept, 12 PM ARG. ZOOM Meeting**

**Event in English**

"Rare earths are gaining traction globally because of their use in high-performance neodymium-iron-boron (NdFeB) magnets. These magnets are used in large volumes in off-shore wind turbines, the growth of which has helped push this application to account for nearly 10% of NdFeB magnet demand in 2019"

"Roskill forecasts neodymium demand to grow at 4.8%py over the next decade - not quite comparable to the double-digit industry growth, but why is that?"

-Nils Backeberg & David Merriman

READ THE ARTICLE HERE.
Global Industry Standard on Tailings Management

A new Global Industry Standard on Tailings Management has been launched by ICMM, UNEP and PRI this month.

“It is with great pleasure that I present the Global Industry Standard on Tailings Management, which sets a precedent for the safe management of tailings facilities, towards the goal of zero harm.” - Dr Bruno Oberle, Chair: Global Tailings Review

READ THE STANDARDS HERE.

Global Industry Standard on Tailings Management

Strengthening current practices in the mining industry by integrating social, environmental and technical considerations, the Standard covers the entire tailings facility lifecycle—from site selection, design and construction, through management and monitoring, to closure and post-closure.

With an ultimate goal of zero harm to people and the environment, the Standard sets a global benchmark for achieving strong social, environmental and technical outcomes. It elevates accountability to the highest organisational levels and adds new requirements for independent oversight. The Standard also establishes clear expectations around transparency and public disclosure, helping to improve understanding by interested stakeholders.

Comprising six Topic areas, 15 Principles and 77 auditable Requirements, the Standard provides a framework for safe tailings facility management while offering Operators flexibility as to how best to achieve this goal.
Congratulations to Cornish Lithium for recent funding from the UK Government’s Getting Building Fund to build a pilot plant for the extraction of lithium from geothermal waters at United Downs in Cornwall, in collaboration with Geothermal Engineering Ltd.

Cornish Lithium also featured on BBC1’s Countryfile on 23rd August. CEO, Jeremy Wrathall and Senior Geologist, Lucy Crane were interviewed about pioneering exploration techniques and use of digital technology to re-evaluate Cornwall’s mineral potential as the UK seeks a domestic supply of lithium for use in electric vehicle and power storage batteries.
Critical Mineral News

The following August news articles from Mining Weekly, Mining.com, Reuters, Roskill, Proactive, Argus Media, and others, provides an overview of critical mineral mining for:

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

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

• Global
  - Businesses including Glencore launch joint bid to improve conditions in cobalt supply chains (25.8.20)
  
  
• Africa
  - DRC: Glencore (20.8.20)(21.8.20)
    - Glencore to keep Mutanda mine on care and maintenance until better market conditions prevail
    
    
    - Glencore’s strategy to underpin cobalt prices post covid-19 (similarly employed in the zinc market where the company holds sway over a chunk of the market) could underpin cobalt prices over the medium term
    

• Asia
  - China: Chengtun Mining (17.8.20)
    - Chinese mining and metals company Chengtun Mining raised its copper and cobalt hydroxide production in the DRC in April-June 2020
    
  
  - China (21.8.20)
    - Electric vehicle demand & logistical constraints in China expected to push US cobalt prices higher, tightening spreads from 16-month lows in August
    
Copper

• Global
  - Copper price above $3 a pound for first time since June 2018 (19.8.20)
  - Copper: Roskill Webinar explains rapid price recovery in the wake of COVID-19 (27.8.20)

• Africa
  - Nigeria: Japaul (21.8.20)
    - Nigerian oil-services firm Japaul seeks $70 million to switch to mining and has obtained licenses to mine gold, lead, nickel and copper
    https://www.mining.com/web/nigerian-oil-services-firm-japaul-seeks-70-million-to-switch-to-mining/

• Asia
  - China (14.8.20)
    - New record monthly highs for copper imports were set in preliminary data for July from Chinese Customs, recording 1.31Mt copper content
  - India: Vendanta (18.8.20)
    - India's Madras High Court has ruled against the reopening of domestic mining conglomerate Vedanta Resources' 400,000 t/yr Sterlite copper smelter
    backToResults=true&selectedMarket=Metals
  - Japan (20.8.20)
    - Japanese shipments of copper cable and wire continued to recover in July, supported by increased demand from the manufacturing sector

• Afghanistan: Fortescue (21.8.20)
  - Fortescue opens talks with Afghanistan on nation’s mining riches - gold, copper, iron ore and rare earths
• Europe
  ○ Greenland: Conico/ Longland Resources
    ▪ Australia’s Conico has signed a conditional binding term sheet to acquire 100% of England registered Longland Resources in consideration for 120 million shares in Conico

• Latin America
  ○ Chile: BHP/Spence (18.8.20)
    ▪ BHP expects the Spence Growth Option project at its Spence mine in Chile to support around 300,000 t/yr of copper output in its first four years

• North America
  ○ Rio Tinto (19.8.20)
    ▪ Rio Tinto has cut its refined copper production target for fiscal 2020 due to delays in restarting a smelter at its Kennecott mine in Utah.
  ○ USA: Jetti Resources (18.8.20)
    ▪ Jetti Resources - a start-up founded in 2014 has introduced technology, which it says can extract copper from low-grade primary sulfides like chalcopyrite, the most abundant copper mineral ore
  ○ Canada: Imperial Metals (10.8.20)
    ▪ Mount Polley tailings pond remediation, six years later
  ○ USA: Northern Dynasty Minerals (20.8.20)
    ▪ Controversial Pebble project in southwest Alaska contains substantial quantities of rhenium
Lithium

- Global (10.8.20)
  - Output cuts at lithium producers in response to low prices and Covid-19-related disruptions could create a structural deficit as demand for electric vehicles (EVs) rises in the coming years
  - A shift back towards using lithium iron phosphate (LFP) chemistry in electric vehicle (EV) and energy storage batteries is prompting changes in production

- Latin America
  - **Argentina: Orocobre/ Livent (6.8.20)**
    - Argentina's lithium producers are watching for signs of an increase to export duty that could raise their cost profiles, as the Argentine Peso continues to fall.
    - Quarterly earnings calls by Albemarle and Livent both reported plans to limit lithium production in 2020 as a result of market oversupply and weak demand
  - **Chile: SQM (13.8.20)**
    - Back to the drawing board for SQM after Chilean regulator rejects the company’s environmental plan for Atacama operation

- North America
  - **Canada: Nemaska Lithium (27.8.20)**
    - Québec government confirms commitment to funding
Graphite

• Global:
  ○ RHI Magnesita (7.8.20)
    ▪ Refractories leader RHI Magnesita saw interim profits more than halve as demand at steel and industrial divisions hit by COVID-19

• Africa
  ○ Mozambique: Syrah Resources (31.7.20)
    ▪ Syrah Resources has reported no production from its Mozambique Balama graphite operation in Q2 2020 as a result of COVID-19
    ▪ https://roskill.com/news/graphite-syrah-resources-reports-no-q2-production/
  ○ Tanzania: Armadale Capital/ Mahenge (13.8.20)
    ▪ Armadale testing natural flake graphite produced at Armadale’s Mahenge graphite project, Tanzania, for battery applications

• Europe
  ○ Sweden: Talga Resources (20.8.20)
    ▪ Graphene company Talga Resources will raise A$10-million through institutional share placement to fund pathway to battery anode production.
    ▪ https://www.miningweekly.com/article/talga-launches-capital-raise-2020-08-20
Nickel

• Asia
  ○ China: Hefei Guoxuan Battery Materials (31.7.20)
    ▪ Hefei Guoxuan signed agreement with Hefei Lujiang Hi-tech Industrial Development Zone to build high-nickel ternary cathode materials plant. Guoxuan is the third largest lithium-ion battery manufacturer in China.
  ○ Indonesia: TISCO (20.8.20)
    ▪ Chinese iron and steel giant Taiyuan Iron and Steel (TISCO), along with Beris Engineering and Research Corporation, is reported to have signed a planning contract to develop an integrated stainless steel operation in Indonesia
  ○ Indonesia: Antam (4.8.20)
    ▪ Indonesian mining and processing firm Antam's nickel ore output and sales were sharply lower as a result of the ban on nickel ore exports

• North America
  ○ USA: Tesla (31.7.20)
    ▪ Tesla boss Elon Musk has pleaded with miners to supply more sustainably-sourced nickel.
  ○ Canada: Karora Resources (31.7.20)
    ▪ In late-July 2020, Karora Resources finalised the sale of its remaining 28% stake in the Dumont nickel project to 2 private funds advised by Waterton

• Oceania
  ○ Australia: First Quantum Metals (31.7.20)
    ▪ First Quantum Minerals (FQM) has reported second quarter production at the recently re-started Ravensthorpe nickel operation in Australia.
Tin

- Africa
  - Namibia: AfriTin (6.8.20)
    - Namibian tin miner, AfriTin, has reported a 79% month-on-month rise in tin concentrate production for July 2020 at its Uis mine.

- Asia
  - China: Baiyinchagan (30.7.20)
    - The Baiyinchagan mine is set to come back online after the local government approved its mining license on 27 July.
    - [https://www.internationaltin.org/baiyinchagan-restart-scheduled/](https://www.internationaltin.org/baiyinchagan-restart-scheduled/)

- Europe
  - Czech Republic: European Metals/ Cinovec (12.8.20)
    - European Metals is planning to begin a new drilling campaign at Cinovec to convert its Mineral Resource to a Mineral Reserve
    - [https://www.internationaltin.org/european-metals-cinovec-drilling/](https://www.internationaltin.org/european-metals-cinovec-drilling/)

Tungsten

- Europe
  - UK (7.8.20)
    - Machine learning research may help find new tungsten deposits in South West England
    - [https://www.sciencedaily.com/releases/2020/08/200807102332.htm](https://www.sciencedaily.com/releases/2020/08/200807102332.htm)
PGMs

- **Global: Platinum Guild International (4.8.20)**
  - Platinum Guild International indicated that, during Covid-19 having greatest impact on jewellery demand in regions with higher infection rates

- **Africa**
  - **South Africa: Eastplats (7.8.20)**
    - Eastern Platinum’s (Eastplats’) revenue for the six months ended June 30 increased by 49% year-on-year to $23.5-million.
  - **South Africa (11.8.20)**
    - Platinum giant South Africa forced by virus to look into abyss

- **Europe**
  - **Russia: Nornickel (12.8.20)**
    - Norilsk Nickel (Nornickel) expects the palladium market to be balanced this year, citing “unprecedented” contraction of end-use demand as the automotive industry faces its worst crisis in decades.
    - [https://www.miningweekly.com/article/palladium-to-shift-from-deficit-to-balanced-market-this-year-nornickel-2020-08-12](https://www.miningweekly.com/article/palladium-to-shift-from-deficit-to-balanced-market-this-year-nornickel-2020-08-12)
  - **Switzerland: Ecole Polytechnique Federale de Lausanne (16.8.20)**
    - Platinum, copper, nickel alloy may be key for smart biomedical devices
    - [https://www.mining.com/platinum-copper-nickel-alloy-may-be-key-for-smart-biomedical-devices/](https://www.mining.com/platinum-copper-nickel-alloy-may-be-key-for-smart-biomedical-devices/)
Manganese

• Latin America
  ○ Brazil (22.8.20)
    ▪ Brazil has seized 70,000 tonnes of illegally mined manganese

• Oceania
  ○ Australia: Eclipse Metals (17.8.20)
    ▪ Eclipse Metals prepares to begin Mary Valley Manganese Project diamond drilling next month
  ○ Australia: South32 (13.8.20)
    ▪ South32 selling its stake in manganese alloy smelter Tasmanian Electro Metallurgical Company to London-based GFG Alliance
    ▪ Column: Tasmanian manganese smelter sale points to greener future for metals
    ▪ Manganese ore market outlook to mid-2021 is likely to be reliant on supplies as alloy demand from steel industry remains buoyant
Rare Earth Elements

- **Global (6.8.20)**
  - Rare earths demand to get another kick up on multi-trillion-dollar cash injections from US, Europe

- **Asia**
  - **China: China's Commerce Industry (21.8.20)**
    - The fall in China's rare earth exports to the US this year has been driven by market factors, China's commerce ministry (Mofcom) said, denying suggestions that political tensions are to blame

- **Oceania**
  - **Australia: Lynas (17.8.20)**
    - Lynas announced a A$425-million equity raise to fund its Lynas 2025 foundation projects, while also reporting a loss in earnings and revenue for the full year ended June

- **North America**
  - **USA (14.8.20)**
    - U.S. Companies Vie for Funds in Race to Build Rare Earths Industry
Engaging a Diverse Workforce - Engineering for the Electric Vehicle Revolution

On August 27th the UK Government UKRI's Knowledge Transfer Network hosted an excellent roundtable webinar about the importance of STEM activities for the future of engineering.

The Driving the Electric Revolution team and guest host Jacqui Murray, Deputy Director of the Faraday Battery Challenge also discussed the benefits of having a diverse organisation.

The discussion is well worth a watch for those looking to encourage diversity in geoscience professions - the challenges are similar!

WATCH IT HERE
Join FutureGeo 2.0 on 29th September @9:30am BST - a free, virtual and first-of-its-kind networking event, organised by Terrafirma & Digital Leaders. The event will bring together the geo-community into a common space where all involved can present, share and understand differing perspectives, ideas and goals, helping shape the Future of GeoScience.

FUTUREGEO 2.0

This is your platform, your opportunity to connect, talk and change the Future of GeoScience.

This free, virtual and first-of-its-kind networking event, brought to you in association with Digital Leaders, is designed to build bridges to the thousand islands in an ocean that make up the geo-community.

Register your interest here, spaces are limited:

https://www.eventbrite.co.uk/e/futuregeo-2.0-lets-connect-talk-and-change-the-future-of-geoscience-tickets-115712959577

29th September 2020 | 9:30 to 12:00 BST
#FutureGeo

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