

Critical Raw Materials – a future (im)perfect?

22nd June 2023 | 13:00 – 14:30 (BST)



Chair: Dr. Jasmine Bone *University of Surrey, UK*

To achieve the net zero dream, it is axiomatic that a stable supply of critical raw metals and minerals will be needed. Our four speakers, all noted academics and researchers specialising in this field, will present three different views on how this may be achieved. Their short presentations will be followed by an open floor Q&A session.



Responsible critical mineral resourcing: Applying the UN Resource Management System to South West England

Dr. Eva Marquis *Camborne School of Mines & Environment and Sustainability Institute, University of Exeter, UK*

Raw materials are crucial for society to achieve the Sustainable Development Goals and global ambitions on climate change action. In an effort to allow better-informed and clearer decision making on the use of natural resources for sustainable development, the United Nations Economic Commission for Europe has developed the United Nations Resource Management System (UNRMA). Application of this system to South West England's critical minerals projects illustrates its potential use case and where it fits in responsible resource management.



Africa and Critical Raw Materials (CRMs) in the context of the EU CRM act

Prof. Judith Kinnaird and Prof. Paul Nex
University of Witwatersrand, South Africa

The European Union (EU) is heavily dependent on imports for critical raw materials (CRMs), which are essential for the production of green and digital technologies. There is a growing demand for these materials as it transitions to a more sustainable economy. The EU CRM act, which was proposed in March 2023, aims to achieve these goals by establishing a European battery alliance, supporting research and development, and promoting recycling. Africa is home to significant reserves of CRMs, including cobalt, lithium, manganese, platinum group elements, and vanadium. By adopting a circular approach to the use of CRMs, the EU can reduce its demand for virgin materials and increase its resilience to supply disruptions. By working with African countries, the EU can ensure that the benefits of the green and digital transitions are shared more widely.



The unattended conversation surrounding critical raw materials in mined mineral waste and process tailings

Borbor Gibson *University of Witwatersrand, South Africa*

The concept of the circular economy and recycling practices has led to an increased focus on recovering critical raw materials (CRMs) from electronic waste and scraps, particularly in the global north countries. However, there is a notable limited attention given to the vast volumes of mined mineral waste dumps and processed tailings in regions with intense mining activities. These sources are largely unattended, and their potential for CRM is largely unexplored. Here we explore the potential of CRMs from mined mineral waste and tailings, which if explored could contribute significantly to the circular economy and secure the supply of CRMs for future generations and for building resilient economies.

