



Accelerating the green transition: Critical minerals, metals production and a fair future for all

Date: Tuesday, 28 November 2023

Time: 2:00 – 3:30 p.m. (CET)

Location: Vienna International Centre, Vienna, Austria

Background

The pursuit of sustainable and inclusive global development has entered an era of unprecedented urgency. The world is witnessing an accelerated transition towards cleaner and greener energy solutions, underpinned by the critical minerals such as cobalt, lithium, and graphite. The imperative to address climate change, necessitates a profound transformation of our industrial paradigms. Against a backdrop of net-zero ambitions, low-carbon technologies and products that rely on critical minerals become integral for this transformation. Yet, it is equally undeniable that the environmental and socio-economic repercussions of mining have too often contradicted the principles of sustainability.

In this context, critical minerals and metals production takes the spotlight. The World Bank predicts a need for over 3 billion tons of these resources for low-carbon technologies, necessitating more than 100 new mines by 2030. Balancing environmental responsibility, social equity, and economic sustainability is essential in the minerals sector. Future net-zero innovations rely on a consistent supply of these resources, but accelerating innovation in post-mining processes can alleviate future demand pressures.

The Ministry of Industry and Mineral Resources, Saudi Arabia, launched, in 2022, the Future Minerals Forum with the objective to shape the future of minerals by bringing together governments, the private sector, multilateral organizations and NGOs to find solutions and sustainable investment streams to support a dynamic, integrated minerals sector. UNIDO's Director General took part in the first Ministerial Roundtable of the FMF in January 2023 and called for the establishment of a Global Alliance to support sustainable critical minerals and responsible mining that can forge the path toward a just and equitable energy transition.



Panel Discussion: “Accelerating the green transition: Critical minerals, metals production and a fair future for all”

To explore this further, the high-level panel discussion takes a deep dive into responsible mineral production and inclusive development of downstream initiatives. It will address the crux for the broader objective of minerals industries such as mining, processing and manufacturing, as catalysts for sustainable development, delivering jobs and opportunity to remote and underdeveloped parts of the world. Discussions will tackle the intricate balance between the economic imperatives of mineral extraction, processing, and service with regard to sustainability goals. It will also address issues of innovation and emerging technologies in revolutionizing mineral production practices.

The discussion will also take into consideration the role of UNIDO as global facilitator of innovation platforms for developing countries. UNIDO can facilitate new innovative partnerships and contribute to safer, cleaner, more environmentally friendly, and diversified operations across the mineral value chain. This includes, but is not limited to, upstream adoption of responsible green transition and standards; downstream processing and utilization, material recovery and re-use value chains.

Finally, the discussion will focus on the adaptation of global standards to local contexts as well as policies required to support this paradigm shift. These matters, among others, will provide a comprehensive understanding of the path forward, highlighting challenges, opportunities, and collective responsibility.

Key questions to be addressed

- How can countries scale-up production of critical minerals to meet demand for the material-intensive energy transition with affordable and sustainable green interventions?
- What is the role of industrial policy in driving investments in mineral value chain creation?
- Should supplier countries move towards developing regional critical minerals strategies?
- How can the international community work together to strike a balance between mineral exports and local value retention?



- What are the technical challenges and opportunities associated with responsible mineral extraction (upstream) in developing countries, and how can advanced mining technologies mitigate environmental and social impacts while ensuring economic viability?
- What are successful models of intra-regional value chain creation?
- How can international organizations help supplier countries accelerate mineral production while minimizing unintended social and environmental consequences?
- What role can international collaboration, knowledge sharing, and technology transfer play in assisting developing countries in responsible mineral extraction and value chain development, and how can these collaborations address environmental stewardship, social justice, and economic viability in a comprehensive manner?

Format

The session will feature an opening remarks followed by a moderated high-level panel discussion (Davos style). It will have simultaneous interpretation in all official languages of the United Nations and will be livestreamed on UNIDO's website: <https://www.unido.org/general-conference-20>.