



teri | THE ENERGY AND
RESOURCES INSTITUTE
Creating Innovative Solutions for a Sustainable Future

ashoka
UNIVERSITY

CENTRE FOR A
People-centric
Energy Transition



COLLABORATIVE CONSORTIUM ON CRITICAL MINERALS
FOR SUSTAINABLE ENERGY TRANSITION

Title: Securing Tomorrow: Critical Minerals and Circular Economy for Clean Energy Transition

Date: 25th February 2026 (Wednesday)

Time: 10:00 AM - 11:30 AM IST

Venue: Roshanara, Taj Palace, New Delhi

Context

India's shift toward clean energy depends on a steady and fair supply of the critical minerals required for solar, wind, batteries, hydrogen, and other low-carbon systems. Global supply chains for these minerals remain fragile and contested, creating material risks for the timely deployment of renewables and storage. To mitigate these risks, there is a significant opportunity to build a "circular economy" by recovering minerals from end-of-life batteries, electronics, and other waste streams. This approach of secondary supply can reduce dependence on concentrated global markets, lower environmental impacts relative to primary extraction, and create domestic green jobs across collection, recycling, refining, and quality certification.

However, scaling secondary recovery demands coordinated action: predictable policy signals (EPR and standards), robust collection and reverse-logistics systems, investment de-risking for recycling and refining infrastructure, quality certification for recovered materials, and interoperable data systems to quantify demand, track flows, and plan capacity. This session will provide a structured platform to align stakeholders on these enablers, using evidence and practical implementation pathways.

Objectives

- Position critical minerals as an energy security imperative for India's renewable-heavy transition, while foregrounding secondary recovery as the most actionable near-term lever to strengthen resilience.
- Launch and showcase the 3C-SET Consortium and its digital collaboration tools as a platform for evidence, convening, and co-creation across government, industry, academia, and civil society.
- Mobilise expert dialogue on bridging the gap between demand-supply intelligence and the practicalities of circular economy pathways—from reverse logistics to market standardisation.

Central Questions

- Given India's dependence on fragile global supply chains, which critical minerals and end-use sectors (batteries, solar, wind, electronics) should be prioritised for secondary recovery in the next 5–10 years, and why?
- What specific changes in EPR design, standards, and certification are most urgently needed to create predictable demand and investor confidence for recycled critical minerals in India?

- What are the key bottlenecks in scaling collection, reverse logistics, and recycling/refining capacity, and how can policy instruments such as blended finance, guarantees, or procurement commitments help de-risk early investments?
- How can India build interoperable data systems and institutional coordination mechanisms to track material flows, assess secondary supply potential, and ensure that circular economy interventions measurably contribute to critical mineral security?

Possible Key Takeaways

A key takeaway is that think tanks can play a catalytic role in strengthening India's critical mineral security by translating mission intent into implementable and bankable pathways, particularly for secondary recovery. Their comparative advantage lies in bridging evidence, policy design, standards, and investment structuring, while convening credibly across government, industry, finance, and research ecosystems. By aligning stakeholders around a shared evidence base and clear pathways, think tanks can help convert the National Critical Mineral Mission and Atmanirbhar Bharat objectives into a *kartavya nishth*, actionable, accountable outcomes.

In practice, this means supporting mission-linked demand-supply intelligence through bill-of-materials-based projections across clean energy and mobility sectors, and quantifying feasible secondary supply under realistic collection, lifetime, and recycling scenarios. Think tanks can translate this analysis into decision-grade import-domestic-secondary pathways, while also shaping workable regulatory and standards frameworks—upgrading EPR design, enabling certification and traceability for recovered materials, and harmonising waste, manufacturing, and mining regulations to create a credible recycled-materials market.

Beyond policy design, think tanks can strengthen implementation by enabling finance and technology scale-up. This includes building open data platforms and national dashboards on material flows and capacities, publishing periodic circularity outlooks, and helping make recycling and refining projects investment-ready through robust business cases, risk-mitigation instruments, and scalable PPP or procurement models. By convening government-led working groups, identifying priority R&D, and supporting structured reviews and scorecards, think tanks can help keep the mission on track and ensure that learning from pilots translates into system-level impact.

Expected outcomes

- A shared and India-relevant framing of critical minerals for renewables and storage centred around energy security and competitiveness issues, with secondary recovery positioned as a priority pathway.
- A public launch of the 3C-SET Consortium and a clear 'how to engage' pathway for government agencies, industry, researchers, and development partners.
- Agreement on five action priorities for scaling secondary recovery (policy, standards, infrastructure, finance, and data)
- A draft roadmap for an evidence-and-implementation workplan (working groups, data needs, research questions, pilots, and policy touchpoints) to be advanced through 3C-SET.

About the World Sustainable Development Summit (WSDS)

The World Sustainable Development Summit (WSDS) is the annual flagship Track II initiative organized by The Energy and Resources Institute (TERI). Instituted in 2001, the Summit series has a legacy of over two decades for making 'sustainable development' a globally shared goal. The only independently convened international Summit on sustainable development and environment, based in the Global South, WSDS strives to provide long-term solutions for the benefit of global communities by assembling the world's most enlightened leaders and thinkers on a single platform. The 25th edition of the annual flagship event of The Energy and Resources Institute (TERI)—the World Sustainable Development Summit (WSDS)—will be held from 25-27 February 2026 in New Delhi. The deliberations of the **Silver Jubilee** edition of the Summit will focus on the umbrella theme of *Parivartan: Transformations: Vision, Voices and Values for Sustainable Development*.