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Secure, Responsible and Equitable Critical Minerals Value Chains

Building bridges between G7 and G20 processes on critical minerals is crucial for minerals security and shared prosperity. An international framework that coherently reconciles the various interests of importing countries seeking supply security and market stability, and producing countries aiming to maximise the economic contribution of mineral value chains to their economies is needed. Such a framework, built on mutually beneficial partnerships, should not only address supply chain resilience, but also support sustainable industrial deepening, technological upgrading and local value creation in mineral-rich economies.

This T7 briefing proposes three practical initiatives for the G7 to consolidate the 2025 G7 Critical Minerals Action Plan which focused on supply security, transparency, and sustainability standards:

- 1) foster dialogue on inclusive and responsible mineral value chains;
- 2) demonstrate feasibility of responsible and inclusive mining value chains; and
- 3) strengthen the circularity of critical minerals within existing frameworks.

CONTEXT

Rapidly rising mineral demand for green, advanced industrial and digital technologies and defence applications, coupled with strategic attempts at securing control and value, has fuelled global tensions around security of supply and local value creation. Trade and investment tensions between G7 countries and China increasingly shape the governance of global value chains, creating a more complex landscape for mineral-rich countries pursuing local value creation. Mineral-importing countries are prioritising supply-chain resilience and diversification to reduce overreliance on single countries, while producing countries seek mutually beneficial partnerships that integrate local value creation. The race to access and benefit from critical minerals, intertwined with mineral-endowed countries' struggles to secure industrial and economic benefit from them, risks weakening environmental and social safeguards and undermining Indigenous and local communities' rights and free, prior and informed consent principles.

Under the Canadian Presidency in 2025, G7 members adopted a Critical Minerals Action Plan focused on security of supply, transparency, and sustainability standards. Building on the adoption of a G20 Critical Minerals Framework in the same year, the G7 should work with partners to consolidate the Action Plan, as a step to implementing the ambition of both G7 and G20 processes towards market stability, increased value sharing, investment blueprints and circularity. Improving market stability and supply-chain resilience ultimately requires strengthening mineral value chains, notably by creating diversified production hubs through both structural upgrading and domestic value chain integration in mineral-rich countries. The T7 proposes the following initiatives for the G7.

1. Drive a political compact: Strengthen dialogue on inclusive and responsible mineral value chains

Leveraging the consensus reached under the United Nations Secretary-General's Panel on Critical Energy Transition Minerals and the G20 Critical Minerals Framework, the G7 has a timely opportunity to forge a balanced global approach to reconcile the interests of producing and consuming countries.

The G7 should pursue a political compact on critical minerals that aligns producer and consumer country interests, acknowledging incentives and trade-offs. This requires explicit political signalling and commitments that G7 countries will support downstream value creation in producing countries, recognising that this may entail higher short-term costs, adjustments to domestic industrial strategies, and complex supply-chain governance, in exchange for greater supply security, diversification from dominant suppliers, and stronger Environmental, Social and Governance (ESG) legitimacy. Producing countries would need to commit to regulatory stability, transparent governance, and international sustainability standards.

A strong, balanced and mutually beneficial political partnership is needed to ensure that mineral-rich countries are enabled and empowered to benefit beyond mere extraction and participate more meaningfully in midstream and downstream processing, in turn contributing to more secure and resilient supply chains for all. This calls for enhanced investments and industrial cooperation between demand- and supply-led countries along the entire value chain, from exploration and mining, to processing, manufacturing and associated services, to skills development, technology and innovation, to circularity and sustainability standards.

This political compact should be operationalised through a package of incentives, including concessional finance, technology sharing partnerships, skills development, guaranteed offtake arrangements, and preferential market access for value-added products. It should also include stronger local value creation criteria within global initiatives, such as the Resilient and Inclusive Supply Chain Enhancement (RISE) Partnership, and strategic negotiations of mutually beneficial trade agreements, along with active support towards the implementation of Global South-led political initiatives, such as the African Green Minerals Strategy.

2. Pilot flagship initiatives: Demonstrate feasibility of responsible and inclusive mining value chains

Complementing the pursuit of a more cohesive political agenda, the need for increased on-the-ground investment aligned to the ambition of mutually beneficial, inclusive partnerships is evident. The G7 provides a platform to take political commitments into action by supporting a range of ‘pilot’ investments. To translate political commitments into practice, the G7 should launch a small number of ‘lighthouse’, high-visibility investment pilots that demonstrate commercially viable and socially responsible mineral value chains. These projects should focus on downstream processing and manufacturing in mineral-producing countries and serve as proof-of-concept for alternative governance and financing models.

The G7 should mobilise a coordinated Development Finance Institution (DFI) platform, across consuming and producing countries, to provide blended finance, political risk guarantees, and technical assistance, explicitly targeting beneficiation and manufacturing. The establishment of systemic de-risking vehicles that cover non-commercial risks (policy shifts, currency volatility, lack of local-currency financing) at a sector level should complement the initiative to lower the costs of capital.

By concentrating resources on a limited number of scalable pilots, the G7 can reduce perceived investment risks, set benchmarks for ESG standards, and demonstrate that inclusive value creation is compatible with secure and competitive supply chains. Such investment should apply existing standards (such as the IFC Performance Standards) and explicitly price in ‘social dividends’ as part of the primary return-on-investment calculation.

3. Implementation partnership: Strengthen the circularity of critical minerals within existing frameworks

Another area where further momentum is required is the improvement of circularity in mineral value chains, an essential component of long-term minerals security and resilience. Circularity is anchored in the G7 Berlin Roadmap on Resource Efficiency and Circular Economy (2022-2025), the G7 Alliance on Resource Efficiency (ARE) operated since 2015, the Circular Economy and Resource Efficiency Principles (CEREP) adopted by the G7 in 2023, and already recognised in all G7 members' critical mineral strategies. However, scaling circularity requires further coordination and practical implementation mechanisms.

A flagship Circular Critical Minerals Partnership by the G7 could anchor circularity solutions along the value chain while enhancing supply security, resilience and sustainability, moving beyond voluntary coordination towards a dedicated platform for financing, standards-setting, and policy alignment. This would notably entail strengthening the circularity of critical minerals within the ARE, the CEREP and the G20-centric Resource Efficiency Circular Economy Industry Coalition (RECEIC) launched in 2022. Maintaining the value of critical minerals in use, and enhancing recovery and recycling, urban mining, and the recovery of minerals from tailings and legacy mining waste will help lower environmental impacts, expand value creation, and reduce dependence on primary extraction that entails geopolitical risk.

Systematically integrating circular supply chains into existing critical mineral strategies while strengthening international policy coordination on trade rules, investment frameworks and support systems for implementation is needed, notably in the Global South. To ensure practical implementation, circularity should be embedded within broader regulatory and market frameworks, rather than treated as a stand-alone initiative. Effective circular mineral strategies require alignment between mining policy, waste management regulation, trade rules and industrial incentives. Linking national critical mineral action plans in both consuming and producing countries to broader circular economy principles would provide strategic coherence.

This would involve integrating circular solutions into the development of interoperable traceability data platforms and supply chain transparency tools. Interoperable traceability platforms represent an important opportunity to enhance transparency and trust across mineral value chains. Their effectiveness can be strengthened through parallel investments in digital infrastructure, institutional coordination and regulatory digitalisation, as well as implementation support in mineral-rich economies to prevent sustainability and transparency standards from constituting unintended trade barriers.

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Think 7 (T7) is the official G7 engagement group bringing together leading think tanks and research centres to provide practical, evidence-based recommendations to G7 decision-makers. In 2026, IDDRI and the European Council on Foreign Relations (ECFR) jointly coordinate the T7 process for the French G7 Presidency.

More information about the T7: <https://www.iddri.org/en/reseau/think-7>

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