Building **inclusive** and **responsible value chains** for **critical raw materials**

Photo: Artisanal mining in Sierra Leone. Adobe Stock

The global transition to a low-carbon and digital economy is driving rapid growth in demand for critical raw materials. Minerals such as cobalt, graphite, lithium, tin, and tantalum are essential to renewable energy systems, battery storage, electric mobility, electronics, advanced computing systems, and artificial intelligence infrastructure.

As demand accelerates, attention is increasingly focused on the resilience, sustainability, and governance of these value chains. Emerging regulatory frameworks, including the OECD Due Diligence Guidance and evolving EU sustainability regulations, are increasing expectations for traceability and responsible sourcing throughout mineral value chains.

In many producing countries, particularly in Africa, these minerals are extracted not only by large-scale industrial operators, but also through artisanal and small-scale mining (ASM). ASM contributes significantly to mineral supply and supports millions of livelihoods, yet much of the sector remains informal, underfinanced, and weakly integrated into responsible sourcing models.

This disconnect is becoming increasingly consequential. Downstream buyers face growing due diligence and traceability requirements, while many ASM actors still lack access to the financing, technical assistance, and market structures needed to comply. Bridging this gap will be critical to building value chains that are not only secure but also inclusive and development-oriented.

The global energy transition cannot be considered truly sustainable if the communities supplying these minerals remain trapped in poverty and informality.

Artisanal and Small-Scale Mining (ASM)

Artisanal and small-scale mining refers to extraction activities carried out by individuals, cooperatives, and small enterprises. It is a major source of employment in many developing countries and contributes significantly to the supply of several critical raw materials. However, ASM often operates outside formal regulatory and financial systems, limiting its ability to meet environmental, social, and market standards.

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A defining moment for critical raw materials

Critical raw materials are becoming increasingly central to industrial policy, energy security, and economic transformation. This is reflected in policy and regulatory platforms such as the European Union's Critical Raw Materials Act and the African Union's Green Minerals Strategy, which emphasize supply chain resilience, responsible sourcing, and greater value addition in producing countries.

At the same time, geopolitical fragmentation, supply concentration, and growing competition over access to strategic minerals are increasing pressure on countries and companies to diversify and strengthen supply chains.

Despite their growing strategic importance, many producing countries continue to capture only a limited share of the value generated across these supply chains. Higher-value activities such as processing, refining, and manufacturing remain concentrated elsewhere, while extraction often remains weakly connected to broader industrial development.

Reframing ASM: from informality to opportunity

ASM is frequently associated with informality, environmental degradation, unsafe working conditions, and governance challenges. These concerns are real and require sustained attention. However, ASM also supports local economies, generates employment, and contributes materially to the supply of several critical raw materials, particularly in Sub-Saharan Africa, often in areas where economic alternatives remain limited.

ASM production frequently enters international markets through indirect and weakly traceable trading channels. The critical question is therefore not whether ASM should be part of the future of mining, but how to improve the conditions under which ASM takes place, supporting more responsible value chains and benefiting small-scale miners and local communities.

Formalization plays an important role in this process. Bringing ASM actors into regulated systems can strengthen traceability and accountability while improving environmental and social practices. It can also reduce opacity in mineral flows, facilitate access to finance and markets, and support more resilient value chains as demand continues to grow.

Regulatory reforms alone, however, are unlikely to be sufficient. Progress also depends on strengthening incentives across the value chain – from miners and cooperatives to aggregators, exporters, processors, and downstream buyers – so that responsible practices become commercially viable and operationally achievable.

Closing the financing gap

Access to finance remains one of the main constraints facing ASM-linked cooperatives and SMEs. The financing gap is structural, shaped by informality, perceived risk, and the difficulty many operators face in meeting conventional lending requirements. As a result, many small-scale actors remain excluded from formal financial channels despite growing demand for responsibly sourced minerals.

This financing gap is increasingly relevant to the resilience and credibility of mineral value chains. Many upstream operators lack the capital needed to improve productivity, strengthen traceability systems, formalize operations, or comply with international standards. In the absence of accessible financing, informal traders often continue to dominate working capital provision through opaque and unequal arrangements tied to future mineral production.

Expanding more transparent financing structures linked to responsible sourcing and improved ESG practices could help strengthen accountability and local development outcomes.

Sustainability, human rights, and resilience

The sustainability of critical raw materials is closely linked to conditions at the point of extraction. Environmental management, occupational health and safety, labour conditions, and community engagement are not peripheral concerns, as they define the long-term viability of the sector.

International buyers are increasingly required to demonstrate due diligence across their supply chains, creating strong incentives for upstream improvements. At the same time, local communities bear the direct impacts of mining activities, making social performance central to maintaining stability and trust.

Above all, addressing child labour must remain a central priority in ASM value chains. In many mining communities, child labour is closely linked to poverty, income insecurity, and the absence of viable economic alternatives. Its eradication therefore requires more than enforcement measures alone. Sustainable progress depends on strengthening livelihoods, improving monitoring and traceability systems, expanding access to finance and formal markets, and building responsible value chains capable of generating safer and more stable income opportunities for local communities.

Women in mining: unlocking potential

Women are active across multiple segments of ASM economies, including mineral processing, trading, transport, and a range of support activities. However, participation is frequently constrained by unequal access to finance, land and licensing systems, technical training, safer working conditions, and decision-making structures. In many contexts, women also remain concentrated in lower-value and more precarious segments of the sector.

Gender-responsive and gender-transformative approaches can support women's participation in higher-value activities and strengthen broader enterprise development. At the same time, they can help address structural barriers that limit women's economic agency, leadership, and access to market opportunities across mineral value chains, contributing to more inclusive, resilient, and sustainable ASM ecosystems.

Local value creation and economic transformation

The long-term development potential of critical raw materials depends on the extent to which value is retained and built within producing countries. At present, much of this value is captured elsewhere, through downstream processing, manufacturing, and technology development.

Strengthening local value creation does not necessarily require immediate large-scale industrialization. Incremental improvements in aggregation, sorting, washing, crushing, and first-stage processing can already increase local participation in mineral value chains, particularly when combined with stronger technical skills, quality standards, and market linkages.

Looking ahead: a catalytic role for the CFC

The Common Fund for Commodities operates at the intersection of finance, development, and commodity value chains. In line with its mandate and the CFC Strategic Framework 2025–2035, the Fund is exploring partnerships and financing approaches that support more responsible, inclusive, gender-responsive, and resilient mineral value chains, particularly in Sub-Saharan Africa.

The CFC's experience in SME finance, fund management, and technical assistance facility management provides a strong foundation for engagement in this sector. Since its inception, the Fund has supported commodity-dependent communities through investments in agricultural and other commodity value chains, working extensively with SMEs, cooperatives, aggregators, and smallholder-linked enterprises across developing countries.

These capabilities are directly applicable to ASM mineral value chains, where persistent financing gaps, limited market access, and weak operational capacity continue to constrain local

Photo: Artisanal mining for gold in Ghana. Adobe Stock enterprise development, women's economic participation, and responsible sourcing efforts. In many producing countries, artisanal and small-scale mining supports not only miners themselves, but also a broader ecosystem of households, traders, transport providers, processors, cooperatives, and local SMEs whose livelihoods depend on commodity production and trade.

Yet these same constraints also represent one of the largest opportunities for development impact within critical raw material value chains. Targeted financing and technical assistance at the SME and aggregation level can help improve livelihoods, strengthen environmental and social practices, expand formal market participation, support women's economic empowerment, and increase the share of value retained within developing countries and local communities.

As demand for critical raw materials continues to accelerate, the integration of ASM actors into more formal, traceable, and responsible value chains will become increasingly important not only for supply chain resilience, but also for ensuring that the benefits of the global energy transition are shared more equitably. Through partnerships across the value chain, the CFC aims to support mineral markets capable of generating tangible economic, social, and developmental benefits for miners, local enterprises, women entrepreneurs, and commodity-dependent communities.

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