

## ISSUE BRIEF :

# Supply Chains

**Polar  
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Institute****Environmental Change  
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Strategic Competition**

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## Essential Questions

How can the mineral supply chain be further developed? What parts of the supply chain require more focus? How can collaboration with international partners be facilitated? How can existing infrastructure be used to strengthen the current supply chain?

## Key Findings

- Processing needs more incentive than extraction. Research and development must occur early to ensure minerals meet the requirements for processing and align with industry needs.
- Engage with end-users of critical minerals to production is aligned with market needs and ensure steady demand and revenue streams.
- International collaboration, particularly with other Arctic nations, can strengthen supply chains by leveraging each country's expertise.
- Recycling in the Arctic is unlikely to be an effective solution because of the sparse population, lack of infrastructure, high energy and transportation costs.

## Policy Recommendations

- The U.S. should consider facilitating cross-border trade between Canada and Alaska, which would facilitate higher numbers of projects, better transportation of materials, and better transportation of manpower. For example, there should be a fast-track process for cross-border movement for people with skillsets applicable to mining.
- The U.S. should look into increasing its processing capacity for domestically-sourced critical minerals. The government, through a White House-led mineral strategy carried out by interagency partners like the Department of Defense and Department of Energy, can provide direction and funding for the development of the processing plants.

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### Focus Group Synopsis

Two main themes arose during the Supply Chains focus group: the international imperative for mineral development in the North American Arctic, and; how to make the mining supply chain more effective and diverse.

The development of a supply chain for critical minerals involves addressing a range of international challenges, including trade policies, regulations, geopolitical considerations. In addition to building domestic production of minerals, the United States should also create incentives for producers to sell minerals to the U.S. The U.S. should also facilitate trade between Alaska and Canada—to create more workforce flow, infrastructure development, and simplify tax policies in those regions.

Policymakers should consider additional incentives to offset processing challenges, and promote a more diverse supply chain. The U.S. can catch up on processing ability, but to do so would require a whole-of-government approach considering China's approach. With the recognition of the need to control the mineral supply chain, that should be possible; the Defense Production Act may be one route to fund smelting feasibility testing. It was discussed that a coalition of Alaska Native Corporations may be the right grouping to unlock Defense Production Act funding. Additionally, research of the feasibility of projects must occur in advance to ensure those minerals meet processing requirements and align with industry needs.

There were two other points of discussion. First, community ownership of secondary services in the supply chain (like hauling, construction, power, etc.) can provide communities with less risky aspects of the mining supply chain to own and operate. Second, building infrastructure near raw material sources, along with access to transportation infrastructure, energy availability, should be considered when evaluating potential locations; this would help make the supply chain more efficient.

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*This brief draws from discussions at a July 2023 conference on Arctic mineral development, hosted by the Wilson Center, University of Alaska, the U.S. Department of Energy's Arctic Energy Office, and RAND Corporation. These findings are from the Supply Chains focus group, as well as related points discussed during five other focus groups focused on Community Ownership, Infrastructure, Workforce Development, Regulatory Frameworks, and Financing.*

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