



ARCTIC 360

CANADA'S NORTH

**REPLY TO NATURAL RESOURCES CANADA CRITICAL
MINERALS STRATEGY DISCUSSION PAPER**

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Mission: Canada's premier Arctic think tank. We are non-partisan and a registered not-for-profit. By working with Indigenous corporations and Northern governments, the federal government, private sector, expert Arctic leaders, partners, and our like-minded neighbours, think tanks, organizations, and institutions around the circumpolar region and beyond, our mission is to elevate the national conversation about Canada's North and the Arctic region at home and to provide an inclusive and coordinated platform for Canada to engage in Arctic discussions around the world.

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Executive Summary Canada's Critical Mineral Strategy requires specific stand-alone attention to the North. The North should be a specific stand-alone sub-theme and focus area and initiative needs to specifically speak to the implications for the North.

Introduction Energy politics is a major driver of global geopolitical stability and instability and force for global economic growth, stagnation, or decline. While the future energy economy will be a carbon neutral one, its prominence in global geopolitics will remain. Canada sits in an extremely fortunate position for its wealth of critical minerals that the world wants and needs. Add to this, Canada is a trusted democracy with high environmental and labour standards and is beginning to emerge as a global leader in Indigenous reconciliation. Canada's potential critical mineral economy has enormous promise to advance its national interests at home and make a significant contribution towards sustained global geopolitical stability.

Canada's North, comprising 40 percent of its total land mass, possesses an oversized share of known and potential critical mineral deposits. This potential offers a distinct opportunity for Canada to exercise global leadership in the region and to advance its soft power well beyond the Arctic itself. However, the North's disproportionate deficit of critical social, economic, and defense infrastructure also creates an equally outsized potential to undermine Canada's Arctic sovereignty, global leadership, and Canada's overall national security. Consequently, Canada's Critical Mineral Strategy requires specific stand-alone attention to the North rather than it being subsumed under a broader rural, remote, and Indigenous umbrella. This paper addresses the questions posed in critical minerals discussion by focusing on the specific role the Canadian North should play and is organised under three sections: 1) national security 2) the critical minerals value chain and 3) global leadership.

Global Leadership and Security Canada's intention to develop its critical mineral economy offers significant geopolitical advantage, particularly among global powers such the UK, EU, the US and China. Strategic advantages, of course, come with risks that requires attention and mitigation if they to be realised. As appendix D of the Critical Mineral discussion paper points out, Canada's Territorial North hold an overrepresented proportion of Canada's future critical mineral economy with potential to become Canada's greatest asset. At the same time, the North's geography alone before including its lack of infrastructure creates a set of inherent risks for Canada that stand apart and are unmatched by any other region of Canada, not least from other rural, remote, and Indigenous communities in southern Canada.

In effect, Canada's road to sustained economic growth and global leadership in the transition to a net zero energy economy begins in the North. The choice is whether Canada has the will and focus to build it; the risks of not doing so could result in foreign ownership over critical infrastructure and the resources in Canada's Arctic.

Canada's Global Road to Resources 2.0 Canada is a medium power, yet in the North, it has an oversized advantage and role to play among global superpowers. The Arctic is not only a region of great strategic interest for Canada. Its global geopolitical significance has vastly accelerated, and the emerging critical minerals economy is quickly becoming a central feature of this acceleration. As such, the Arctic is a fundamental piece of Canada's global leadership potential and means to strengthen its diplomatic position among like-minded allies.

For starters then, Canada's critical mineral strategy would benefit from making a direct link and reference to the Global Affairs chapter of Canada's Arctic and Northern Policy Framework (ANPF). This includes the role that the critical minerals strategy could play in advancing the ANPF's efforts to restore Canada's place as an international Arctic leader. If (one may dream) the ANPF's chapter on assuming global leadership could become the basis of a full Arctic strategy, the critical minerals strategy has a critical role to play not only as regards global leadership in the region but also as it directly relates to Canada's Arctic sovereignty and security (e.g., foreign direct investment).

When it comes to the ANPF and the Critical Minerals strategy, both stress the need to close Canada's northern infrastructure gap. In effect, advancing Canada's critical mineral strategy, including addressing the North's massive critical infrastructure deficit, and discussions of Canada's Arctic sovereignty and overall national security are so interrelated they should be understood as part of a broader single conversation. The National Security Review of the TMAC mine sale should serve as a cogent example and precedent for understanding the direct relationship between Canada's national security, the infrastructure deficit in the Canadian North, and the region's critical minerals potential.

Related to the above, Canada's critical mineral strategy, also seems to be missing a specific framework/plan/set of measures that will be used when it comes to Foreign Direct Investment (FDI) in Canada's critical mineral supply chain. Going further, within such a framework should be a specific section that addresses the unique security implications related to FDI in the North (for example Chinese FDI).¹ New mining projects in the North, for instance, will require building accompanying critical infrastructure and supply chains where none currently exist.

¹ Related reading: <https://macdonaldlaurier.ca/national-security-critical-minerals-and-canadian-trade-policy->

In terms of existing mines, many of the mines in the North include infrastructure assets such as ports, road, and/or runways. Foreign ownership of Canadian infrastructure via mine ownership in the Canadian North has very distinct and serious defense and security implications, not comparable to anywhere else in Canada. Chinese BRI investments around the world, for instance, have resulted in Chinese ownership of numerous country's critical port infrastructure. More recently, China opened its first foreign military base in Djibouti. The implications for Canada of Chinese ownership of Canadian Arctic critical infrastructure are clear. Yet, it is also worth mentioning that its implications extend beyond being a Canadian domestic issue. Presently, Canada's Arctic is being viewed as a security risk among Canada's allies and, in turn, is undermining Canada's potential to restore its global leadership in the region much less around the world.

For example, in 2021, the US announced a 12 million USD aid package for Greenland focused on helping Greenland develop its critical mineral economy. According to a [BBC article written at the time](#),

'[a] senior US state department official said the aid package would help Greenland's economic development, notably natural resources and education. The Associated Press reported that a big part of it will be US specialist consultancy work.'²

Since USAID's initial foray into Greenland (and into what is considered an OECD nation), the US has decided to expand its aid efforts to other Arctic nations, of which Canada is *explicitly* mentioned. In January 2022, the U.S. Department of Defense commissioned a [report](#) on China's Arctic FDI in the region.³ The report stated that

'although Arctic nations altogether are wealthy, Arctic regions 'often suffer higher levels of poverty due to historic discrimination against Indigenous populations, limited infrastructure, and distance from major population centers.' The report recommended U.S. aid be 'expanded to other regions such as Northern Canada.'⁴

lawrence-herman-for-inside-policy/

² <https://www.bbc.com/news/world-europe-52396715>

³ https://www.cna.org/archive/CNA_Files/pdf/arctic-economic-security.pdf

⁴ *Ibid.*; also see: <https://www.thestar.com/opinion/contributors/2022/05/27/getting-canada-back-into-the-arctic-diplomacy-business.html?rf>

The Critical Mineral Value Chain Canada's value-chain creation cannot be abstracted from the previous section. This section looks at critical mineral value chain creation from the specific Arctic regional context. Specifically, this section highlights the Arctic strategies of Canada's Arctic neighbours, accompanying initiatives, and the investments they are making in their Northern regions with particular attention to the green energy transition and accompanying innovations to get there.

The point is to demonstrate that precedence exists and with a similar Canadian specific approach (one focused on the opportunity and potential), the return on investment would not only be the realisation of a generational opportunity but the fulfillment of a multigenerational promise to complete Northern national building, help fulfill Canada's commitments to Indigenous reconciliation, safeguard Canada's Arctic sovereignty and security, and consequently support Canada's aim to demonstrate Arctic regional and global leadership.

At its worst, without specific dedicated attention to the North, Canada has the very real potential that its Arctic will be perceived as a strategic opportunity for other states to take advantage of whether this includes Canada's like minded allies or others not aligned with Canada's interests. In either case, the result will be to the direct detriment of safeguarding Canada's Arctic sovereignty, overall national security, and Canada's ability to be taken seriously as a global leader able to use its critical minerals potential towards strengthening geopolitical stability.

To begin, Canada's circumpolar neighbours view their own Northern resources, not least their critical minerals potential as the major driver of innovation, economic growth, and overall future prosperity for their respective countries. As we are witnessing, Canada's circumpolar neighbours are innovating directly out of their Northern regions (and scaling those innovations up and out) rather than hoping to adopt innovations from elsewhere to be adapted for the North. Canada would benefit enormously if its Critical Minerals Strategy made the bold move and adopt its own a view of its North with optimism and that highlights the potential of the region. The Critical Minerals Strategy could set a new precedent in Canada about the importance that the North holds for the whole of Canada.

The discussion below begins with excerpts from Norway and Sweden's Arctic Strategies before turning to a discussion about Canada. This section ends with a quick case study of Greenland to highlight its achievements in attracting high standard global capital, the kind that Canada seeks (long-term pension fund and venture capital) when it comes to FDI in its critical mineral's economy and the broader value chain.

Norway's Arctic Strategy: To begin, Norway's latest [Arctic strategy](#) opens by stating that:

'[t]he Arctic will continue to be Norway's most important area of strategic responsibility...[t]he region is home to some of Norway's leading academic and research institutions in areas such as marine research, fisheries and natural resource management, climate change and environmental research, Arctic innovation and sustainable ocean-based industries.'⁵

In its chapter focused specifically on value creation, the Strategy states:

'[t]he Government will work to create a framework that enables companies in North Norway to further realise their potential in the years ahead across a wide range of industries: ocean-based industries, the maritime sector, petroleum, green power-intensive manufacturing, mineral extraction, agriculture, tourism, space infrastructure and the services sector...[t]here is potential for substantial value creation, both onshore and offshore, and to increase positive spin-off effects by encouraging cooperation at various stages of the value chain'.

The Strategy goes on to state,

'North Norway has a long tradition of sound and sustainable resource management and business activity...[t]he Government will continue to facilitate innovation, entrepreneurship and start-ups in the north and will promote a well-functioning capital market.'⁶

Norway's Arctic strategy also points to the need to ensure that it has the critical infrastructure in place to attain its aims. According to the strategy,

'[d]ue to the long distances and low population density in the region, access to adequate, secure electronic communications networks (broadband and mobile) is crucial for job creation in urban centres and outlying areas in North Norway. The Government's efforts to improve digital infrastructure will help to enhance value creation and increase mobility for people and businesses in the north'.⁷

⁵ https://www.regjeringen.no/en/dokumenter/arctic_policy/id2830120/

⁶ Ibid.

⁷ https://www.regjeringen.no/en/dokumenter/arctic_policy/id2830120/#tocNode_42

Sweden's Arctic strategy: Sweden's own [Arctic strategy](#) focuses on the critical nature of its North, northern resources, and innovation potentials that its North creates. According to its strategy section entitled: '*Sustainable extraction and refinement of Swedish raw materials in the Arctic region*',

'[t]he world's need for innovation-critical minerals and metals is increasing as the electrification and digitalisation of societies, industries and transport systems are accelerated so as to reduce global carbon dioxide emissions. There is great potential in Sweden's Arctic region for the extraction of several metals and minerals for new environmental and technological innovations. Nordic work on certification systems for metals is a central part of action to increase Sweden's and the Nordic region's competitive advantages for sustainable battery production and green electrification.'⁸

The strategy goes on to state that the 'mining industry is an important part of the Swedish economy...Sweden has long experience, expertise and modern technology to make use of its own raw materials, both primary and secondary, for sustainable mineral extraction as efficiently as possible.'⁹

The Strategy then explicitly points out that this includes exporting its Arctic mining experience and expertise. According to the Strategy,

'[k]nowledge is transformed into new products and services at a number of world-leading innovation clusters around Sweden's Arctic region, but also by smaller actors and small enterprises in various sub supplier chains...Arctic conditions like a cold climate and sparsely populated areas make it possible to provide effective test and demonstration environments for the development of the aviation, automotive and component industry, as well as outstanding space activities.'¹⁰

Canada's Critical Minerals Strategy and the Canadian North In short, Canada's critical mineral strategy needs to include the North as a specific priority area. In addition to the reasons already laid out, the Strategy's focus on building sustainable infrastructure will require distinct initiatives

⁸ <https://www.government.se/4ab869/contentassets/c197945c0be646a482733275d8b702cd/swedens-strategy-for-the-arctic-region-2020.pdf>

⁹ Ibid.

¹⁰ <https://www.government.se/4ab869/contentassets/c197945c0be646a482733275d8b702cd/swedens-strategy-for-the-arctic-region-2020.pdf>

and solutions for the North to attract private capital to the region. Not least, this includes Canadian and global pension funds with the patient capital to invest in Greenfield infrastructure projects. Canada's North also needs R&D and start-up capital so more efforts can originate in the North. Like its Arctic neighbours, Canada needs the capital investments required to be able to innovate out of the North and create new technologies with potential to be scaled up and out well beyond Canada's Arctic region (rather than hope one day southern innovations will find their way North).

Further to this, as the Canadian Minerals and Metals Plan has pointed out, engagements with Indigenous communities found that there are systemic obstacles for gaining access to competitive capital to achieve equity participation. While this is an issue nationwide, when it comes to the North, the added capital costs due to the magnitude in which critical infrastructure is lacking (e.g. the lack of transportation infrastructure out the outset challenges the ability to import the supplies required to build new infrastructure) exacerbates this reality for Indigenous Northerners to a level incomparable to the rest of Canada.

It is precisely for these reasons that, institutions such as the Business Development Bank of Canada, Export Development Canada, the Canadian Commercial Corporation, ISED, Invest In Canada, and *especially* the Canada Infrastructure Bank need to create specific financing and investment vehicles and/or programs for Canada's North. Such efforts must carry real enabling measures that can drive investment into the region rather than offer insignificant amounts, for instance, offering financing mechanisms for small-scale add-on 'green energy projects', that will do little to nothing to make the fundamental inroads required to put a dent in the North's critical infrastructure gap.¹¹ One example would be to leverage ISED's strategic innovation fund in order to create specific funding grants with built in KPI's for the North or other capital expenditure grants that can help de-risk up front costs for companies wishing to invest in critical mineral projects in Canada's North.

¹¹ A report published by the investment management company, Letko Brossea, an investment management company based in Canada looked at the broader contributions of Canada's pension funds (e.g., job creation, enabling action on policy goals). According to the [Report](#), pension funds' long-term investment portfolios enable them to take increased levels of equity risk. The Report argues that in 1990, Canadian pension funds allocated close to 80% of their equity investments to Canadian public equities. By 2020, it was around 10% and some of the largest Canadian funds held only 1%. The authors argue that the problem with this downward is that 'pension funds are entities created by government to serve Canadian policy objectives'...Instead of investing entirely in our neighbour's houses, Canadian pension savings can be used to invest in our own house to improve our lives.'

The correlation of this report to Canada's Critical Mineral Strategy including the Security aspects of the Strategy is that today, the Canada Pension Plan Investment Board continues to [invest](#) hundreds of millions dollars into companies in China from health care technologies to venture capital funds and climate technologies – the same investment areas that Canada's North needs yet is lacking global capital investment.

Of significance and adding to the reasons why the North is distinct from many Indigenous and remote communities in southern Canada is that for a vast majority of Northern communities connecting to existing grids or networks is not a possibility. Energy, telecommunications, supply chains, and accompanying infrastructure need to be built anew, in whole. This requires nothing short of earnest nation building and a specific set of tools, initiatives, etc. to fulfill this need.

Yet, every challenge is also an opportunity. For instance, in addition to creating specific financing and capital initiatives for the North, the North must be included in Canada's robust network of research and development (R&D) labs. As is explained below, the very facet that the Arctic is vast, cold, remote, dark six months of the year, has harsh weather and a critical infrastructure gap is now viewed as one of the biggest assets when it comes to innovation and Canada's Arctic neighbours.¹² As Canada embarks on building a new critical minerals economy and accompanying value and supply chains across the whole of Canada, this moment is a once in a generation opportunity to ensure that the North's own critical minerals economy and value and supply chain connects to the rest of Canada and to global supply chains.

Likewise, Canada's North represents a globally significant opportunity to capitalize on and advance Canada's ESG credentials through the entire value chain. Canada's North is already setting global precedent when it comes to the emerging critical minerals economy. For example, Canada's first operating critical minerals project is a collaboration with Cheetah Resources (Vital Minerals) and Det'on Cho corporation. The project is on Indigenous land and Det'on Cho Corporation operates the mine. This project could be regarded as a global gold standard in Indigenous reconciliation and a blueprint for successful Indigenous reconciliation.

Further to this, in 2004, the Mining Association of Canada created a Towards Sustainable Mining (TSM) Standard. It was a first-of-its-kind standard in mining focused on mine-site level transparency, with intended oversight and external assurance and has been quantifiably driving improvement in key areas including community and Indigenous relationships, climate change and biodiversity.¹³ The TSM has an independent panel of 12 people that include representatives of Canada's Inuit, Metis, and First Nations, local mining communities, environmental and social NGOs, finance, labour, among others.

Of particular relevance, the Mining Association is working specifically with Canada's Arctic neighbours to expand and advance this initiative. Beyond industry in Canada, the TSM has been

¹² For more in this regarding Canada's Mines to Mobility initiative see: <https://www.thegrower.ca/blog/2021/2/2/missing-canadas-vision-for-the-north>

¹³ As stated by Ben Chalmers in an email correspondence with Jessica Shadian, June 2022.

adopted by Norway and Finland and the mining association is in discussions with Sweden and Greenland about adoption with the specific goal to create a consistent Arctic standard for responsible mining. This presents a real opportunity for Canada's Critical Minerals Strategy to explicitly highlight and build in reaching its ESG goals.¹⁴

Greenland Case Study Greenland provides a round example where the right messaging alongside robust social and environmental regulations are helping to attract global capital to develop Greenland's own critical minerals economy. Greenland's Disko-Nuussuaq mine, for example, is a sulphide ('MMS') nickel-copper-platinum-cobalt project ('Ni-Cu-PGM-Co') located on the southwest coast of Greenland. The mine is operated by London-listed Bluejay Mining in which KoBold Metals has 51 percent ownership.¹⁵ In its latest funding round, [KoBold raised](#) 192.5 million USD. Its investors, include Norway's Equinor; BHP mining group; Scott Belsky (chief product officer at Adobe and Lyft); Silicon Valley based venture capital fund, Andreessen Horowitz; Ray Dalio, Bridgewater Associates founder; as well as Canada's Canadian Pension Plan Investment Board (CPPIB).

KoBold uses AI to search for minerals and for its Greenland project, it plans to use drones to survey the region in search of 'a deposit that will be the first- or second-largest most significant nickel and cobalt deposit in the world'.¹⁶ It also also has a number of projects in Canada. Windfall Geotek, a Canadian company similar to Kobold, currently has three Canadian projects, all located in Quebec.¹⁷ Unlike the past, Greenland is demonstrating that the Arctic holds the key ingredients for a future net-zero energy economy. It is also increasingly regarded as a sought-after region for innovation creation to support this transition with the ability to secure short and long-term capital from pension and venture capital funds to support critical mineral mining and accompanying innovation projects in the Arctic. There is much opportunity for existing companies in Canada to expand to new projects in the North and, if successful, attract new start-up companies and the accompanying venture capital into the region.

In sum, the Critical Minerals Strategy provides an enormous opportunity to help export to the global investment community a narrative about Canada's North having a crucial role to play in the future net zero-emissions energy economy, including that Canada possesses some of the world's highest environmental standards and offers a blueprint for Indigenous reconciliation through building Indigenous partnerships.

¹⁴ Ibid.

¹⁵ <https://www.cnn.com/2022/08/08/world/greenland-melting-mineral-mining-climate/index.html>.

¹⁶ Kurt House, CEO, Kobold Metals, in an interview with CNN: <https://www.cnn.com/2022/08/08/world/greenland-melting-mineral-mining-climate/index.html>

¹⁷ <https://www.windfallgeotek.com/>

Yet, there is another reason for placing specific attention to Greenland. There are strategic reasons why Canada should seek to create a bi-lateral critical minerals agreement with Greenland. As discussed, Greenland is becoming a global focus for the critical minerals the world wants and needs. There is a huge opportunity to build out Canada's ESG narrative in partnership with Greenland and as part of Canada's existing Arctic efforts to create a shared set of expected sustainable mining practices and expectations among Canada's circumpolar neighbours. Greenland is also in a similar process of building the required infrastructure for its own critical mineral's economy. As very close geographical neighbours with strong cultural connections there is an opportunity to think about the potential strategic benefits in building regional east-west Arctic supply chains (thus growing the market share of the world's supply). Lastly, it is worth pointing out that the US already has a bi-lateral Agreement with Greenland (in addition to Canada) on critical minerals giving the US the advantage to engage with Canada and Greenland independently at the expense of Canada being able to do the same if Canada does not have its own Agreement with Greenland.

Advancing Canada's Critical Minerals Objectives: Mechanisms for ensuring persistent global political leadership and diplomacy

Lastly, it is worth pointing out that, though it will be a major achievement for Canada, the completion of the Critical Mineral Strategy will only be the beginning (not the final product) of a decades long process. Moreover, the relevance of the Strategy is going to grow exponentially in the years to come. The discussion paper rightly points out that 'Canada is well positioned to be a leader in the responsible, inclusive, and sustainable production of critical minerals and resilient value chains. We have a role to play in powering the green and digital economy, both at home and around the world'. This last section points to some missing pieces in the paper about the significance and role that persistent and ongoing diplomacy plays in demonstrating global leadership and realising those aims.

Inherent in being a global leader, is demonstrating persistent political leadership both at home and on the world stage. As the [discussion paper](#) states, Canada's critical mineral strategy will

'work to ensure that international engagement activities related to critical minerals align with the Government of Canada's strategic objectives. This includes strategic consideration of broader geopolitical and industrial priorities for Canada's international engagements to advance secure critical minerals supply chains, including the consideration of any potential gaps and regional priorities.'

A vital part of being able to carry out international engagement efforts, including the accompanying soft diplomacy required, is by working with and helping to support respected, non-biased and non-partisan Canadian (and international) think tanks. Around the world, countries work in collaboration with and support domestic think tanks to help advance their own country's soft diplomacy and soft power objectives and to facilitate track II diplomacy. Essentially, the road to global formal diplomacy and global leadership begins with those institutions that enable consistent dialogue and can facilitate track II diplomacy.

For that reason, respected, non-partisan think tanks have an invaluable role to play in helping to convene the necessary domestic and international political, private sector, Indigenous, academic, and other experts to increase awareness as well as commence and advance conversations and initiatives on specific topics. Respected think tanks help facilitate domestic consensus at home and build consensus and cooperation among international partners. They serve as platforms for Canada to educate the world about its policy objectives, initiatives, and achievements as well as engage in key conversations with allies in a persistent and ongoing manner. It is through the work of think tanks that persistent engagement becomes possible and serves as a key to maintaining and strengthening cooperation and relations among allies. In effect, well supported and well-run think tanks have a role to play in protecting and strengthen Canada's interests and overall national security.¹⁸

¹⁸ For example, [Arctic360](#), Canada's leading Arctic think tank elevates the conversation at home in Canada and abroad on Canada's Arctic and role in the world. This includes convening governments, Indigenous communities, the mining sector, and institutional investors to discuss advancing Canada's Northern critical mineral economy in a collaborative and inclusive way (with a specific focus on investment and Indigenous reconciliation). On the international stage, Arctic360 hosts an [Annual conference](#) which convenes Canada's circumpolar and other like-minded allies around the world; carries out a podcast series: 'Breaking the Ice'; [hosts panels and sessions](#) at major international Arctic events with Canada's Northern leaders, circumpolar neighbours, private sector, Indigenous corporations, and others. Combined, these efforts routinely provide a global platform for Canada to discuss its plans, initiatives, achievements, and national interests to and with like-minded allies. Essentially, think tanks provide [opportunities for Canada to demonstrate global leadership](#) and achieve greater global collaboration.



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