

Northwest Territories Action Plan for
**PROMOTING CRITICAL
MINERALS**

Appendix

Participant Comments from Critical
Minerals Workshop November 9, 2021

*(These comments are as they appeared in
the workshop transcripts, except for minor
typo corrections.)*

Plan d'action des Territoires du Nord-Ouest pour la
**PROMOTION DES MINÉRAUX
CRITIQUES**

Annexe

Commentaires des participants à l'atelier sur
les minéraux critiques du 9 novembre 2021

*(Ces commentaires sont indiqués tels qu'ils ont été
enregistrés dans la transcription de l'atelier, sauf
quelques corrections grammaticales mineures.)*



THEME ONE

Awareness, engagement, information sharing, and understanding of critical minerals development in the NWT

QUESTION ONE

WHAT DO YOU THINK THE PUBLIC PERCEPTION IS ABOUT CRITICAL MINERALS NOW?

1. LACK OF PUBLIC UNDERSTANDING/AWARENESS

- a. There will be the need to educate the public about what critical metals are and what they mean to the green economy.
- b. The people of the NWT likely do not have good knowledge about the uses of some of the less common critical minerals so the perception may not be as good as it could be.
- c. My anecdotal experience is that there is not a lot of knowledge in the general public about critical minerals. We need to have better outreach and education to let people know where these materials come from.
- d. Very little perception, I don't think there is a lot of knowledge either regarding what they are or the future opportunities for onshoring.
- e. The average Canadian is likely unaware of what critical minerals are and why they are important. Public perceptions about mining in general will probably impact views on critical minerals.
- f. I think the general public has a limited understanding of what critical minerals are and what they are "critical" for. I think there is currently limited understand about what they are, what they are used for and the potential in the NWT and Canada.
- g. I'm sure that many like me can't even pronounce rare earth elements like praesodymium.
- h. Knowledge about what critical minerals are and what the potential in the NWT is not well known in the NWT. The connection to green energy is not well known either.

- i. Very little awareness overall with consumers across Canada.
- j. Because this is “new” for the general public I don’t think they would generally distinguish between critical minerals and other mining.
- k. “Critical minerals” is likely a foreign term to many in the NWT.
- l. Statistics from a Quebec government survey about critical minerals to the public indicated only approximately 15 percent of individuals knew what they were. With that being said, I feel those numbers are probably similar or even lower (as Quebec is a mining heavy province) so NWT public knowledge (and perception) is likely low or non-existent about of critical minerals.
- m. People do not understand we need to develop critical minerals in our own backyard in order to meet climate change targets.
- n. I think people understand that technology and innovation are important to help solve the climate crisis and other global issues, but I don’t think people generally have an understanding that this is made possible with innovation created by critical minerals use.
- o. There is a significant lack of awareness by the public of the intrinsic link of minerals and mineral extraction with everyday life. This basic concept, that modern existence cannot be supported by recycling alone and that mineral extraction is a part of life should be central to any efforts specifically directed towards critical minerals.
- p. I think most NWT residents are not aware of critical minerals. There is need for an economic strategy to be developed for Denendeh.
- q. Likely limited awareness of where critical minerals are supplied from now, and potential for Canada to become a preferred supplier based on ESG factors, location, etc.

2. THE CORRELATION TO “GREEN” TRANSITION IS BECOMING INCREASINGLY IMPORTANT

- a. Critical minerals will play an ever-increasing role in combating climate change.
- b. Most people don’t realize that “green” technologies for the moment are not so “green” if we look at the whole supply chain.
- c. As the global supply chain issues continue, the average person may begin to understand the scope of critical minerals’ use in everyday products.
- d. Does the public who are clamoring for governments to address climate change and global warming know that the proposed and current methods of wind and solar power, electric battery powered vehicles etc. will need mining to increase by ten times over current levels to supply all the materials to build the green technology required?

3. THERE IS A WIDE SPECTRUM OF PERCEPTIONS - BOTH IN LEVEL OF AWARENESS, AND IN THEIR ROLE AS A NET POSITIVE OR NEGATIVE.

- a. There is likely a wide variety of levels of awareness about critical minerals, from no awareness to a high level of technical expertise.
- b. Depends on how they are portrayed - positive public perception on critical minerals for products we use (lithium-ion batteries, renewable energy), potential negative public perception on environmental impact from exploring and developing critical minerals.

4. ENVIRONMENTAL/SOCIAL CONCERNS

- a. With tungsten, perceptions may be poor due to the bankruptcy of the Cantung mine. But how many people know that the reason Cantung has closed many times is because the Chinese flooded the market and made the operation uneconomic. So it still has potential in a critical minerals world today.
- b. Important but equally concerns about mining and the environment.
- c. Negative associations (example environmental problems and child labour.)

5. CONFUSION SURROUNDING TERMINOLOGY/DEFINITIONS

- a. Broad spectrum of views but definitions are important. Critical minerals, critical to whom? Shareholders, governments, public interest?
- b. There is growing awareness of critical minerals, but still some confusion using rare earths as synonym rather than subset of critical minerals.
- c. The public may have a better understanding if the term was changed from “critical” to something more descriptive of their use.
- d. I think part of the confusion about what critical minerals are stems from “critical minerals” being a policy definition, and not a distinct chemical group.

6. MISCELLANEOUS COMMENTS

- a. The NWT has a rich history in mining. The general public may lean on their common knowledge of other resources (diamonds and gold), when thinking about critical minerals.
- b. (There is a) Presumption that the extractivist model of development will solve the climate crisis. What are the other options? Reductions in consumption, better recycling?

QUESTION TWO

WHAT MESSAGES WOULD BE MOST USEFUL FOR THE PUBLIC TO KNOW ABOUT CRITICAL MINERALS?

1. MOST USEFUL MESSAGING – CRITICAL MINERALS

- a. Critical minerals are necessary to reduce our reliance on fossil fuels.
- b. Messaging should focus on the essential use of critical minerals in new tech and renewable energy. Without critical minerals these end products won't be available and climate goals won't be met.
- c. The link between raw critical minerals and 'final' products in relation to climate change and global growth/demand forecasts (e.g., Copper from renewable technology).

<https://www.visualcapitalist.com/visualizing-copper-demand-for-renewables/>

- d. Climate change is a global problem and so should be the mitigation strategies. Traditionally, people have always used the "Not in my backyard" reaction to push mining projects out of their jurisdiction. People need to know that if it must be mined, the mine could be (under) their cottage or even under their homes.
- e. Canada has some of the highest ESG standards in the world. Far better for these minerals to be mined in right here in Canada than in other jurisdictions that may not share the same standards.
- f. The most important message is to connect the end products with the raw materials needed to produce them. Without increased critical minerals production global climate goals won't be met. Also the ESG value of critical minerals produced in NWT/Canada when compared to where alternative sources come from, both on mining and refining basis.
- g. It would be good for people to understand that the mining industry today is not the industry of our grandfathers' or even fathers'. There is a chart to help display that here on our Chamber of Mines website. See: **https://www.miningnorth.com/_rsc/site-content/Chamber-news-releases/NWT%20Mining%20not%20my%20fathers%20industry.pdf**

2. MOST USEFUL MESSAGING - EMPLOYMENT AND ECONOMIC OPPORTUNITIES

- a. I'd say all minerals are critical to our economy and lives, but there is a nuance to what these other "critical minerals" are. We need to recognize and explain the importance of both. For many in the north, both types fuel businesses and provide jobs and training and tax revenues.
- b. Information on the economic opportunity associated with critical minerals development.
- c. Large economic benefit potential from becoming a supplier of critical minerals (e.g. huge increases in demand, what minerals/mineral potential we have in Canada, the Canada-US joint action plan on critical minerals).
- d. That mineral development is extremely important to the NWT economy. It provides jobs in the mining, government, service industry.
- e. What are the opportunities - career opportunities for example - that are associated with critical minerals? The entire supply and manufacturing chain and the benefits certain technologies will bring depends on people being active in this industry.
- f. Building awareness of youth of the job opportunities along the critical minerals value chain and what education they will need to get these opportunities.

3. MOST USEFUL MESSAGING - MAKING CONNECTIONS BETWEEN THE RAW RESOURCES AND THEIR ROLE (AND IMPORTANCE) IN OUR DAILY LIVES

- a. The importance of critical minerals to medical supply chains, especially as we recover globally from the pandemic. People need to understand the benefits of critical minerals to their lives, especially something crucial like their medical care. Supporting the transition to the low carbon economy is definitely nice but need to demonstrate direct impacts to Canadians.
- b. It would be good for people to know the full process of how critical minerals get from the earth and into modern everyday products like cell phones, electric vehicles, batteries, computers etc.
- c. "Critical minerals" as a term doesn't provide the public a lot of information about what they are, what they are used for and why they are important...we should focus on education on the term - or consider using another term that is more intuitive for the public.

- d. What they are critical for (e.g. applications and lack of substitutes), the supply chain and the issues that that supply chain faces, and how our lives would be different without those critical metals.
- e. Understanding the geography and lifecycle of different critical minerals, from exploration to mining to the whole value chain, and understanding the technologies that are made with these minerals and their importance to the current and future economy and in reaching environmental/GHG goals.
- f. How and why they are essential for modern society and the impacts of mining these minerals, and the things that need to be in place to make it possible to benefit from these resources.

4. MOST USEFUL MESSAGING - WHAT MINING IS, HOW DOES IT WORK, AND WHY WE NEED IT TO SUSTAIN OUR WAY OF LIFE

- a. They need to know about the unseen costs (along with potential benefits) because mines are typically located out of sight and out of mind for most people in big cities, disconnected from the end users, such as:
 - How critical minerals are mined;
 - What critical minerals are used for;
 - How these can contribute to ESG goals/development of clean tech; and
 - What the mining process is, and how that process may or may not be different than previous mining projects with history of high environmental impact (i.e. Giant, Colomac, Eldorado) in the NWT.
- b. The most relevant piece of data that we should be conscious of is global population. Every cotton shirt made relies on factories, transportation and consumer infrastructure that is built with minerals and metals. Even if we recycle 100% of everything that is used today, what materials will the next 3 billion people on Earth use to sustain their daily life?
- c. The public has to be taught the process to development, prospecting, staking, exploration, etc.

5. MOST USEFUL MESSAGING - UNDERSTANDING GLOBAL SUPPLY CHAINS, ALONG WITH THE RISKS OF ALLOWING FOREIGN NATIONS TO MONOPOLIZE ACCESS TO THESE RESOURCES.

- a. One important message for the public is how critical minerals are important in our daily lives and how we are now dependent on the foreign countries for their supply. In general, the general public is not aware of this.
- b. There are significant national security implications in letting big players like China, or even allied nations like the US, control and manipulate global supply.
- c. Understanding the supply chain. As an example, in agriculture consumers can see where their produce comes from, is produced and then where it is purchased.
- d. If we can tell the story of critical minerals and how the products that are created by them get to us now, people can make informed decisions about shortening and or strengthening the Canadian portion of the supply chain... thereby making it greener and intensifying ESG results.
- e. The Government of Canada definition - Critical minerals are minerals that can be mined in Canada, are essential for our domestic industries and security, and improve the stability and sustainability of supply chains that serve Canada and its allies.

6. MOST USEFUL MESSAGING - MISCELLANEOUS COMMENTS

- a. Regional Indigenous governments in the NWT must be made aware of the critical minerals potential in their area.
- b. The cards have captured the theme well. This needs to be a holistic approach that shows how they are produced in Canada vs the rest of the world, what they are used for, how important the responsible and ethical production/sourcing is for climate change, ESG objectives, green economic goals, food security, world environmental impacts vs local impacts (we are interconnected) in general and how our Northern and Canadian economies work and how our current levels of sustainable development/standard of living are dependent on this sector of our economy.

- c. I think that people need to understand what are the building blocks of our societies in terms of minerals and metals, where they are primarily produced and then upgraded, where they need to be transported from now and into the future, the carbon footprint of that global transportation and what the impact on our Indigenous peoples reconciliation and socio-economic progress and our countries economy and environment in general. Then how they fit into managing climate change, supply chain risks and the ESG impacts of sourcing all critical and strategic minerals from other jurisdictions that are not ethically and responsibly sourced and produced.
- d. Education is required, history starting from 2014 devolution, updating Bill C-34. Current market demand is critical minerals, regional education session are needed to best provide a informative feedback.
- e. It will be important information for the public to list and DESCRIBE the 31 minerals/elements which have been identified by Canada as critical.
- f. Renewable technology isn't necessarily green with our current model of consumerism (for example if you buy a new electric car every 2 years, rather than making a really good gas car that lasted 20 years, there is actually the potential for it to be worse). We need to quantify in an objective way, the energy cost that goes into making manufactured goods and consider how long things are intended to last.
- g. Honest assessment of impacts and benefits.
- h. I think that when considering what would be a "useful" message we need to go back to what our objectives are. It's pretty clear that even in this setting, objectives are quite divergent. If, for instance, the goal is capitalizing on economic development the messaging will be different than if our objective is to reduce total energy consumption. Regardless of the objective, however, I think we should avoid an Alberta-style industry-influenced curriculum for schools.

QUESTION THREE

HOW MIGHT WE CONVEY THIS INFORMATION TO THE PUBLIC?

1. **CONVEY THE INFORMATION – RECOGNIZE YOUR AUDIENCE AND SPEAK TO THEM AT THEIR LEVEL, IN WAYS THEY CAN EASILY UNDERSTAND.**
 - a. Use plain language to communicate how minerals are important to our daily life, for green technologies, etc. (use) tv/radio/education system so people understand the importance of supply and the personal linkages.
 - b. From perspective of small Indigenous Government Organizations with low capacity, there is the potential for information overload and consultation fatigue when it comes to the natural resources sector. High level updates (like news bites or briefing notes) from a reliable source (e.g., Government website) that are relevant for us and specifically tailored to the Indigenous community perspective so we can understand what is going on without reading 300-page documents or doing intensive searches trying to find information.
 - c. Use plain language!
 - d. In terms of ways of communicating information, we need to consider the varying audiences: adults and younger generations being the most “basic” types. This will require different approaches. Educating younger generations (children in schools) should no doubt be a part of it. Infographics and short videos could be a solution for the general public/consumers (i.e. teens and adults).
 - e. It is important that the message is designed in a way that is consumable by the general public.
 - f. Consider having an advisory committee of ‘message audience members’ - Youth, Elders, Indigenous governments, ENGO, industry members, educators.
 - g. Use of plain language, as well as use of Indigenous language.

2. CONVEY THE INFORMATION – FOCUS ON EDUCATION

- a. The posters the Chamber (of Mines) has with iPhones and Skidoos labelled for what mined materials they require are great! Send them home in all kids' school bags!
- b. NRCan has put into the Canada Minerals and Metals Plan the concept of mineral literacy. But I've heard they are not financing it very well. That could change. The NWT needs its own mineral literacy campaign to help, so we do our part along with other provinces and territories and Canada.
- c. One good way is to start to teach kids about mining and various minerals and their uses in our schools. That would do two things (maybe more): educate on minerals, and perhaps even spark their interest in taking up careers in over 100 different career options available in the minerals industry.
- d. Teach kids at school. They'll bring it home and teach their parents. Kids can be very powerful at convincing parents.
- e. Good idea to review and update the school curriculum on minerals.
- f. It would be definitively important to teach geology in class, in the same way as biology, physics etc. How a student can decide to pursue a career in geoscience if he has never heard of it!!
- g. Education is needed. Grade school and up as well as education of Indigenous governments and the general public.
- h. It would be great to get some programs/and or presentations on critical minerals into the classrooms.
- i. Education through various community outreach activities.
- j. Educate people on the overarching importance of mining to society. They should be educated in the friendliest manner that "if it cannot be grown, it must be mined!"

3. CONVEY THE INFORMATION – FOCUS ON THE WHOLE PICTURE. DON'T SUGAR COAT THE BENEFITS OF DEVELOPMENT WHILE IGNORING THE IMPACTS. UNBIASED INFORMATION WILL RESONATE FAR MORE THAN INDUSTRY “PROPAGANDA”

- a. Need for an “honest broker” for information as ITI is both a promoter/booster and a regulator. Also need for a more inclusive process. Civil society interests need to be engaged.
- b. Have a quality of life aspect tied to the industry sector/location of where these activities occur. Appeal to the “whole person”.
- c. Whatever the channel, messaging should aim to reduce the polarizing ‘us vs. them’ rhetoric that often exists during public discussion of mining projects and extractive industries. This polarization drives people, industry, and communities apart, and does not focus on the holistic benefits that can be achieved through responsible/equitable development.
- d. Admit to past failures and acknowledge that the industry is working towards a sustainable future.

4. CONVEY THE INFORMATION - TRADITIONAL AND SOCIAL MEDIA ADVERTISING

- a. In Quebec, the AEMQ (QUEBEC MINERAL EXPLORATION ASSOCIATION) launched an advertising campaign for the general public called “Did you know that? (TV advertising, display) to explain how minerals are present in our daily lives. An initiative that could be duplicated...very interesting.
- b. All forms of media will be important for raising awareness and providing a platform for questions and further discussion.
- c. Good information can be conveyed to the public about critical minerals through recognized (and trusted?) media with conventional tools such as radio, newspaper, magazines, newsletters.
- d. A strong and visible digital presence about critical minerals can be established through government websites and social media platforms like Facebook, Instagram and Twitter to provide info to the general public.
- e. We should use a variety of communication/media types. Teaching materials for schools, written materials, videos, games, web content, apps, infographics.

- f. Short engaging videos that could be hosted on the Mining North Works website and sent out via Facebook throughout the NWT.
- g. Use existing initiatives like NRCan's Canadian Minerals and Metals Plan, GEM-GeoNorth, and the Arctic and Northern Policy Framework to develop communication products specific to the audience. Have governments convey messages through media announcements, publicity campaigns, news story items etc ...promote it.

5. CONVEY THE INFORMATION - CAREER OPPORTUNITIES

- a. There is little interest from the general public to learn about critical minerals and in exploration in general. That changes when there are long term jobs available.
- b. If one wants to make sure our youths get educated and come back to the NWT, they have to have a sense of purpose. If they can see their contribution to the society by developing resources, that will benefit the NWT.

6. CONVEY THE INFORMATION - FOCUS ON SUSTAINABILITY AND ESG

- a. Tie it to a sustainability brand (and create) - similar to ethical coffee, FSC (paper products), cotton.
- b. There are many green leaning organizations that should be engaged to spread the message to like-minded people.

7. CONVEY THE INFORMATION - VIDEO CAMPAIGN

- a. Saskatchewan shared an approximately six-minute video overview of energy and mineral resources in their province at the EMMC meeting in September 2021. It was very informative and well done.

<https://www.youtube.com/watch?v=Yy9zJvymMoM>

- b. A feature length movie, Hollywood quality, about strategic minerals to bring the hard facts to the masses.

8. MISCELLANEOUS COMMENTS

- a. We can start in the schools. I think though also we need to engage with all leaders and tastemakers in communities small and large and all our elected officials to try to get a common understanding of this primary sector of our economy and how all secondary, tertiary and service industries are dependent on primary economic activity to create GDP/ societal prosperity, development and positive levels of income and socio-economic growth. We should be able to enunciate how socio-economic and environmental sustainability must go hand in hand and are mutually supportable and not a zero-sum game.
- b. Part of conveying this information must include defining CM or critical minerals.
- c. Diavik was preparing, pre-Covid, to conduct mine site tours for tourists and schools. If we could let more people see mines in action, in person, or perhaps virtually, it might help make mining seem a little less mysterious.
- d. The limited supply for many products during, and coming, because of the pandemic maybe the eye opener that people need to understand how important mining these materials really are!
- e. Leverage initiatives like Canada Brand for Mining through the Canada Minerals and Metals Plan Action Plan initiatives.
- f. The Liberal Party committed to an exploration tax credit for critical mineral exploration. How many people know that? It should be communicated too.

THEME TWO

Marketing and promoting the NWT's critical minerals potential

QUESTION ONE

WE INTEND TO (FURTHER) PROMOTE INCREASED INVESTMENT AND EXPLORATION IN CRITICAL MINERALS. WHAT ARE THE MOST ATTRACTIVE FEATURES OF THE NWT, ITS REGIONS, AND ITS MINERAL RESOURCE SECTOR THAT WE SHOULD EMPHASIZE?

1. MOST ATTRACTIVE QUALITIES OF THE NWT - GENERAL COMMENTS

- a. Good ESG record and going forward. Great investment for ESG geared funds.
- b. Strong relationship with transboundary geological surveys resulting in predictive power in exploration.
- c. Relationship with Saskatchewan with SRC for REE (current relationship development).
- d. Strong government support for exploration and research to support mineral development.
- e. Environmental safeguards already in place.
- f. Nechalcho - Cheetah resources trial mining. Small scale/artisanal mining in the critical minerals space.
- g. The NWT has a long history of mineral development - it speaks to our experience. Let's use our successes as examples.
- h. The security of resources if trade negotiations change.
- i. Established, strong collaborations with scientists who study the geology of ore deposits. Their work provides important information that supports the exploration and extraction of mineral resources.
- j. Clarity in permitting processes. Good relationship between federal, provincial and territorial governments.
- k. Really strong investment in Indigenous and northern mineral supply companies.

- l. Good ESG record and going forward. Great investment for ESG geared funds.
- m. Strong relationship with transboundary geological surveys resulting in predictive power in exploration.
- n. Relationship with Saskatchewan with SRC for REE (current relationship development).
- o. Strong government support for exploration and research to support mineral development.
- p. Nechalacho - Cheetah Resources trial mining. Small scale/artisanal mining in the critical minerals space.
- q. The NWT has a long history of mineral development - it speaks to our experience. Let's use our successes as examples.
- r. The security of resources if trade negotiations change.
- s. Established, strong collaborations with scientists who study the geology of ore deposits. Their work provides important information that supports the exploration and extraction of mineral resources.

2. MOST ATTRACTIVE QUALITIES OF THE NWT - GOVERNMENT AND IGO PARTNERSHIPS

- a. Indigenous relationships.
- b. Opportunities for companies to partner with and build capacity with IGs.
- c. Government modernizing legislation that is relevant to the mineral sector e.g. socio-economic, Mineral Resource Act, Public Lands Act.
- d. NWT places huge emphasis on positive working relationships with IGOs and enabling community involvement throughout the development and production processes.
- e. Highlight the strength of the partnerships with Indigenous governments and other levels of community and regional government.
- f. Indigenous economic reconciliation when it comes to critical minerals. (Nechalacho)
- g. Really strong investment in Indigenous and northern mineral supply companies.

3. MOST ATTRACTIVE QUALITIES OF THE NWT - GEOSCIENCE AND MINERAL POTENTIAL

- a. A huge upside potential with diverse commodities huge untapped regions within the NWT like the Sahtu region that have great potential for critical minerals.
- b. We know the geologic potential is present in the NWT. Critical minerals should not be viewed as sunset industries. These are not diminishing assets, they are massive vectors of growth. Need to focus on communicating these points to residents.
- c. The geological potential. Land, types of resources, and growing infrastructure and population.
- d. The untapped potential of the North. There is room to explore, or re-visit old exploration.
- e. The world class nature of deposits in the North.
- f. The NWT has untapped, world class potential for CMs.
- g. Geology of NWT is very prospective and minimal exploration. High potential for discoveries. Potential for leveraging known deposit.

4. MOST ATTRACTIVE QUALITIES OF THE NWT - THE NWT REGULATORY PROCESS

- a. Environmental safeguards already in place.
- b. A stable political and regulatory regime (globally speaking).
- c. The north has a modern regulatory system that engages the needs of Indigenous peoples.
- d. We have a lot of great companies that already recognize the needs of regulatory regimes.
- e. An integrated resource co-management system that provides certainty when fully funded and implemented.
- f. The regulatory system is robust and inclusive, create space to tell an ESG message that is tailored to our (NWT) experience.
- g. From the MVLWB perspective, often hear it is more difficult - the need for engagement which is different than from down south in Canada (co-management system); IGOs are more responsible for development. A question is whether it is worth it to economically mine the critical minerals in the NWT. Promotion of settled land claims with IGOs and ESG with the regulatory process as an advantage.

5. SUGGESTIONS TO ENHANCE NWT ATTRACTIVENESS

- a. Could work towards promoting a high degree of knowledge around critical minerals.
- b. Educating northern residents in the communities about mining and critical minerals will be just as important or more so than educating investors about geological potential. It's human potential too that we need to promote.
- c. Areas like the Cantung mine already has a road with access; we should be looking at mines that are currently closed that may possibly have potential to re-open for CMS. Colomac is another great example.
- d. Plenty of jurisdictions working to promote themselves but need to focus on what makes the NWT different.
- e. Marketing the NWT as a great place to live and work. Great quality of life in terms of access to programs and services, etc.
- f. ESG, investor and company tours, company-led promotion activities.
- g. Engagement from the federal government for investment in high-cost regions of the country. Perhaps consider making the NWT a special economic zone.
- h. Find some other tools to level the playing field to ensure the NWT remains competitive.

6. CURRENT INFRASTRUCTURE, PROPOSED INFRASTRUCTURE AND ACCESS TO DEPOSITS

- a. Available logistics to move resources and assets to market.
- b. Emphasizing existing infrastructure (like the railroad to Pine Point).

7. OTHER COMMENTS AND SUGGESTIONS CONCERNING ATTRACTIVENESS

- a. “Critical minerals” is a new name for something that already exists.
- b. There is a strange relationship to the term “critical minerals” in the NWT when it is best known for gold and diamonds.
- c. Reconcile the image of the NWT to the critical mineral potential it has.
- d. It’s hard for ITI to deliver these messages because we are a promoter and a regulator at the same time
- e. Information on ESG credentials.
- f. At federal level, climate policy has taken precedence, but there are intersections when it comes to critical minerals.
- g. Move away from the policy intersections as a zero-sum game.
- h. Critical minerals touch upon a wide range of policy areas but need to ensure the relative value is factored into larger picture.
- i. Need to ensure current operating industry can survive, because it will determine future survival of the sector.
- j. The strength of message is increased by who is delivering that message. It’s important that it be developed inclusively.
- k. How we want the NWT to view the resource sector here.

QUESTION TWO

CAN YOU RECOMMEND ANY EVENTS OR ACTIVITIES THAT DEAL SPECIFICALLY WITH CRITICAL MINERALS, COMMODITY SPECIFIC OR IN GENERAL, THAT COULD BE ADDED TO THE GNWT STRATEGY?

1. RECOMMENDED EVENTS AND ACTIVITIES – GENERAL COMMENTS

- a. Focused government mapping for and promotion of areas of critical mineral occurrences.
- b. Targeted CM geoscience by Canada NRCan and NWT NTGS.
- c. Partnerships with universities for co-op programs, internship programs, etc.
- d. Canadian Minerals and Metals Plan. Any promotions or events being held.
- e. Attracting investors - information kit (regulatory, political, realistic landscape) that provides clarity for investment environment. Demystifying the investment climate as well as the north.
- f. Getting active in other sectors that critical minerals may be key to (automotive, technology, etc.)
- g. PDAC - pursue a whole of government approach. Not only GNWT, but federal government participation as well.
- h. Mining Matters is an important group to consider — targets education of younger people (gr 4-8) in Canada, tailored education for Indigenous groups, etc. It's important to get this into high schools as well.
- i. Exhibits at public institutions, like tech centers or museums.
- j. In general, promote our ESG advantages. This is becoming increasingly important in investment decisions and we should highlight that at conferences and events that focus on ESG innovations and best practices.
- k. Use the miningnorthworks! Website, initiative and activities to help communicate opportunities, knowledge, education, etc. <https://miningnorthworks.com/>
 - Get back to in-person conferences. No substitute for in-person events where face to face discussions can be had.
 1. Conferences, and professional events;
 2. Roundup in Vancouver; and
 3. Northern miner - global mining symposium.

2. RECOMMENDED EVENTS AND ACTIVITIES - REGIONAL STRATEGIES

- a. Regional Economic Development Plans - Strategic resource development plans (Regional Mineral Development Strategies) need the bigger overarching plan to allow for integration.
- b. Involve the Indigenous governments to partner in the GNWT strategy.
- c. Participation of Indigenous groups is very important; ensure there is a good balance of faces and places in the programming.
- d. More incentive for communities to promote the regional potential to bring projects forward. Colville went out to meet with companies and the result is better and long lasting. Relationship is better when there is active participation.

3. RECOMMENDED EVENTS AND ACTIVITIES - EDUCATION

- a. Consider re-opening the curriculum “book” to include education on mining and critical minerals, we need more exposure.
- b. Any marketing strategy needs to include education at home to gain understanding and support.
- c. Focus within NWT to increase understanding and support for the industry - will set foundation to maximize opportunities for partnerships and capacity building later and improve the sense of “open for investment”.

4. RECOMMENDED EVENTS AND ACTIVITIES - SUGGESTIONS

- a. Think of this as a broader thing than just critical minerals to broaden the conversation.
- b. Who are the points of contact across the north? Clarifying and ensuring proper connections are made.
- c. Think outside of the box, be more inclusive, there is nobody from the NGOs in this workshop, we need to engage with these folks too.

QUESTION THREE

WHAT OTHER ACTIVITIES AND TACTICS SHOULD BE PART OF THE GNWT PROMOTION AND MARKETING STRATEGY?

(NOTE: GNWT has a promotion and marketing strategy that is currently focused on high-profile resource conferences such as Round-up and PDAC to increase investment and exploration activity in the NWT. Workshop participants were asked to consider activities and tactics besides these types of conferences.)

1. OTHER PROMOTION AND MARKETING STRATEGIES

- a. Use miningnorthworks website and tools to teach kids about the tremendous, diverse, career opportunities available to them from critical mineral exploration and mining.
- b. Bring other foreign officers through so that they can grow the knowledge and understanding of what the NWT has to offer (sound, but expensive) — make it less “unknown”.
- c. Creating ambassadors who can promote mining in the north.
- d. Reducing costs of exploration and mining in the north. Canada will be creating a mineral exploration tax credit for critical minerals for all of Canada, but there should be a north of 60 mineral exploration tax credit.
- e. Creating campaigns to promote the industry. Much like how tourism would run a campaign. As separate from an internal campaign.
- f. The NWT has a wide array of critical mineral resources. We should take a regional inventory survey of known critical mineral resources and advertise these known deposits widely. Should also emphasize what makes these minerals “critical” in our marketing to differentiate them in the public eye.
- g. Reimagining closure - think of how we can use current mine sites to assist with developmental needs in close proximity.
- h. From an NTGS perspective, lots of interest from researchers for field-based work on how to explore, remediate things - innovation factor that could be promoted more.
- i. Promotion of ESG and regulatory process with the involvement of IGOs (settled land claims - not all positive). How responsibly sourced the critical minerals are is huge factor for corporations and a growing must from consumers.

- j. Mining companies and government work together to create scholarships and collaboratively design research projects with universities (pay scholarships and train graduates - example MITACS program). Also - internships, co-ops, apprentice programs to train young people and get them jobs after.
- k. Collaborate closely with Government of Canada in the national initiatives to partner with the us on developing, creating and incentivising sources of REE and critical minerals.
- l. May need to consider funding a high-profile activity and doing it very well as a leader for attracting more widespread attention. For example, a high-profile investor/newsletter writer tour of NWT properties and communities.

2. OTHER STRATEGIES - ENSURE INDIGENOUS ENGAGEMENT AND PARTICIPATION

- a. Engaging with Indigenous governments, communities and the general public to develop a revised mineral strategy, as well as, to have regular two-way dialogue about mineral exploration.
- b. Invite other Indigenous groups who have done well in resource development to come and share their experiences on how to be successful working with industry.
- c. Having Indigenous leadership and their representatives show up to (investment) conferences
to say this is our land, this is what we want to promote, and what partnerships they want sends a strong message.
- d. Capture the full range of objectives in promotional materials - both for external and internal audiences (to gain support)
 - Indigenous reconciliation-opportunity for IGO partnerships
 - social development - capacity building/jobs/training
 - environmental benefits etc.
- e. Become comfortable with engaging with the Indigenous groups and not being afraid to talk to them about the findings to prevent fear of the support not being provided by these parties.
- f. More and better relationship/communication between federal and territorial governments and land claim (groups).
- g. Bring Indigenous governments into the discussions with potential investors to discuss the land use policies.

- h. Any NWT mineral strategy needs to meet the needs of both public and Indigenous governments.

3. OTHER STRATEGIES - FOCUSING ON KEY INFRASTRUCTURE DEVELOPMENT

- a. Bolster NWT infrastructure to create a more attractive environment for developers and investors. Build roads, facilitate the use of LNG, etc. promoting and building the SGP road and Grays Bay road getting built. Building Mackenzie highway.
- b. Fundamental infrastructure getting traction. Talston expansion. Hydro potential for other projects.
- c. Partner in infrastructure with individual companies and projects to help bring them into production, eg, like Canada did with providing Taltson power to make the Pine Point mine able to go into production. The mine paid for it over mine life and generations continue to benefit from the hydropower long after the mine closed. Look for similar opportunities today.

4. OTHER STRATEGIES - INVESTMENT CONFERENCES - LOOK AT THE ONES WITHIN CANADA, TOO

- a. Benchmark Materials conferences - focus on all critical minerals.
- b. Organized commodity-based promotional events including workshops.
- c. GNWT organizing commodity-specific / NWT-related presentations or workshops for regions based on potential.
- d. More than tradeshow approach - for promoting and marketing of critical minerals to communities (for education) from a regulatory approach but also to the investment world for mineral exploration and development.
- e. Communicating to consultants and investors to bring their attention out of the “usual channels” so they start looking at the north.
- f. Look at other ways (than conferences) to promote — engage in the international work around benchmarking and ESG. PDAC etc. doesn’t attract new people, you’re just talking to the converted.
- g. PDAC, etc. is important to attend, we need to tell people that we are open for business, we want development.

5. OTHER STRATEGIES – MISCELLANEOUS COMMENTS

- a. Continuing to educate the rest of Canada on how things work in the NWT.
- b. Dealing with governments at all levels (federal, territorial and Indigenous government). Everyone needs to be on the ground floor of planning for a fulsome plan.
- c. If we can get people up here to show what we have and what we can offer, we can get more investment opportunities.
- d. Dividing the promotion of exploration and discoveries in the north.
- e. The more meaningful the message we give is (stop the divisiveness) the more people in the NWT who relate to our messaging, the more it will resonate outside of the territory.
- f. Keep looking for the “story” when it comes to the marketing and promotion of the sector.

THEME THREE

NWT CRITICAL MINERALS COMMODITIES - WHAT THEY ARE AND WHERE THEY ARE FOUND

QUESTION ONE

WHAT NWT MINERAL COMMODITIES COULD WE CONSIDER IN DEVELOPING AND RETAINING ECONOMIC STRENGTHS IN OUR MINERAL INDUSTRY?

1. COMMODITIES ARE SPECIFIED

- a. We need to build on the ones we have to start with. Cantung/Mactung, Pine Point, etc. and identify areas or regions with the best potential.
- b. Cobalt - Hard to source with good ESG practises.
Base metals and battery metals; IZOK deposit is high grade zinc; that structure could continue into NWT. Copper is even more prospective than zinc, so NWT should support copper discoveries. Cobalt and rare earths of great interest. Huge competitive advantage for Canada to develop its supply and value chains for these minerals, including rare earths. Nickel and lithium (area) other opportunities, not sure for NWT though.
- c. A lot of investor attention on rare earths. Attracting capital from institutional investors, ESG investments are huge. Would focus investment attention on these future focused metals.
- d. Go look at deposits that we haven't thought about for a long time, e.g., cobalt at Port Radium, copper in the Mackenzie Valley in red bed copper formations, or nickel in the southeast part of the NWT.
- e. Uranium, and the other commodities that other groups listed.
Commodity specific - e.g., Nechalacho REE operation - ore sorting technology; underground vs open pit mining.
- f. Lithium, tantalum, niobium, graphite, tungsten, zinc, rare earths, cobalt, bismuth.

2. POLICY AND PLANNING ADVICE

- a. Should not be a commodity-specific approach; more promotion for prospectors to make discoveries; land access is a big issue still.
- b. Mining long range planning to optimize benefits for NWT.
- c. Training and education to create a locally skilled workforce.
- d. While we do need to focus on critical minerals, we must also remember the cyclicity of all mineral commodities. Need to remember not to lose sight or disregard minerals not on the “critical” list.
- e. Diversify mineral production too so that we protect the industry from having all its eggs in one basket and then exposed to market changes.
- f. The emphasis of differences for critical vs battery minerals is important to understand. Climate change fight using critical mineral commodities is not only just for EVs. What’s critical? (Carbonization)
- g. May want to examine Bill C-34, and whether or not regulations have been completed yet. This may help inform development of our action plan.
- h. How does NWT seek to reconcile its pre-existing mining survival in light of focus on critical minerals.
- i. Supply side; where do we have deposits? Strategy for contribution to commodities market. Decoupling minerals that have different commodity cycles to avoid boom bust. Countercyclical, gold with critical minerals and base metals.
- j. Commitment to double tax credit for critical minerals in recent election. There is some movement but will see more policies on Canada’s list.
- k. Look at not just mining, but value added if potential is there.
- l. When there’s a focus on a mineral, making sure that land claims are settled.

- m. Focus on elements that contribute to “the greater good” of society versus only the wealth aspects. Useful elements that society needs to progress in a sustainable fashion. Of course we’ll need gold to pay for that!!
- n. In addition to every commodity we can mine and export - we should be focused on the commodities on the Canadian Critical Minerals List.
- o. Are there opportunities to have additional minerals (that have potential in NWT?) added to the National Critical Mineral list?
- p. Critical minerals are defined by Canada. Are there minerals in the NWT we would want added to its benefit?
- q. Get the geological survey to invest in research and mapping of environments that we may not have looked for before.

3. EXISTING OPPORTUNITIES AND CHALLENGES

- a. Secondary processing opportunities from past mining - secondary materials.
- b. Supporting / encouraging companies to optimize ore processing from the beginning of mining.
- c. Recovery is often low at the start of a mining operation and gets optimized with time. This results in loss of efficiency and total resource.
- d. The infrastructure deficit — it’s not as easy to process or extract (to get out of the territory) some minerals because of a lack of infrastructure.
- e. Focus on existing mines in the short-term - maximizing output, extending life.
- f. Existing brownfields sites that can be revisited/reused.
- g. Past producing mines return to production. New opportunity to determine long term impacts.
- h. Opportunities to reprocess waste in the past. Leave it in a better shape than it was before.
- i. Chance to revisit old sites.

- j. Whatever commodity is pursued, need to be fully aware of the ore content and what contained elements might not be accepted for, or could be deleterious to processing and refining (smelters change penalties for this in some instances) multi-element deposits; not all are positives, some are undesired.
- k. Processing some minerals require development of processes.

4. MISCELLANEOUS

- a. Critical minerals list is a place to focus. We can observe that we've seen precious metals and diamonds mined in the Territories. The timeframe for the process when you find these is much shorter than those for copper, etc.
- b. What are the opportunities for different materials? Are there many or few opportunities/deposits.
- c. Federal list of critical minerals is not static.

QUESTION TWO

HOW MIGHT AN NWT CRITICAL MINERALS ACTION PLAN BE INFORMED BY REGIONAL (E.G, INDIGENOUS REGIONS, GEOLOGIC REGIONS, INDUSTRIAL REGIONS) KNOWLEDGE, INPUT, AND LESSONS LEARNED?

1. REGIONAL STRATEGIES

- a. Regional Mineral Development Strategies - incorporating CM into development process.
- b. Tailor a plan based on the knowledge of the mineral potential of the regions.
- c. Resume the initiative to create, revise update Regional based Mineral Development Strategies. It started, moved forward in fits and starts and then came to a halt with Covid restrictions.
- d. Those RMD Strategies are essentially built by the Indigenous governments of the Regions.
- e. Work with the groups and the regions to understand what is wanted in a strategy.

- f. Sahtu - Finding out what is and isn't in the region. Understanding the financing of a project. Lack of knowledge in the mineral development process. What is the business process ? Understanding the risks of the exploration process.

2. INDIGENOUS CONSIDERATIONS AND KNOWLEDGE

- a. Information needs to move upward from the communities.
- b. Will have to be informed by people's experiences and legacies.
- c. Evaluate the needs and concerns of Indigenous communities when considering transportation of critical minerals around those communities.
- d. Asking what Indigenous peoples know about the regions before development of a plan.
- e. Hasn't been any real mineral development in the Sahtu. Except long in the past, e.g. Uranium. So there is a sour taste in people's mouths on that.
- f. Need to go to communities, hard with the pandemic, need more than a one day meeting. Need 2-3 day workshops in communities to educate people. Bringing in Indigenous groups that are experienced with development and that are successful. There will be more trust in communities with other Indigenous groups that are experienced. Importance of educating our people on the use and needs of these minerals, e.g. cell phones. Like in oil and gas, people need to understand that they need these fuels to run their vehicles and keep their homes warm.
- g. Involve the Indigenous communities and regulatory players in getting input. Need ecosystem approach, cumulative impacts assessment, and the conservation network planning framework. Layers like land claims to consider (now and unresolved). Strategic regional environmental assessments are needed.
- h. Successes in NWT is often based on processes, each region is different, there are different governments, we need an approach that is both reflective and respectful of that.

3. PARTNERSHIPS

- a. Key for unlocking projects is enduring partnerships with stakeholders and Indigenous governments – to unlock the Grey's Bay corridor and IZOK project for example. Still a work in progress.

- b. If possible, development collective actions within the action plan that Canada/GNWT and IGs all support and have roles to advance- establishment of economic Zones? infrastructure priorities (roads/hydro) to support high potential development areas?
- c. NWT has a lot of traditional knowledge built up. We also have a lot of industrial memory and experience from past years. There should be a focus on partnerships between Indigenous Governments, Territorial Government, Federal Government and developers. Royalties should be shared and defined in advance so all parties have expectations set.
- d. Joint action items between Indigenous governments, GNWT, and federal government to demonstrate collective work would send a strong message to industry.

4. GEOSCIENCE CONSIDERATIONS (MAINLY DATA-FOCUSED)

- a. Effort should be put towards retaining digital information produced by industry through activities like assessment reporting etc. to support public engagement information and evidence-based decision making processes.
<https://www.pdac.ca/priorities/access-to-land/geoscience/eaddf-guidelines>
- b. Full survey of NWT mineral potential needs to be completed (still a low percentage of the territory explored).
- c. Geological survey should focus its activities on identifying environments and locations where critical minerals are found; i.e. different geological environments.
- d. Information needs to be caught and made available, backgrounds and exposure have big effects on decision making.
- e. Using evidence-based processes, leaning on geoscience that is available, need more public geoscience being conducted (especially in the North) — there is a gap in the evidence used in the decision making process.

5. LESSONS LEARNED AND MISCELLANEOUS

- a. Considering capacity of project. How many people will be required for the project. Can the company hire more workers, or will they need to rely on regional resources and infrastructure.

- b. Opportunities beyond making money at a regional level - The training and experiences are important long lasting legacies from mineral development.
- c. Infrastructure improvements will lead to better understanding of the potential
- d. Lessons learned - talking about life cycle of mine and opportunities that exist at each stage.
- e. Holistic approach to ESG – also important to the overall supply chain not just the consumer.
- f. Understanding where products are going and how they are being used. e.g. green technologies. Take pride in contributing the value the mining has on society.

QUESTION THREE

DO ANY OF THESE COMMODITIES HAVE ANY PARTICULAR ADVANTAGES, OPPORTUNITIES, OR RISKS THAT WE SHOULD BE AWARE OF? IN OTHER WORDS, WHAT SHOULD WE FOCUS ON AND WHAT POTENTIAL PITFALLS SHOULD WE BE AWARE OF?

1. OPPORTUNITIES

- a. Is there space for us to become leaders in some of the regime innovation.
- b. The regulatory regime is more robust in Canada than in other countries.
- c. We have just shifted some of these environmental issues to other parts of the world — saying “someone else can mine it” isn’t as helpful as saying “how can we do this in a way that makes sense from an environmental and stakeholder standpoint”.
- d. Look at aggregate demand for various critical minerals. And understand size of demand across different minerals and metals to see what the scope of the supply opportunity is.
- e. Focus on minerals that are on the critical mineral strategy for both Canada and the US, especially ones that are close to infrastructure — this can give us the opportunity to bridge the infrastructure gap and also figure out what the demand in North America is.
- f. Need to focus on securing domestic supply.

- g. See what commodities or known deposits or high potential geological environments are to infrastructure. They should be easier to bring online if their costs are reduced by infrastructure. If you are going to build roads, try to weave them closer to deposits that can then help pay for them, and become mines.
- h. Dynamic nature of the commodity markets.
- i. Discoveries attract projects. Get more exploration and discoveries happening. Will require dealing with issues such as land access.
- j. Companies are trying to rely less on importing. There's an opportunity for us to mine and process rare earths etc.
- k. Copper and zinc needs are going to double in demand. Many zinc mines are about to close and future supply needs may not be met. Zinc is "critical" from this perspective.
- l. Huge potential for discovery, but we need to keep an eye to how that affects things downstream.
- m. Targeting exploration and development on combining specific commodities for new technological solutions and techniques to prolong life of assets and energy efficiencies.
- n. Some minerals can be used to reduce material needs. E.g. concrete should be galvanized with zinc so that the concrete lasts longer. We need to be aware of those opportunities and how they contribute to a low carbon economy.
- o. Canadian companies could benefit from US incentives on developing critical mineral potential, but full impact remains unclear.
- p. NWT has the unique opportunity to have some unique deposits with potentials for multi-commodities e.g. tantalum+niobium+lithium+graphite (+ maybe tin) all critical elements in one deposit.
- q. Proximity of supply to avoid what companies see as increasingly turbulent geopolitical relations.
- r. Nechalacho could be many-generational mine, not just with the large shallow deposit, but also the deeper deposit.
- s. Respect to Traditional Land use, and making sure development is aware of land use frameworks.
- t. Tantalum, niobium, lithium.

2. ADVANTAGES - ESG

- a. High ESG standards.
- b. Canada has strong ESG that it can market and promote.

3. POLICY-FOCUSED

- a. Finding deposit is the first – extractive process is equally important in critical minerals. Supporting metallurgical studies and the economics. Can you get by-products both positive and negative. Needs to be understood from the beginning.
- b. Foreign ownership and investment of our natural resources affects development and who receives the benefits.
- c. Being aware of the value chain of the rare earths, and the ability to report-out – gives a sense of gravitas towards what we are putting out there.
- d. Economy won't go away, but policies will build supply chains based on national security interests.
- e. Small environmental effects of rare earth mining? They are not always large, or small. All deposits are different and should be managed to keep effects minimal.
- f. Need a variety of minerals for a variety of purposes, e.g. longer-term battery energy storage for skyscrapers. Grid storage is important, and zinc is a part of the solution.
- g. Need to determine federal policy, position, and figure out if critical minerals are within the federal mandate letter to Minister Wilkinson. This may help in coordination and collaboration between governments and allow for alignment of policies.

4. RISKS, BOTH PERCEIVED AND REAL

- a. Be aware that base metal mines can produce acid rock drainage that must be managed.
- b. Re: risks arise from the size of market opportunity, counter-cyclical commodities, and the way to hedge risk across these variables/factors. Can a strategy balance these risks, can we model or analyze these different risks and opportunities to create a more balanced, lower risk strategy?
- c. Capacity to process - the ability to meet the quality standards.
- d. Is cobalt a risk because demand might fall if technological alternatives get developed. Cobalt is a superior technology in lithium-ion batteries. If a country can unlock a sustainable and ethical battery value chain, then cobalt should still be in demand. There is work to reduce the percentage of cobalt in cathodes, to be replaced by nickel, but the growth in battery demand should still increase cobalt demand by 3 -5 times in next decade.
- e. Canada does not have as much experience with processing rare earths. We need more science done around mining rare materials.
- f. TIME - It will be important to bridge current mining activity (diamonds in NWT) with new critical mineral development to support businesses and maintain capacity already built which would be lost if there was a gap and reduce the possibility of a critical mineral sector growing.
- g. Risk - Canada can fall behind for REE. It's a crowded market and lots of competition to secure sourcing for supply chain dominance.
- h. Always, always protect the water. Be insistent. It is do-able but be ever careful that it is.
- i. Take note of the national security concerns surrounding rare earths and precious metals. There are potential opportunities, but also risks tying yourself to something so high profile.
- j. Some deposits would have large footprints, some small. When educating communities on what to expect, tell them this. Explain how risks can be managed and mitigated in any case.
- k. Global political influences on supply and prices, and certainty and stability of supply chains.
- l. Some critical minerals do not have a long-term demand, so the focus needs to be on the economic opportunity.
- m. The legacy of historical mining operations, and the impacts incurred by Indigenous peoples.
- n. Negative or cautious public perception of the risks.
- o. Large environmental impact of critical minerals mining (tailings and mitigation measures).

5. COMMODITIES AND AREAS TO DEVELOP

Areas

- Pine Point;
- Mackenzie Valley;
- Port Radium;
- Nechalacho REE Operation;
- Cantung/Mactung.

Commodities

- Cobalt;
- Zinc;
- Copper;
- Nickel;
- Lithium;
- Uranium;
- Tantalum;
- Niobium;
- Graphite;
- Bismuth;
- Rare Earths;
- Tungsten.

6. STAYING INFORMED BY REGIONAL KNOWLEDGE, INPUT, AND LESSONS

- No responses in workshop transcript.

THEME FOUR

CRITICAL MINERALS PARTNERSHIPS AND COLLABORATIONS

1. ORGANIZATIONAL PARTNERSHIPS

As stated in the workshop notes, developing partnerships and collaborations within the critical minerals resource sector should be beneficial for all parties. These include shared memoranda of understanding, joint ventures, and collaborative projects (e.g., Vital Metals [Nechalacho project] – Yellowknife Dene First Nation [Det'on Cho Nahanni Construction]; Vital Metals rare earth element processing plant – Saskatchewan Research Council – Saskatchewan).

Several of the representatives from industry, including those from companies and advocacy groups, Indigenous government organizations and advocacy groups, government departments all answered two questions about partnerships or collaborations. Their answers appear below, under the heading Organizational Partnerships, as they were written on the cards that were uploaded to the meeting facilitator.

There were two other areas of discussion for Theme Four - Opportunities and Approaches for Developing Partnerships and Facilitating and Encouraging Partnerships. Comments arising from both discussions can be found below.

1. ORGANIZATIONAL PARTNERSHIPS – PARTICIPANT COMMENTS

OSISKO METALS

What types of partnerships or collaborations make sense for your organization?

- a. Engaging and developing exploration/collaboration agreements with Indigenous communities.

Which types do not make sense for your organization?

- a. Research and development;
- b. Need to be careful about being drawn away from the main goals of an explor/devel. Company.

DENE NATION

What types of partnerships or collaborations make sense for your organization?

- a. These collaborations or partnerships are community or regional decisions but equity participation is a growing want. Equity participation must not be limited to the project property but in the developing company as well. That way, if the company has other projects elsewhere the community or region benefits from these as well.

Which types do not make sense for your organization?

- a. It does not make sense to partner with communities after a significant discovery because the cost to the community would be too high.

MINERAL AND PETROLEUM RESOURCES, ITI – GNWT

What types of partnerships or collaborations make sense for your organization?

- a. Federal government, Indigenous governments, industry;
- b. Industry, Indigenous governments, other governments;
- c. Partnerships with governments, e.g. Indigenous governments, federal and provincial governments; partnerships with industry associations, e.g. NWT and Nunavut chamber of mines.

Which types do not make sense for your organization?

- a. None. As government we are willing to collaborate/partner with any/all key stakeholders in the resource exploration and development sector including industry, regulators and other governments - other jurisdictions and NWT Indigenous governments;
- b. Partnerships with individual companies are more difficult to justify as a public government.

NORTH SLAVE REGIONAL OFFICE, ITI - GNWT

What types of partnerships or collaborations make sense for your organization?

- a. Regional delivery of ITI's economic development programs in the North Slave Region of the NWT;
- b. Regional delivery of the NWT BDIC's credit granting programs in the North Slave Region of the NWT;
- c. Indigenous governments;
- d. Federal government;
- e. Municipal governments;
- f. Economic development corporations of Indigenous governments and organizations;
- g. Education institutions (Aurora College, universities outside NWT, high school/middle schools);
- h. Industry.

MMG Ltd.

What types of partnerships or collaborations make sense for your organization?

- a. Working group to support advancement the Grays Bay Port & Road Project – Kitikmeot Inuit Association (KIA), Government of Nunavut, NWT & Nunavut chamber of Mines, other regional mining companies, infrastructure development partners;
- b. KIA - equity participation model to ensure alignment and enduring benefits from development of IZOK / High Lake;
- c. Joint development agreement with Canadian mining / investment partner; we acknowledge, as a foreign-owned mining company, that partnering with a local stakeholder is going to maximize chance of success.

PDAC

- a. No reponses.

NWT & NUNAVUT CHAMBER OF MINES

What types of partnerships or collaborations make sense for your organization?

- a. Help public and communities with education and information on the minerals industry;
- b. Help with regional mineral development strategies;
- c. Work with Indigenous governments to help advance mineral development for their benefit and that of NWT and Canada;
- d. Partner in public awareness initiatives with public and Indigenous governments for mutual benefits;
- e. Help promote employment in the industry;
- f. A go-to for media to learn more about industry.

Which types do not make sense for your organization?

- a. Direct business opportunities in the industry since we are a non-profit association.

NATURAL RESOURCES CANADA (NRCan)

What types of partnerships or collaborations make sense for your organization?

- a. Universities, p/t geological surveys, mining/exploration companies;
- b. Indigenous governments.

ALBERTA'S INDUSTRIAL HEARTLAND ASSOCIATION

What types of partnerships or collaborations make sense for your organization?

- a. We welcome all heavy industrial investment in our region - Alberta Industrial Heartland, including metals refining and processing, etc.

NWT AND NUNAVUT COM, GEK CONSULTING

What types of partnerships or collaborations make sense for your organization?

- a. N-S partnerships of development corporations, Indigenous governments and territorial/provincial governments for mutual benefit; participation agreements between developers and Indigenous governments with a royalty share agreement with the Government of Canada and territorial/provincial governments to get communities and governments aligned and permitting and regulatory bodies behind the development of critical and strategic minerals. Collaboration and funding contributions on downstream refining and value-add(ed) industrial activities.

NWT MINE TRAINING SOCIETY

- a. No responses.

LAND AND WATER BOARDS OF THE MACKENZIE VALLEY

What types of partnerships or collaborations make sense for your organization?

- a. There isn't really a partnership role for the land and water boards (LWBs) in this context. In a sense the LWBs do collaborate with proponents on a project-specific basis via back and forth dialogue when applications are being prepared by proponents.

Which types do not make sense for your organization?

- a. Need to be somewhat impartial due to regulatory function.

INUVIALUIT REGIONAL CORPORATION

- a. No responses.

GNWT DEPARTMENT OF LANDS

What types of partnerships or collaborations make sense for your organization?

- a. Planning, research, promotion, education.

Which types do not make sense for your organization?

- a. (Lands has a) Regulatory role - partnership with proponents being regulated would be problematic.

GEOLOGICAL SURVEY OF CANADA

- a. No responses.

CANNOR (CANADA NORTHERN ECONOMIC DEVELOPMENT AGENCY)

What types of partnerships or collaborations make sense for your organization?

- a. Working with business sector organizations and civil society (service) organizations. Also, working with territorial government departments.

JUNIOR EXPLORATION COMPANIES – IN GENERAL

What types of partnerships or collaborations make sense for your organization?

- a. Financial agreements (offtakes);
- b. Optimize flow through funds (regulatory and social costs).

Which types do not make sense for your organization?

- a. Research and development (not enough money, time factor - careful not to dilute company for shareholders).

NORZINC LTD.

- a. No responses.

CIRNAC (Crown-Indigenous Relations and Northern Affairs Canada) Federal government – northern affairs

What types of partnerships or collaborations make sense for your organization?

- a. Other federal government departments, industry mining associations (national and regional) environmental non-government organizations, territorial governments, Indigenous governments and representative distinction-based organizations;
- b. Indigenous governments and representative distinction-based organizations;
- c. Territorial governments;
- d. Environmental non-government organizations;
- e. Mining associations (national and regional);
- f. Industry;
- g. Other federal government departments; and
- h. Science based organizations - could be academia, Indigenous knowledge.

CLIENT SERVICE AND COMMUNITY RELATIONS (CSCR) – INDUSTRY, TOURISM AND INVESTMENT – GNWT (Compiled with whole of ITI)

What types of partnerships or collaborations make sense for your organization?

- a. Industry;
- b. Indigenous government co-development and community organizations;
- c. NWT & Nunavut Chamber of Mines; and
- d. Collaboration - three territories.

NORTH SLAVE MÉTIS ALLIANCE (NSMA. Includes Marc Whitford)

What types of partnerships or collaborations make sense for your organization?

- a. Impact benefit agreements;
- b. Joint venture company creation;
- c. Contracting to member affiliated businesses, and directly hiring members;
- d. Contribution agreements to fund NSMA participation on plan development and consultations, legal reviews;
- e. Heavy haul contracts (ice road trucking); and
- f. Joint ventures. Growth contracts for experience.

Which types do not make sense for your organization?

- a. Unknown.

NORTHWEST TERRITORIES GEOLOGICAL SURVEY (NTGS) ITI, GNWT

What types of partnerships or collaborations make sense for your organization?

- a. University scientists;
- b. Exploration and mining companies;
- c. Federal research scientists;
- d. Prospectors;
- e. Funding agencies;
- f. Partnership with universities and other research institutions, mineral exploration and development companies;
- g. Indigenous groups and communities across the territory; and
- h. With other provincial and territorial geological surveys and Geological Survey of Canada.

PROVINCIAL GOVERNMENTS

Saskatchewan Ministry of Energy and Resources

BC Ministry of Energy Mines and Low Carbon Innovation

- a. No responses.

2. OPPORTUNITIES AND APPROACHES FOR DEVELOPING PARTNERSHIPS

QUESTION: WHAT ARE THE BIGGEST OPPORTUNITIES AND POTENTIAL APPROACHES FOR DEVELOPING MINERAL RESOURCE SECTOR PARTNERSHIPS AND COLLABORATIONS, BOTH NOW AND IN THE FUTURE?

- a. Having the ability to come to the table as a strong partner;
- b. GNWT and Government of Alberta (and associated organizations such as Alberta Innovates, Emissions Reduction Alberta, Invest Alberta Corporation);
- c. For CANNOR, partnerships with other funding agencies, both federal and territorial add value to our program. Further, partnerships with clients are key to our ability to identify projects that we are best positioned to support. Ideally, opportunities that allow us to leverage our support to get more “bang for the buck” are ideal;
- d. Industry perspectives - specific/focused scope to address issues/problems through partnerships/collaborations;
- e. Completing outstanding land claim processes;
- f. Pine Point has ‘clean’ ore and smelters will want it in order to dilute less desirable ore containing undesired elements;
- g. Opportunity for equity projects;
- h. Get back to in-person conferences. No substitute for in-person events where face to face discussions can be had;
- i. Focus on increasing clarity for mineral development standards, land access, and regulatory process. There exist many differences even between different NWT regions and jurisdictions. Clarify expectations for all parties involved in taking a project from exploration to production and through to reclamation. (From Theme Two, copied by Stephane Poitras);
- j. Investing in ESG now to benefit in the future;
- k. Opening up of NWT through infrastructure projects can bring greater opportunities (Tlicho All-season Road);
- l. Work on existing critical mineral projects to increase potential (Cantung, Pine Point);

- m. Market incentives for impact and benefit agreements. This could look like tax breaks or other means. Reward companies that sign impact benefit agreements, or business partnerships with Indigenous communities and hire local through tax breaks or other incentives - make it pay to be a responsible company;
- n. Room to leverage investments and infrastructure:
 - i) Focused funding on infrastructure is key. NWT is a remote part of the world, and (has) socio-economic disadvantages based on lack of infrastructure and services. Need a public-private partnership approach, with a return for the private sector. Need to have multiple companies involved. e.g. Mining company, with infrastructure company, with governments;
 - ii) Historically, (for) Pine Point, (the federal) government-built road infrastructure, rail, power, and then the company had to pay the government back, essentially giving the company a mortgage on the infrastructure investment. e.g. Kitikmeot Inuit Associations could build Gray's Bay Road and earn a return on investment with the mines paying for use of the road;
 - iii) Equity participation by Indigenous groups in infrastructure project.
- o. Need to teach kids about career opportunities in schools, and need to take a partnership approach; industry wants to partner ECE to get this into classrooms; e.g. Mining north works. 100 different career opportunities in mining;
- p. Employment opportunities; Indigenous employment only at 30%; need to teach kids about career opportunities in schools, and need to take a partnership approach; industry wants to partner with Education, Culture and Employment (ECE, GNWT) to get this into classrooms; e.g. Mining North Works. 100 different career opportunities in mining;
 - i) Increase Indigenous and community employment in the minerals industry to help stop economic leakage, provide more benefits. This will take education to help make this happen;
 - ii) Working with communities to educate and inform of the possible opportunities they might consider in the minerals industry;
 - iii) Long term education of community workforces.

- q. Understanding by the community of all the different options that may be available to them to set up collaborative partnerships that are effective for them;
 - i) Using professional negotiators along-side community negotiators and those professionals are funded by govt;
 - ii) GNWT and federal pathfinder approaches to introduce companies and communities;
 - iii) Readiness planning for communities - useful tool for developing relationships.
- r. Partnerships should begin early in exploration phase - to build capacity, trust and relationships as projects develop;
 - i) Early engagement. Meaningful dialogue;
 - ii) Engaging early and often during the process.
- s. BC - developed a regional mining alliance to demonstrate that doing business in the province isn't always a challenge;
 - i) Taking regional inventories will allow you to showcase what you have to offer. This can then be presented to potential investors to try to attract investment, exploration, and development;
 - ii) Sahtu – finding out what is and isn't in the region;
 - iii) Understanding the financing of a project. What is the business process?;
 - iv) Lack of knowledge in the mineral development process. Understanding the risks of the exploration process.
- t. The sector is competitive, but there is opportunity in developing a national approach to attract investment:
 - i) Canada brand strategy is stronger than any of the provinces and territories could hope to be on their own;
 - ii) Messaging is key; Canada has so many pools of messaging - unified/central portal for critical minerals messaging; best practices, readily accessible; a portal partnership of some sort;
 - iii) Opportunities to align with larger priorities - federal, etc. Alignment to national priorities;
 - iv) Federal government to play a key role.

- u. Competitive jurisdictions aside -particular in the northern territories - working together provides a chance to better leverage the opportunities;
- v. Beneficial for the Yukon and Nunavut government to inform the GNWT on what our future may look like while we move further into our future of working on this;
- w. Improve perception of the mining industry, changing the narrative from past poor environmental and social practices, industry is reforming and improving. Industry will also transition to net zero in coming decades. Need to get youth interested in this journey. Mining critical minerals is still mining;
 - i) Transformation of industry, and messaging about that transformation is critical and needs to get to next generation, and kids that enjoy STEM, and want to be involved in green industries and technologies. Can mine sustainably and contribute positively to economy. Generational change underway;
 - ii) The opportunity to move towards the low-carbon economy.
- x. Advantage in working with larger jurisdictions to maximize opportunities;
 - i) Building downstream refineries will further incentivize development allowing many smaller projects to benefit - federal funding can assist in this. Must look at whole value chain working together;
 - ii) Full supply chain considerations - raw materials from NWT, processing in AB or SK – what are ways we can facilitate/coordinate so there is value/benefit for all, and sharing any risks.
- y. Exploration companies working with Indigenous governments to come up with plans for exploration and related work (e.g. training local residents) on Indigenous private lands;
 - i) Opportunity - increasing opportunity for/facilitating ownership stake by Indigenous governments in mineral projects on their land;
 - ii) IGOs have private lands - direct partnerships with industry. Although scattered parcels of lands, there are ways to market their lands to industry on their own;
 - iii) Equity participation by Indigenous groups in minerals projects.
- z. Online map staking - negatives: costs, time, GHG emissions (helicopters, planes)
 - NWT needs this in partnership with IGOs, etc. Map staking is a part of the solution.

2. FACILITATING AND ENCOURAGING PARTNERSHIPS

QUESTION: HOW MIGHT THE GNWT FACILITATE AND ENCOURAGE THESE COLLABORATIONS, PARTNERSHIPS, AND RELATIONSHIPS?

- a. Developing a standard format for royalties to be shared between various governments would accelerate development as opposed to having to negotiate royalty distribution case by case;
- b. Facilitating discussions with international bodies (like the U.S. government);
- c. Increasing the effectiveness of the socio-economic agreements;
- d. May need to consider funding a high-profile activity and doing it very well as a leader for attracting more widespread attention. For example, a high-profile investor/newsletter writer tour of NWT properties and communities. (Comment Stephane Poitras: dup. to theme 2, q3);
- e. I wonder if the GNWT Lands or ITI might set up various workshops and other training that will enable leadership to make more effective decisions for their communities;
- f. Consistent messaging and integrating voices from across the NWT when defining government priorities;
- g. The GNWT has consensus government, but often MLAs differ in alignment towards approach to mineral development. Need to see more consistent and unified approach from our leaders;
- h. Continuing to educate the rest of Canada on how things work in the NWT. The NWT has done a good job in this area, but it can be challenging when it comes to knowledge about the NWT (Comment Stephane Poitras: duplicated to Theme 2, q3);
- i. Reaching out to other governments, especially Yukon and Nunavut on how we can further educate within the north to what exactly are the benefits of the mining sector in the NWT;
- j. Incorporating education choices that can create opportunities. (Trades introduced in high school). Pre-entry exam;
- k. Federal-level organizations with funding available can be approached to develop projects and opportunities:
 - i) The NWT is a high-cost jurisdiction in which to operate, and the case must be made to the federal government for significant investment;
 - ii) Interaction with the federal government on mineral resource sector has to increase.

- l. GNWT in 1988 entered into deal with Tlicho to build a dam, GNWT built it and then Tlicho owned the dam and got returns on power produced by the demand for 25 years;
 - i) Support Indigenous governments in seeking/achieving equity partnerships in mineral projects through new and existing regulatory processes;
 - ii) GNWT can play a role in facilitating equity partnerships;
 - iii) Create mineral literacy/knowledge to increase incentives in the regions for additional work to create the opportunity for partnerships and or equity stake agreements. (e.g. pipeline equity agreements);
 - iv) Equity partnerships perhaps like the Tlicho power with GNWT back in the late 1980s. This saw infrastructure built and the Tlicho benefit, and GNWT and the public benefited. Are there other examples today that could see infrastructure advance?
- m. Segmentation of promotion and marketing for critical minerals;
- n. There is a need to promote the direct benefits from development made clear to the general public;
- o. Building upon the partnerships and collaborations in the past that have benefitted the NWT;
- p. Continue to start partnership development early in any project to ensure there are benefits for all;
- q. Integrating Indigenous voices to speak directly with the federal government to drive policies;
- r. Collaboration essential between Canada and GNWT and inviting Indigenous governments and industry into these initiatives. Need a safe space for people to be creative together;
- s. GNWT should have ongoing relationship with CANNOR to ensure we are not duplicating efforts, but are rather supporting projects and programs synergistically, leveraging our funding, and more bang for our funding buck;
- t. Funding projects designed to promote synergy between different sectors. For example MITACS promotes industry-science collaboration. Could something like this apply to Indigenous governments with getting partnerships started with mines;
- u. During mineral commodity cycles, low points, it would benefit exploration and development in the NWT. When cash-flows are low for the mineral industry as a whole, companies are more likely to come to explore (e.g. mineral incentive plans from government).
 - i) Exploration incentives could be developed for critical minerals in particular;
 - ii) Create funding and loan options to create capacity to participate in mining projects.

If you would like this information in another official language, call us.
English

Si vous voulez ces informations dans une autre langue officielle, contactez-nous.

Kispiᓂ ki nitawihᓂīn ē nīhīyawihk ōma ācimōwin, tipwāsinān.
Cree

Tɬɬ chq̄ yatɬ k'è è . Dɬ wegodɬ newq̄ dè, gots'o gonede.
Tɬɬ chq̄

[illegible]

Edi gondi dehgáh got'le zhatié k'éé edati'éh enahddhę nide naxets'é edahlí.
South Slavey

K'áhshó got'íne xədə k'é hederı ɛdɛhtl'é yerınıwę ní dé dúle.
North Slavey

Jii gwandak izhii ginjik vat'atr'ijahch'uu zhit yinothan jì, diits'àt ginohkhì.
Gwich'in

Uvanittuaq ilitchurisukupku Inuvialuktun, ququagluta.
Inuvialuktun

Inuktitut

Hapkua titiqqat pijumagupkit Inuinnaqtun, uvaptinnut hivajarlutit.
Inuinnaqtun

Indigenous Languages and Education Secretariat: 867-767-9346
ext. 71037 Francophone Affairs Secretariat: 867-767-9343

