Natural Resources Canada | Ressources naturelles Canada

Critical Minerals Research, Development and Demonstration at Natural Resources Canada

Presenter: Konstantin Volchek

CanmetMINING
Natural Resources Canada

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Canada

Contributors – NRCan Team

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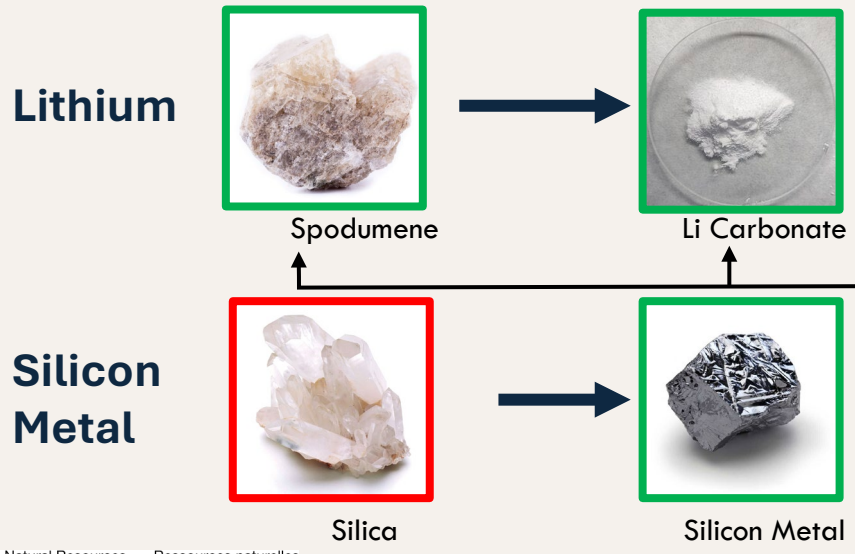
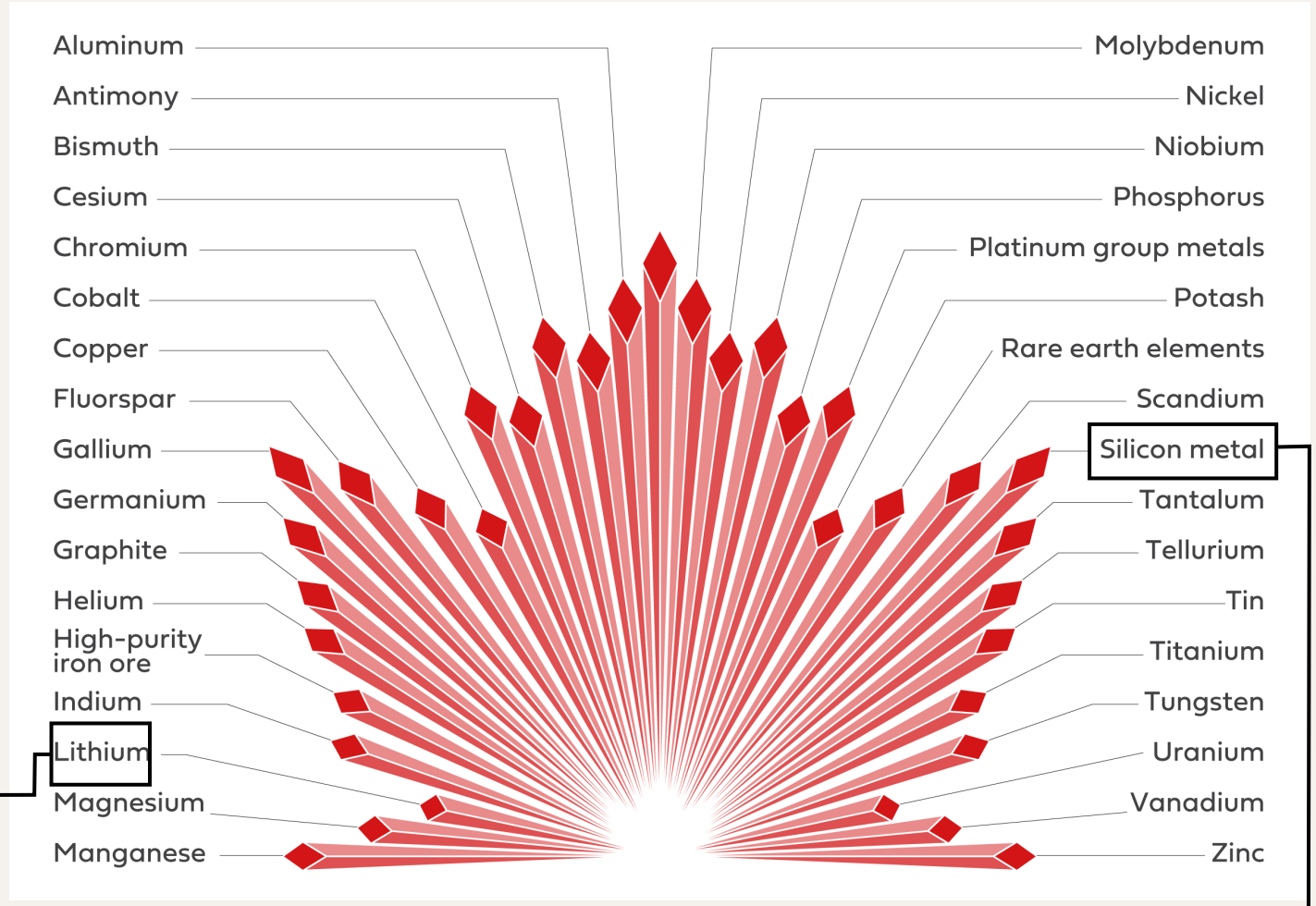
Outline

- Canadian critical minerals strategy
- Critical minerals research, development and demonstration program (CMRDD)
- CanmetMINING's work
- International initiatives
- Future outlook

Canadian Critical Minerals List

- Canada's critical minerals list identifies 34 minerals and metals that are considered essential for the sustainable economic success of Canada and its trading partners.
- Canada produces **25** of **34** critical minerals, with potential for further resource development.
- While not explicitly listed amongst the 34 minerals and metals, the list covers both raw materials and processed materials, though not in every instance. For example:



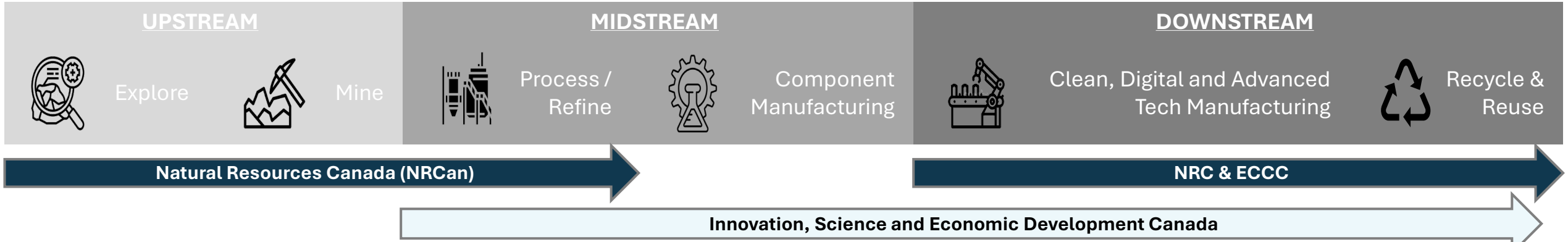


Canadian Critical Minerals Strategy (CCMS)

- **Goal** is to increase the supply of reliable and responsibly sourced critical minerals and support the development of domestic and global value chains for the green and digital economy
- **Focus** is on the development of the upstream and midstream segments of the value chain, including recycling.
- **Whole-of-government approach** to implementation involves more than 15 federal departments and agencies

- **CCMS core objectives:**

1. Supporting economic growth, competitiveness, and job creation
2. Promoting climate action and environmental protection
3. Advancing reconciliation with Indigenous Peoples
4. Fostering diverse and inclusive workforces and communities
5. Enhancing global security and partnerships with allies



CCMS Focus Areas

Driving research, innovation and exploration

Business Development Bank of Canada

Critical Minerals Exploration Tax Credit

Critical Minerals Geoscience and Data Initiative

Critical Minerals Research, Development and Demonstration program

Mineral Exploration Tax Credit

Accelerating responsible project development

Canada Growth Fund

Clean Technology Manufacturing Investment Tax Credit

Critical Minerals Research, Development and Demonstration program

Export Development Canada

Northern Regulatory Initiative

Strategic Innovation Fund

Building sustainable infrastructure

Critical Minerals Infrastructure Fund

Canada Infrastructure Bank - Critical Minerals Investments

Advancing reconciliation with Indigenous Peoples

Indigenous Natural Resource Partnerships program

Critical Minerals Infrastructure Fund - Indigenous Grants

Indigenous Loan Guarantee Program

Growing a diverse workforce and prosperous communities

Sectoral Workforce Solutions Program

Indigenous Skills and Employment Training Program

Skills and Partnerships Fund

Youth Employment and Skills Strategy

Strengthening global leadership and security

Global Partnerships Initiative

Bilateral and multilateral collaboration

Critical Minerals Support Mechanisms Overview

Grants & Contributions

Critical Minerals Geoscience and Data Initiative

Critical Minerals Infrastructure Fund

Critical Minerals Infrastructure Fund - Indigenous Grants

Critical Minerals Research, Development and Demonstration program

Global Partnerships Initiative

Indigenous Natural Resource Partnerships program

Northern Regulatory Initiative

Strategic Response Fund (formerly, Strategic Innovation Fund)

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Tax Incentives

Canadian Development Expense

Canadian Exploration Expense

Clean Technology Manufacturing Investment Tax Credit (30%)

Critical Minerals Exploration Tax Credit (30%)

Flow-Through Shares

Mineral Exploration Tax Credit (15%)

Scientific Research and Experimental Development Tax Incentive

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Financing

Business Development Bank of Canada

Canada Growth Fund

Canada Infrastructure Bank - Critical Minerals Investments

Export Development Canada

Indigenous Loan Guarantee Program

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Note: Financing opportunities are primarily facilitated through Crown Corporations, which are hybrid entities that are wholly owned by the Government of Canada but operate at arm's length.

Grants & Contributions

Critical Minerals Research, Development and Demonstration program (CMRDD) supports the development of green and innovative processing technologies for critical minerals. It focuses on the commercialization of emerging technologies, raw material input production for batteries and permanent magnets, and strengthening supply chains in advanced manufacturing, semiconductors, and ICT. Support may be available for activities such as preliminary metallurgical testing, including characterization and process (flow sheet) development.

Strategic Response Fund (SRF), under Innovation, Science and Economic Development Canada, is delivering targeted support to critical minerals projects through $1.5 billion in funding announced in Budget 2022 for the Canadian Critical Minerals Strategy. The program supports projects that foster innovation in processing, manufacturing, and recycling, while driving sustainable growth in emerging sectors.

Critical Minerals Infrastructure Fund (CMIF) was launched in 2023 and will provide up to $1.5 billion in federal funding until 2030 for mine site-enabling clean energy and transportation infrastructure projects necessary to enable the sustainable development and expansion of critical minerals in Canada.

Global Partnerships Initiative (GPI) provides demonstration funding for Canadian projects with international linkages. Specifically, this includes Canadian technologies applied abroad or critical mineral projects in Canada with international partners, depending on the level of project readiness.

Project spotlight

Rio Tinto fer Titane received $222 million through the Strategic Response Fund for its Decarbonization and Product Diversification Pathways Project, which will increase its production of critical minerals and decarbonize operations through innovative smelting technology.

The **Northwest British Columbia Highway Corridor Improvements Project** approved up to $75 million in conditional funding through the Critical Minerals Infrastructure Fund to the Province of British Columbia to improve several hundred kilometers of roadways in northwestern British Columbia. The highway improvements are expected to support several critical minerals projects in British Columbia's Golden Triangle.

Tax Incentives

The Canadian Critical Minerals Strategy established **new tax incentives** utilized by the Canadian critical minerals sector, including:

Clean Technology Manufacturing Investment Tax Credit (CTM-ITC) is a **30% refundable tax credit** established under Budget 2023, applicable towards the cost of investments in, among others, new machinery and equipment used to mine, process, or recycle six critical minerals: lithium, cobalt, nickel, graphite, copper, and rare earth elements.

Critical Mineral Exploration Tax Credit (CMETC) is a **30% tax credit** for targeted critical minerals (i.e., nickel, lithium, cobalt, graphite, copper, rare earth elements, vanadium, tellurium, gallium, scandium, titanium, magnesium, zinc, platinum group metals, and uranium) under Budget 2022. Budget 2023 modified the CMETC to also include lithium from brines.

These measures complement **existing federal tax measures** utilized by the mining industry, including:

Canadian Exploration Expense (CEE) provides a **100% deduction** for greenfield exploration expenses (including geological/geophysical/geochemical surveying, drilling, trenching, etc.). Unused balances can be carried forward indefinitely for tax purposes or can be transferred to flow-through share investors.

Flow-Through Shares (FTS) are a tax-based incentive for mining companies to obtain equity financing for mineral exploration and development in Canada. FTS investors can be corporations or individuals.

Mineral Exploration Tax Credit (METC) is a **15% non-refundable tax credit** that supports certain mineral exploration expenses incurred in Canada and renounced to FTS investors. It cannot be claimed in addition to the CMETC.

Financing

Crown Corporations play a significant role in de-risking projects across Canada, including the mining sector. These efforts support Canada's net-zero goals and Canadian clean technology and defence supply chains.

Canada Growth Fund (CGF) was announced in Budget 2022 as a $15 billion fund that aims to reduce private sector investment risks and finance Canadian projects that support Canada's net-zero goals. CGF invests in emission-reduction technologies and projects that benefit Canada, including critical minerals. CGF offers **equity and debt structures**, **hybrid arrangements**, and **contractual support**.

Export Development Canada (EDC) is a self-financing Crown corporation that supports domestic and international projects, such as foreign projects with Canadian direct investment and non-Canadian projects procuring goods and services, including critical minerals. EDC can provide **debt financing**, **loan guarantees**, **trade insurance**, and **project financing**, and has flexibility in the type of financing it can provide.

Canada Infrastructure Bank (CIB) is a Crown Corporation that invests in infrastructure projects (roads, rail, ports, electrification), including those related to critical minerals projects. These projects fall under the banks $5 billion Trade & Transportation sector.

Project spotlight

On May 14, 2025, the Canada Growth Fund (CGF) announced a commitment of approximately $156M to **Foran Mining Corporation**.

This funding will help the company its flagship asset, the McIlvenna Bay Mine Project, which is Canada's only copper and zinc deposit currently under construction. Foran is striving for the mine to be the first carbon-neutral copper project in Canada.

Note: Crown Corporations are hybrid entities that are wholly owned by the Government of Canada but are entities that operate at arm's length.

Investing in Critical Minerals Development

$3.8 billion in funding was allocated over 8 years to the CCMS.

RESEARCH AND DEVELOPMENT

$144.4 million to support R&D of technologies to support critical mineral value chains.

INDIGENOUS ENGAGEMENT AND CAPACITY

$25 million to increase economic participation in the critical minerals sector and **$13.5M** for engagement and capacity building related to critical minerals infrastructure development.

REGULATORY SUPPORT

$40 million to support northern regulatory processes (CIRNAC).

GLOBAL PARTNERSHIPS

$70 million to advance Canada's global leadership on critical minerals.

INFRASTRUCTURE

Up to **$1.5 billion** for infrastructure investments that support critical mineral development & Canada Infrastructure Bank to provide loans to Indigenous communities to support equity stakes in infrastructure projects.

TAX CREDITS

30% Critical Mineral Exploration Tax Credit and **30%** Clean Technology Manufacturing Investment Tax Credit.

INNOVATIVE PROJECTS

$1.5 billion to support manufacturing, processing, and recycling applications.

GEOSCIENCE AND EXPLORATION

$79 million for public geoscience and exploration to better identify and assess critical mineral deposits.

Critical Minerals Research, Development and Demonstration Program (CMRDD)

Supports the development of innovative processing technologies for the critical minerals industry to help advance Canadian mining projects towards the production of critical minerals value chains.

Avenues for support:

1. In-kind support for Federal R&D projects
2. Non-repayable contributions for piloting and demonstration projects

Focus area: Driving research, innovation and exploration; Accelerating Project Development

Expected outcome: Improved commercial readiness to deploy critical mineral projects using novel processes and technologies

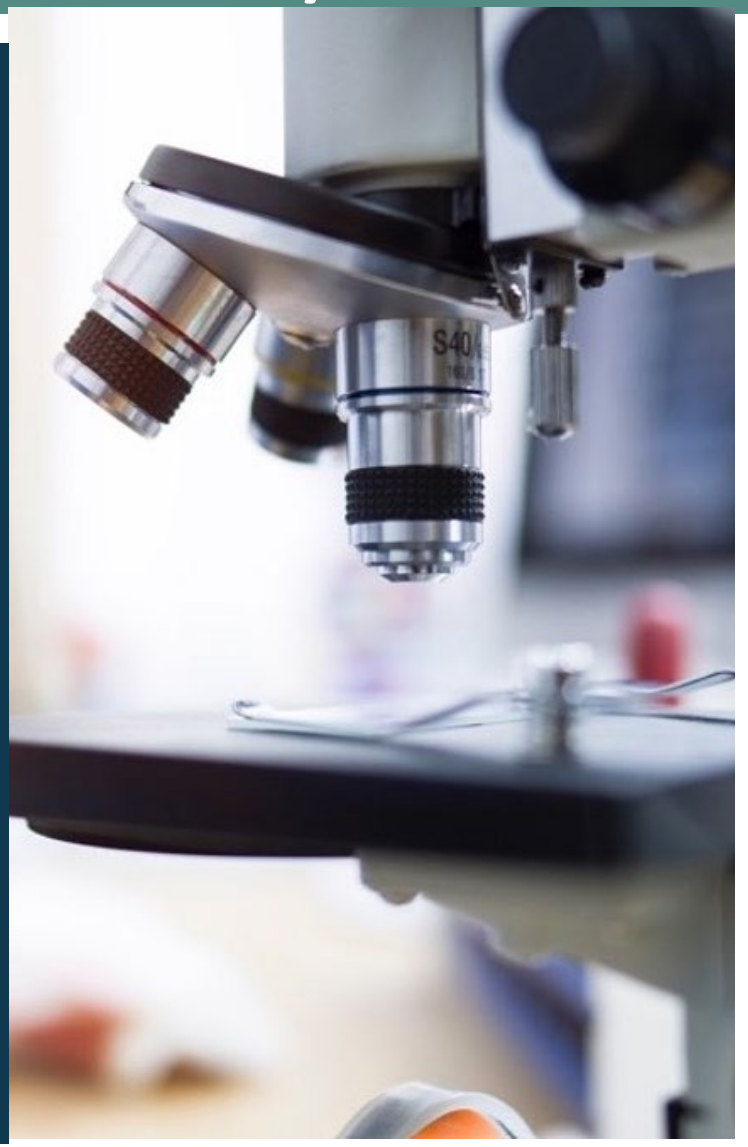
Timeframe: 2022-2028

Status: Call for Proposals is Closed

Critical Minerals Research, Development and Demonstration Program (CMRDD)

Grants and Contributions Projects:

- $91.3 million announced for 20 demonstration projects and two strategic investment:
  - 6 projects completed
    - ✓ Lithium project in AB; Nickel project in BC; Nickel-Cobalt project in AB; Nickel-Cobalt project in QC; Cobalt project in NWT; REE project in ON
  - 3 projects expected to be completed by March 2026
    - ✓ REE project in QC; REE project in ON; Graphite project in ON
  - 10 projects expected to be completed by March 2027
    - ✓ REE project in SK; Graphite projects in QC; Graphite Project in QC; Black Mass Recycling project in ON; 2 Nickel-Cobalt projects in ON; 2 Lithium projects in BC; 1 Lithium Project in QC; Phosphorus project in QB
  - 1 project expected to be completed by March 2028
    - ✓ Lithium project BC



Canadian Federal Laboratories Conducting Research in Upstream to Midstream Critical Minerals Value Chains

Natural Resources Canada

CanmetMINING

CanmetENERGY

CanmetMATERIALS

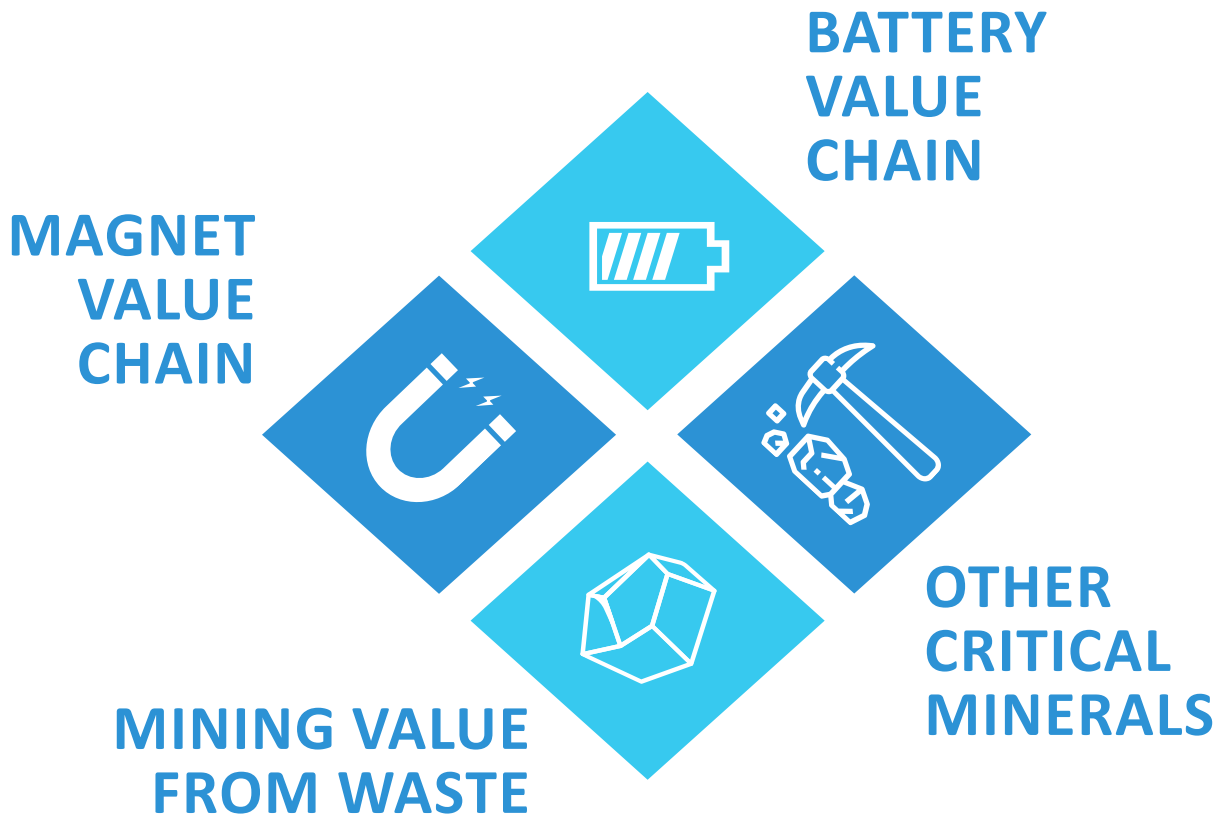
CanmetMINING is a Branch within the Lands and Minerals Sector of Natural Resources Canada
Labs in Ottawa and Sudbury (Ontario) and in Val-d-Or (Quebec)

Geological Survey of Canada

National Research Council of Canada

Focus Areas of our Critical Minerals R&D

- 78 federally-led R&D projects between 2021-2027 (~60% in battery value chain)
- Extractive metallurgy, processing, refining
- Environmental technology and knowledge
- Secondary sources and recycling
- Approximately 80 external collaborators (industry, our provinces or territories, universities, other scientific institutions)
- Advanced manufacturing at our partners CanmetMATERIALS and National Research Council
- Sustainable mining standards, hydrogen and battery powered mining equipment



List of Ongoing CM Research Projects at CanmetMINING

Battery Value Chain

- Recovery of Sc from Primary Resources Using Supercritical Solvent Extration
- Enhancing Battery Recycling and Industrial Waste Valorization via Integrated Electrochemical-membrane Separation Technologies
- Lithium Processing from Hard Rock
- Sustainable options for energy-efficient recovery of critical elements from refractory silicates
- Lithium from Brines
- Trace metals and their mineral hosts in mine dust and dust-source materials
- Development of Best Available Technology Economically Achievable (BATEA) for the Treatment of Lithium Containing Effluents
- Regeneration of sodium sulphate from spent lithium carbonate precipitation solutions using alcohol-assisted crystallization
- Production of EV battery precursor Ni- and Co- sulphate salts from pyrrhotite-rich tailings
- Recovery of Graphite from Waste Stockpile

Magnet Value Chain

- Electrochemical Recycling of Neodymium and Praseodymium for Magnet Manufacturing
- REE, Sc, Nb, Al and Y recovery from the Primary Resources
- Recover of Critical Minerals from Ferruginous Ores
- Critical Minerals extraction from radioactive ores and uranium tailings
- A new and promising REE separation method: separating REEs utilizing the gaps among REE oxalate solubilities
- Chemical Soaking of Canadian REE Ore Samples: Optimization and Scale-up testing as an effective alternative to the conventional baking-leaching process.
- Scandium and REE recovery from coal fly ash
- Rare Earth Elements: Solubility, Toxicity and Partitioning in aquatic environments (REESTeP)

Mining Value from Waste & Other

- Recovery of Critical Minerals: Enhancing Cu recovery and Nb Retrieval from Tailings
- Desulphurization and critical metals recovery from high-sulphide tailings
- Critical Mineral Potential in Canadian Mine Tailings
- Technology development and demonstration of direct reduction of chromite (DRC) process – Phase 2
- Mining Effluent Treatment of Selenium (METS)

Production of EV battery Ni- and Co-sulphate salts from pyrrhotite-rich tailings

Project Leader: Dr. Rory Cameron

Objective: Produce EV-battery Ni&Co sulphates from high liability pyrrhotite-rich tailings via novel bioleaching technology and direct sulphate production

Process flowsheet: Bacterial leaching, followed by conversion/stabilization of the residue, and recovery of Ni&Co

Progress and achievements:

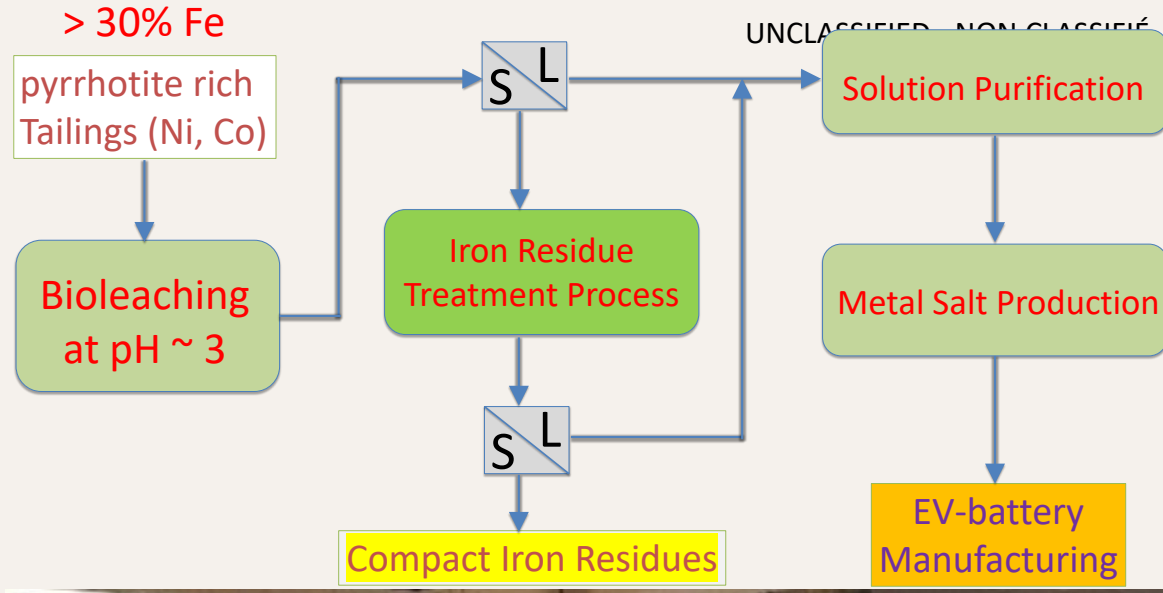
- Demonstrated all unit operations within the proposed flowsheet are technologicallyy feasible
  - Bioleaching leaches 80-90% of Ni and Co (5 samples tested);
  - Ni&Co recovery - Ni&Co can be recovered by IX, and direct mixed sulphide precipitate;
  - New residue can be transformed into more stable form, and/or incorporating in backfill
- Demonstrated the bioleaching at pilot scale in three tanks-in-series cascading 50L reactors

Publications:

Cameron, R., et al. (2021). Stirred-tank bioleaching of nickel and cobalt from pyrrhotite-rich tailings from Sudbury, Ontario. Hydrometallurgy 204 105592.

Cameron, R., et al. (2020). Recovery of battery metals (Ni and Co) from pyrrhotite tailings. Conference of Metallurgists 2020.

Cameron, R. (2018). Extraction of Co and Ni from a pyrrhotite-rich tailings sample via bioleaching. Extraction 2018.

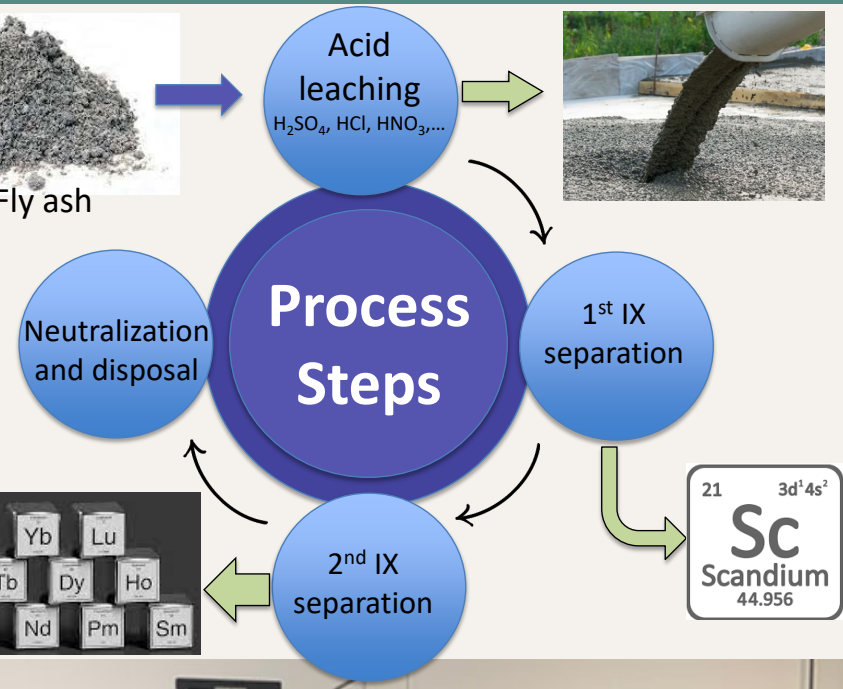


Scandium and REE Recovery from Canadian Coal Fly Ash

Project Leader: Dr. Rory Cameron

Objective: Produce critical metals (Sc and REEs) from coal ash and use the waste residue as a supplementary cementing material (SCM):

Process flowsheet: Mild acidic atmospheric leaching followed by novel IX/SX process to recover two separate products: Sc and REE

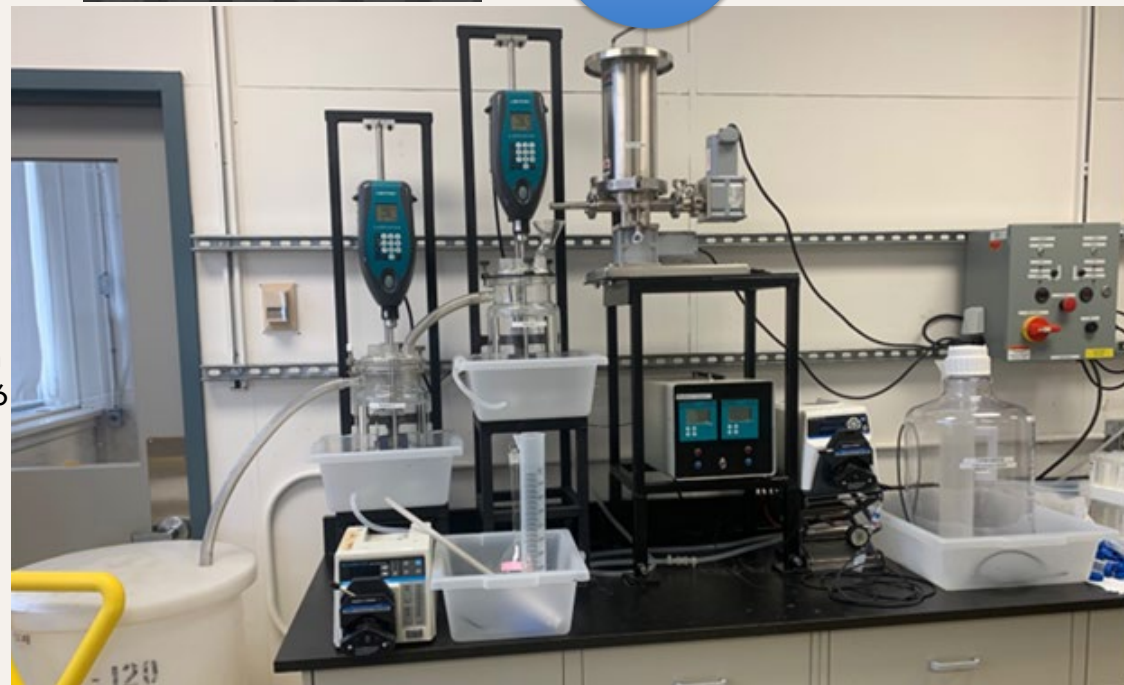


Progress and achievements:

- Demonstrated all unit operations are technologically feasible:
  - Short SRT; Sc concentration from 12 ppm in ash to 80% in final product
- Leaching process did not affect SCM properties of the coal ash

Remaining work/ next steps:

- Refine Sc production and develop REE & Zr recovery
- Test recovery process with other dilute acidic PLS
- Comprehensive TEA



Publications:

Mostajeran, M., Cameron, R., et al. (2024). Improving the efficiency of acidic eluents for elution of Scandium from Lewatit® VP OC 1026 and TP 272 solvent impregnated ion exchange resins. Minerals Engineering 216 108842.

Mostajeran, M., Cameron, R., et al. (2021). Mining value from waste: Scandium and rare earth elements selective recovery from coal fly ash leach solutions. Minerals Engineering 173 107091.

Mostajeran, M. and Cameron, R. (2022). Enhanced elution efficiency of scandium from ion Exchange resins. Conference of Metallurgists 2022.

Mostajeran, M. and Cameron, R. (2021). Optimization of a green eluent for scandium with significantly improved elution efficiency. Conference of Metallurgists 2021.

The Soaking Process for Cracking Low-grade REE Ores

Project lead:	Dr. Chen Xia
Objectives:	Evaluate static acid/alkaline soaking (SAS) as an alternative to conventional rotary kiln acid-baking
Innovation:	Low-energy, long-duration ambient or short-duration sub-boiling static soak — avoids rotary-kiln processing (200–400 °C).
Benefits:	* Lower capital and operational costs. No rotary kiln, No high temperature, No agitation * Economical for low-grade feeds that is widely available outside South-East Asia * Minimize energy use and environmental footprint * Enables profitable processing of low-grade feeds outside SE Asia
Progress:	* Tested on 5 different ore samples from Canadian deposits * DOE optimization of soaking leaching conditions
Next steps:	* Expand testing to additional Canadian REE ores * Further optimize to minimize cost and maximize recoveries * Scale up on selected samples * Mineralogy to elucidate mechanisms * Techno-economic analysis (TEA) and commercialization path

Ore/Conc	SMW	IMW	CHS	CRW
Hosting minerals	Fergusonite/Allanite (Si)	Amphibole/Pyroxene (Si)	Bastnaesite (Carbonate)	Monazite (Phosphate)
Direct acid leaching	Nd 70%, Dy 40%	Sc 0%	L 67%, H 75%	L 13%
Acid baking leaching	Nd 76%, Dy 57%	Sc 6%	N/A	N/A
Long term acid soaking leaching	Nd 89%, Dy 73%	Sc 72%	L 94%, H 87%	L 45%
Long term (25°C) alkaline soaking acid leaching	N/A	Sc 35%	L 90%, H 86%	N/A
Short term (95°C) acid soaking acid leaching	Nd 93%, Dy 82%	Sc 90%	L 94%, H 93%	L 82%

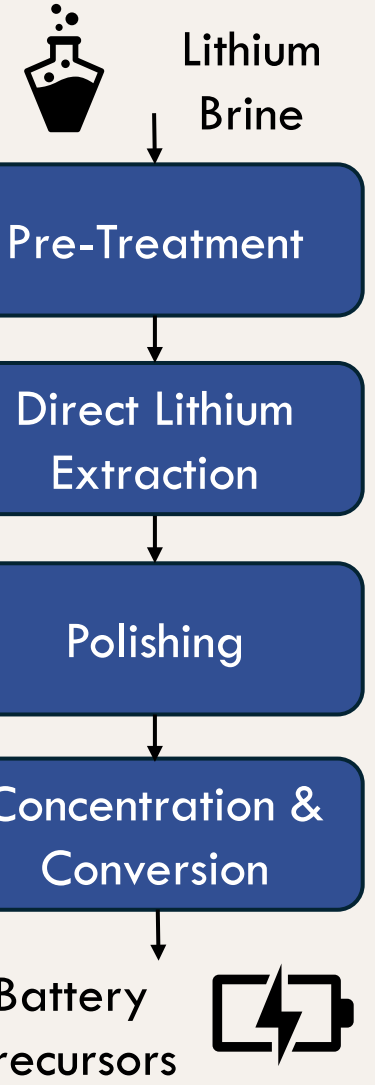
Recovery of Lithium from Brines

Project Leaders: Matthew Hudder & Dr. Sanaz Mosadeghsedghi

Objective: Develop, optimize, and demonstrate technologies for the extraction of lithium from Canadian petroleum and geothermal brines.

Process Approach:

Conventional pre-treatment followed by a combination of novel physicochemical technologies (e.g. electrochemical, adsorption, membrane separation) to extract lithium. Subsequent concentration and purification of lithium-rich streams to produce battery precursors.



Progress and Achievements:

- Evaluation of various technologies (electrocoagulation, electrodialysis, electrosorption, carbonation, supported liquid membranes, functional ionic liquids, etc.) at laboratory-scale and identification of the most effective.
- Development of a novel, patent pending, electrochemical-based direct lithium extraction (DLE) process using electrocoagulation and electrodialysis.
- Development of post-DLE technologies capable of reducing the volume of lithium-rich solutions greater than 300x.

Remaining Work & Next Steps:

- Further validation of both DLE and post-concentration technologies using additional industrially-sourced brines.
- Completion of both in-house and 3rd party detailed TEAs.
- Optimization of DLE technologies.
- Demonstration of the combined flowsheets at pilot-scale.

Supporting the Development of a Lithium Guideline for Freshwater

Project Lead: Dr. Carrie Rickwood

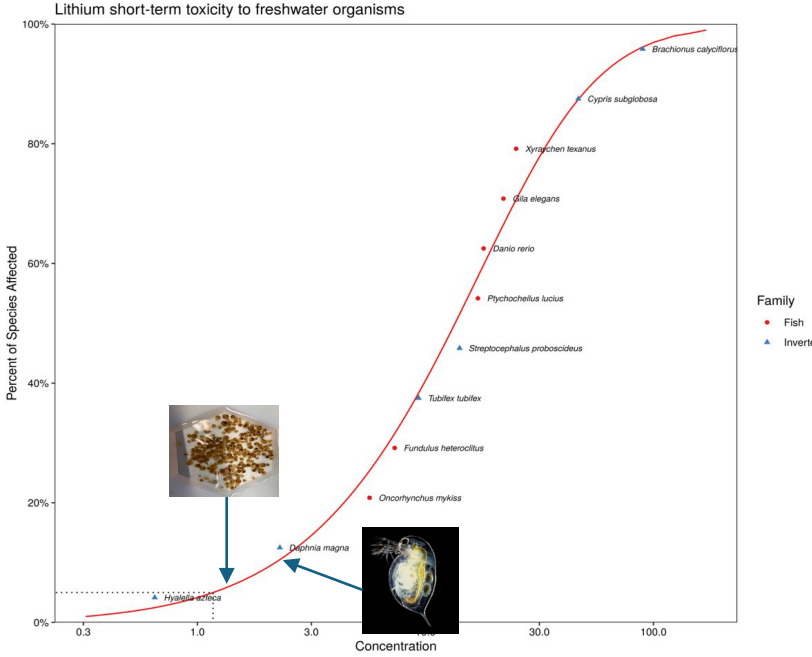
Objective: Assess the toxicity of lithium-bearing mining effluents and assist in the development of guidelines with Environment and Climate Change Canada (ECCC)

	Toxicity Tests
Cladoceran 	• 30-d *Daphnia pulex* • Survival and reproduction 
Clam	• 28-d Fingernail clam - *Pisidium sp.* • Survival, growth and burrowing

Outcomes:

- No chronic toxicity guideline for Li for the protection of aquatic life
- Majority of toxicity studies are short-term, ECCC prefer longer-term chronic toxicity data
- CanmetMINING conducted long-term (>21-d) exposures to Li with two aquatic invertebrates to evaluate their sensitivity
- Data is provided to ECCC for guideline development using species sensitivity distribution (SSD) where 95% of species protected

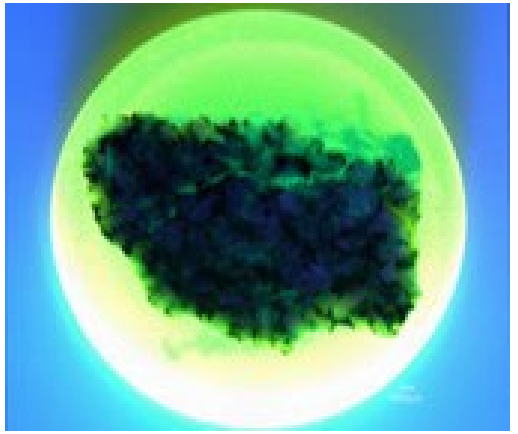
Li guideline ~ 1.25mg/L (based on SSD)



High Voltage Pulse Fragmentation of Critical Minerals (A Global Partnership Initiative Project)

Project Team: Tony Di Feo, Gary Cui, David Zal

- High voltage pulse fragmentation (HVPF) uses high voltage pulses to generate electrohydraulic breakage of materials. Potential energy savings will result in lower communition costs and reduced greenhouse gas emissions.
- HVPF can preferentially liberate ore minerals from gangue along mineral boundaries, which can produce enhanced enrichment.
- Improvements in downstream processes such as flotation and leaching may also benefit from HVPF treatment; HVPF produces proportionally less fines than conventional crushing/grinding, and in combination with selective liberation could yield improvements in grade during flotation and leaching.
- **International collaboration with Bureau de Recherches Géologiques et Minières (BRGM), Dr. Kathy Bru.**



HydroShift - Shifting Mining Waters From Burden to Resource

Project Lead

- French Geological Survey (BRGM- *Bureau de recherches géologiques et minières*) – *France*

Project team

- Institute of Geotechnics of Slovak Academy of Sciences – *Slovak Republic*
- University of Huelva - *Spain*
- Tampere University – *Finland*
- CASPEO Process Simulation - *France*
- CanmetMINING, NRCan – *Canada*

Metal Recovery Innovation

- Create new technologies to extract valuable metals (Cu, Zn, Ni, Co, REEs) from AMD.
- Integrate process simulation with life cycle assessment (LCA) to demonstrate economical viability, scalability, and support of sustainable water management

Valorization of AMD Residue

- Metal-rich residues accumulated over time through existing treatments will be batch-processed using new technologies developed in the project, enhancing resource recovery and making the process more economically viable

Policy and Stakeholder Collaboration

- Create a Stakeholder Committee (mining companies, policymakers, environmental organizations) to provide guidance, tackle regulatory and economic barriers, and promote best practices for AMD & residues that align project goals with industry needs
- Conduct national inventories of metals in AMD and residues

CanmetMINING's Role

Work Plan

WP1: Development of technology for water treatment with simultaneous metal recovery

- Obtain AMD samples from Canadian and EU sources
- Develop and scale up chelation-assisted ED for selective REE recovery
- Pilot-scale validation; advance TRL from 4 to TRL 6.

WP2: Valorization of metals from existing mine water treatment residues

- Mining residue from PMAP; share material with BRGM
- Membrane-based leaching for the extraction of CM such as Ni and Co from AMD treatment sludge

Deliverables

- **Mid-project report & Final Report (WP1 & WP2)**
  - Electro-driven recovery of REE from AMD
  - Base metals recovery from AMD
- **Techno-Economic Analysis**
  - Evaluating process feasibility, cost-effectiveness, and potential industrial adoption.
- **Environmental Impact Assessment**
  (Impact Assessment & Ecotoxicology Group)
  - Assessing the sustainability by quantifying chemical usage, waste minimization, and energy efficiency.

Canada's Critical Minerals: Future Outlook

Building a world-leading, responsible critical-minerals value chain

Strategic Direction

- Global demand for critical minerals set to increase significantly — Canada is accelerating its role
- Shift toward full value chain: exploration → processing → manufacturing → recycling
- ESG, Indigenous participation & traceability are core competitive advantages

New Key Domestic Initiatives

- C$ 2 billion over five years (from 2026-27) for the **Critical Minerals Sovereign Fund**
- C$ 371.8 million over four years (from 2026-27) for the **First & Last Mile Fund**
- Additional measures

Outlook (2025-2030)

- Increased pace of projects (graphite, rare earths, scandium, lithium etc.)
- Greater domestic processing and recycling capacity
- Canada positioning as trusted supplier for clean-tech, EVs, advanced manufacturing and defence.

Global Partnership and Strategic Positioning

Canada - trusted partner in secure, sustainable critical-minerals supply chains

International Leadership

- Active role in the G7 Critical Minerals Action Plan and its allied supply-chain alliances.
- Declaration of critical minerals as national-security priorities under the **Defence Industrial Strategy**

Major Partnerships & Investments

- Canada-led partnerships with key allies (USA, UK, EU, Germany, Japan, South Korea, Australia, Ukraine)
- Announcement of 26 new investments/partnerships with nine allied countries for supply-chain scale-up, including equity, loans, and off-takes

Looking Ahead

- Growth in foreign investment, diversification of export markets, move from raw exports to value-added processing
- Stronger ESG/traceability regimes becoming a differentiator
- Strategic intersection of critical-minerals, clean-tech, advanced manufacturing & defence sectors

Additional Resources and Contact Information

NRCan's Critical Minerals Concierge Service supports industry, academia, and Indigenous organizations by offering pathfinding services across federal programming and helping navigate the regulatory processes via a referral model: https://www.canada.ca/en/campaign/critical-minerals-in-canada/contact-us.html

Supporting Information: More information on critical minerals incentives and programming can be found on NRCan's website: https://www.canada.ca/en/campaign/critical-minerals-in-canada/federal-support-for-critical-mineral-projects-and-value-chains.html

Critical Minerals Centre of Excellence (CMCE) Newsletter: Provides up-to-date information on critical minerals https://natural-resources.canada.ca/minerals-mining/critical-minerals/sign-form

Canada