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Critical Raw Materials Partner Canada: An (almost) Perfect Match

The European-Canadian Raw Materials Partnership in Times of Friendshoring

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The European Union (EU) is aiming to strengthen its cooperation with like-minded countries to secure its supply of so-called critical raw materials. European Commission President Ursula von der Leyen considers Canada a "perfect match" – a resource-rich and reliable partner that shares the EU's geopolitical interests and sustainability goals. Canada is seeking to diversify its supply chains and counteract the influence of Chinese actors in its mining industry through a policy of friendshoring. To this end, the Canadian government has shown itself to be far more open to cooperation with the EU regarding raw material supply chains and key industries compared to the United States (US) government. It would be beneficial for both sides to deepen this cooperation. However, to truly make this partnership a perfect match, the EU should offer stronger financial incentives for the integration of European and Canadian industries, promote scientific exchange and technical collaboration, and advocate for robust corporate due diligence in supply chains.

The mobility and energy transition, as well as digitalisation, will lead to a rising demand for certain mineral and metallic raw materials. The EU is largely dependent on imports from non-European countries for access to these raw materials. For this reason, the recently passed Critical Raw Materials Act (CRMA) aims to not only expand Europe's mining sector, but also to strengthen the EU's international partnerships with resource-rich countries. Since 2021, the EU and Canada have engaged in a "strategic partnership on raw materials". As one of the few countries in the Western Hemisphere that harbours large deposits of all the raw materials needed for the production of lithium-ion batteries, Canada is an important partner for the EU in the green and digital transformation.

However, the increased focus on Canada and its natural resources can also be attributed to the growing geopoliticisation of international raw material supply chains, particularly since Russia's invasion of Ukraine. A central element of this development is friendshoring, a foreign trade policy approach that aims to align supply chains as much as possible with countries that share the same values and interests. In this regard, Canada and the EU consider

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each other like-minded actors; Commission President von der Leyen even described the partnership as a "perfect match". The prerequisites for increased cooperation in the raw materials sector and certain downstream supply chains seem promising. However, there are several challenges concerning the implementation, particularly with regard to the financing of raw material projects as well as sustainability aspects and due diligence in the mining sector.

Canada's raw materials strategy

Mining has a long tradition in Canada. The first industrial iron mine opened in the early 18th century in the eastern province of Quebec. Today, around 200 mines extract 60 different minerals and metals, including those now considered critical or strategic by many industrialised nations. In 2021, the mining sector accounted for around 5 per cent of the nominal GDP and nearly a quarter of Canada's total exports. Approximately half of the world's publicly traded mining companies are headquartered in Canada. The country is among the most important trading hubs in the international raw materials market.

At the end of 2021, the Canadian government published a national strategy for critical raw materials comprising three overall goals: *first*, strengthening domestic raw material supply chains, from exploration to recycling; *second*, promoting reconciliation with Canada's Indigenous peoples; and *third*, enhancing cooperation with like-minded partners on both bilateral and multilateral levels.

Strengthening Canada's domestic mining industry

In Canada's critical raw materials strategy, 34 raw materials are classified as critical, of which 26 are mined domestically. Twenty-four of these 34 raw materials are also considered critical by the EU, and 13 of them are classified as strategic. (In the EU, critical raw materials are additionally classified as strategic if their demand is expected to grow exponentially and there is a significant supply risk associated with them.)

In Canada, six raw materials are deemed strategically significant for the Canadian economy and industry: lithium, graphite, nickel, cobalt, copper, and rare earth elements (REE). All six are found in Canada but are currently mined and processed to varying extents. Whereas nickel and copper are already extracted in large quantities, lithium, graphite, cobalt, and REE have been mined only in small amounts in the past, despite the belief that there are substantial deposits of lithium and REE in the country. The expansion of domestic mining will therefore focus specifically on these six raw materials.

The Canadian government's decision to boost the national mining industry has also been influenced by geopolitical developments in recent years. The goal is not only to promote the mining industry but also to critically screen the industry for actors that counteract the economic and geopolitical interests of the Canadian government. Chinese investors and companies have gained significant influence in the Canadian mining sector over the last two decades. Two of the largest Canadian mining corporations have state-controlled Chinese enterprises as major shareholders. In the province of Manitoba, the Chinese company Sinomine operates one of the only two lithium mines in Canada, exporting the extracted raw material to China for further processing. Since 2019, Sinomine has also operated the only cesium mine in the Americas and Europe. By processing the raw material locally and selling it on the North American market, Sinomine has almost complete control over the supply chain and raw material prices.

In response to the growing presence of Chinese actors in the Canadian mining sector, the Canadian government now reviews foreign investments in critical raw material projects from a national security perspective and allows foreign companies looking to buy major Canadian producers of critical minerals only "in the most

exceptional" of circumstances. At the end of 2022, it had already forced three Chinese mining companies to sell their stakes in two Canadian lithium exploration companies. The Chinese company Shenghe recently bid to acquire stakes in Canada's only rare earth mine, only to be stopped by order of the Canadian government. To offset the loss of Chinese money and instead spur investments from more like-minded players in Canada's mining industry, the government also plans to provide state subsidies. The critical raw materials strategy is supported by nearly 4 billion Canadian dollars (CAD, approximately 2.7 billion euros) and tax credits for investments in critical raw material supply chains. A significant portion of the subsidies will go towards building infrastructure for critical raw materials, resource exploration, and supporting Indigenous communities.

Although the US Inflation Reduction Act (IRA) has caused frustration within the EU, Canada stands to benefit significantly. Thanks to the free trade agreement with the US, Canadian companies qualify for US subsidies and tax credits. Since the adoption of the IRA and Canada's critical raw materials strategy, the country has seen a slew of new investments. Swedish battery manufacturer Northvolt announced plans to establish its first non-European lithium-ion gigafactory in Quebec; Volkswagen plans to invest CAD 7 billion in building a battery factory in Ontario and to acquire stakes in Canadian mines to secure access to battery raw materials.

The central province of Saskatchewan became home to Canada's first processing facilities for REE. Rare earths mined in northern Yukon are to be processed in Saskatoon and then shipped to Europe via a Norwegian company. This would be the first REE supply chain to run directly from North America to Europe without a stopover in China. In neighbouring Manitoba, plans are advancing for another supply chain that would completely exclude China. The first fully electric mine, powered entirely by renewable energy, is slated to extract lithium in northern Manitoba before it is processed by the South Korean company LG and directly supplied to American and European car manufacturers.

According to an analysis by Bloomberg New Energy Finance, Canada now has the best conditions for developing battery supply chains, even more so than China. The combination of a well-established raw materials sector, close ties with the US automotive industry, and high sustainability standards gives the country a decisive advantage over other raw material producers. However, the weakest link in Canada's raw material supply chains remains processing. Although the country currently has more than 400 lithium mining projects in the pipeline, plans for new processing facilities are progressing slowly. Ironically, Chinese firm Sinomine has now applied for a permit to build a processing facility for its lithium mining operations in Manitoba. In so doing, the company also aims to signal to Ottawa that it is willing to integrate the material extracted in Canada into the North American supply chain, rather than exporting it directly to China. Similar obstacles are evident in the rare earth supply chain. One of the two projects for building rare earth processing facilities in Saskatchewan has been put on hold. Due to financial difficulties, the facility, which had already been half-built and funded by state subsidies, had to be partially sold to a Chinese company.

Graphite processing also faces significant funding challenges. Following China's additional restrictions on graphite exports at the end of 2023, pressure is mounting on the North American market to ramp up its production and expand its processing capacities for the metal. However, the challenge is not just to find the necessary capital to build the plants, but to also become competitive in the market. China, which produces around 70 per cent of the world's natural and synthetic graphite, continues to dominate the market and its prices. Additionally, a manufacturing facility for cathode active material (CAM) — a critical component of lithium-ion

batteries — currently costs three to four times more in North America than in China.

Financing new raw material projects is therefore one of the biggest challenges currently facing the Canadian mining industry. Chinese companies invested around CAD 21 billion in the Canadian mining sector between 1993 and 2023, making them some of the most important financiers, especially for junior mining companies (small to medium-sized firms focused on exploring and developing new mining projects). The Canadian government's push for divestment from Chinese companies has therefore drawn sharp criticism from the mining industry, arguing that the government is depriving junior companies of much-needed liquidity without providing them with an adequate alternative.

The Canadian government thereby faces a dilemma that is all too familiar to the EU: On the one hand, Canada — as a close ally of the US, Japan, and the EU — aims to follow the current credo of "less China, more security" and partially decouple from Chinese companies. On the other hand, to become a leader in critical raw material supply chains, Canada needs what Chinese investors have been readily providing: capital, and quickly, because the race to acquire resources is already in full swing and the window of opportunity for Canada to establish itself as a leader in this field will not be open indefinitely.

ESG+I: The "indigenous" in ESG

The second goal of Canada's critical raw materials strategy pertains to the reconciliation with Indigenous peoples and the promotion of sustainability standards in the mining sector. To distinguish itself from competitors such as China and Russia, Canada is also leveraging the increased awareness and importance of sustainability and corporate responsibility in (raw material) supply chains. In addition to social, environmental, and governance (ESG) criteria, reconciliation with the Indigenous peoples of Canada plays a particularly important role (ESG+I).

The relationship between the Canadian state and Indigenous peoples living in Canada has been marked by systemic oppression and discrimination, forced relocation and assimilation in so-called Residential Schools, and ongoing violence, especially against Indigenous women. Since 2008, these injustices have been addressed through a Truth and Reconciliation Commission (TRC). The TRC process includes the recognition, acknowledgment, and (financial) compensation of historical injustices against Indigenous peoples, as well as a commitment to building a trusting relationship between the Canadian government, industry, and Indigenous communities.

The mining industry plays a crucial role in this process. The majority of critical raw material deposits are located in areas inhabited by Indigenous communities. Major points of conflict between the Indigenous population and the mining sector include disputes over land rights, negative environmental impacts, and (sexual) violence against Indigenous peoples. However, the mining industry also presents opportunities for Indigenous communities, which are significantly affected by unemployment and poverty, and whose living areas suffer from inadequate transport and energy infrastructure. Over the years, the mining sector has become the largest private employer of Indigenous peoples in Canada, with the proportion of Indigenous ownership in the sector increasing: More than 200 Indigenous businesses now supply the Canadian resource industry.

The Canadian government aims to build on this foundation with its critical raw materials strategy, using the expansion of the extractive sector as an opportunity to advance reconciliation with the country's Indigenous population. In this spirit, it has recently developed a national "Benefits-Sharing Framework", which aims to increase investment in the training of Indigenous peoples in the resource sector, facilitate access to capital for Indigenous communities to allow for greater financial

participation in mining projects, and ensure that Indigenous communities are more involved in the planning and decision-making processes of mining projects.

The significant focus on reconciliation with Canada's Indigenous population in the national resource strategy is viewed positively by many Indigenous peoples. They also have an interest in benefiting from the growth of the Canadian extractive sector. However, the Canadian critical raw materials strategy contains an inherent conflict of interest. On one hand, the government and the private sector are committing to deeper cooperation with Indigenous communities and to a fair, transparent, and open consultation process. On the other hand, the window of opportunity for Canada to assert its global leadership in critical raw material supply chains is closing quickly. Consequently, there is concern that Indigenous rights may ultimately be compromised in favour of the government's ambitious plans to rapidly scale up the mining sector. Early signs of this conflict are already visible in the Ring of Fire, which is a particularly resource-rich area in northern Ontario inhabited by many Indigenous communities. A 2023 law aimed at expediting approval processes for the development of new mines and their infrastructure is being criticised for undermining environmental impact assessments and insufficiently involving Indigenous communities. Indeed, the number of preliminary mining licences in the Ring of Fire increased by nearly 30 per cent last year without there being any consultations with the affected communities. Furthermore, the UN High Commissioner for Human Rights (OHCHR) recently reprimanded the Canadian government for inadequately protecting Indigenous rights to clean water and sanitation, particularly in mining areas.

European-Canadian cooperation in global raw material supply chains – a "perfect match"?

The third goal of Canada's critical raw materials strategy focuses on strengthening cooperation with like-minded partners, in the spirit of friendshoring.

Together with its allies, Canada aims to diversify its material supply chains away from China and find "collective responses" to challenges such as price manipulations and overproduction by non-like-minded states. In 2021, the EU entered its first-ever raw material partnership with Canada. Since then, seven joint projects have been realised, including private-sector investments in battery production, battery recycling, and lithium processing. In addition, both Canada and the EU are members of the Minerals Security Partnership (MSP), a US-initiated multilateral forum for coordinating and promoting joint international raw material projects.

The goals set out by the EU in the CRMA for securing raw material supplies can only be achieved through imports from resource-rich countries such as Canada. The Canadian mining industry offers numerous opportunities for collaboration. Its focus on the raw materials needed for the production of green technologies, semiconductors, and permanent magnets aligns well with the industrial sectors targeted by the European Net-Zero Industry Act. For Canada, the EU represents an attractive sales market and an important landscape for investors. Already, the EU is Canada's second-largest export market for mineral and metal raw materials. Therefore, enhanced cooperation with Canada in the raw materials sector and downstream supply chains would benefit both parties and should focus on the following four key areas.

Integration of raw material supply chains

The goals of the CRMA and the Canadian critical raw materials strategy require that (mining) companies relocate their opera-

tions more towards European and North American industrial states. These companies face the challenge of bearing the additional costs arising from higher wages and energy prices as well as increasing ESG requirements while compensating for the politically induced decline in Chinese investments. Neither the Canadian subsidies nor the raw material funds that some EU member states plan to establish will be able to close this funding gap in the short term. The current political debate on decoupling and de-risking should not ignore this reality. Even though awareness of the risks of high supply chain dependencies and the importance of geopolitics is also increasing within the industry, companies continue to primarily focus on economic factors and the question of whether there is a business case for them or not. One example is the German-Canadian startup Rock Tech Lithium, which, in addition to its raw material projects in Canada and Germany, recently signed a raw material supply agreement with a major Chinese company (while at the same time being denied funding for the construction of a lithium processing plant by the German Ministry for Economic Affairs due to a lack of funds).

If the EU and Canada, along with other members of the MSP, aim to diversify strategic raw material supply chains and build capacities outside of China, they must also be willing to bear the additional costs of this security investment. The EU should therefore signal its determination to invest more in building joint supply chains. To this end, it should complement its CRMA with its own financial incentives for private-sector investments, for example through a raw materials fund at the EU level. When selecting so-called strategic projects, the focus should be on junior mining companies, as they are the ones facing particularly high hurdles in obtaining the necessary capital due to the number of risks involved in exploration projects. At the same time, projects aimed at increasing the capacities for processing critical raw materials should especially be promoted, as this is where the greatest dependencies and supply risks exist for both the EU and Canada.

Given that the EU has not yet been able to conclude its negotiations with the US on a separate raw materials agreement, deepening cooperation with Canada makes even more sense. The country is already a reliable partner of the EU. Even after a possible change of government, it will prioritise cooperation with the EU in the raw materials sector; in addition, the Canadian government is far less aggressive than the US in the competition for critical raw materials and more open to cooperation in key supply chains. The EU-Canada Comprehensive Economic and Trade Agreement (CETA) provides a good basis for stronger integration, both in the raw materials sector and in downstream supply chains. As a resource-rich country with expertise in the mining sector and affordable and predominantly green energy, Canada can primarily strengthen the upstream and midstream stages of these supply chains. The EU, with its established chemical, automotive, and steel industries, could easily connect to the midstream and downstream supply chains.

To identify potential synergies and points of connection, the EU should first boost coordination among its member states, both with regard to their respective needs for critical raw materials and in terms of cooperation opportunities between European and Canadian companies. In doing so, the member states can rely on established networks such as international chambers of commerce as well as bilateral associations such as the German-Canadian Association.

Collaboration in international raw material projects

Despite the EU's reliance on critical raw material imports from outside Europe, European companies continue to hesitate when it comes to investing in raw material projects in third countries. This reluctance is partly due to the fact that few international mining companies are based in the

EU, and European companies typically act as end-users of the supply chain. Additionally, many European firms shy away from investments in risky raw material projects, especially in structurally weaker regions, where meeting ESG standards often poses greater challenges.

In contrast, Canadian mining companies are active in nearly 100 countries worldwide. Many of these countries have also established raw material partnerships with the EU, including Zambia, the Democratic Republic of Congo, Chile, Argentina, Namibia, and most recently, Greenland. In Zambia, three of the seven largest mines are operated by Canadian mining corporations, and in the DR Congo, one of the world's largest copper mines is under Canadian ownership. Therefore, the EU should focus more on enhancing collaboration with Canadian companies in projects in third countries. Canada not only boasts a broad ecosystem of junior mining firms but has also established robust structures and local legal expertise in many of these countries.

Furthermore, integrating public- and private-sector financing opportunities from both sides would help to de-risk investments in raw material projects in these third countries, thereby reducing the barriers for participation by European companies. Forums such as the G7 Partnership for Global Infrastructure and Investment, the EU Critical Raw Materials Club, and the MSP Forum are suitable platforms for identifying and financing joint projects and networking among companies.

Promotion of international sustainability standards

The EU and Canada both commit to high sustainability standards in global raw material supply chains. On the one hand, this commitment is intended to serve as a competitive advantage for industrialised countries of the Global North vis-à-vis actors such as China and Russia. On the other hand, it aims to signal to resource-rich countries of the Global South that, going forward, the extraction of critical raw materials should be conducted in a more environmentally friendly manner while bringing them more economic and social benefits. Implementing this in practice will not be easy, given the previously mentioned conflict of interest between speed and due diligence. However, if the EU and Canada fail to uphold their self-imposed sustainability goals, they risk not only harming the environment and the rights of Indigenous communities, but also losing credibility in producer countries of the Global South.

Therefore, the EU and Canada should jointly work towards turning intentions into concrete action and agree on measurable instruments for enhancing sustainability and corporate responsibility in global raw material supply chains. Although Canada has made progress in "sustainabilising" its mining sector domestically, Canadian companies operating in third countries are frequently accused of human rights violations and environmental abuses, particularly towards Indigenous and local communities. Especially when cooperating with Canadian firms in third countries, the EU must make adherence to high sustainability standards a prerequisite. Drawing from the recently adopted EU Corporate Sustainability Due Diligence Directive (CSDDD), the EU should advocate for binding due diligence obligations in global supply chains among all of its MSP partners.

Strengthening technical and scientific cooperation

As a resource-rich country with a long mining tradition, Canada possesses extensive experience and qualified expertise in the mining industry. At the same time, the resource sector is currently undergoing fundamental changes, especially with regard to advancing digitisation, automation, and decarbonisation in mining. To drive and actively shape these developments, the EU should enhance technical cooperation, both among its member states and with Canada. This effort should encom-

pass everything from raw material exploration and research into new and more efficient extraction methods to the advancement of technologies for extracting resources from waste streams and recycling. Canada's inclusion in the new Horizon Europe programme should specifically be utilised for joint research projects in the resource sector. Likewise, bilateral cooperation formats such as the German-Canadian Battery Material Collaboration should be expanded to also include the exploration and extraction of raw materials. Concurrently, exchanges between geological services and education institutions should be intensified.

Moreover, the EU can benefit from Canada's extensive mining experience in improving its own supply of critical raw materials: The objectives outlined in the CRMA foresee a significant expansion of intra-European mining. Particularly in the development of new mines, resistance from civil society and affected communities is to be expected, as is already evident in Spain and Portugal. The involvement of local communities in resource projects is a central component of Canada's resource strategy. Scientific insights into benefit-sharing frameworks and the involvement of Indigenous communities in Canada can provide important guidance and incentives for EU member states in dealing with their own populations. Therefore, the targeted promotion of exchanges with Canadian science, business, and representatives of Indigenous communities on cooperation in the resource sector is prudent.

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