Nunavik Inuit and Raglan Mine: New approaches to closure planning (*isulinnisanganut parnasimautiit*)

Arn Keeling [a1]

Vanessa Potvin [a]

with members of the Raglan Mine Closure Plan Subcommittee

[a] Memorial University of Newfoundland, Canada

Abstract

This article explores an experimental approach to mine closure planning and community participation that foregrounds the dialogue between technical and legal approaches to the mine and the knowledge and values of affected Indigenous communities. Located in the Inuit territory of Nunavik in the Canadian province of Québec, the Raglan Mine is the site of a unique collaborative approach to mine closure planning. Although the Raglan Mine is expected to remain operational for at least another 20 years, the Closure Plan Subcommittee was launched in March 2018 to establish and maintain a dialogue with the mine's Inuit partners about mine closure. The objective is "to integrate the traditional knowledge of the communities, but also to exchange the scientific knowledge of the technical experts and the mine." Drafted in collaboration with members of the Subcommittee, this article reviews the regulatory context for mine closure planning in Nunavik, including the lack of requirements for community-engaged planning or integration of socio-economic objectives. It also reviews the key milestones of the Subcommittee's work to date and assesses progress towards its objective of establishing culturally relevant closure goals and criteria, and the integration of Inuit knowledge, enterprise, and industry know-how in the closure planning process.

Key Words: Mine reclamation, mine remediation, mining, Indigenous rights, Inuit, Québec

Résumé

Cet article explore une approche expérimentale de planification de la fermeture des mines et de la participation communautaire qui souligne le dialogue entre les approches techniques et juridiques de la mine ainsi que les connaissances et valeurs des communautés autochtones affectées. Située dans le territoire inuit du Nunavik, dans la province canadienne du Québec, la Mine Raglan est le site d'une approche de planification de fermeture

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[1] Arn Keeling, Professor, Department of Geography, Memorial University of Newfoundland. Email: akeeling@mun.ca; Vanessa Potvin, Department of Geography, Memorial University of Newfoundland. Email: vanessanpotvin@gmail.com.
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unique et collaborative. Bien que la mine Raglan doive rester opérationnelle pendant au moins un autre 20 ans, le sous-comité du plan de fermeture a été lancé en mars 2018 pour établir et maintenir un dialogue avec les partenaires Inuits de la mine au sujet de sa fermeture et pour intégrer les connaissances traditionnelles des communautés. Son objectif est « d'intégrer les connaissances traditionnelles des communautés, mais aussi d'échanger les connaissances scientifiques des spécialistes techniques et de la mine. » Rédigé en collaboration avec les membres du sous-comité, ce texte examine le contexte réglementaire de la planification de la fermeture des mines au Nunavik, y compris l'absence d'exigences en matière de planification communautaire ou d'intégration d'objectifs socio-économiques. Il passe également en revue les étapes importantes du travail acomplis à date et évalue le progrès du sous-comité vers la réalisation de son objectif: établir des buts et des critères de fermeture culturellement pertinents et intégrer du savoir inuit, du savoir de l'entreprise et du savoir-faire de l'industrie dans le processus de planification de la fermeture.

Mots clés: Réclamation des mines, remédiation des mines, exploitation minière, droits autochtones, Inuits, Québec

Resumen

Este artículo explora un enfoque experimental para la planificación del cierre de minas y la participación comunitaria que establece en primer plano el diálogo entre los enfoques técnicos y legales de la mina y los conocimientos y valores de las comunidades indígenas afectadas. Ubicada en el territorio inuit de Nunavik, en la provincia canadiense de Quebec, la mina Raglan de Glencore es el sitio de un enfoque colaborativo único de la planificación del cierre de minas. Aunque se espera que la mina Raglan permanezca operativa durante al menos otros 20 años, en marzo del 2018 se puso en marcha el Subcomité del Plan de Cierre para establecer y mantener un diálogo con los socios inuit de la mina sobre el cierre de la mina e integrar los conocimientos tradicionales de las comunidades. El objetivo es "integrar los conocimientos tradicionales de las comunidades, pero también intercambiar los conocimientos científicos de los expertos técnicos y de la mina". Redactado en colaboración con miembros del Subcomité, este artículo examina el contexto regulatorio para la planificación del cierre de minas en Nunavik, incluida la falta de requisitos para la participación de la comunidad en la planificación o la integración de objetivos socioeconómicos. Este artículo también examina los principales hitos del trabajo del Subcomité hasta la fecha y evalúa el progreso hacia su objetivo de establecer metas y criterios de cierre culturalmente relevantes, así como la integración de los conocimientos, las empresas y los conocimientos de la industria inuit en el proceso de planificación del cierre.

Palabres claves: Recuperación de mina, remediación de mina, minería, derechos indígenas, Inuit, Quebec

1. Introduction

Mine closure, reclamation, and transition present a range of challenges and opportunities for mine-adjacent and impacted communities. These include environmental concerns around long-term landscape impacts and ecological damage (including contaminant remobilization); community and regional economic impacts from deindustrialization and job losses; and decisions about local infrastructure and future land uses of post-mining sites (Keenan & Holcombe, 2021; Everingham *et al.*, 2020; Bainton & Holcombe, 2018). Post-mining land use is most often conceptualized in technical terms around environmental remediation that exclude communities and land users themselves—especially Indigenous peoples (Beckett & Keeling, 2019). Accommodating multiple publics and working across the complexities of social-economic and cultural contexts is a particular challenge in reclamation planning (Alonzo *et al*., 2024). Yet, without engagement and agreement between stakeholders/rightsholders, mine closure and reclamation threaten to reproduce or deepen the injustices and harms associated with earlier phases of mineral development (Lim *et al*., 2024; Sandlos & Keeling, 2017).

Despite a growing recognition of the importance of community-engagement in closure and reclamation planning, there are few examples of how participation actually happens in different projects and jurisdictions, or over time (Measham *et al*. 2024; Holcombe *et al*. 2024). Recent international reviews of public participation in closure planning reveal a patchy continuum of public participation frameworks (Alonzo *et al*., 2024), ranging from public approval mechanisms for reclamation plans and success criteria, to low transparency and limited public involvement (Xavier *et al*., 2015). In Canada, community leaders and critics are increasingly pushing regulators and extractive companies alike to reframe what kinds of knowledge and expertise should be centered in reclamation practices and how extractive sites should be repaired, repurposed, and managed (Monosky &

Keeling, 2021a; Beckett, 2021; Joly *et al*., 2017). In their review of mine closure regulations and plans in the Canadian North, Monosky & Keeling (2021a) found community engagement at closure is often left to the discretion (and financial capacity) of the company, rather than compelled by regulators or local governments. Their study confirmed that companies focus mostly on the technical, engineering aspects of closure while social, cultural, economic, and historical issues are typically left out of the planning process. Indigenous knowledge and values from affected communities were rarely referenced, and discussions of community engagement methods frequently stated that engagement in closure planning would happen at a later date.

This article explores a unique case of mine closure and reclamation planning that goes beyond regulatory requirements for community engagement. Located in the Inuit territory of Nunavik in the Canadian province of Québec, the Raglan Mine is the site of a collaborative approach to long-term mine closure planning (Figure 1). Although Raglan Mine is expected to remain operational for another 20 years or longer, the Closure Plan Subcommittee (CPSC) was launched in March 2018 to establish and maintain a dialogue with the mine's Inuit partners about mine closure and integrate Inuit knowledge. This level of advance community engagement in closure planning is unusual in the Canadian industry (and, as noted, internationally), in spite of the increasing requirements for consultation, consent, and negotiated agreements with Indigenous communities whose lands host mining developments (Boirin-Fargues & Thériault, 2024; Horowitz *et al*., 2018; Papillon & Rodon, 2017). In that sense, the CPSC represents a kind of 'experiment' in closure planning, though one rooted very much in the pre-existing history and relationships between mining and communities in the territory.[2]

This article shares the origins and experience of the Subcommittee's dialogue around mine closure. It builds on the group's participation (through two of its members) in the virtual Indigenous Exchange Forum on Mine Closure in 2021, an event which gave rise to this Special Section of the *JPE*.[3] In recounting the activities and insights from the Subcommittee, the article draws on discussions and reflections of participants captured in meeting minutes and annual reports, to illuminate how the Subcommittee is meeting the challenge of mine closure planning.[4] Subcommittee member and researcher Arn Keeling (Memorial University of Newfoundland) drafted this text (with the support of former research student Vanessa Potvin), based on frequent discussions at Subcommittee meetings about the Indigenous Exchange Forum and follow-up publications. Article drafts also underwent review by Subcommittee members, including Inuit representatives. By and large, this article does not identify individual speakers or contributors, reflecting the Subcommittee's commitment to working together, even on matters of dispute or concern. This approach also reflects the reality of the group's changing membership over the past 5 years (on both the Inuit and industry sides), but also its commitment to continuity and mutual accountability in its process.

It is important to acknowledge at the outset the complicated relations between relatively small Inuit communities, the regional government, and mining companies in the region. These relations are inherently uneven, power-laden, and rooted in a history of colonialism and negative experiences with mining in Nunavik (Nungak, 2018; Carney, 2016). These historical experiences continue to impact Inuit communities and influence their engagement with mining today. The first section briefly reviews this context, noting the history of mining in the region, the origin of Nunavik as a political entity through modern land claims, and the negotiated agreements between Nunavik Inuit and Raglan Mine. While many Nunavimmiut[5] remain deeply concerned about the impacts of past and present mineral extraction on their territory (Brochu, 2024), through these agreements Inuit attempt to ensure these concerns are addressed as part of envisioning a sustainable post-mining future for their communities (Gallant, 2024; Papillon & Rodon, 2017).

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[2] We deploy the term "experiment" here in the open-ended sense used by authors such as Whatmore & Landström (2011), Lane *et al.* (2011), Waterton (2015, 2017), and Gross (2010, 2016), who describe participatory "experiments" in public participation and collaborative knowledge making which acknowledge both the uncertainty and the politics of making environmental knowledge.

[3] The full Indigenous Exchange Forum report is available as Holcombe *et al*. (2024).

[4] Meeting minutes are reviewed and verified by CPSC members at each subsequent meeting but are not publicly available. Bi-annual reports are available via https://www.glencore.ca/en/raglan/sustainability/environment/Closure-Plan-Subcommittee

[5] Nunavik Inuit.

What follows documents the processes and activities undertaken by the Subcommittee, highlighting the key issues raised by community members about mining and mine closure. Initially launched in response to concerns about tailings management, the Subcommittee has undertaken a range of initiatives and activities to enhance community understandings of and input into mine closure planning. Through its work, the Subcommittee provides a compelling example what can and should be expected of government and industry approaches to closure planning with mine-impacted communities.

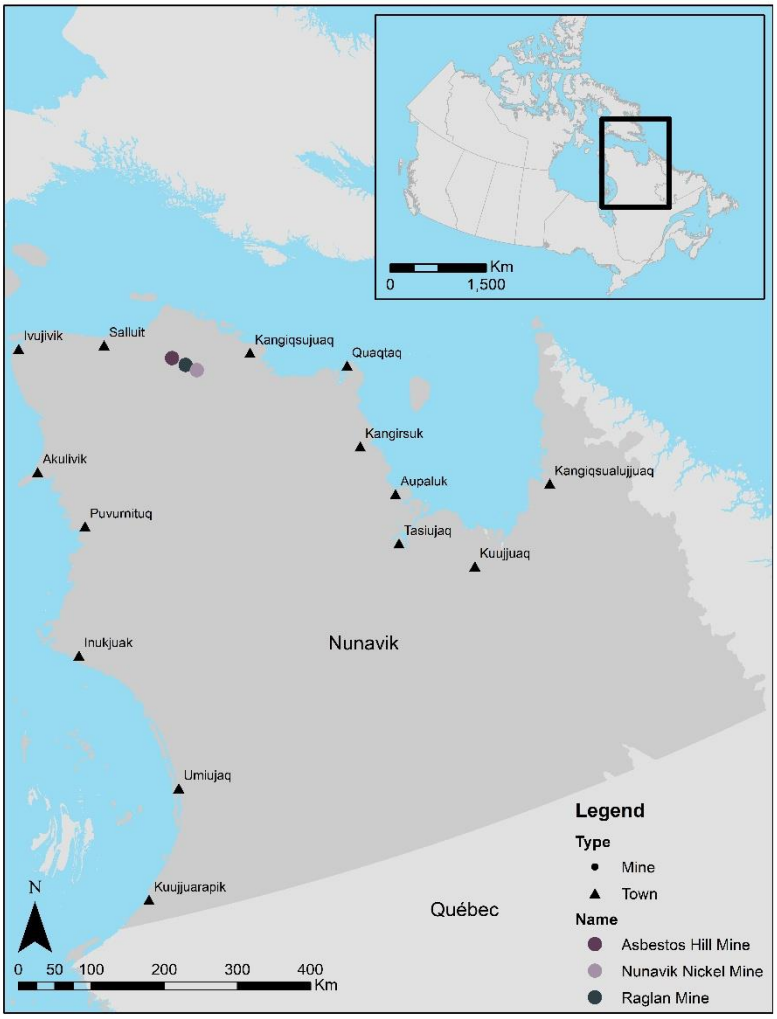

Figure 1: Nunavik communities and mine sites (Monosky 2020). Map produced in ArcGIS 10.7.1 using Statistics Canada (2016) data and contains information licensed under the Open Government License – Canada.

2. Nunavik and Inuit communities

The Inuit homeland of Nunavik covers one-third of the province of Québec, from the 55th parallel to the Hudson Strait coast (Figure 1). It is also one of four regions within Inuit Nunangat, the circumpolar Inuit homelands. Within Nunavik, the predominantly Inuit population resides in 14 coastal communities, the largest being the administrative center of Kuujjuaq. Like many Indigenous groups in Canada, the population of 14,000 is significantly younger than the Canadian average, with over 33 per cent under 15 years (Nunivaat, 2024).

Due to its challenging Arctic climate, small population, and lack of road connections, Nunavik remains remote from major settlements in the south of Québec. As a result, many Inuit regularly travel "down south" for medical care, work, or education, and some have permanently relocated outside the region.

As an Arctic region, Nunavik is characterized by extreme seasonality, with long, cold winters and relatively short, cool summers. Nevertheless, it also has a rich abundance of Arctic-adapted animal and plant species on the lands and in the waters of the territory. As well as using coastal resources and travel routes, the Inuit of Salluit and Kangiqsujuaq (the villages closest to the mine) traveled and camped extensively through the inland Katinniq area that now hosts the Raglan Mine site (Labrèche, 2003). They hunted caribou and (especially during the fur trade era) trapped Arctic fox, as well as fishing in lakes and rivers in the Deception River watershed. Abundant marine resources on the coast included seals, beluga whales, and walruses, as well as many pelagic fish and shellfish species.

These resources sustained Inuit land-based livelihood and culture for millennia before the arrival of European whalers and fur traders, and continues to support community subsistence and culture today as part of a mixed economy (Morantz, 2010). The land remains central to all aspects of Inuit culture, as a recent report on Nunavik society, culture, and economy described:

> Nunavik Inuit culture and identity comprises every element that defines us as a distinct people: Inuktitut language, the traditional way of life, the fabrication of clothing, the wildlife we depend upon for our food security, traditional knowledge and survival skills, visual and performance art, legends and myths, Inuit cosmology and values such as sharing. (Makivvik 2014, p. 13)

As Charlie Arngak, former mayor of Kangiqsujuaq and signatory of the Raglan Agreement (described below), stated: "The land has a name – Mikigiarniavik – an identity, a soul. This is why I decided to go and meet the president of [mining company] Falconbridge. We wanted to protect Mikigiarniavik, the communities' soul."

Inuit culture and self-determination came under increasing stress and pressure during and after the Second World War, as colonial relations with Euro-Canadian culture and governments deepened. Across Inuit homelands, missionary education and the growing role of federal and later provincial governments in Inuit social and cultural life had "devastating and long-lasting impacts on people's livelihoods, cultural vitality, self-esteem and both physical and mental health" during this period (Czyzewski *et al*., 2014, p. 12). Inuk author and leader Zebedee Nungak describes the assertion of Québec provincial government administrative responsibility over the region in the 1960s and large-scale resource developments in the early 1970s as "wrestling with colonialism on steroids" (Nungak, 2017).

Indigenous opposition to massive hydroelectric dam developments in Northern Québec in the 1970s led to the negotiation of the *James Bay and Northern Québec Agreement* (JBNQA), signed by the province of Québec with Cree and Inuit in 1975 (Hervé, 2017; Rodon, 2014). This modern treaty created Nunavik's current land regime, which recognizes and protects certain Inuit land rights, albeit to only a small portion of their historic territory and with the exclusion of subsurface rights. No mechanism was established to share royalties from resource development, and the province (rather than Inuit) continued to exercise jurisdiction over most of the territory's natural resources, including mineral rights (Rodon 2014).

In spite of industry interest in Nunavik mineral resources, dating back to the 1930s, only three mines have operated in the region—the now abandoned Asbestos Hill (Purtuniq) Mine (1972–1984) and two currently operating nickel mines, Raglan Mine (1997–present, owned by Glencore) and Nunavik Nickel (2012–present, operated by Canadian Royalties) (Philie, 2013). The first to operate, the Asbestos Hill Mine, pre-dated the creation of Nunavik's contemporary governance landscape, as well as modern environmental and mining regulations. As the region's first major industrial operation, Asbestos Hill employed mainly a fly-in/fly-out workforce from southern Quebec, although some Inuit from nearby communities also worked at the site (Carney, 2016). Weak provincial regulations resulted in widespread contamination at the mine site and the

nearby Deception Bay (Salluit Aippangat) port, with virtually no remediation undertaken after the mine's closure in 1984 (Poirier & Brooke, 2000, Carney, 2016). After decades of inactivity, and amidst continued Inuit concerns about safety and contamination, the site (located near the Raglan Mine site) was finally put on the provincial list of abandoned sites in 2019 (MERN, 2020).

This negative history and political ecology of natural resource exploitation shapes the concerns of Nunavik Inuit today. As the *Parnasimautik* report on Nunavik lands and resources noted, "wealth [has been] extracted from Nunavik without a concomitant, concurrent and reciprocal improvement of living conditions for Nunavik Inuit and their communities" (Makivvik, 2014: 183). While many Nunavimmiut welcome economic and employment opportunities in mining, they also stress the importance of ensuring environmental quality and the protection of traditional wildlife harvesting and other land-based activities (Makivvik, 2014: 144-145).

Current mining operations in Nunavik are governed within a complex system that includes multiple regional authorities with differing but sometimes overlapping mandates, two impact and benefit agreements (IBAs), and a land claims agreement that provides some special rights to Nunavimmiut on some of their territory. At the regional level, the JBNQA created a set of regional governance bodies, like Makivvik Corporation (the territory's Inuit political body), the Kativik Regional Government, the Kativik Environmental Quality Commission (KEQC), and the Kativik Environmental Advisory Committee (KEAC), which are a mix of "public" and Inuit governance organizations (Rodon, 2014, Fabbi *et al*., 2017). These bodies, all of which have Inuit representatives, have varying roles in regulating mining and ensuring Inuit participation in decision-making (Figure 2). Only the KEQC has a defined role in closure planning through the regional socioeconomic and environmental impact assessment (SEIA) process and its regular review of closure plans (Monosky & Keeling, 2021b). These regional governance bodies are nested within the provincial regulatory system of Québec, which has its own complicated set of governance arrangements and political agendas related to resource development. Québec has final decision-making authority for all aspects of mineral development in Nunavik, including mine closure, and provincial ministries are responsible for governing how mine closure happens, what mine closure plans must contain, and what the standards are for remediation. Revised and updated closure plans must be submitted to the provincial government for review and approval every five years leading up to the final closure (MERN, 2017).

Negotiated agreements such as IBAs are also central to the relations between Inuit communities and mine operators. Such agreements, increasingly common in Canada, are bilateral agreements between companies and Indigenous representatives that address varying issues such as profit sharing, procurement, training and employment objectives, and environmental objectives (Rodon *et al*., 2018; Thériault *et al*., 2022). Canadian federal and provincial governments are not typically signatories, although (as in this case) Indigenous self-government organizations often are. Signed in 1995, the Raglan Agreement was the first such agreement of its kind in Canada, and included Société Minière Raglan du Québec Limitée (Raglan Mine), Makivvik Corporation, and the northern villages of Salluit and Kangiqsujuaq, the settlements closest to the mine (Rodon & Lévesque, 2015). The provisions of the agreement, including profit-sharing as well as protections for sacred sites, employment and training opportunities, Inuit-focused human resource strategies, community programs, and environmental monitoring requirements, are implemented through the Raglan Committee, including representatives of all signatories. As discussed below, this committee also provides a forum to address concerns and policies related to mine operations—including mine closure and reclamation.

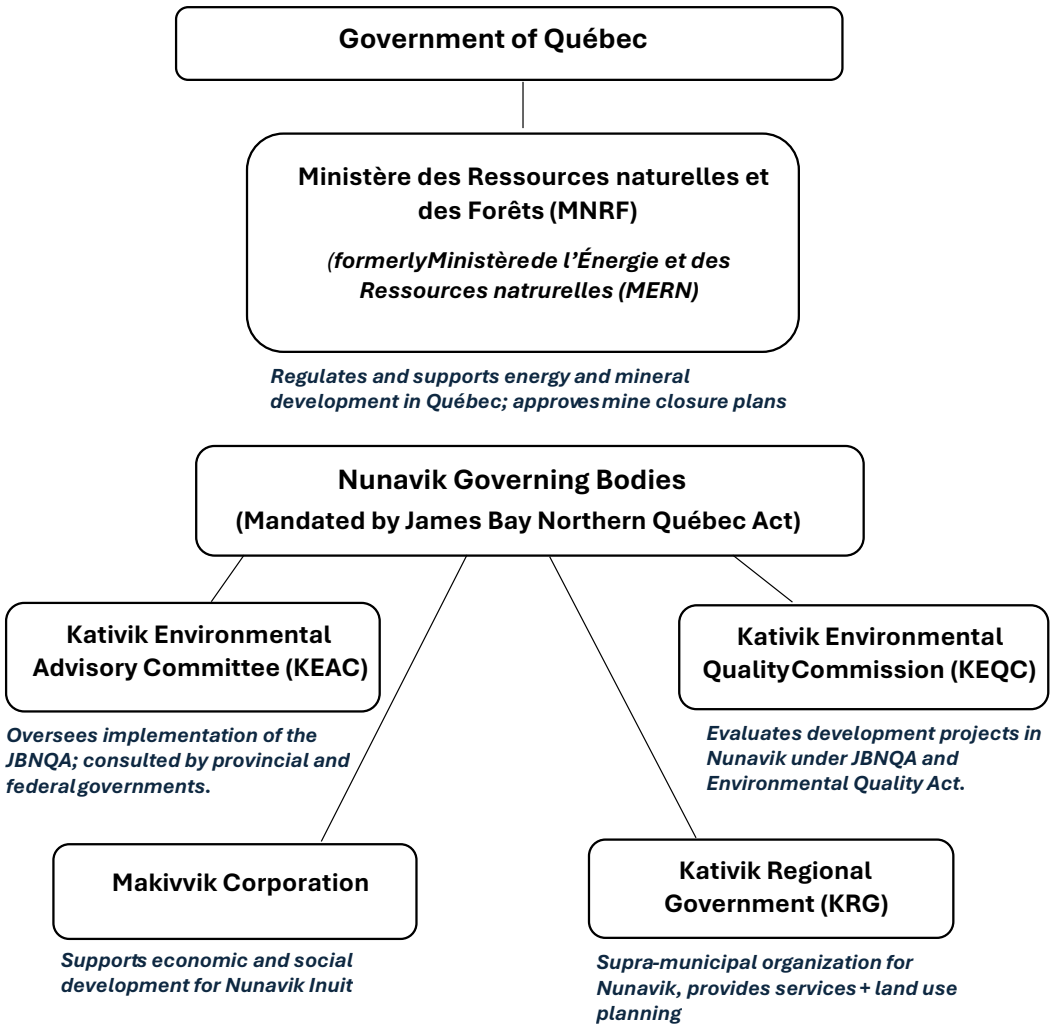

Figure 2: Simplified organizational chart of Nunavik resource regulatory system (after Monosky & Keeling 2021b)

3. Origins and activities of the Closure Plan Subcommittee

Originally established by Falconbridge Ltd., the Raglan Mine is operated by Glencore Canada[6] producing primarily nickel concentrate for international markets. The mine property, including both open pit and underground mines, covers roughly 70 km from west to east and over 10 km from north to south (Figure 3). The mine's operations and infrastructure also entail a private airstrip, a network of privately maintained service roads, and the port facility some 90 km away from the mine site on the Ungava Coast at Salluit Aippangat (Deception Bay), which was repurposed from the Asbestos Hill operation. Commercial nickel concentrate production began in 1997 and, with a recent expansion of operations, Raglan Mine is expected to remain operational until 2041.

[6] Operated by Falconbridge from 1997-2006, the mine was acquired by Xstrata in 2006, which subsequently merged with Glencore in 2013.

Figure 3: Raglan Mine production and residential complex at Katinniq. Source: Raglan Mine

The creation of the mine closure subcommittee was sparked by Inuit concerns about long-term tailings management at the site expressed at public forums dating back to 2014. As one founding member of the subcommittee recalls, most community members and leaders were previously unaware and uninvolved in the mine's reclamation and closure plans. To that point, Raglan Mine had relied on a technical advisory committee to formulate and review plans for tailings management and eventual reclamation plans (which are submitted for approval by provincial regulators every five years). These discussions underscored the necessity of establishing a dedicated committee to integrate the expertise of Inuit partners while prioritizing their concerns regarding restoration and tailings management. In response, in 2018 the Raglan Committee committed to establishing a subcommittee "to improve the [closure] concept alongside its Inuit partners and work towards an integrated closure plan that is both environmentally and socially acceptable" (Closure Plan Subcommittee, 2020). Membership of the subcommittee includes mine employees responsible for environment and community relations, representatives from the Inuit partner communities and Makivvik Corporation, as well as a technical expert in mine site reclamation and tailings management from a Québec university. Through a research partnership with the NSERC TERRE-Net network,[7] a university researcher (the first author) with expertise on social aspects of mine closure planning was also invited to join the committee.

At its first meetings in 2018, the CPSC established its own terms of reference and objectives, including adopting a mission and vision statement. The vision statement reads:

[7] The Towards Environmentally Responsible Resource Extraction Network, funded through the National Sciences and Engineering Research Council, operated from 2016-2023 conducting research into leading edge mine waste management and reclamation practices.

> We will strive for a mine closure outcome that will safeguard Inuit land use, resources, and ecological integrity, create benefits and build capacities in Salluit and Kangiqsujuaq, and ensure the transfer of skills, knowledge, and values between Inuit and industry to ensure efficient, safe, and long-term solutions to closure and remediation at Raglan Mine (Closure Plan Subcommittee, 2020).

In addition to environmental and social priorities, the CPSC mission statement also included objectives to create "culturally relevant closure goals and criteria" through "the integration of Inuit knowledge, enterprise, and values…" (Closure Plan Subcommittee, 2020). These objectives, and the inclusion of cultural criteria and Inuit knowledge, far exceeded the regulatory requirements at the time of the Quebec government for community consultation and social objectives (MERN 2017), and in doing so set significant targets for the subcommittee. The group also adopted an objective to "keep the communities informed" about the closure plan review to ensure transparency and input from local community members in Salluit and Kangiqsujuaq.

4. Making sense of the mine closure plan

To meet its objectives, subcommittee members first needed to become familiar with the closure plan itself. Closure plans are the "instruction manuals" for how to decommission mine facilities, reclaim disturbed lands, and ensure the long-term prevention of pollution and health risks from the site (Monosky & Keeling 2021a). These documents run into hundreds of pages of often highly detailed and technical material related to mine operations, infrastructure, and proposed environmental reclamation activities. Mine closure plans are typically prepared by engineering consultants and mine staff, with little input from community members or partners. Rather, they are formatted to meet guidelines and criteria set by regulators (MERN 2017).

Thus, a central task for the subcommittee's first two years was a comprehensive, collaborative review of the existing mine closure plan, last filed in 2018, with the goal of identifying questions, concerns, and potential additions to the next version. During the review, it became immediately apparent how disconnected the closure plan was from Inuit communities, both as partners with the mine through the Raglan Agreement and as the traditional owners and users of the territory. The existing closure plan referenced no Inuit knowledge in its preparation nor in its evaluation of reclamation strategies or post-mining land use and objectives.

Through this process, the group also realized the need for greater clarity and understanding of often highly technical information about mining and mine reclamation. As Inuit subcommittee members noted, key mining terms and concepts in the closure plan were often undefined or not well-explained, meaning they struggled to understand the proposed reclamation actions and objectives (Minutes, 26 Feb 2019). During subcommittee meetings, held roughly quarterly, the independent technical expert provided guidance and information on the closure plan, but also led the creation of a "microprogram" on mine reclamation and waste management through Université du Québec en Abitibi-Témiscamingue, both to support subcommittee members' understanding but also as a "pilot" training for future community engagement around mine closure. In subsequent years, subcommittee members completed the microprogram training (MEIE1004 Mine Closure Plan) together as part of their meetings, which has enhanced the collective understanding of the technical aspects of mining and reclamation.

Recognizing the importance of language in developing mutual understanding and contributing Inuit knowledge to the closure plan, the CPSC held Inuktitut terminology workshops (Figure 4), bringing together Inuit language experts and subcommittee members to create and test translations of key mining terms through a structured process. The resulting terminology guide and glossary includes mining terms, definitions, Inuktitut translations (in Roman orthography and Inuktitut syllabics) and descriptions of the translated phrase. For instance, "closure" translates as "isulittuq" and "closure plan" as "isulinnisanganut parnasimauti." Although requiring ongoing revision to better reflect dialect differences, these terms will help inform and improve future community engagement in closure planning, and the operator also committed to integrate relevant Inuktitut terms into communications and signage at the mine.

Figure 4: Terminology workshop report, Raglan Mine Closure Subcommittee.

5. Building the Subcommittee's knowledge around mine closure

To further build the subcommittee's expertise, members also conducted site visits that provided opportunities for on-the-ground, practical learning about mine operations and reclamation. Subcommittee members joined scheduled community visits to the Raglan Mine site itself, touring underground and surface mines, the ore concentrator, shipping and transportation facilities at Salluit Aippangat (Deception Bay), and the tailings facility. At each site, members witnessed first-hand the mine operations and waste management practices and asked questions of employees. Visits to the "south" included a tour of Glencore transshipment dock in Québec City (where ore is loaded from a ship onto trains for further processing in Sudbury, Ontario), visits to research labs at the Université du Québec en Abitibi-Témiscamingue in Rouyn-Noranda, where studies on reclamation techniques at Raglan Mine are ongoing, and a tour of an abandoned mine site to observe how acidic tailings are being reclaimed. Where needed, the subcommittee also reaches out to other experts for relevant information, such as climate change projections and the experience of closure planning at other company mine sites.

To inform the development of social and community-defined mine closure objectives, the CPSC asked the social reclamation expert and students to present background information and conduct research on this understudied area. An initial community-focused study provided insight into the knowledge and priorities related to closure in the communities of Salluit and Kangiqsujuaq: a graduate student working with the subcommittee conducted interviews with community members around key priorities for closure planning (Potvin 2021). Although many of the interviewees were unaware of the mine closure process, they highlighted community concerns and interests around mitigating environmental impacts, the desire to maintain and/or repurpose infrastructure post-closure, and the desire for community engagement in closure planning.

Not surprisingly, community participants in this study identified environmental protection as central to any plan. As one Salluit community member noted, "The land itself is most important to protect—the land, the water, the lakes, the fish and the animals that are staying over there. There are three big lakes over there and all of them are very important for the community. Everybody hunts on those three lakes and [in] Deception Bay" (quoted in Potvin 2021). Another mentioned that "[the tailings] might be poison and I want that to be taken care of before [the company] leave" (Potvin 2021, 68), noting that "the environment is everybody's concern" (Potvin 2021, 69).

The results of this initial study highlighted the gap between closure planning regulations (which require the complete dismantling and removal of most infrastructure related to mining) and the right of first refusal for Inuit to acquire this infrastructure, which is guaranteed to communities as part of the Raglan Agreement. As one interviewee stated, "We have to make sure that we keep what can be kept that could benefit Inuit in this region and communities" (Potvin 2021: 58). These infrastructures include the central mine complex, roads, residential and industrial buildings, power plants and wind turbines, an airstrip, and port facilities, all of potential benefit for future development in the region. One participant argued that, post-closure the company should, "[h]and over an agreement of the usage of roads, make sure that these are and will be useable to be safe and maintained, for the communities to be able to use them for something else such as the parks … and of course there's hunting and fishing component to that, too" (Potvin, 2021: 72).

To better understand current mine closure regulation and practices elsewhere in Canada, another student conducted a detailed review of closure regulations and closure plans at active mines across the Canadian North, including Nunavik (Monosky & Keeling 2021a). The review of provincial and territorial mine closure regulations and guidelines highlighted the gaps in community engagement and planning for mitigation of the social impacts of mine closure. These gaps are common in mine closure policies and plans across Northern Canada, but the study also highlighted opportunities for improving these aspects through the Nunavik region's unique joint environmental review process, as well as the Nunavik Inuit Mining Policy (Monosky &Keeling 2021b). These results reaffirmed the CPSC's focus on continuing community engagement and developing social objectives for Raglan Mine's closure plan. Through these research activities, the CPSC also endorsed participation in the virtual Indigenous Exchange Form, hosted by the University of Queensland (Holcombe *et al.* 2022) that provided national and international information sharing opportunities as well as the impetus for this Special Section (see Introduction).

Although not formally part of its mandate, the CPSC also provided a forum to address the longstanding concerns about the abandoned Asbestos Hill (Purtuniq) mine. As noted above, the largely unreclaimed site sits not far from Raglan Mine, and has been a major safety concern for Inuit for decades. These concerns shape and inform Inuit perspectives on closure objectives at Raglan Mine. Recognizing these concerns, the CPSC invited Quebec government officials to provide the subcommittee regular updates on emerging plans for the site's reclamation (CPSC 2020, 2022). In 2023 the Ministère des Ressources Naturelles et Forêts (MRNF) established a liaison committee similar to the CPSC to guide and inform reclamation of this abandoned site.

Following these research and knowledge-building activities, to provide input into the existing closure plan, the CPSC turned its focus to a detailed review of the revised closure plan, which was filed with the Quebec government in late 2024. Subcommittee members provided input into the selection of the consulting firm selected to update the plan, and reviewed chapters as they became available, to ensure the incorporation of questions and concerns. Most notably, the subcommittee participated in developing and reviewing a new "social" chapter of the closure plan, holding planning workshops and discussions to define this new inclusion. In doing so, it became apparent how challenging it was to create a social impacts chapter "from scratch" on such short timelines—especially when forecasting social and economic changes 20 years into the future when the mine closes. For instance, while the Raglan Agreement collects some socio-economic monitoring data relating to employment, education, profit-sharing, and other socio-economic benefits and impacts, these are currently not linked to the potential impacts of closure. Rather than a complete socio-economic risk analysis and mitigation plan, the resulting social impact chapter focuses on identifying key considerations for Nunavimmiut in considering post-mining transitions. It also charts a course for future data analysis (through the mine's social monitoring plan) and community engagement related to both the risks and the opportunities related to mine closure.

6. Lessons, challenges and opportunities

As the Closure Plan Subcommittee finalized its review of the updated Raglan Mine closure plan before submission to the Québec government in 2024, there was an opportunity to reflect on the lessons, challenges, and opportunities of its first five years of work (summarized in Table 1). The local context was key: this uniquely collaborative process was enabled by the pre-existing relations between the mine, the communities, and Makivvik, as set out in the Raglan Agreement, largely outside of regulatory requirements for consultation. In other situations where there is no such agreement, or where relations are poor or even adversarial, the trust, partnership, and accountability needed to complete this work would be absent (Measham *et al.* 2024; Horowitz 2010). Although the mine's social, economic, and environmental effects on the region are not without controversy, the mine's continued presence since the 1990s and its commitments to Inuit parties under the Raglan Agreement provide a platform for long-term planning. Consistent and adequate resources, support, and commitment from the company and community representatives is vital, without which the sustained engagement over years required for learning and planning together would be impossible. In this sense, it is an approach that moves beyond mere consultation and "engagement" and towards modes of collaboration, co-design and partnership. It also, as one Inuk subcommittee member noted, reinforces Inuit expectations for meaningful collaboration and involvement with industry at all stages of operation, both now and in the future.

	Lessons and opportunities	**Challenges**
Process and governance	Collaboration, inclusion, partnership – clear vision Commitment and resources from company Technical support and training (microprogram, site visits, onboarding) Documentation of processes and integration of Inuit knowledge and values from "cultural researchers"	Timelines and volume of technical materials Turnover of members Multiple demands on members (especially Inuit members) Need to ensure continuity in long-term planning
Regulatory context	Inclusion of community and regional leaders and organizations (Makivvik, village Land Holding Corporations) 'Benchmarking' of best practices in mine closure planning	Absence of clear regulatory guidance framework for engagement Provincial authority remains paramount Some regional governance organisations could be more involved
Community involvement	Engagement and culturally inclusive process (terminology) Outreach and information sharing (3-D model, community liaisons)	Ensuring correct Inuktitut terminology and creating meaningful translations ('shared language' around mining and closure) Continuing to develop and address social aspects in closure plan, alongside environmental concerns Prioritizing infrastructure questions Need more and diverse modes to engage leaders and 'everyday' Inuit, especially youth *in the communities*

Table 1: Lessons, opportunities, and challenges of the collaborative closure planning process, as identified by CPSC members.

This 'experimental' process has not been without challenges. As noted, even in an atmosphere of goodwill, bringing together the worlds of mining and Inuit values presents challenges in communication and

mutual understanding. In this regard, openness and accountability are essential, and Subcommittee meetings were guided by a communication protocol of mutual respect and dialogue. Another challenge surrounded how to reconcile the busy schedules of the parties involved while meeting the timelines required to develop and submit the closure plan. Meetings invariably involve travel (often weather-disrupted) by subcommittee members who often wear many 'hats' with the company, community, or university. Long online meetings (especially during the COVID-19 pandemic) were difficult to sustain (including the technical and logistical issues of internet connection for northern participants).

A related and significant issue is turnover, both of mine staff and Inuit representatives. In response, and to ensure continuity and progress of the review, the Subcommittee developed 'onboarding' materials to help new members to get 'up to speed' on the process and to ensure they are well-integrated into the discussions. Ultimately, the question of turnover and communication is fundamental to long-term closure planning: subcommittee members recognize they will need to hand off this important work to future generations who will undertake the work of actually closing the mine, likely after 2040. To this end, documenting the process as it unfolds is important, and the CPSC has produced regular minutes, annual reports, and other communications that are accessible to community members through the company's community liaison offices.

Nevertheless, CPSC members reflected on the need to improve and deepen engagement with the wider community in the villages. While community radio reports and presentations at Raglan Mine's annual "environmental forums" held in the communities provided some outreach opportunities, subcommittee members understand the need to engage local leaders, Elders, and youth on closure issues on an ongoing basis. For instance, to better inform communities about the tailings and site reclamation process, the CPSC commissioned a large-scale, portable 3-D model of the tailings facility to be displayed in the communities. Inuit community liaisons working with the mine also attended CPSC meetings to follow the process and communicate information and resources back to community members. Still, there is a need to develop a shared language (in Inuktitut, but also technical) around mining and mine closure, to ensure community members can understand and evaluate the closure options. This includes developing community priorities and strategies around repurposing of infrastructure, economic planning, and environmental monitoring post-closure.

Looking ahead, the work of the closure plan subcommittee presents opportunities beyond simply the review of environmental reclamation plans. From the beginning, the Subcommittee regarded its work as 'benchmarking' for industry the engagement of Inuit community members and rightsholders in closure planning, a standard that can be set for other developments in the region (and elsewhere). Some evidence for this influence may be seen in the inclusion of social considerations in the newly revised Quebec government closure and reclamation planning guidelines (MNRF 2024) and the government's establishment of a community committee to guide the reclamation of the abandoned Asbestos Hill site. Closure planning can also help develop future partnership and economic opportunities for Inuit enterprises, for instance in reclamation activities, procurement, etc., as well as informing regional economic planning more broadly (for instance, through the repurposing of mined lands). By ensuring, as far as possible, the proper mitigation and remediation of mine-impacted lands, Inuit parties will enhance the self-governance of their territories and (as outlined in the Subcommittee mission statement) "maximize community benefits and contribute to a sustainable future for Salluit and Kangiqsujuaq…."[8]

7. Conclusion

In spite of growing industry attention to human rights, and "social performance," company-community relations in the global resource industries are frequently fraught, power-laden, and often highly inequitable (O'Faircheallaigh, 2023). This is true not only for development and operational phases, but also closure, reclamation, and mine site transitions (Kemp & Owen, 2018). Recent calls for further research on community

[8] The full mission statement reads, "The Raglan Mine Closure Sub-Committee is a partnership within the Raglan Agreement that aims to provide assurances for safe water, land and food resources, maximize community benefits, and contribute to a sustainable future for Salluit and Kangiqsujuaq by mitigating the negative social, economic and ecological impacts of mine closure. This will be realized through the creation of culturally relevant closure goals and criteria and the integration of Inuit knowledge, enterprise, and values, scientific expertise, and industry know-how." (Closure Plan Subcommittee, 2020).

participation in closure planning stress the need for case studies, exemplars, and frameworks for community- and rightsholder-engaged closure and reclamation planning (Alonzo *et al*., 2024; Measham *et al*., 2024). Although falling short of a comprehensive model or framework for closure planning, the experience of the Raglan Mine Closure Plan Subcommittee offers some insights into the conditions, processes and considerations for a more sustained and comprehensive role for local and Indigenous communities in closure planning.

Clearly, the local context and history of company-community relations is key to the establishment and process of the subcommittee. The existence of a negotiated agreement (the Raglan Agreement) provides the basis for the subcommittee's mandate and membership, including Inuit organizations. As rightsholders, not merely "stakeholders," Inuit parties can place greater demands for consultation and consent than many models of "participation" or "engagement" seen elsewhere (Alonzo *et al.*, 2024). Building on these relations, the subcommittee established a clear vision and process for collaboration on mine closure that has guided its activities. Regular tracking and reporting of progress and objectives ensures transparency, although the members see opportunities for even greater outreach and involvement of community members. Including independent experts and researchers to inform and help build the knowledge base of the subcommittee complements the efforts to integrate Inuit knowledge and values from the Inuit members, themselves serving as "cultural researchers" as one member put it. In turn, these formally trained "experts" in mine closure gain important insights from Inuit which directly informs closure planning options and strategies.

As an "experiment" in closure planning, the work of the CPSC offers an instructive example for how local and Indigenous communities can demand meaningful participation in shaping reclamation and post-mining futures. Although rooted in partnership and collaboration, this closure planning exercise does not (as Braun notes) "eliminate crucial geopolitical and political economic questions of who is compelled to experiment with new ways of knowing and producing novel socio-ecological forms, and who is in the position to make the demand" (Braun, 2015: 112). Nor does the approach assume full consensus within communities and the region over the benefits and challenges of mineral development. It is, however, a practical exercise in "making things public" (Whatmore & Landström, 2011) by slowing down technical knowledge to allow for the redistribution of expertise and opportunities for meaningful engagement around a question of ultimate importance for Inuit—protecting and reclaiming their land.

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