

Northwest Territories Mineral Sector Review and Benchmarking

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Disclaimer

The views expressed in this report are those of the author and do not necessarily represent the views of the GNWT.

The information contained in this report is the product of publicly available and internal GNWT documents as well as interviews carried out in the NWT and remotely from March to May 2017. Independent verification or audit of all statements was not possible, though verification was attempted where possible. As such, the author denies responsibility over assertions made by credible interviewees erroneously.

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Executive Summary

With the development of the Mineral Resources Act (MRA), the Northwest Territories (NWT) is facing a historic opportunity to redefine its relationship with an industry that has in many ways helped shape the North. Mining represents nearly 25 percent of the NWT's GDP and approximately 50 percent of its international and inter-provincial exports. Yet the industry directly employs less than 7 percent of the NWT workforce—about the same as the transportation, tourism or construction sectors and less than the education, health or retail sectors—and generates approximately 7 percent of fiscal revenues for the territory. What's more, due to its capital intensive nature and need for niche skills, mining has the lowest labour income multiplier of any industry in the NWT. This means that among all industries, the mining sector provides the smallest return per dollar of revenue for NWT residents.

The good news is that there is significant opportunity for the NWT to benefit more from mining. Due to the enormous revenues generated by the sector, mining can be a catalyst for development, as we have seen in Chile, Western Australia and Wyoming. Its positive impacts depend heavily on maximizing value from subsurface assets and transforming these assets into sustainable and diversified economic growth and well-being for NWT residents.

The territory faces unique challenges in accomplishing this transformation. Difficulties include the NWT's small population, large land mass, diffuse infrastructure, complex regulatory regime, and joint administrative responsibility with the Government of Canada.

In order to succeed, it is vital that the NWT get every stage of the “natural resource decision chain” right. First, the government and aboriginal groups can further encourage mineral exploration while setting aside some lands for alternative uses. Second, the government must collect a fair share of the value of mineral assets. While fiscal revenue generally represents the bulk of benefits accruing to a region, non-fiscal benefits such as jobs, skills, business development and new infrastructure can also be important. Third, these revenues ought to be managed for the well-being of current and future generations. Fourth, the government can invest these revenues in a manner that grows the economy sustainably and in a manner that reduces dependence on a volatile natural resource sector.

This report highlights areas where the GNWT has done well to maximize the benefits of mineral production and other where the government may be missing opportunities. The issues can be divided into those that help “grow the size of the pie”, meaning increase mineral production, and those that help “increase the share of the pie”, meaning shift a greater proportion of economic rents from company shareholders to NWT residents without substantially lowering investment. Both are important if the NWT is to benefit fully from mining.

Among the highest priority issues identified by the report are:

- **Conditions for Exploration:** Conditions for exclusive exploration rights already exist in the NWT, such as acquisition of a prospecting permit, physically staking the land according to the *Mining Regulations* or carrying out work and submitting geological data to the government. However many of the NWT's reputational challenges stem from conflicts at the exploration phase and much of the work done *in situ* is not reported. Among the list of reforms that could be considered are: Pre-screening of companies; greater consultation at the exploration stage;

requiring submission of all work done on claims and leases; and providing opportunities for communities to raise concerns about claims before they are recorded.

- **Incentives for Exploration:** Claims and leases can be held in good standing for decades with minimal work requirements, effectively locking up high-potential land and preventing greater exploration. Insufficient transport infrastructure prevents greater exploration. Also, current financial incentives for exploration companies are less efficient than alternatives. Many of these issues can be tackled relatively easily through regulatory reform. Addressing them could significantly increase exploration activity in the NWT.
- **Land Rights and Planning:** Regulatory uncertainty in areas where land claims are being negotiated discourages exploration and makes transitioning to the mine development phase in these areas risky for companies. Agreeing on land use plans could improve the business environment for mining companies and help prevent company-community conflict.
- **Intergovernmental Transfers from the Government of Canada:** Chapter 10 of the Devolution Agreement and the Territorial Financing Formula may represent two of the most critical impediments to greater benefit sharing for NWT residents. These rules cap the share of resource revenues that can be retained by the GNWT, creating an enormous disincentive to expand the sector and raise revenue, stifling support for mineral production, weakening both the territorial and federal tax bases, and reinforcing the GNWT's dependence on the Government of Canada.
- **Fiscal Regime and Revenue Collection:** The GNWT's generous deductions on royalties and corporate income taxes—along with the complexity in overseeing tax avoidance measures such as transfer pricing—result in some of the lowest 'government take' in the world for minerals. Low government take represents an implicit shift of economic rents from NWT residents to mostly foreign company shareholders. Appropriate fiscal regime reform could generate significantly more revenue for the territory without instigating a drop in mineral sector investment.
- **Government Equity Management:** Under current regulations, the GNWT has the right to purchase distressed mineral assets; it has done so in the case of Mactung. The purchase of equity provides an opportunity for the GNWT to profit from the mineral sector, particularly since returns on equity are not capped by the Devolution Agreement. However there is no clear government policy on criteria for equity purchases, equity management or profitable sale of assets.
- **Equitable Economic Growth and Diversification:** The NWT economy has shown anemic growth over the last decade; real GDP is nearly identical to what it was in 2002, despite billions of dollars in public investment and mining sector spending. The territory remains dependent on federal transfers and is exposed to commodity price-driven boom-bust cycles. The GNWT faces unique challenges in diversifying its economy, yet there is much the GNWT can do. Raising more revenues from the mining sector and channeling those funds into infrastructure, education and high-potential sectors could do much to improve the territory's economic prospects.

These are just some of the issues highlighted in the report. Its goal is to help frame and facilitate future discussion and consensus building on improvements to the mineral sector governance framework. As such, it is intended to serve as a starting point for additional policy discussions among NWT stakeholders and contribute to informing and outlining a comprehensive reform agenda, including development of the MRA.

Introduction

Background

The history of mining in the Northwest Territories (NWT) goes back hundreds or even thousands of years. There is evidence of longstanding First Nations and Inuit iron and copper mining along the Slave River and in the high arctic, along with quarrying along the Mackenzie River. Major commercial mineral production started with the Eldorado radium, uranium and silver mine in 1933. Since then, significant volumes of gold, tungsten, silver, zinc, copper, uranium, lead and nickel have been produced in the NWT.

Today, the NWT is best known as a diamond producer. Three mines are producing with two more (Snap Lake diamond mine and Cantung tungsten mine) having recently been placed on care and maintenance (see Table 1).

Table 1: Operating mines in the NWT as of April 2017

Project	Companies	Commodity	Production start	Fiscal revenue generated to date
Diavik	Rio Tinto (operator) – (60%), Dominion Diamond (40%)	Diamonds	2010	Unknown ¹
Ekati	Dominion Diamond (operator) (approx. 80%), Archon Minerals (approx. 20%)	Diamonds	1998	Unknown
Gahcho Kué	DeBeers (operator) (51%), Mountain Province Diamonds (49%)	Diamonds	2016	Unknown

Several more projects are in various phases of development. These include the Yellowknife Gold Project (gold), NICO (gold, copper, cobalt, bismuth), Nechalacho (rare earth metals), Prairie Creek (silver, zinc, lead, copper) and Courageous Lake (gold). Given moderate commodity prices and complications related to mine plans, it is unclear when or whether these projects will begin production.

What's more, the territory has huge natural resource potential, in fact greater subsurface mineral wealth than most countries. Notwithstanding scant geological information compared to many other

¹ Rio Tinto paid USD 63.2 million in tax, zero in 'royalties' and USD 382 thousand in fees on Diavik in 2015, for a total of USD 63.6 million. USD 23.6 million was paid to the GoC (covering iron ore projects as well); USD 29.7 million was paid to the GNWT in taxes; and USD 382 thousand was paid in fees. (Source: United Kingdom transparency disclosures). Yet these figures do not match GNWT budget figures stating that the GNWT collected only CDN 31.8 million in corporate income tax in 2015 from all companies.

jurisdictions—certainly compared to Canadian provinces—the GNWT has already identified potential commercial deposits of gold, diamonds, zinc, lead, silver and uranium.

Yet the territory faces unique challenges in managing this wealth and transforming subsurface resources into sustainable development. These difficulties include the NWT's small population, large land mass, diffuse infrastructure, complex and sometimes counterproductive regulatory regime, and joint administrative responsibility with the Government of Canada.

Territorial stakeholders often highlight two major challenges, namely lack of infrastructure (specifically power and transport) that would make mining projects viable, and a complex regulatory and political structure that makes transitioning from staking a claim to actual production difficult.

This report identifies several additional challenges, including relatively marginal revenue generation from producing mines; a Territorial Financing Formula that diverts resource revenue windfalls away from the NWT to the federal government and discourages reform; low 'government take'; vague economic growth and diversification plans; unclear regulations—especially related to environmental and social standards; lack of coordination between mineral regulatory agencies; and low levels of trust between civil society groups, aboriginal governments, mining companies, the territorial government and the federal government. Low levels of trust seem to have originated in a legacy of exploitation and environmental disasters—for example related to the Giant gold mine—however continue as a result of a perceived lack of respect for legal or traditional claims on land.

Partly in response to these challenges—though also due to commitments made during the devolution process—the GNWT has pledged to develop a stand-alone Mineral Resources Act (MRA). Currently, mineral sector activities are regulated through an array of legislation and regulation, notably the *Mining Regulations* (2014) under the *Northwest Territories Lands Act*, the *Mackenzie Valley Resource Management Act* (1998) and the Devolution Agreement.

The aim of this mineral sector review is to help identify priorities for reform as part of but not limited to the development of the MRA. This involves examining current practices in the NWT and benchmarking them against international good practices. As a secondary goal, this review aims to present policy options that may be appropriate in the NWT context, specifically in those areas which have been identified as having the potential to generate significant returns for NWT residents.

It is important to note that this review only covers mining on lands managed or co-managed by the GNWT. The review therefore does not address mining regulation of private lands belonging to aboriginal governments on settled claim regions nor regulation of federal Crown lands.

Methodology

This report employs a modified version of the benchmarking framework developed by the Natural Resource Charter (NRC), but tailored to the Northwest Territories' context. The NRC itself is a compilation of lessons for transforming subsurface resource wealth into sustainable development. It was authored by policymakers from around the world and drafted as set of tools and policy options to guide governments' and societies' use of non-renewable natural resources.²

² The Natural Resource Charter can be found at <http://resourcegovernance.org/analysis-tools/publications/natural-resource-charter-2nd-ed>.

The NRC covers all elements of the “natural resource decision chain”, the series of decisions policymakers face when trying to convert natural resources into development and maximize the benefits from extraction for their residents. In other words, it is the list of steps needed to turn natural resource wealth into well-being. The motivation for outlining these decisions is that many resource-rich regions often have trouble realizing the full development potential of their resource wealth. Articulating the decisions helps governments understand where they can affect change.³

The natural resource decision chain is illustrated in Figure 1. The process begins with the decision of whether to extract and includes the questions of how to allocate rights to extract, how to generate revenues and other benefits, and how to manage the revenue from extraction.

Figure 1: Natural Resource Decision Chain



The benchmarking framework is a tool for benchmarking a government’s management of its resource wealth and resource revenues against global good practices. The benchmarking questions—derived from academic research and practitioner experiences as described in the NRC and elsewhere—do not set a common standard for every jurisdiction, but rather help guide the consideration of different policy options. They also present the universe of options available to policymakers.

While not all questions in the NRC benchmarking framework are relevant for the NWT—for instance, the questions on state-owned companies are immaterial since the NWT does not have a state-owned mining company—this report draws on the majority to evaluate the government’s mineral policy framework. Specifically, this report asks the following broad questions, sometimes drawing directly from the NRC benchmarking framework:⁴

Sectoral strategy and public engagement

1. Does the government have an inclusive and comprehensive strategy for the management of mineral resources?
2. Has the government clearly identified the territory’s resource endowment, who owns it, and the positive and negative impacts of extraction?
3. Does the government ensure that resource management is sufficiently transparent for all actors to effectively understand and scrutinize decision making and its implications?
4. Does the government adequately monitor operations across mineral project life cycles?
5. Does the government ensure that there are good working relationships between all stakeholders within affected communities?

³ NRG (2015) *The Natural Resource Charter Decision Chain*. Online: http://www.resourcegovernance.org/sites/default/files/nrgi_NRC-Decision-Chain.pdf.

⁴ These questions are drawn from the Natural Resource Charter Benchmarking Framework which can be found at <http://resourcegovernance.org/analysis-tools/tools/natural-resource-charter-benchmarking-framework>.

Mineral tenure and company responsibilities

6. Does the government adequately prepare before allocating exploration or production rights?
7. Does the government allocate exploration and production rights to competent and law-abiding companies, and in a way that maximizes value for the territory?
8. Do mining companies work transparently and seek to build trust with all stakeholders related to its activities, and act with honesty and integrity?
9. Do mining companies work to maximize the potential benefits and minimize the social and environmental costs associated with resource extraction?

Fiscal regime

10. Does the fiscal regime secure a reasonable return for the government while still attracting sufficient investment?
11. Does the legal framework of fiscal terms provide sufficient accountability to citizens, stability for investors and flexibility to respond to changing circumstances?
12. Do government authorities collect the full value of taxes and other payments owed to the state?
13. Does the government have a clear policy on investing directly in mining projects and managing state equity in mining projects?

Mitigation of negative impacts and benefit sharing

14. Does the government maintain an effective system for assessing the potential impacts of resource projects?
15. Does the government mitigate the environmental, social and health costs of resource projects?
16. Does the government help affected communities to benefit from resource projects?
17. Does the government ensure that domestic businesses and workers have the opportunity and capacity to operate in the extractive sector?
18. Does the government ensure that mineral industry infrastructure is open to third parties wherever economically feasible?
19. Does the government take the opportunity to encourage value-added in the mineral sector, when the opportunity costs of doing so are less than the benefits?

Revenue and expenditure management

20. Is the government's spending and borrowing fiscally sustainable, given that non-renewable natural resources are finite?
21. Does the government adequately manage the rate of spending in the domestic economy?
22. Is government spending independent of short-term changes in revenues?
23. Does the government distribute resource revenues in an accountable and transparent manner, and avoid off-budget transfers and spending?

Economic diversification strategy

24. Is there a multi-year economic growth and diversification plan that is well-defined and fully costed?
25. Does annual public spending align with strategic plans?

Research was based on a review of legislation, regulation, internal government documents, secondary materials and in-person interviews in Yellowknife and remotely. The questions above and others were asked of a number of NWT government and external stakeholders from March to May 2017, including:

- Department of Environment and Natural Resources
- Department of Finance
- Department of Industry, Tourism and Investment (including the Mining Recorder's Office and Northwest Territories Geosciences Survey (NTGS))
- Department of Infrastructure
- Department of Justice
- Department of Lands
- Diavik Diamond Mine
- K'atl'odeeche First Nation
- Northwest Territories Chamber of Mines
- Northwest Territory Métis Nation
- Wek'eezhii Land and Water Board

Structure

Each chapter is split into issues or decisions necessary for good resource governance. The issues are described and a short review of existing practice in the NWT is presented. The issues are then given a green-yellow-red grading which is intended to be interpreted as follows:

- **Green:** Existing practice meets international standards or is functioning sufficiently well to justify maintaining the *status quo*.
- **Yellow:** Improvements could be made to the regulatory regime that may generate returns for NWT residents, justifying consideration of alternative policies.
- **Red:** Existing practice does not meet international standards or significant gains could be made by adopting alternative policies.

A green rating is not meant to imply that improvements cannot be made. However it is meant to indicate that major changes may not yield significant returns given the political capital required to make those changes. Similarly, a red rating is not meant to imply that improvements must be made but rather than there may be significant returns to the residents of the NWT in considering policy changes.

With the goal of framing and facilitating future discussion and consensus building, each chapter also highlights priority areas as identified through research and stakeholder consultation. This report could serve as a starting point for further policy discussion among NWT stakeholders and contribute to informing and outlining a comprehensive reform agenda.

Sectoral Strategy and Accountability to the Public

Comprehensive Mineral Strategy and Public Consultation



Effective and sustainable resource management requires an inclusive and comprehensive strategy. Adopting a territorial strategy with adequate public consultation and input can help build consensus among stakeholders—including residents, government officials, legislators, aboriginal groups, civil society groups, the media, mining-affected communities, companies and investors—on key policies, which in turn can build trust, reduce tensions, and improve the investment environment. Most importantly, it can guard against a piecemeal approach to decision-making, which is particularly harmful for an industry where projects can last decades.

In many cases, mineral strategies are vision statements rather than true plans. A comprehensive mineral strategy requires that: (1) Roles and responsibilities of different government agencies in managing the mineral sector are well defined; (2) The plan contains clear goals, actions and timeline; and (3) The public is consulted and there is a critical mass of residents who buy into the strategy.

The NWT Mineral Development Strategy fulfills some of these criteria. The strategy contains clear goals, actions and timeline.⁵ Implementation was also tracked up until 2015.⁶ In brief, the strategy consists of (non-exclusive list):

- **Creating a competitive edge:** Strengthening geosciences information and promotion; financial incentives for exploration; reducing energy costs and improving roads.
- **Establishing a new regulatory environment for the NWT:** Streamlining and clarifying regulations; improving client services and government responsiveness.
- **Enhancing Aboriginal engagement and capacity:** Greater and more informed participation in the sector by aboriginal groups.
- **Promoting sustainability:** Completion of land use plans in different NWT regions; improving mine reclamation planning, execution, inspections and monitoring; improving environmental practices; improving impact mitigation; improving Socio-Economic Agreements (SEAs).
- **Enriching workforce development and public awareness:** Greater local content in mining operations; greater training to meet the mining sector's needs; improving education outcomes.

⁵ NWT Industry, Tourism and Investment (2013) *NWT Mineral Development Strategy*. Online: http://www.iti.gov.nt.ca/sites/www.iti.gov.nt.ca/files/nwt_mineral_development_strategy.pdf.

⁶ NWT Industry, Tourism and Investment (2015) *NWT Mineral Development Strategy: GNWT Implementation Plan 2014-2019*. Online: http://www.iti.gov.nt.ca/sites/www.iti.gov.nt.ca/files/gnwt_iti_6749_mds_implementation_plan_web_ready2_.pdf; NWT Industry, Tourism and Investment (2015) *NWT Mineral Development Strategy: GNWT Implementation Plan 2014-2015*. Online: http://www.iti.gov.nt.ca/sites/www.iti.gov.nt.ca/files/mineral_development_strategy_implementationplan.pdf.

According to the GNWT's implementation report, the government has made significant progress towards some of these objectives in the four short years since the strategy was developed. For example, the NWT Geological Survey is undertaking a modernization drive, expanding geological information and placing it online. Plans are underway to expand road access in the territory. And the Land and Water Boards have developed more and better guidance documents. Less progress has been made on improving client services, greater and more informed participation by aboriginal groups, completion of land plans, or improving benefits for mining affected communities through training, procurement, SEAs or Impact Benefit Agreements (IBAs).⁷

While the strategy provides a useful blueprint for improving the business environment for mining companies, in general, it focuses more on how the government can support the industry rather than: (1) Mutually-beneficial partnerships between the mining industry, government and the NWT private sector to grow the economy; (2) How the industry can support the NWT economy and livelihoods of residents; or (3) How the mineral sector in the NWT can be leveraged for economic diversification. This may reflect the goals of the document, namely to increase mineral investment rather than generate broader improvements in NWT residents' welfare, and the drafting process, which was led by ITI and the NWT Chamber of Mines rather than a broader set of government ministries and non-governmental organizations. That said, the NWT Economic Opportunities Strategy, a more wide-ranging document developed through broader consultation, also includes some elements found in the NWT Mineral Development Strategy, such as building the territory's geosciences data. However the Economic Opportunities Strategy is nowhere near as comprehensive as the Mineral Development Strategy when it comes to mining.

Several important elements of a comprehensive mineral development strategy, as highlighted in this report, are missing, including: a focus on revenue generation from the sector; business development in mining-affected communities, for instance through IBAs and SEAs; and sustainability in a broader sense than mine site sustainability, meaning leveraging the sector for broad-based economic growth and graduating from boom-bust economic cycles.

Furthermore, coal, salt and quarrying are absent from the documents. There is great potential for expansion of quarrying, for example, as highlighted in this report.

A government-wide vision or strategy for the role of the mineral sector in the NWT economy would help build consensus around improvements to mineral sector governance and broaden the policy options under consideration. It may also help to break down policymaking silos between and within ministries and regulatory bodies.

A government-wide strategy is more likely to be successful if it is the product of inclusive processes that are open and participatory. A plan debated in public will expose policy conflicts and inconsistencies sooner and render inevitable course corrections less disruptive. Wide and deep consultations provide the necessary understanding of issues that can be addressed in the planning process. Because the extraction process can last many generations, decisions made in the present must be robust to the cycles of governments. This calls for building understanding and consensus from a critical mass of

⁷ NWT Industry, Tourism and Investment (2015) *NWT Mineral Development Strategy Implementation: Progress Report April 1, 2014 – March 31, 2015*. Online: http://www.assembly.gov.nt.ca/sites/default/files/td_358-175.pdf.

informed citizens. Actors outside the government, including aboriginal groups, legislators, journalists, and civil society groups can become guardians of the strategy.

Wider and deeper consultation would also support the GNWT's goal of improving public awareness of mineral sector policy and would generate new policy ideas. Perhaps even more importantly, it would ensure that residents in mineral-rich regions are treated as true partners rather than stakeholders, which would be essential given that they are the ones most directly impacted by mining.

Geological Information Management



Developing a thorough knowledge base on mineral potential is crucial for informing decisions on rate of exploitation, land planning and encouraging investment. Investments in geological and geophysical surveys or gathering information from private sector explorers can draw investor attention to the territory.

The government has a duty to collect, store and analyze technical information arising from all exploration operations carried out under its jurisdiction. This information is key to building the government's geological understanding. This can serve to strengthen its negotiating position with investors as well as promote further exploration. To this end, the government should require that exploration companies provide all technical information in an understandable format and that the information be made publicly available, following a defined period of confidentiality to allow companies that have discovered commercially-viable deposits to transform a claim into a producing mine without undue interference from competitors.

The Northwest Territories Geological Survey (NTGS) serves as the NWT's principal source of public geosciences knowledge. The NTGS's main focus is on transforming geological information provided by exploration companies into data that is accurate and useable. Currently, the office is moving from paper to open source digital formats. While geological data gathered is confidential for three years, all other information is becoming easily available through NTGS's online portals, NT GoMap, NT GoData and Gateway. A physical library is also available for use by researchers. At the time of research, the NT GoMap was not working.

While the current system is functioning adequately, there are several regulatory improvements that could greatly improve the knowledge base on mineral potential. These include:

- **More comprehensive disclosure requirements to NTGS:** At the moment, exploration companies are only required to report work done up to a minimum threshold. Furthermore, work on leases is not reported. Reporting requirements could be changed in new legislation or regulation.
- **Verification of geological information:** In the past, NTGS verified company reports of work. At the moment, there is little incentive for companies to disclose accurate information, except that which is required of publicly traded companies under NI 43-101 securities disclosures. Independent verification of mineral exploration results and production could be reintroduced.
- **Government investment in geological surveys:** The NTGS relies on a \$1.5 - 3 million a year budget (including federal funding) and partnerships with academic institutions to improve the

geological knowledge base in areas with high potential but where the private sector has not stepped in. The GNWT or Government of Canada could consider additional funding, as was done in Canada and the US in the 19th century, Soviet countries in the 20th century and in much of Southeast Asia today.

- **Improvements to NTGS’s online portals:** NT GoMap is not the most user-friendly and does not describe other types of land use; the NTGS’s online portals’ usability could be greatly improved. The NTGS’s website could be incorporated or merged into the GNWT’s proposed land tenure website, currently only meant to cover land use rather than surface and sub-soil information.
- **Reforms to mineral lease system:** At present, there are no work requirements on leases to keep them in good standing, leaving significant land unexplored. Requiring companies to relinquish unused leases if there is no plan to develop them would allow other companies to explore and would improve access to geological information.

Land Rights and Planning



There are many reasons why a government may wish to set aside certain lands as ‘no-go’ zones for mineral exploration and production. These include environmental protection, social and cultural reasons or for alternative uses of the land. At the same time, mining companies require clarity in deciding where they can mine and under what conditions. Before allowing exploration activity, clear property rights should be established.

Land rights in the NWT are undeniably complex. Miners must navigate a patchwork of systems, including federal Crown lands, GNWT lands, Commissioner’s lands, titled areas with settled land claims, and areas where land claims are being negotiated. Different rules on prospecting, exploration and production often exist for each type of land.

Of specific concern to the mining industry is the uncertainty surrounding areas where land claims are being negotiated. While settled land claims have clearly delineated ‘no-go’ zones, unsettled claims are currently open to exploration but may be closed in the future, or may be subject to new rules in the future as determined by aboriginal governments. This uncertainty discourages exploration and makes transitioning to the mine development phase in areas with unsettled claims risky for companies.

A secondary concern of the mining industry is the perceived lack of clarity around exploration and production procedures for titled lands on settled claims. The Gwich’in Settlement Area, Sahtu Settlement Area and Inuvialuit Settlement Region have mineral claim staking, exploration and production procedures. Each has its own Land and Water Board that regulates mining activity and approves permits, though land use permits and water licenses may be referred to the Mackenzie Valley Environmental Impact Review Board. The Tłı̨chǫ Government, on the other hand, does not record new claims on its titled lands, though pre-existing recorded claims and mining leases are managed by the Wek’eezhii Land and Water Board. That said, these procedures are not well understood or communicated to mining companies.

A third concern is the overlapping jurisdiction over land management. For example, while both the Department of Lands and the Department of Executive and Indigenous Affairs negotiate land agreements, the Department of Justice hold land titles.

At present, approximately 28 percent of NWT lands have been withdrawn for conservation, land claim negotiations or other purposes. A further 14 percent of NWT lands have been designated as Settlement Lands, meaning that title is vested with an Aboriginal Organization pursuant to the terms of a Settlement Agreement (see Table 2 below). Mineral tenures currently occupy 1.33 percent of NWT territory. Of this amount, just over half (approximately 892,745 hectares) are areas of leases in good standing.

Table 2: Land Types in the NWT

Land Type	Area (km ²)	Percentage %
Settlement Lands	195,800	14.4%
Established Conservation Lands	150,900	11.1%
Lands withdrawn from land claim negotiations	152,400	11.2%
Land withdrawn for conservation purposes	48,800	3.4%
Land withdrawn other purposes	20,400	1.5%
Proposed Conservation Lands, no land withdrawal	11,800	0.9%
Non-designated Crown Lands	776,800	57.2%

Source: Mining Recorder’s Office, GNWT

The Mining Recorder’s Office—whose role includes issuing claim, lease and prospecting permits—has an easy-to-use Mineral Information Tenure System (MITS) and map viewer that allows the public to view claims on land. It also clearly shows which land may not be staked.

While the Mineral Tenure Map Viewer helps clarify land rights, public land use plans for the entire NWT are needed to encourage exploration and development across the territory. It may also be useful to develop a one-stop-shop for viewing mineral claims and leases, though this would require buy-in from different governments within the NWT. Finally, the NWT may wish to simplify land rights by making rules for territorial lands and commissioners’ lands more consistent.

Exploration and Production Rights and Responsibilities

Exploration Rights and Responsibilities



Governments must decide who should undertake mining activities and under what terms. Rights allocation systems differ drastically from country-to-country. While some countries, like Canada, allocate rights to explore and produce on a “first-come first-served” basis, many others allocate rights through bilateral negotiations or competitive bidding. In general, competitive bidding or negotiations are most useful where the geological potential is well-understood and valued, whereas “first-come first-served” can generate added incentive for exploration. The NWT mostly allocates rights through “first-

come first-serve” but does directly negotiate with companies on occasion, for example in search of a viable private sector partner on the Mactung project.

Whichever system is chosen, the rights allocation process should ensure that: (1) operating companies are competent and respectful of residents near mine sites; (2) allocation of permits, licenses or leases is fair and transparent; (3) exploration is encouraged; and (4) companies are abiding by reasonable obligations to protect the environment, mitigate the negative social impacts of mining activities and respect designated “no-go” zones.

Competence Requirements and Recording of Claims

The NWT currently does not pre-qualify or screen companies operating in the territory, either at the exploration or production phases. Prospecting permits, which provide the sole right to stake a claim in a given area, are available to any individual or company willing to pay the \$25 permit fee as outlined in the *Mining Regulations*. Prospecting permits are valid for 3-5 years (with possible 1 year extensions) as long as adequate work is submitted or a nominal fee or charge of \$0.25-1.00 per hectare is paid to the Mining Recorder. There is also no requirement for companies staking a claim to meet minimum good governance standards. Nor is there a requirement for the government to choose or approve a transfer of a claim or lease.

Based on interviews, historically, companies with prospecting permits have been the most prone to encountering social conflicts in the NWT, though conflicts have arisen in several circumstances. Exploration companies without adequate guidance or experience in the territory often run afoul of aboriginal rights or norms. This issue could be addressed through clearer guidance on “small c” consultations in the early phases of exploration, mandatory consultation training for exploration companies operating in the NWT, or pre-screening of companies for a history of community-company conflict or other problems such as poor waste disposal practices. Candidates for prospecting licenses can also be required to undertake a short training and cultural awareness course prior to receiving their license, as in Ontario. Transfers of claims or leases could also require ministerial approval, a policy also found in Ontario.

Another option raised in several interviews was a requirement for community approval after a claim is made but *prior* to it being recorded by the Mining Recorder’s Office. Communities would be given a reasonable but defined period of time to register any challenge to a claim. The legitimacy of the challenge would be assessed by the GNWT, following due process. This would prevent a situation where a company incurs exploration costs only to discover community opposition to the project, a situation which has already occurred in the NWT. It would also provide communities with a degree of agency over activities which would affect them, mitigating future conflicts.

Furthermore, some companies with claims or even subsurface leases do not have the financial or technical capabilities to carry out environmental testing or do adequate work on their sites. Pre-qualification or screening for financial resources, similar to the process homebuyers have to go through to purchase a home, and for technical know-how and experience may serve the territory well in encouraging exploration and for speeding up environmental assessments since good data provides a useful baseline.

Fairness and Transparency of Lease and Permit System

Allocation of subsurface leases is extremely transparent in the NWT. The Mineral Information Tenure System (MITS) and map viewer allows the public to view claims on land and lease and permit terms are found in the *Mineral Regulations*.

At the same time, improvements can be made to the mineral claim and lease system. The system needs to allow for the reduction in the size of claims and leases as exploration progresses in order to prevent too much of the resource base being located in any one lease or set of claims. At the moment, claims can be held for 10 years (plus any suspensions for justifiable cause) without taking them to subsurface lease. During this time, the holder of the claim must carry out work equivalent to approximately \$5 per hectare per year and submit this work to the government, though up to four contiguous claims can be grouped to reduce even this negligible requirement.

Interestingly, these rules only apply to claims issued since 1977. Claims made prior to that year remain active until the anniversary date on record. While no further work on these claims is allowed without taking them to lease, individuals and companies can hold claims over 100 years old without surrendering them to others who may wish to explore that area.

Subsurface leases can be held for 21 years with unlimited additional 21 year renewals. No work is required on leases. In other words, land with valuable geological information can be held by one party for an unlimited period without developing a mine. As a result, large amounts of prospective geology are controlled by single companies (e.g. Nighthawk Gold Corp.; Terrax Minerals), some with limited financial capacity to develop mines. And the only information made available to the government about mine plans are through securities' disclosures for publicly traded companies and information provided to the Land and Water Boards.

Several interviewees referred to claim and lease rules as "archaic", particularly the grouping rules, fees and physical staking. The term of claims and leases is also somewhat long compared to other Canadian jurisdictions and highly unusual globally. In British Columbia, the Yukon and Quebec, for example, claims have a term of 1-2 years, though lease terms are similar to the NWT. In Guinea, a country with a new state-of-the-art mining code, exploration permits are granted for 3 years with a maximum 2 year extension. Operating permits are granted for 15 years with unlimited 5 year renewals conditional on work requirements having been met, including implementation of a social and environmental impact assessment, implementation of a community development plan, mine development and some production. The GNWT could also consider requiring greater information when leases are allocated, for instance preliminary mine plans and social and environmental mitigation plans, and "use-it-or-lose-it" provisions whereby leases are withdrawn if no significant work is carried out within a specified time. Finally, rules could be changed to allow for a reduction in size of leases before the 21 year tenure expires.

In addition to reviewing the claim and lease terms, the GNWT could review the staking process. Under the *Mining Regulations*, claims must be staked by hand in the field. Given modern surveying technologies and the existence of an online cadastre, staking could easily be transferred online by using a metric grid. This would reduce the tax deductible costs associated with staking and could encourage exploration by expediting the claims process.

Exploration Incentives

As has been stated elsewhere, the NWT lags behind other Canadian jurisdictions in exploration investment, including other jurisdictions with underdeveloped transportation systems such as Nunavut and the Yukon. Whereas exploration investment has grown in most other jurisdictions over the last decade, it has remained steady at approximately \$100 million per year in the NWT. There is a particular dearth of investment in early stage exploration.⁸

Reputation has a big role to play. The Fraser Institute's Annual Survey of Mining Companies—which is based on company perceptions and therefore highly influenced by media reporting and public relations—has often ranked the NWT low on the list of Canadian jurisdictions in terms of investment attractiveness and policy perceptions. That said, the NWT is still in the top quartile globally in terms of investment attractiveness and mineral potential best practices, rising steadily, and in the top half globally in terms of policy perceptions. Uncertainty around land claims, regulatory bottlenecks and lack of infrastructure were identified as chief deterrents to investment.⁹ Clearer and improved messaging on the regulatory regime by the GNWT would significantly boost the score, encouraging exploration activity.

Exploration could be further promoted through improved infrastructure, specifically by building the seasonal overland road from Tibbitt to Contwoyto and extending the Mackenzie Valley Highway (see “Encouraging Investment Through Infrastructure Development” section below). Reform of the claims and leasing system, as described above, could also encourage exploration in the territory.

Interestingly, according to interviews, market data and company surveys, the lack of financing available to exploration companies does not appear to be a major deterrent to investment. Nonetheless, the mining industry has called for increased financial incentives for exploration companies. These incentives, while sometimes encouraging investment on the margins, can end up costing the government more in foregone revenue than the estimated net present value of increased exploration activities and subsequent mine development and production, especially given low government take in the territory (see “Fiscal Regime” below).

Proper program design is therefore essential. Exploration costs are already deducted from royalty payments and corporate income taxes. The NWT also already has a Mining Incentive Program (MIP) which provides up to \$25,000 for prospectors and up to \$200,000 for companies who propose new exploration projects or are already carrying out NWT mineral exploration work. The current program budget is \$1 million. While pure **grant-based programs** such as the MIP may promote exploration in certain cases, it is unclear whether exploration would still take place in these same areas without the government's subsidy. The design may therefore not be cost-effective for the GNWT compared to alternative programs. Other exploration incentive options include:

- **Exploration tax credits:** Tax credits up to a certain percentage of eligible expenses can be applied against personal or corporate income tax. The federal government's Mineral Exploration Tax Credit (METC), for example, allows 15 percent of eligible exploration expenses to be applied to federal income taxes, and can be carried back 3 years or carried forward 20 years. This is in

⁸ GNWT and NWT and Nunavut Chamber of Mines (2013) *Pathways to Mineral Development: Report of the Stakeholders Engagement Panel for the NWT Mineral Development Strategy*.

⁹ The Fraser Institute (2016) *Survey of Mining Companies 2016*. Online: <https://www.fraserinstitute.org/sites/default/files/survey-of-mining-companies-2016.pdf>.

addition to the Canadian Exploration Expense (CEE) deduction that allows investors to deduct 100 percent of exploration costs from their income derived from unrelated activities. While these types of incentives sometimes increase investment on the margins, evidence shows that the inducement effects are usually negligible compared to changes in commodity prices or reduced cost of exploration through infrastructure development. Moreover, exploration tax credits are also most often used as tax planning tools by high-income taxpayers. In the NWT, this would generally mean that the largest beneficiaries would be investors residing outside the territory.

- **Modified exploration tax credits:** Similar to an exploration tax credit except that investors must be resident in the NWT to benefit. While a modified exploration tax credit would contribute to tax planning by wealthy NWT residents, more money would remain in the territory, the benefit of increased exploration activity might be exceeded by the loss in fiscal revenues from the program.
- **Exploration loans:** The government can provide access to credit for exploration companies operating in the NWT at market or even concessional rates. This would require establishing a special fund or development bank.
- **Government equity:** The government can reduce the cost of exploration by becoming an investor itself in exploration activity, for example by taking a 1 to 49 percent equity share in an exploration company operating in the territory. The GNWT already holds equity in mining at least one mining project (Mactung) and government equity in mining activities is fairly common globally, for instance in Quebec and East Asia.¹⁰ The cost of such a program could be similar to existing programs however the government would share in the upside potential and rather than just provide a subsidy.

Company obligations in the exploration phase

There are currently no obligations on companies to consult with affected communities or aboriginal groups or mitigate environmental damage during the exploration phase, except in specific circumstances. Light exploration activities have no consultation or environmental impact mitigation requirements. Thus communities are often not provided the opportunity to informally share concerns about where exploration should or should not occur after a claim is made but before drilling begins, especially in regions without land plans.

Once exploration requires heavy drilling or other invasive activities, plans are required to be submitted to government. In these cases, information may be provided to the Department of Lands for acquisition of a surface lease. However, by the GNWT's admission, surface lease requirements are unclear; they are usually not required during the exploration phase, but have been requested in distinctive cases. They may also be also be provided to Land and Water Boards as part of a preliminary screening, essentially a light-touch environmental assessment, if there is public concern that exploration activities could cause social or environmental damage.

¹⁰ Quebec's Capital Mines Hydrocarbures fund has been endowed with \$1 billion to invest directly in resource projects. See <http://www.economie.gouv.qc.ca/bibliotheques/programmes/aide-financiere/fonds-capital-mines-hydrocarbures/>.

Consultation should be done early and often. However many companies do not have the requisite experience to navigate a complex political environment. As a result, many companies fail to engage aboriginal groups appropriately and early enough.

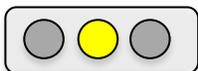
Currently, different government departments share information with communities on an *ad hoc* basis. For example, the Mining Recorder’s Office will make aboriginal groups aware of claims on their land pursuant to either a convention or agreement, such as an Interim Measures Agreement for land areas where a land claims agreements are under negotiation. In the case of Inuvialuit, the same is called a Mineral Prospecting Agreement. However an easy-to-follow step-by-step guide for company engagement and “small c” consultations does not exist, despite the Land and Water Boards’ guidance documents. The GNWT or Land and Water Boards could provide more detailed written guidance to companies on how to engage with communities. GNWT procedures on what information must be proactively shared with aboriginal groups during the exploration phase could also be clarified, while allowing flexibility in managing the consultations themselves.

Furthermore, the GNWT could enhance the Pathfinder Support Service, as suggested by others.¹¹ Ideally, this office would help mining companies navigate the engagement and regulatory processes impartially, acting as a neutral source of information. This would require staff to master the NWT’s complex set of rules governing exploration, development and producing companies and easily connect companies with relevant aboriginal groups, regulatory bodies and government agencies. This would encourage investment by helping to mitigate the perception that the NWT is a difficult jurisdiction in which to do business and could help speed regulatory approvals, even in the mine development and production phases.

ITI’s Client Service and Community Relations Unit has the potential to develop into such a Pathfinder Support Service. Its mandate includes regulatory navigation, connecting clients to government agencies and non-governmental organizations, and providing information to stakeholders about regulatory requirements. In practice, its activities go beyond this mandate by “educating” NWT residents on the benefits of mining. While the unit plays many of its roles effectively in some cases, many of its activities are viewed as biased towards industry, undermining the GNWT’s broader mandate of serving all stakeholder interests equally. Reforms could be enacted to create service that is truly neutral and helps build trust between companies and communities, thereby clearing a bottleneck to mineral development.

The GNWT is also in the process of developing a Regulatory Roadmap for Mineral Development in the NWT. This document could serve mining companies and other stakeholders well if it proves to be a user-friendly step-by-step guide to the regulatory process.

Mine Development and Production Rights and Responsibilities



¹¹ GNWT and NWT and Nunavut Chamber of Mines (2013) *Pathways to Mineral Development: Report of the Stakeholders Engagement Panel for the NWT Mineral Development Strategy*.

Taking a mine from the exploration to development and production stages is a complex endeavor anywhere. In general, development requires a detailed mine development plan (including industrial infrastructure and a work schedule); an economic and financial analysis of the project; an environmental and social impact assessment; an emergency and risk management plan; a health and safety plan; a rehabilitation plan; a resettlement plan if necessary; and a plan to mitigate the negative social and environmental impacts of the mine. A benefit sharing plan is also often required (see “Benefit sharing with mining-affected communities” below). Government responsibilities during the production phase are generally limited to monitoring compliance with these plans, except in cases of significant mine expansion, when some of the items listed above may be required.

The NWT is no different; taking a mine to development and production stages is complex. One unique element though is the division of responsibilities between the GNWT, the Federal Government and the four Land and Water Boards of the Mackenzie Valley which are co-managed by governments and aboriginal groups, as well as the Environmental Impact Screening Committee and Environmental Impact Review Board under the Inuvialuit Final Agreement.¹² (Note: The remaining analysis will focus exclusively on the Land and Water Boards rather than regulation in Inuvialuit). Land use permits, water licenses and waste management plans, all of which are required for mine development, are issued and managed by the relevant Land and Water Board. Unsettled claim regions are managed by the Mackenzie Valley Land and Water Board (MVLWB). Land and Water Boards are administered according to the *Mackenzie Valley Resource Management Act* (2007). Water management is also subject to the *Waters Act*.

Social and environmental assessment and impact reviews

Land use permits and water licenses, in turn, require development of a mine plan, a waste management plan, a spill contingency plan, an environmental and social impact mitigation plan, and soil and water testing, among other requirements. This process can take approximately 12 months if only “preliminary screening”, essentially a light-touch environmental assessment, is required.

However land use permits and water licenses for large-scale mining projects usually require fully-fledged environmental assessment or an even more comprehensive environmental impact review. Environmental assessments and impact reviews can help shape mine development plans in a way that mitigates negative social and environmental impacts.

Environmental assessments in the NWT can take 1-3 years, which is an average length of time by global standards. Mine expansion requires additional land use permits and water licenses, though generally does not require a new environmental assessment except in cases of massive expansion such as a new mill. That said, one challenge in the NWT is that there are no clear criteria on when a project must go to environmental assessment or environmental impact review.

In theory, the environmental assessment process could be accelerated if there were clear environmental reporting, resettlement or water quality standards. The Mackenzie Valley Environmental Impact Review Board, which is responsible for conducting environmental assessments and participating in impact reviews, has published environmental impact assessment and socio-economic impact assessment

¹² The four Land and Water Boards are the Gwich'in Land and Water Board, Sahtu Land and Water Board, Wek'eezhii Land and Water Board and Mackenzie Valley Land and Water Board.

guidelines.¹³ However each Land and Water Board sets its own standards for what is considered acceptable. Furthermore, adequate baseline environmental data is usually unavailable or scattered across databases with different formats. Setting clear requirements on water and soil testing prior to land use permit and water license applications are made and setting common standards on environmental assessments would contribute to regulatory clarity. A centralized data warehouse for environmental data, similar to the geological database, would also help. ENR's Cumulative Impact Monitoring Program could host this database.

Consultations and engagement

Request for a land use permit and water license also triggers company engagement and official consultations. Boards require that companies identify affected parties, sometimes with the help of Board staff, and initiate dialogue with these groups. This can take the form of written notices, community meetings or workshops. Boards also require that companies submit engagement plans and engagement records signed by meeting participants. This engagement should take place before permit and license applications are made to Boards.

Once applications are submitted, a multi-stage official consultation process begins. Permit and license applications must be made available to affected parties and Boards must consider their advice. Public hearings are held and documents circulated for comment. Boards then provide changes to the application based on this advice. If these changes are integrated, the Board will approve the application.¹⁴ Should permits or licenses be approved without integrating key comments by aboriginal groups, the GNWT will often approach these groups to determine if other measures might be needed to address their concerns.

While some mining industry members have voiced frustration with the duration of engagement, consultations and environmental assessment, as well as occasional delays in granting of permits and licenses, the system seems to serve environmental and community needs well. That said, the process remains complex. For example, companies are often unaware of which groups must be engaged and how. Clearer consultation and engagement regulations or guidelines—such as the Regulatory Roadmap for Mineral Development that the GNWT is currently developing—and a neutral one-stop shop support service for companies would speed the approval process and could improve company-community relations. Alternatively, the process could be streamlined through changes to the MVRMA.

Monitoring and enforcement

Oversight bodies and stakeholders such as the legislature, civil society groups, aboriginal groups, the media and mining-affected communities should easily be able to read mine plans and monitor

¹³ Mackenzie Valley Environmental Impact Review Board (2004) *Environmental Impact Assessment Guidelines*. Online: http://www.reviewboard.ca/upload/ref_library/1195078754_MVE%20EIA%20Guidelines.pdf; Mackenzie Valley Environmental Impact Review Board (2007) *Socio-Economic Impact Assessment Guidelines*. Online: http://www.reviewboard.ca/upload/ref_library/SEIA_Guidelines_Contents_and_Chapter_1.pdf.

¹⁴ MVLWB (2013) *Engagement and Consultation Policy*. Online: <https://mvlwb.com/sites/default/files/documents/wg/MVLWB%20Engagement%20and%20Consultation%20Policy%20-%20May%202015.pdf>; MVLWB (2014) *Engagement Guidelines for Applicants and Holders of Water Licenses and Land Use Permits*. Online: <https://mvlwb.com/sites/default/files/documents/wg/MVLWB%20Engagement%20Guidelines%20for%20Holders%20of%20LUPs%20and%20WLS%20-%20Oct%202014.pdf>.

compliance with permit and license terms as well as monitor environmental and social impacts of specific projects. After all, easy access to information is indispensable for carrying out their responsibilities. Nevertheless the current system limits access to information in several ways.

First, while much information is publicly available on GNWT, Land and Water Board and federal government websites, it is usually written in technical language inaccessible to laypeople. For example, environmental assessments are available on the Mackenzie Valley Environmental Impact Review Board and Canadian Environmental Assessment Agency websites, however the information is spread over many documents, difficult to find, and filled with jargon. The summary for Ekati's Jay Project expansion alone consists of 735 mostly technical documents.

Second, certain pieces of information are simply unavailable. While a large amount of environmental material is published on websites previously mentioned, information on the financial costs and benefits of producing mining projects are still largely confidential or not provided to the GNWT. Publicly traded companies release some data through their 43-101 securities filings, however gross production, cost, government payments, and social benefits (including benefits through IBAs) are usually difficult or impossible to access.

Third, there is no centralized comprehensive repository of mining sector information that provides documents and data on a mine-by-mine basis. Ideally, the GNWT would create a single easy-to-use website which includes the cadastre, claims and leases currently on MITS, geological information, summaries of mine plans, summaries of environmental assessments, SEAs, volume and quality of production, payments to governments, and other relevant information.

Finally, independent verification of information can be quite lax in the NWT. For example, GNWT inspectors are meant to monitor compliance with land use permits and water licenses on non-federal lands. For instance, during the production stage, annual environmental reviews are conducted by the Department of Environment and Natural Resources and Environment Canada. However GNWT inspectors usually rely on self-reporting by companies; there is often no independent data verification, for example of water quality, biological impacts or chemical composition of the soil.

Similarly, the Workers Safety and Compensation Commission verifies compliance with the *Mine Health and Safety Regulations* (2014). It is unclear to what degree these rules are followed in the NWT.

Independent production monitoring is also extremely weak. ITI makes one on-site inspection per year on average to verify depreciable assets for royalty calculation purposes. While a system does exist within the *Mining Regulations* to value diamonds, there are currently no requirements for the GNWT to independently verify mineral production volumes or ore quality in the case of metallic minerals. Most production figures are reliant on third party sales data or self-reported, with the exception of Gahcho Kué. Spot audits on production volumes, while legal under the *Mining Regulations*, have not been performed. Underreporting of production could cost the GNWT significant amounts of money in lost fiscal revenue. (See "Revenue collection" below.)

Securities, closure and reclamation

Mine closure and reclamation is generally designed to eliminate future government liabilities related to environmental remediation of mine sites and protect the health and safety of those living near mine sites. The NWT's closure goal sets a more stringent standard, to return the mine site and affected areas

to a viable and self-sustaining ecosystem. In some cases, this standard has been interpreted as eliminating most indications of mining activities, including eliminating roads and other infrastructure.

Closure and rehabilitation plans are generally included in land use permit and water license applications. As such, they are approved by Land and Water Boards, which consult on closure plans and each have their own standard for what is deemed an adequate closure and reclamation plan. Land use permits stay open until mine sites have been cleaned or restored to their natural state. Companies are financially responsible until the permit is closed, which occurs once the relevant Land and Water Board gives final clearance.

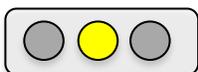
Every new and existing advanced mineral exploration and mining operation must be able to provide adequate financial securities to ensure that the operator, rather than the government, bears the cost of reclamation, including care and maintenance, permanent closure, and post-closure monitoring.¹⁵ Land and Water Boards set mine liabilities through the Department of Environmental and Natural Resources (ENR) holds water license securities and the Department of Lands holds land use permit securities.

The size and use of financial securities for mining projects has been raised as an area of concern. ENR usually recommends a higher security than companies or Land and Water and Boards. Alternative security models, such as assurance bonds or staggered securities, could be considered.

There are also no clear rules on when a security should be used. Additionally, current regulations are unclear on whether companies operating adjacent to old mine sites are responsible for that old site's environmental liabilities.

Local Impacts

Benefit Sharing with Aboriginal Groups and Mining-affected Communities (employment, voluntary payments, business development and shared-use infrastructure)



(Note: Benefit sharing with NWT residents is covered in “Local content and value-added in the mineral sector” below.)

Resource projects can incur significant environmental and social costs that are often borne disproportionately by those in the vicinity of the extraction. However, extractive projects also have the potential to generate benefits for local communities through: (1) compensation payments; (2) local employment; (3) training; (4) investments in public services and infrastructure; (5) access to mining company infrastructure (i.e. shared-use infrastructure) and (6) local business development, at least while operations continue.

Good resource management requires minimizing the costs for affected communities, while enhancing the benefits. Where these costs cannot be eliminated, the government should work to mitigate the negative impacts on livelihoods and arrange adequate compensation for those affected. As a general

¹⁵ MVLWB / AANDC (2013) *Guidelines for the Closure and Reclamation of Advanced Mineral Exploration and Mine Sites in the Northwest Territories*. Online: https://glwb.com/sites/default/files/documents/wg/WLWB_5363_Guidelines_Closure_Reclamation_WR.pdf.

rule, compensation should aim to target those most adversely affected by extraction. Currently, the GNWT does not have a resettlement or compensation policy, however to date there has been little demand for such a policy given the remote location of most mines and other tools at the government and communities' disposal, particularly Impact Benefit Agreements (IBAs). IBAs generally include a compensation element.

Among the most used tools are Socio-Economic Agreements (SEAs) and IBAs, sometimes called Participation Agreements. SEAs are negotiated between the GNWT and mining companies. They are legally binding and publicly available, however they are not mandatory.¹⁶ SEA negotiations are usually initiated when the environmental assessment is triggered, though timing of negotiations is unclear. SEAs often reflect commitments made during the environmental assessment process. Provisions generally cover local employment requirements for both the operator and contractors, training programs, priority procurement for Northern and Aboriginal businesses, employee healthcare, and respect for local culture. The GNWT has not reviewed the universe of benefit sharing options; there are potentially many missed opportunities when negotiating SEAs.

Enforcement of existing provisions has been mixed. In general, there has been full compliance with training and compliance provisions. Procurement provisions are generally adhered to, notwithstanding implementation challenges. Local employment requirements are sometimes not met due to lack of effort on the part of companies. Some companies have claimed that there are not enough qualified workers in the NWT, however others, namely Diavik, have fully complied with similar requirements. Vague drafting of certain provisions and occasional unrealistic targets for percentage of workers from local communities also undermine SEA policy objectives.

Enforcement of SEAs is particularly weak since the GNWT relies on self-reporting to monitor compliance and the only penalty available to the GNWT is revocation of land use permits, an extreme measure which has never been used and is unlikely to ever be used. Companies are opposed to introducing less severe penalties and damages to SEAs since these would be enforceable.

IBAs, on the other hand, are signed between affected communities and companies. IBAs are also legally binding contracts and are usually confidential. As of 2012, there were 18 active IBAs in the NWT. Several more have been signed since. Anecdotal evidence suggests significant overlap between SEAs and IBAs. Where there is overlap, IBAs generally take precedence over SEAs. This is due to a political commitment rather than a question of legality. That said, since they are confidential, the GNWT's SEA negotiators have no legal recourse to determine whether provisions in SEAs and IBAs are contradictory or complimentary.

While most countries have the equivalent of IBAs, usually called Community Development Agreements (CDAs), the SEA concept is fairly unique globally. Provisions included in SEAs are usually incorporated into mining legislation, such as a local content law, or mine plans. In the NWT, SEAs seem to fill a gap in the legislation, the lack of provisions in the *Mining Regulations* or elsewhere that require mines to develop local content plans and shared-use infrastructure.

In theory, IBAs could also fill this gap and may do so. However, as opposed to SEAs that are public, IBAs are usually confidential. It is therefore unclear whether they are providing adequate benefits for mining-

¹⁶ SEAs are available at <http://www.iti.gov.nt.ca/en/services/socio-economic-agreements>.

affected communities or whether the benefits are shared widely in communities. It is also unclear to mining companies when and if IBAs are required, though in practice they are being signed earlier and earlier in the exploration phase.

Several policy options are available to the GNWT to increase the benefits accruing to mining-affected and aboriginal communities. The GNWT could incorporate local content, shared-use infrastructure and compensation provisions into legislation. SEAs could be made mandatory and the GNWT could develop a model SEA with guidelines for negotiation. IBAs could be made public so that the GNWT could ensure consistency with SEAs. Public IBAs would also allow communities to compare and learn from other agreements and would likely improve terms for community members.

Intergovernmental Transfers to Aboriginal Groups



In nearly every country, subnational governments receive public funds through a combination of direct tax collection and transfers from the national government. In most, non-renewable natural resource revenues are apportioned no differently than other revenues. However, in more than 30 countries—Canada included—distribution of natural resource revenues is governed by a set of rules that are distinct from those governing distribution of general revenues.¹⁷ (See “Intergovernmental transfers from the federal government” below for a description of revenue sharing between the GNWT and the Government of Canada.)

In the NWT, aboriginal groups receive resource revenues via two channels. First, certain groups receive mining revenues according to Interim Resource Development Agreements or through their land claim agreements. For example, the Dehcho First Nations are entitled to 2.45-12.25 percent of royalties collected on mineral production in the Mackenzie Valley, depending on the royalty amount.¹⁸

Second, a share of resource revenues are allocated from the GNWT to Aboriginal Parties. According to the Devolution Agreement’s Northwest Territories Intergovernmental Resource Revenue Sharing Agreement (Chapter 10 and Schedule 17), 25 percent of resource revenues are to be shared with signatories to the agreement.¹⁹ The distribution of the 25 percent, which is expected to amount to approximately \$10-15 million this year, is based on a formula which, simplified, is weighted 30 percent for cost of living and 70 percent for population.²⁰ The GNWT must make quarterly payments to aboriginal groups and explain how they calculated their revenue shares. These payments are not subject to offset from any other transfers to aboriginal groups.

¹⁷ Bauer, Andrew et al. (2016) *Natural Resource Revenue Sharing*. NRGU-UNDP. Online: <http://www.undp.org/content/undp/en/home/librarypage/poverty-reduction/nrgi-undp-natural-resource-revenue-sharing.html>

¹⁸ Deh Cho First Nations Interim Resource Development Agreement (2003). Online: https://www.aadnc-aandc.gc.ca/DAM/DAM-INTER-NWT/STAGING/texte-text/ntr_pubs_dird_1330724324385_eng.pdf

¹⁹ At present, there are nine signatories, including the Gwich’in Tribal Council, Inuvialuit Regional Corporation, Northwest Territories Métis Nation, Sahtu Secretariat Incorporated and Tłı̨chō Government. Three groups have not signed the agreement.

²⁰ The formula can be found at <http://devolution.gov.nt.ca/wp-content/uploads/2012/04/140310-Signed-Resource-Revenue-Sharing-Agreement.pdf>.

These resource revenue transfers represent a separate source of benefits from mining for aboriginal groups in the NWT, in addition to the benefits accrued through IBAs, SEAs and fiscal revenues collected and spent by the GNWT. The strength of this system is that communities far from active mines can benefit from the presence of mining in the territory, spreading revenues to the regions most in need. Despite not hosting active mines, the Gwich'in Tribal Council, Inuvialuit Regional Corporation and Sahtu Secretariat Incorporated receive approximately two-thirds of the transfers due to high cost of living in their territories and the size of their populations. In general, GNWT officials and aboriginal groups interviewed seemed satisfied with the arrangement.

One weakness of the system is the cap on transfers to aboriginal groups. Since resource revenues to the NWT as a whole are capped under Chapter 10 of the Devolution Agreement (or at least that is the collective interpretation of Chapter 10), transfers to signatories are also capped. As a result of this provision and low government take from mining projects more generally, the size of transfers remain meagre. That said, the system seems to be achieving its unstated aims, namely to share the benefits of mining more widely than without resource revenue sharing and garner support for devolution from aboriginal groups.

Revenue Generation

Fiscal Regime



Mineral development may provide employment and other returns, but its principal benefit is government revenue to support development and the wellbeing of residents. Generating these revenues requires a well-designed fiscal system that takes into account the large upfront costs, long production timelines, location specificity, volatility of commodity prices, finite nature, and substantial economic rents inherent in any mineral project.

This unique context warrants a unique fiscal regime for the mineral sector. A fiscal system should encourage upfront investment while providing significant returns for the owner of the asset, namely the government, within a reasonable timeframe.

Most fiscal regimes incorporate profit- and production-based elements. The profit-based element, such as a corporate income tax, provides risk-sharing between the government and the investor. The government shares in the upside of a profitable investment while the investor has some downside protection from losses or low returns. On the other hand, profits taxes are highly susceptible to tax avoidance measures such as transfer pricing, streaming agreements, thin capitalization, treaty shopping and cost overruns. There are also many legal tax deductions in Canada that can reduce the tax burden, such as loss carry-forwards and tax exemptions.

The production-based element, such as a royalty, ensures a minimum payment is made to compensate for the environmental and social costs of extraction. It also guarantees payment, even at the beginning of production. If a project cannot sustain a reasonable royalty, it is highly unlikely that the project is viable from a public welfare perspective since the government could be giving up a non-renewable asset without any assurance of payment.

Similar to most Canadian jurisdictions (except Nova Scotia and Quebec) but highly unusual globally, the NWT does not have any traditional production-based elements in its fiscal regime. Instead, it has a 5-14% “royalty”, which is production- and cost-based. It is not profit-based in that it is assessed based on production value minus mine costs, rather than based on overall company profits. However neither is it a typical royalty, which is calculated as a percentage of volume x price without deductions.

The principal challenge associated with this type of regime—similar to the challenge faced in collecting profit-based taxes—is that costs can be inflated to reduce royalty payments. While some of these costs are verifiable by NWT-based auditors, several deductions are highly susceptible to transfer pricing or cost overruns. These include deductions based on: sorting, valuing and marketing costs; insurance, storage, handling and transportation costs; imported equipment costs; and the costs of processing outside the NWT.²¹ The current regime is extremely complex for any tax administration to manage effectively. Furthermore, some rules are not aligned with international standards, such as 100% depreciation of assets or weak project ring-fencing. In 2016, the NWT collected \$58.2 million in royalties, 29% less than expected at the start of the year.²²

The NWT royalty regime is particularly problematic in that companies must only produce a royalty return once it reaches “commercial production”. This occurs when mine reaches 60 percent of rated capacity of the mill for 90 continuous days. No royalties are collected prior to “commercial production”.

Royalty payments are also weakly enforced in the NWT. ITI makes one on-site inspection per year on average to verify depreciable assets and presence of equipment for royalty calculation purposes. However neither mineral volumes nor ore quality in the case of metallic minerals are independently verified, leaving open the possibility of underreporting for metallic mines. Furthermore, the only penalty for evading royalty payments is to pay interest on unpaid royalties.

Companies usually put up surety bonds and guarantees to secure obligations under a Water License and Land Use permit. And the NWT charges a corporate income tax of 11.5% (collected by the Canada Revenue Agency on behalf of the NWT) along with license and permit fees, though corporate income tax is also subject to numerous tax deductions, some of the most generous, globally. As a result, corporate income tax paid to the NWT was a paltry \$25 million in 2016 (all sector included, though mostly from the resource sector).

The end result is that the NWT has one of the world’s most charitable fiscal regimes for the mining sector, one that captures between 20-30% of economic rents from mining projects, net of costs. This is compared to between 30-35% in South Africa, 45-60% in Peru, and 50-80% in Western Australia (see Figure 2).

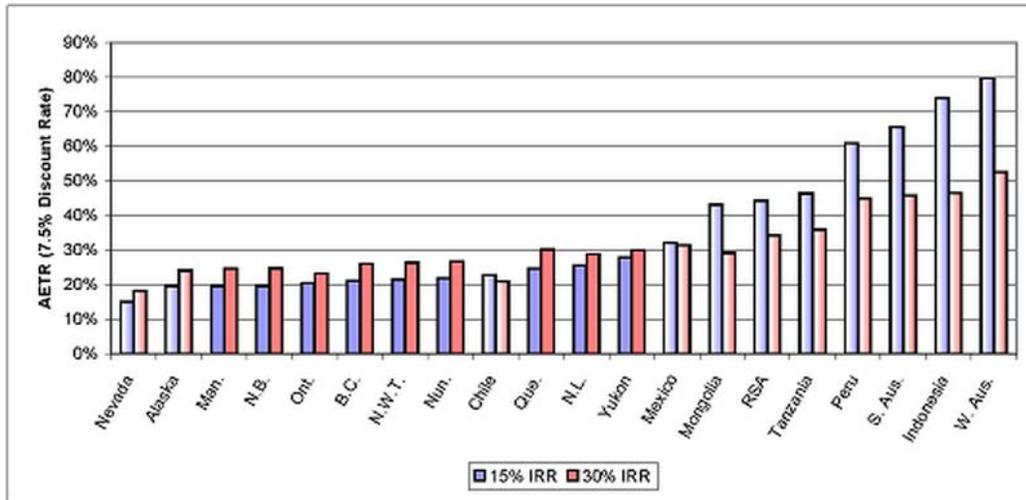
Of note, these are likely overestimates due to transfer pricing and other tax avoidance measures. However true ‘government take’ over the project lifecycle in the NWT is unknown since information on sales, costs and profits per project is not publicly available except what is available through securities disclosures. Privately held companies are even more opaque. As a result, options for reform are not well understood.

²¹ These deductions are referenced in the Northwest Territories *Mining Regulations* (2014), Section 70.

²² *GNWT Public Accounts 2015-2016: Consolidated Financial Statements and Financial Statements Discussion and Analysis*. Online: http://www.fin.gov.nt.ca/sites/default/files/documents/public_accounts_2015-2016_-_section_i_-_consolidated_financial_statements.pdf.

Contrary to conventional wisdom, increasing ‘government take’ does not necessarily reduce the incentive to invest. It is a measure of the profit split independent of costs. In fact, government take can be increased while simultaneously encouraging investment by lowering start-up costs, focusing on larger projects and capturing a larger percentage of peak revenues. The key is imposing the right fiscal tools and finding innovative financing options for infrastructure and mine development.

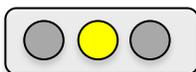
Figure 2: Average Effective Tax Rate in Different Jurisdictions



Source: Natural Resources Canada

Based on a benchmarking against the international experience, NWT residents could benefit substantially by increasing ‘government take’, provided that the windfall revenues were to be invested in improved infrastructure and social services. That said, while the royalty regime could be adjusted, the Territorial Financing Formula and Devolution Agreement signed with the federal government together limit the amount of royalty revenue that the NWT can retain (see “Intergovernmental Transfers from the Government of Canada” below). Reform of the territorial financing formula and the devolution agreement would therefore need to be considered if the GNWT were to decide to evaluate the effects of changes to deductions, royalties, corporate income taxes, government equity policy and fees on investment and government take. Such an evaluation would require fiscal modeling on a range of different types and sizes of mines to determine the impact of a change in regime on the marginal propensity to invest, government take and responsiveness to a change in mineral prices.

Revenue Collection



All governments face tax administration challenges. Auditing multinational companies with complex legal structures who sell difficult-to-price commodities (such as diamonds) can be testing in any environment, especially one with limited capacity.

However measures can be taken to reduce this complexity. For instance, governments can rely on simple fiscal tools, such as royalties or bonuses, which do not require much information to monitor. They can limit deductions and clarify rules in legislation, such as the prices which must be used in assessing taxes. And they can build capacity to audit companies.

In general, revenue collection in the NWT is highly complex. Corporate income taxes are collected and audited by the Canada Revenue Agency on behalf of the territory and transferred to the Department of Finance (Finance). Property and fuel taxes are collected by Finance. Royalties and some fees are collected by ITI. Quarry payments and rents from surface leases are paid to the Department of Lands. Water use fees and securities are collected by ENR. Workers health and safety fees are collected by the Department of Justice. Road tolls are collected by the Department of Transport. Land use fees are not collected at all now since they were left out of the Devolution Agreement, except in Inuvialuit since it does not fall under the MVRMA.

Finance, which double-checks corporate income tax assessments, reports no challenges associated with tax collection. However there are serious difficulties in collecting royalties given how they are calculated. These include:

- **Mineral valuation:** While larger diamonds are all valued, smaller diamonds and other mineral commodities may not be independently valued or priced using an independent metric. For example, while most of DeBeers' diamonds are independently valued (due to the company's vertical integration, hence inability to guarantee that sales are at market prices), diamonds from Ekati and Diavik are valued using the sales prices, along with other information. However there is no verification that third party sales prices reflect market value. Furthermore, the mining regulations do not specify an independent price for the taxation of metallic minerals.
- **Exchange rate challenges:** Royalties are paid in Canadian dollars yet minerals are sold in Euros or USD, making sales data vulnerable to exchange rate manipulation.
- **Transfer pricing and cost overruns:** Since royalties are cost deductible, companies can shift costs from other operations to NWT operations, especially costs related to processing, marketing and handling minerals. Supplier and non-operating costs are particularly difficult to monitor and could be subject to double-counting by joint venture partners. One case of misapplied costs has already been discovered since Devolution with the minimal staff currently available to carry out audits.

Furthermore, the current fee structure is archaic; in some cases they can justifiably be considered nuisance fees. This includes prospecting permit, lease and claim fees, as well as land use permit and water license fees. Options for reform include centralizing fee payment (for instance under the Department of Finance), setting fees that match the costs of service provision by the government, or eliminating certain fees altogether.

Intergovernmental Transfers from the Government of Canada



In nearly every country, subnational governments receive public funds through a combination of direct tax collection and transfers from the national government. In most, non-renewable natural resource

revenues are apportioned no differently than other revenues. However, in more than 30 countries—Canada included—distribution of resource revenues is governed by a set of rules that are distinct from those governing distribution of general revenues.²³

The NWT's resource revenue sharing system is somewhat unique in that a large percentage of resource revenues is collected by the territory and transferred to the federal government. In the author's experience, the only other country with such a system is the United Arab Emirates. This system is based on an interpretation of the Devolution Agreement that may not be consistent with the language in said agreement.

In the NWT, the distribution of fiscal revenues is governed in large part by the Territorial Financing Formula and Chapter 10 of the Devolution Agreement. Under the Territorial Financing Formula (TFF), the formula that determines the annual unconditional transfer from the Government of Canada to the NWT, for each dollar the territory raises itself in taxes, approximately 70 cents are removed from the federal transfer. In other words, even if resource taxes rose significantly, much of the revenue would be clawed back.

On the other hand, the Devolution Agreement allows the GNWT to retain the lesser of: 50 percent of mineral, oil, gas and water-related revenues; or five percent of an amount called the 'Gross Expenditure Base', calculated at between \$70–100 million per year over the coming decade.²⁴ Therefore, for the first \$100 million in resource revenues, which consist in largest part by royalties, the GNWT would retain a maximum of \$50 million.

Of this amount, 25 percent is transferred to 9 of 12 aboriginal groups that have signed the resource revenue sharing agreement. Once other aboriginal groups sign the agreement, they too will be eligible for a share of the transfers. The money flowing to aboriginal groups cannot be spent on operational expenditures, but must be placed into capital investment or used for debt repayment.

Due to poor drafting, the Devolution Agreement is unclear on how resource revenues above the threshold mentioned in the previous paragraph are to be treated. However Section 10.1 of the agreement states that "resource revenues shall not be included in the calculation of the Territorial Formula Financing Payments" has been interpreted by territorial and federal officials as meaning that 100 percent of resource revenues above the threshold are deducted from TFF transfers. The federal government's justification for the 100 percent clawback provision is that it aligns the TFF with the federal government's provincial equalization policy. Yet from a purely legalistic perspective, it is equally valid to interpret the clause as saying that the territory will retain 100 percent of resource revenues above the threshold or that these revenues will be clawed back in the same manner as other self-generated revenue under the TFF formula.

The consequence of this provision—or at least its commonly-held interpretation—is that it generates a huge disincentive to raise additional revenue and expand mining production. Reforming the resource

²³ Bauer, Andrew et al. (2016) *Natural Resource Revenue Sharing*. NRG-UNDP. Online: <http://www.undp.org/content/undp/en/home/librarypage/poverty-reduction/nrgi-undp-natural-resource-revenue-sharing.html>

²⁴ The definition of resource revenues can be found on p. 13-14 of the Devolution Agreement. Online: <http://devolution.gov.nt.ca/wp-content/uploads/2013/09/Final-Devolution-Agreement.pdf>

revenue sharing formula is therefore in the best interest of the GNWT, the federal government and the mining industry.

Since the vast majority of revenue from additional mineral production is transferred to the federal government, there is little incentive on the part of the GNWT to either expand production or to raise additional revenue from the sector. As a result, the federal government loses out on the corporate income tax, sales taxes and other sources of revenue it would collect from the sector, not to mention economic activity mining in the North would generate for other provinces in terms of spillovers (which are mainly captured by supplier hubs in British Columbia, Ontario and Quebec). The transfer system also reinforces the GNWT's dependence on the federal government since it creates a disincentive for the territory to raise its own fiscal revenues, further costing the Government of Canada in terms of fiscal transfers. What's more, support for industry activity would be much greater among NWT politicians and residents if they could see greater tangible benefits emerge out of the industry. Low revenue collection therefore hinders industry growth.

The GNWT could raise additional revenues from the resource sector through changes in corporate income tax and introduction of state equity. However, under the TFF formula, these revenues would be clawed back to the tune of 70 percent, which is another disincentive for revenue collection and sector growth.

In short, the existing resource revenue sharing formula is deeply flawed. Interestingly, Section 10.6 of the Devolution Agreement explicitly states that the resource revenue sharing formula "may be amended with the written consent of Canada and the GNWT". This implies that negotiators recognized the fundamental shortcomings of the formula and that there may be an opportunity for reform.

Government Equity Management



The fiscal regime already provides the government with a return on its resources, but governments also frequently take equity stakes in a project. The government may consider state equity participation for many other purposes, for example: as a second-best means of rent capture (especially where informational asymmetries are severe, or monitoring capacity constrained); as a means to invest state resources; to hold valuable mineral assets temporarily until an ideal operator can be found; or as a way of potentially influencing corporate decision-making (although regulation may be more effective).

Equity can generate significant returns for the government, but also carries significant risks. Negative returns on investment, financial responsibility for unforeseen environmental damage and reputational damage if the project fails are just some of these risks. Furthermore, as a shareholder, the government can be placed in conflict of interest since it is both a mineral right holder and regulator of those same rights. As such, some governments that hold significant equity in extractive projects—such as Brazil, Chile, Norway and Timor-Leste, or the Canadian federal government in the case of the Norman Wells oilfield—will create firewalls between the mineral regulator and the manager of state equity.

The GNWT is already an equity shareholder in a number of companies. For instance, the GNWT owns equity in the Northern Transportation Company Ltd., a resupply company along the Mackenzie River. It

also holds the claim on the Mactung tungsten site. As a result of being the mine’s largest creditor (thanks to its security), the GNWT inherited the mine from North American Tungsten when it went bankrupt in 2015. The government paid a cut-rate \$3 million for the mineral rights and land use permit. North American Tungsten’s other property in the NWT, Cantung, was reverted to the Government of Canada in the same deal since the federal government is responsible for care and maintenance of contaminated sites in the territory. Both the Mactung and Cantung projects are currently on hold.²⁵

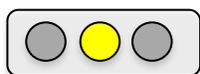
While having never produced any minerals, Mactung remains one of the world’s highest grade tungsten deposits. Consequently there is some interest in the mineral rights and land use permit. The GNWT may put the rights out to bid using external consultants, subject to agreement with the Government of Canada.

More generally, the GNWT does not have a clear policy on state participation in mining projects. One option would be for the territory to maintain an equity share in Mactung, should it be sold. In addition to the potential revenues the project could generate, an advantage of state equity is that returns retained by the GNWT are not capped by the devolution agreement, unlike royalties. On the other hand, a portion may still be clawed back under the territorial financing formula. Also, as mentioned earlier, holding equity in an operating mine would place the GNWT in conflict of interest.

The GNWT’s approach to equity participation can be described as opportunistic rather than strategic. While this may have served the government well in the Mactung case—though time will tell whether the mine is sold to a competent company and generates adequate returns—the GNWT may be better served by having a consistent approach to mineral equity. First, this would address concerns over conflict of interest. Second, a more directed approach might be able to generate significant financial returns for the GNWT, as seen in Chile for example. A strategy would consist of criteria for state participation, clear rules on how to manage such equity, and rules on how to dispose of it profitably. It would also outline a plan to address conflict of interest and guarantee public disclosure of equity holdings and returns.

Revenue and Expenditure Management

Fiscal Sustainability



Intergenerational equity is particularly important in mineral-dependent economies since these resources are finite; depleting mineral assets today means that future generations will not be able to directly benefit from their fiscal and non-fiscal benefits. As a result, good macroeconomic management involves balancing the needs of current and future generations.

There are at least three ways that governments can use mineral resources to benefit future generations: (1) Setting aside a portion of mineral revenues in a savings fund; (2) Keeping public debt levels low so that future generations are not burdened by interest payments; and (3) Investing in sustainable

²⁵ For more details see <http://www.gov.nt.ca/newsroom/statement-cantung-mine-and-mactung-property>.

development, which often means investing in industries that are less volatile and longer-lasting than the mineral sector.

NWT Heritage Fund

In 2012, the GNWT created the NWT Heritage Fund to “save a portion of resource revenues for the benefit of future generations of NWT residents.” The Heritage Fund represents one of the world’s newest sovereign wealth funds (SWFs), government-owned funds set up for macroeconomic purposes that invest primarily in foreign assets. The revenues deposited into are retained for the first 20 years of the fund’s existence, after which up to five percent of the year-end balance can be withdrawn and spent through the budget process.

While the Heritage Fund meets some of the good governance standards for sovereign wealth fund established by international authorities—including the International Forum on Sovereign Wealth Fund’s Santiago Principles and standards found in the Natural Resource Governance Institute’s Resource Governance Index—the legal framework governing the fund suffers from fundamental flaws. Foremost among these is the absence of a clear deposit rule.

For the Heritage Fund to achieve its objective of saving a portion of resource revenues for future generations, a given sum or percentage of resource revenues must be deposited into the fund annually. Most well-functioning SWFs in advanced economies—including in Alaska, Alberta, Chile, Montana, New Mexico, North Dakota, Norway, Texas and Wyoming—and many in developing countries have statutory deposit rules. These rules are generally tailored to the government’s needs. Where these rules have not been legislated, as in Alberta from 1987 until a new Fiscal Management Act was passed 2013, savings funds usually do not save and are therefore ineffective.

Another major flaw is the absence of clear investment mandate for the fund’s assets. In this sense, the NWT Heritage Fund resembles the discretionary funds in countries with weak governance structures, where they generally become channels for corruption or patronage. For instance, current rules leave open the possibility of Heritage Fund managers investing based on personal connections rather than on any objective investment criteria.²⁶

Finally, oversight and transparency of the fund are extremely weak by international standards. Fund asset performance is reported in an annual report and the fund is managed by the Financial Management Board, which is neither independent nor has the requisite expertise to manage sovereign wealth fund assets.²⁷ These three problems suggest that future generations may not be well served by the NWT Heritage Fund.

Public debt levels

²⁶ The NWT Heritage Fund regulations, while broadly outlining standards of creditworthiness and an acceptable issuer, do not meet any international standard of what might be considered an investment mandate or investment guidelines. See <https://www.justice.gov.nt.ca/en/files/legislation/nwt-heritage-fund-act/nwt-heritage-fund-act.r1.pdf?t1489612591458>.

²⁷ Daitch, Sarah, et al. (2014) “A Question of Future Prosperity: Transforming Natural Resource Wealth into Citizen Well Being Through the Northwest Territories Heritage Fund” in *Arctic Yearbook 2014* (ed. Lassi Heininen), Northern Research Forum. Online http://www.arcticyearbook.com/images/Articles_2014/Daitch_et_al_AY_2014_FINAL.pdf.

Debt sustainability does not imply running balanced budgets. However it does imply that the government should only increase borrowing at the same rate as fiscal revenue growth.

The GNWT's debt level is estimated at approximately \$960 million as of FY 2016-17 or 26 percent of territorial GDP. This is more than \$300 million less than the federally-imposed debt limit of \$1.3 billion. There is no information in the GNWT budget estimates on the cost of debt servicing for the GNWT. As a result, the intergenerational equity calculations are not possible to make at this time. However a debt-to-GDP ratio of 26 percent is not particularly high by global or even Canadian standards.

Fiscal revenues have managed to increase steadily, growing on average 4.7 percent per year from 2008 to 2016. This is exclusively to do with increase grants and transfers from the Government of Canada; self-generated revenue has actually *decreased* since 2013. Poor revenue generation by the GNWT and dependence on the federal government may explain why the government has stated a desire to cut spending to reduce debt rather than find new sources of revenue.

That said, the GNWT has been running fairly steady deficits over the last decade (see Figure 3). While this is not a worry in itself, increased resource revenues would certainly help to address any possible future fiscal sustainability challenges.

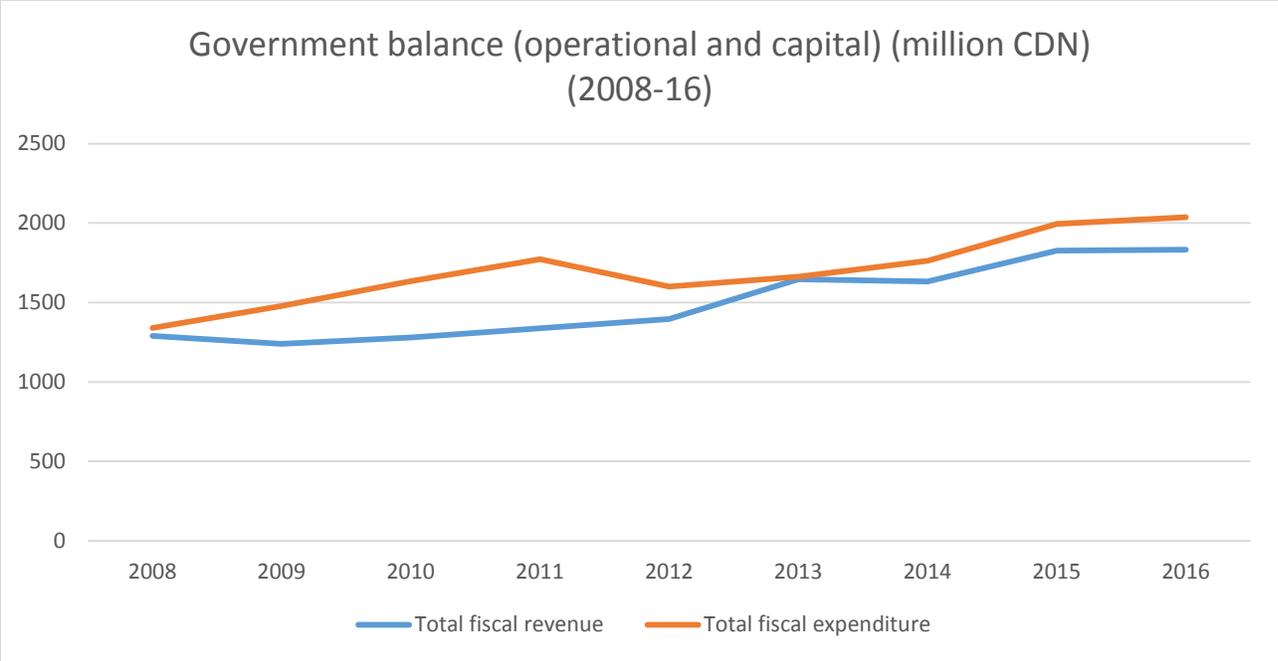
Investing in sustainable development

The NWT has experienced anemic growth recently. From 2005 to 2015, the economy *shrank* at an average rate of -0.85 percent per year.²⁸ Clearly, economic growth and diversification have not been achieved, despite the GNWT's best efforts.

While the causes of poor economic performance are beyond the scope of this report, new investments in infrastructure, social services (especially education) and sustainable industries may help turn this trend around. (See section on "Equitable economic growth and diversification"). This spending could be financed out of increase resource revenues.

Figure 3: NWT government balance (Source: NWT budget estimates)

²⁸ Statscan data.



Volatility Management



Revenue volatility is often a leading concern for governments dependent on extractive industries. As future revenues are uncertain, government investment planning is difficult, with the risk of overspending on poorly planned projects in boom times and harsh spending cuts when prices or production fall. Further, the resulting volatility of prices and private sector spending can cause businesses to follow volatile resource-sector spending patterns in a manner that harms long-term economic growth.

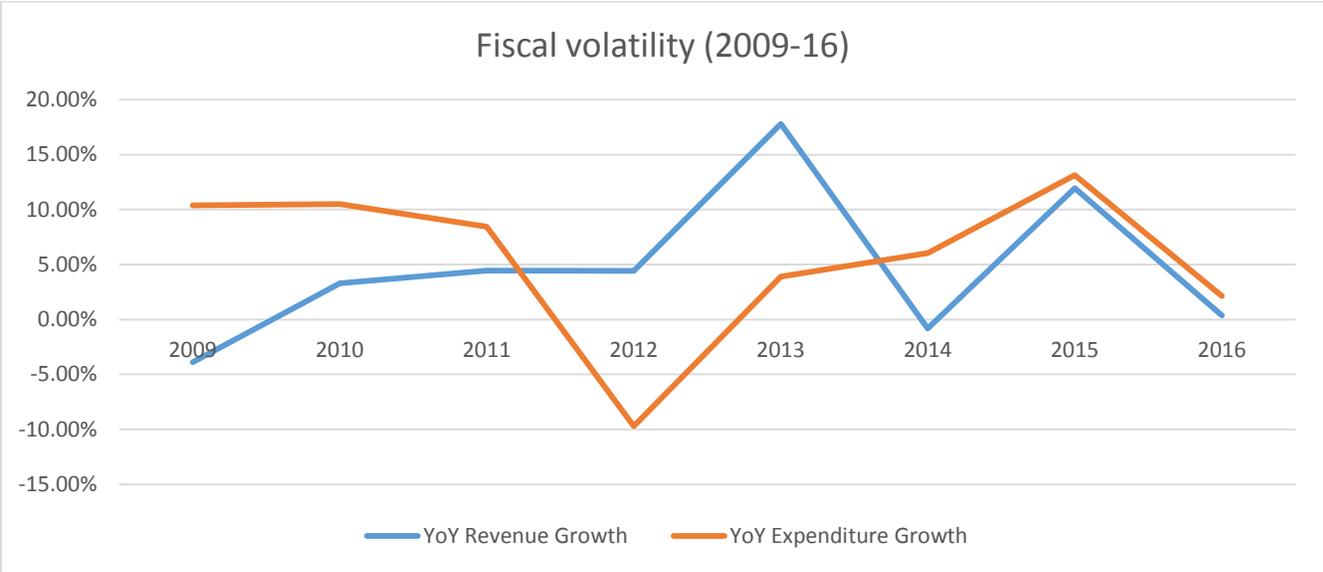
The most reliable, long-term solution is to reduce revenue dependence on resource extraction. Diversifying the economy, particularly the tax base, away from the extractive sector can ensure a supply of government revenues that is not tied to the fortunes of one industry. Furthermore, it can save the non-resource private sector from harmful boom-bust cycles. Diversification is a long and difficult path that requires short-term stability. To manage this interim process, governments have a range of tools including the design of the extractive industry tax regime, managing the flow of revenues in and out of the budget, and decisions about which types of expenditure are more volatile than others. A suitable strategy may involve a combination of these, along with improvement in underlying institutions to ensure that the tools are effective in controlling government spending, and shield the economy from macro disturbances.

Whereas Alberta and Newfoundland, for example, suffer from resource-related boom-bust spending cycles, the GNWT is mostly shielded by the stability of Government of Canada transfers, which still represent more than 75 percent of the territory’s fiscal revenue. Fiscal revenues rarely grow more than 10 percent per year and rarely drop more than a few percentage points (see Figure 4). The combination of federal transfers and low tax and royalty collection from the resource sector means that, unlike most

resource-dependent jurisdictions, the NWT does not need a budget stabilization mechanism such as a stabilization fund or resource price hedging.

At the same time, the NWT economy as a whole does occasionally suffer from mild resource-sector driven boom-bust cycles. The same mechanism that smooths fiscal revenues—federal transfers and grants—also prevent the government from engaging in counter-cyclical fiscal policy, spending more when economic growth is weak and less when economic growth picks up.

Figure 4: NWT budget volatility (Source: NWT budget estimates)



Sustainable Growth and Economic Diversification

Encouraging Investment through Infrastructure Development



The NWT is in a rare position in that infrastructure deficits represent a clear bottleneck to mineral exploration and production. In certain regions such as the Mackenzie Mountains, lack of access prevents detailed surveys and makes production unviable except for the most profitable projects where equipment can be flown in and out. And the high cost of building winter roads every year to existing mines shrinks royalty and corporate income tax payments. What’s more, mines that are developed in remote locations are usually reliant on expensive diesel power which must be flown in or trucked on ice roads during the winter.

Transport

The GNWT has already identified three priority transport routes that would open up new areas for mining activities and provide greater access to isolated communities. In the Northeast, an all-season overland road from Tibbitt to Contwoyto in the Slave Geological Province would provide greater and longer access to a diamond- and gold-rich region. In the West, the Mackenzie Valley Highway would extend Highway 1 from Wrigley to Inuvik, improving access to the Mackenzie Mountains. In central NWT, the Tłjchq All-Season Road that would link Yellowknife to Whati is expected to further open up the interior. These roads were prioritized in consultation with aboriginal groups and mining companies.

Roads have generally been easier to approve in settled land claim areas since governing authorities in those areas have an equal say in infrastructure developments. Environmental assessments in particular move quicker on settled lands. Therefore settling land claims, or at the least agreeing on land use plans, would be key to gaining access to remote regions.

Cost of road construction in the NWT can be prohibitive. Geology, distance from inputs and freeze and thaw cycles explain the \$0.8-1.0 million per km cost of road rehabilitation and \$1.0-2.5 million per km cost for new roads, depending on road classification, terrain type, location, and environmental consideration. Bridges cost between \$11,000-14,000 per square meter. This is much higher than most Canadian jurisdictions.²⁹

According to the Department of Infrastructure, the Mackenzie Valley Highway would cost approximately \$700 million and the Slave Geological Province road would cost more than \$200 million for the first phase only. It is unclear how much the Tłjchq All-Season Road would cost, though the federal government has already committed to covering 25 percent of costs through the P3 Canada Fund.

There are many possible financing options for roads, especially where the private corporations are expected to benefit significantly. At the one extreme, the government can finance roads out of the public purse. This option is the one most commonly employed in the NWT; roads are generally 2/3 federally funded and 1/3 GNWT funded. The New Building Canada Fund is already providing some financing and the newly established Canada Infrastructure Bank may offer more.

At the other extreme, mining companies can finance roads and deduct these from taxes as costs. Mining companies in the NWT are already building roads such as the Diavik-De Beers Tibbitt to Contwoyto Winter Road. These can be taken over by the government once mines close, however they often do not meet government standards and are often not linked to communities. Mining plans therefore often call for these roads to be dismantled during mine closure, notwithstanding that communities may wish to take over a mine road for hunting.

However there are many other possible financing options, including:

- Public-private partnerships: The public sector can share financing with a private investors; repayment is made through tolls or government repayment over an extended period.
- Government charges only producing mines: The public sector can finance the road and charge mining companies once large-scale mineral production starts.
- Cost-sharing between companies and government: The public sector and mining companies can form a PPP.

²⁹ NWT Department of Infrastructure figures (2017).

- Cost-sharing with aboriginal governments: The GNWT, federal government and aboriginal governments can form a partnership.
- Tax incentives for mining companies: Mining companies can be provided tax incentives such as extra deductions to encourage upfront investments in transport infrastructure.

Choosing between financing options ought to be a function of who will benefit most from the road. If the road is expected to generate significant returns in terms of increased investment, higher tax revenues and greater community access to goods and services, then significant public expenditure may be justified. However if roads are expected to principally lower costs and increase private sector profits for existing mines, public financing is less justified.

Power

The importance of power generation to the feasibility and profitability of mines in the NWT cannot be overstated. While energy costs are not publicly available on a mine-by-mine basis, we can infer the costs based on government information. Last year, the NWT Power Corporation produced power from diesel and natural gas at more than \$1.2 million per megawatt.³⁰ Given that Ekati uses approximately 20-30 MW annually, Diavik uses approximately 28-30 MW and Gahcho Kué uses approximately 6-8 MW, all on diesel generators, we can broadly estimate that the sector spends at least \$65 million and likely upward of \$80 million annually on diesel power, with only three mines operating.

In total, the industry burns more than 200 million liters of diesel fuel per year. Not only does this represent 50 percent of the NWT's carbon emissions, but these costs are also tax and royalty deductible, lowering government take from the sector. On a bright note, Diavik spent \$30-35 million on a 9.2 MW renewable energy wind farm in 2012, which should reduce emissions by 10 percent and lower power costs.

The high cost of energy makes new mines, especially on marginal projects, less feasible. However using public funds to subsidize these costs may not be economical. The GNWT conducted a \$15 million feasibility study to expand the Taltson hydro plant by approximately 60 MW, link the NWT to the North American grid, and provide electricity to the mines by building a 740 km line. \$90 million in revenue could have been generated annually according to the study. However the project would have cost \$700-995 million.³¹ Furthermore, given the lifespan of the existing diamond mines, it is no longer reasonable to invest in excess capacity or to connect these mines to the grid, especially since the project would be completed after the mines have closed. It is also unclear whether the region that hosts Ekati and Diavik will host the next wave of mining projects in the NWT.

Expanding wind power at existing mines may also be a non-starter. Most companies require an 8-10 year payback to invest in new sources of energy. Wind power has a 10 year payback, while Diavik and Ekati are both expected to close within the next 10-15 years.

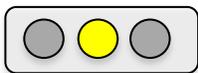
³⁰ NWT Power Corporation Annual Report (2016). Online: <http://www.ntpc.com/docs/default-source/Reports/2016-nt-hydro---ntpc-annual-report---final-for-website.pdf?status=Temp&sfvrsn=0.03274810406058176>.

³¹ A backgrounder on the Taltson project can be found at <http://www.gov.nt.ca/sites/default/files/documents/Backgrounder%20-%20Taltson.pdf>.

Still, there are steps the GNWT can take to lower energy costs for mining companies. For example, the GNWT could conduct process audits to reduce wastage. Diavik recently lowered the mine temperature from 6 to 4 degrees, saving millions of dollars.

More promisingly, but only applicable to future projects, the GNWT can encourage companies to design mines that use a much greater proportion of renewable energies. This can be done through legislation, SEAs or the environmental assessment process. While natural gas is not viable due to the transportation challenges, and there is not much geothermal potential near most mine sites, wind farms can significantly reduce reliance on diesel power. Wind power has enormous potential in many parts of the NWT. Solar power can also reduce diesel use by up to 20 percent, as long as the operator is willing to invest in expensive storage.

Local Content and Value-added in the Mining Sector



The presence of the mining industry can generate significant benefits for a region beyond revenues. Non-fiscal benefits include jobs, training, technology transfer and local business development, for instance mine supplier development (e.g. catering; engineering services; drilling equipment). In Australia, Finland and some southern Canadian provinces, such as British Columbia and Quebec, local content has kick-started growth in mining supplier industries, built local skills, improved access to credit for businesses, and generated true partnerships between multinational mining companies and local businesses and universities.

Another form of local content commonly employed is to offer contracts to companies with local equity participation. In many countries, companies either based locally or whose beneficial owners are local are given preferential access to mine site contracts. These policies are often difficult to enforce in practice and usually end up benefiting wealthy locals (rather than those most in need of the benefits) or foreign companies using local shell companies.

Another set of non-fiscal benefits stem from shared-use infrastructure. Mine sites often require the construction of roads, airports, ports, power generation units, telecommunications systems, clean water and other infrastructure. Many of these large-scale infrastructure projects can be expanded at relatively low cost to benefit mining-affected communities.

Finally, local economies can often benefit from the additional fiscal and non-fiscal benefits associated with beneficiation and other downstream value-added activities. Local mineral processing can generate higher sales or export profits than transporting raw materials, though local processing can also be uneconomical due to the cost of inputs (especially power and chemicals) and there are environmental implications of local processing. Additionally, raw materials can be transformed into intermediate or even final goods, such as cut and polished diamonds, metal wire or even jewelry.

Local content

There are some obvious constraints to the benefits the NWT can accrue from local content. First, suppliers require inputs and the territory's high wages, distance and poor transportation connections to

supplier hubs makes purchase of inputs expensive. As a result, it is quite difficult for NWT-based companies to compete with lower-cost jurisdictions in providing goods and services to mines.

Second, the NWT's labour market is tight. The current unemployment rate is 7 percent, similar to the rest of Canada. Labour force participation is actually 5 percentage points higher than the rest of Canada. While improvements can always be made, the NWT labour market may be saturated and at its "natural" level of unemployment.³² Therefore there is not enough excess labour, especially skilled labour, to grow value-added industries. That said, workers can and have been imported to serve this purpose to loosen constraints on the labour market.

Third, mining is capital-intensive and does not produce many jobs. Despite the mining sector representing approximately 25 percent of the NWT's GDP and approximately 25 percent of self-generated fiscal revenue, fewer than 1,600 people or 7 percent of the NWT workforce were directly employed by the mining sector in 2016.

Still, there are opportunities for greater local content and growth of non-fiscal benefits from mining. Already some mines are providing preferential access to local businesses. For example, certain Hay River car and truck dealers have supplier deals with mining companies. Catering and janitorial services are also usually locally sourced.

Aboriginal groups are often the strongest advocates for local procurement and the most proactive. In a replicable example, the Tłı̄ch̄o government, in collaboration with CanNor, conducted a study looking at how they could benefit from the presence of mines. They concluded that fuel supplies and trucking would be the most profitable and achievable growth sectors and have since started providing these services to some mines.

There is significant potential for expanding opportunities for business development through SEAs and IBAs. Some SEAs already include certain provisions to encourage local procurement, such as minimum local procurement requirements and prioritizing purchases from local aboriginal businesses or NWT businesses. However these provisions are generally poorly defined or unenforceable. Another option would be to introduce an incentive for local procurement similar to the GNWT's Business Incentive Policy (BIP) but that would apply to mining companies.

SEAs also contain local employment requirements, though the language used is quite broad—for instance, the company will "use best efforts to hire, retain and promote as many NWT residents as possible"—and SEAs are generally unenforceable. The result is that percentage targets are usually not met.

That said, local employment targets may be unrealistic in many cases. Mining companies select local employees from a relatively small pool of eligible and qualified workers. Many prospective employees in the NWT have criminal records, which makes them ineligible for hiring. Education also remains a barrier; many candidates from smaller communities have Grade 6 education when a minimum requirement may be Grade 9. Finally, as mentioned, unemployment rates are quite low in the NWT, making the targets even tougher to achieve.

³² Statscan and NWT Bureau of Statistics. Online: <http://www.statsnwt.ca/index.html>

Furthermore, the GNWT does not have a clear policy objective when it comes to local employment. On the one hand, the government pushes for local hiring through SEAs. On the other hand, the government wants to encourage non-resident miners to settle in the GNWT. There is also a greater focus on *quantity* of jobs rather than *quality* of jobs. In general, locals are hired disproportionately for low-skill position such as janitorial services whereas non-residents are hired for managerial and high-skill positions. This allows companies to meet their local employment targets, but may not serve the long-term interests of the NWT since new and transferable skills are not being developed.

Finally, SEAs usually contain training and human resource development provisions. These include scholarships, specialized mineral sector training and literacy programs. Often aboriginal groups are given priority. Once again, these provisions generally use broad language and are unenforceable.

IBAs, on the other hand, are enforceable. However since they are confidential, it is unclear whether they provide adequate local benefits or whether the provisions therein are enforced. As mentioned earlier, there is a lack of coordination between IBA and SEA drafters, potentially leading to overlap or even inconsistencies. As such, public disclosure of IBAs would serve mining communities well.

At present, the GNWT does not have an explicit local content policy that applies to the private sector. An implicit policy does exist via the negotiation of SEAs. However the GNWT may benefit from setting specific goals for local content across the territory, a comprehensive evaluation of which local content policies are working and not working, and developing a strategy to improve local content, similar to Brazil's local content mapping exercise for its petroleum industry.

Shared-use infrastructure

A degree of shared-use infrastructure already exists in the NWT. Hunters and trappers use the roads built to the Ekati and Diavik mines to find game. Also, several mines' charter flights are used to support cross-territorial transportation, some beyond the mines' needs. However shared-use infrastructure in the NWT remains in its infancy.

Part of the reason for this is that most mines are located at a great distance from populated areas, limiting the potential for shared-use infrastructure. It is therefore often impractical to share power, roads and even telecommunication infrastructure with local communities.

That said, there are exceptions. The NICO mine could have shared power with Whati and other close communities, but provisions to these ends were not included in the draft mine plan. This represents a serious missed opportunity. Additionally, any new mine at Pine Point could share transport, power and telecommunications infrastructure with Hay River and Fort Resolution. The feasibility of such a plan would need to be considered at the mine development phase, currently regulated by the Land and Water Boards. Given the potential savings associated with shared-use infrastructure to the GNWT, it may be in the government's interest to negotiate with companies on expanding capacity beyond what the mine might need.³³

Beneficiation and value-added industries

³³ For more information on shared-use infrastructure, see <http://ccsi.columbia.edu/work/projects/leveraging-infrastructure-investments-for-development/>.

The GNWT has made several efforts in the past to incentivize downstream mineral activities in the territory, both in terms of mineral processing and value-added industrialization. The experience has been generally disappointing.

The most famous case of mineral processing in the territory was the Giant Mine's gold processing furnaces, at the time built due to the inability to export large amounts of raw materials. The result was a well-recorded environmental and social disaster.³⁴ More recently, Cantung processed raw materials into tungsten concentrate, though this concentrate was transported to China, the US and Europe for further refining into ammonium paratungstate.

More recently, a number of mines have considered processing of raw materials into concentrate or beyond. Both Avalon (Pine Point) and the NICO mines have even considered upgrading concentrate to semi-refined metals. However the Tłı̄ch̄ô Government rejected the idea due to the residual waste caused by high-grading. Furthermore, the cost of transporting reagents to the NWT vastly outweighed the value-addition from in-territory processing. While lime could have been quarried in the territory, other toxic chemicals only available from other regions would have been required. Concerns about transporting these chemicals into the territory also contributed to the decision not to process locally. Processing of metallic minerals is generally not economical in the NWT.

There exists some value-added potential for cutting, carving and manufacturing of quarried products such as silica sand, soapstone, lime and granite. Granite in particular is high-value. Currently, the NWT imports many of its granite tiles from Italy.

The one area that the GNWT has focused a lot of effort is diamond processing. In the past, diamond mines were required to sort diamonds in the NWT, though the obligation has since been dropped. Companies were also encouraged to cut and polish diamonds in the territory by preventing a certain percentage from being exported. These efforts failed, though the reasons remain unclear. ITI plans to hire a consultant to look further into the issue of diamond processing.

Recently, the GNWT negotiated agreements with the diamond mines that require them to make 10 percent of "economic rough" available at market rates for processing in the NWT. This requirement has benefited two companies: New York-based Almod Diamonds Ltd. and Vancouver-based Crossworks Manufacturing (a subsidiary of HRA Group). The goal is to incentivize niche manufacturing, namely cutting, polishing and production of jewelry. While local labour could be used, it is likely that foreign skilled workers would be needed. Chinese and other foreign tourists represent the primary market for these goods, though the southern "ethical diamond" market is growing. Crossworks already has a factory tour; Almod has plans to open a demonstration center as well.

There are currently no regulations on beneficiation or downstream value-added activities in the NWT; only agreements with mine operators and manufacturers. A diamond policy strategy is being developed by ITI, but there are no plans for a broader plan for beneficiation and value-added.

While the NWT is unlikely to develop an industrial base due to its distance from markets and small population, there are greater opportunities for encouraging downstream activities, especially so-called "diamond tourism", growth of an NWT-branded "ethical diamond" to be sold around the world, and

³⁴ See <http://www.cbc.ca/news/canada/north/multimedia/is-yellowknife-ready-to-reckon-with-its-toxic-legacy-1.3659758>.

manufacturing of quarried products, especially heavy products such as granite. With the right encouragement, manufacturers could grow the granite tile sector and even export to the rest of Canada and the United States. A market study would need to be conducted to ascertain the sectors' potential.

Equitable Economic Growth and Diversification



Natural resource revenues provide governments with the opportunity to transform residents' lives for the better. Not only can the government finance infrastructure and provide more and better social services, but additional revenues can also be used to increase the territory's capacity to absorb further investment.

Investing for economic growth can be a good in itself, but it is particularly important in the NWT given the territory's dependence on the Government of Canada and the natural resource sector. In 2016, 71% of the GNWT fiscal revenue came from the federal government. Of the remaining self-generated fiscal revenues, approximately 25% can be directly linked to the mining sector, which makes the GNWT resource-dependent according to IMF criteria.

This dependence on federal transfers and the mining sector can be self-perpetuating. As we have seen in other jurisdictions in similar circumstances, such as Alaska, Botswana and Mongolia, this type of reliance can weaken the link between residents and their government, which in turn can impair government accountability. It can also generate a situation where government and the natural resource sector attracts the best professional talent, capital and government interest, preventing growth of other sectors, a phenomenon called 'Dutch disease'. The end result is that dependent governments often fail to diversify their economies and generate broad-based growth.

Mineral dependence also harms job creation and seems to have done so in the NWT. Despite the mining sector representing nearly 25% percent of the NWT's GDP, approximately 50% of (international and inter-provincial) exports and about 25% percent of self-generated fiscal revenue, less than 1,600 people, or less than 7% of the NWT workforce, were directly employed by the mining sector in 2016. This is about the same as the transportation, tourism or construction sectors and less than the education, health or retail sectors.³⁵

In fact, economic multipliers for mining in the NWT are also lower than for most other industries or sector, both in terms of GDP and labour income. According to the NWT Bureau of Statistics, diamond mining has *the lowest labour income multiplier of any industry or sector in the NWT*. This finding is not surprising, nor unique to the NWT, since mineral production is capital intensive and many jobs are fly-in-fly-out. However it does highlight the need to focus on other sectors if the NWT wants to grow and generate jobs. Forestry and logging, education, transportation, retail, agriculture (including animal husbandry), and professional and administrative services have some of the highest multipliers.³⁶

³⁵ NWT Bureau of Statistics. Online: <http://www.statsnwt.ca/index.html>

³⁶ NWT Bureau of Statistics (2012) *NWT Economic Multipliers: Overview and Results*. Online: <http://www.statsnwt.ca/economy/multipliers/Multiplier%20Report-2012.pdf>.

Mining can and should be an important component of the NWT economy, but only insofar as it can help grow and diversify the economy and improve the lives of current and future generations. Transforming revenues into equitable economic growth and jobs, in turn, requires an economic diversification plan. Economic diversification plans generally refer to investments in an enabling environment for private investment—meaning public spending increases on infrastructure, especially transport, power and telecommunications, and added focus and reforms to education—as well as targeted support for specific sectors. A strategic development plan that has clear targets over the medium- to long-term, is fully costed, is institutionally linked to the annual budget process, and has buy-in from a critical mass of residents is usually quite helpful in promoting economic diversification and keeping the government on track.

The GNWT has already produced some economic plans. The NWT Economic Opportunities Strategy, the most wide-ranging document available, provides a long list of policy options, plans and targets for economic development. However it does not form a comprehensive development strategy nor are these plans costed with clear prioritization, clear timelines (only “short”, “medium” and “long” terms are provided) or a monitoring mechanism.³⁷

In addition to the Economic Opportunities Strategy, the GNWT has several sector-specific plans. Tourism 2020, for example, outlines plans and targets, and possesses the added virtues of a budget and clear performance measures. Education incentives are also fairly robust. For instance, the Department of Education, Culture and Employment’s Student Financial Assistance Program provides generous student loans to those who attend post-secondary institutions outside the NWT but who return to the territory following their studies.³⁸ According to the Department of Finance, 60% of non-aboriginal and 80% of aboriginal students do return to work in the NWT.

That said, development planning to date has been ineffective. The NWT economy has shown anemic growth over the last decade; real GDP is nearly identical to what it was in 2002, despite billions of dollars in public investment. The service sector, agriculture, forestry, construction, tourism, manufacturing and utilities in particular have stagnated.³⁹

As mentioned, the GNWT faces unique challenges in diversifying its economy, not to mention global and national clustering of economic activity where infrastructure and jobs already exist. However there is much the GNWT can do. Raising more revenues from the mining sector and channeling those funds into other potentially high-growth sectors could do much to improve the territory’s economic prospects.

Disclaimer

The views expressed in this report are those of the author and do not necessarily represent the views of the GNWT.

The information contained in this report is the product of publicly available and internal GNWT documents as well as interviews carried out in the NWT and remotely from March to May 2017. Independent verification or audit of all statements was not possible, though verification was attempted

³⁷ NWT Economic Opportunities Strategy. Online: <http://www.iti.gov.nt.ca/en/economic-opportunities-strategy>

³⁸ <http://www.assembly.gov.nt.ca/sites/default/files/12-11-06td106-173.pdf>

³⁹ NWT Bureau of Statistics. Online: <http://www.statsnwt.ca/index.html>

where possible. As such, the author denies responsibility over assertions made by credible interviewees erroneously.

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