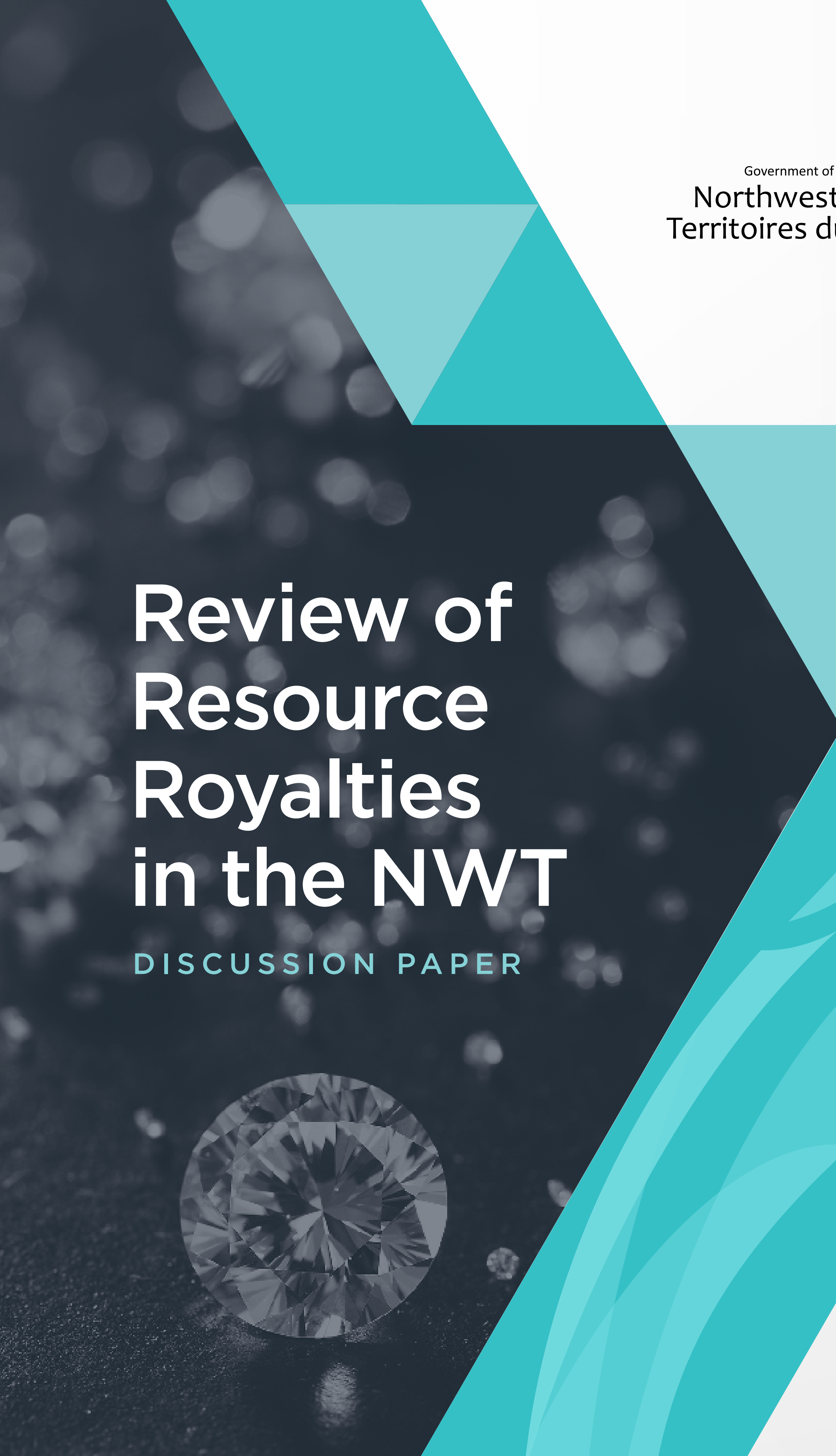
Government of | Gouvernement des
Northwest Territories
Territoires du Nord-Ouest



Review of Resource Royalties in the NWT

DISCUSSION PAPER

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Intergovernmental Council of the Northwest Territories

A key feature of the 2014 Devolution Agreement was the establishment of an Intergovernmental Council (IGC) to allow public and Indigenous governments to cooperate and collaborate on matters related to lands and resource management.

The Council provides a forum for northern leaders to address matters of land and resource management, while respecting the autonomy and authority of each government over its own lands.

The Council is established by the Northwest Territories Intergovernmental Agreement on Lands and Resources Management. The goal of the Intergovernmental Council is to work together to explore ways to coordinate their respective land and resource management practices, share capacity, and avoid duplication.

MEMBERS OF THE INTERGOVERNMENTAL COUNCIL INCLUDE:

- Government of the Northwest Territories(GNWT)
- Inuvialuit Regional Corporation
- Gwich'in Tribal Council
- Sahtu Secretariat Incorporated
- Northwest Territory Métis Nation
- Tłı̨chǫ Government
- Acho Dene Koe First Nation and the Fort Liard Métis Local #67
- Salt River First Nation
- Deninu Kųę́ First Nation
- Kátł'odeeche First Nation

From the Intergovernmental Council of the Northwest Territories (IGC)

The promise of Devolution included a commitment to work collaboratively, as Northwest Territories governments, on the management of lands and resources in the NWT.

This commitment was formalized in December 2020 in a Legislative Development Protocol developed and adopted by the Intergovernmental Council.

The protocol is the first agreement of its kind in Canada.

Consistent with the Northwest Territories Intergovernmental Agreement on Lands and Resources Management, it respects the jurisdictions and authorities of Indigenous governments and the GNWT while also providing a mechanism for collaboration and consensus-building.

More importantly, as the IGC develops the regulatory framework for the Northwest Territory's first stand-alone Mineral Resources Act, the protocol is now being put into practice.

The work to review the NWT's resource royalty regime is one part of this historic work.

Executive Summary

Northern leaders are working as the Intergovernmental Council (IGC) of the Northwest Territories (NWT) to design the regulations needed to bring the first made-in the-NWT *Mineral Resources Act (MRA)* into force.

Early in the process to develop the MRA, it was collectively agreed, that a fulsome review of the NWT's royalty regime would be part of its regulatory development.

Royalties serve to convert a non-renewable resource into a financial asset for the public benefit of all residents. Around the world, royalties are determined in many different ways but most fall into one of five types.

The NWT Royalty system is profit based. Royalties are calculated as a percentage of the production value of the minerals mined minus the costs incurred to extract those minerals.

Mineral royalties must be paid annually. The NWT's existing mining regulations prescribe higher royalty rates from more-profitable developments and lower royalty rates from less-profitable developments.

In all cases, the costs of building and operating a mine are deducted before calculating the royalties. In cases where a project is not profitable, no royalties are paid.

The GNWT collects 100 percent of royalties paid in the NWT. Off the top, a percentage of this total is shared with Indigenous governments under modern treaties agreements.

From there, the GNWT and federal governments split the royalties collected from resource development (50-50). The GNWT then shares 25% of its share with those Indigenous governments that are signatories to the Devolution Agreement.

For the past 20 years, diamond mining has made up the largest segment of the NWT's GDP, contributing $814.1 million to GDP in 2020, and a total of $23 billion since 1999.

Since 2014, $11 billion worth of diamonds have been produced in the NWT and approximately $250 million in royalties paid.

Since 2015, the GNWT has collected an average of about $90 million annually in additional revenues from diamond mines (like taxes).

Since 2014, $11 billion worth of diamonds have been produced in the NWT and approximately $250 million in royalties paid.

Recognizing the extraordinary benefits that mining can bring to a jurisdiction, governments can choose to entice or attract companies to mine in their jurisdiction by making allowances to tax or royalty regimes that will improve the feasibility of a proposed project.

The current rules for administering resource royalties in the NWT are the same ones that were used by Indian and Northern Affairs Canada for over 60 years.

To shape the public discussion and development of the NWT's resource royalty regime, the Intergovernmental Council has set out three broad measures by which it proposes to consider royalty regulations for mineral development in the NWT.

1. Are NWT royalty regulations providing a fair share of the profit?
2. Are NWT royalty regulations contributing to a stable and competitive investment environment in the NWT?
3. Is the utility of NWT royalty regulations being maximized?

All elements of the royalty system (except for the resource revenue distribution formula) are open for discussion and a combination of concepts and elements may ultimately be employed to establish the NWT's royalty system moving forward.

Before any new regulations can be considered, proposed adjustments and changes will need to be modelled and simulated to determine what their full financial impacts and benefits will be.

The input received from Indigenous governments and organizations, industry, elected officials and the public will be combined with what is learned from financial modelling and other research and analysis that will be completed by the GNWT's Department of Industry Tourism and Investment to ultimately form policy options for future regulations.

Sommaire

Les dirigeants du Nord travaillent dans le cadre du Conseil intergouvernemental des Territoires du Nord-Ouest (TNO) pour concevoir les règlements nécessaires visant à mettre en vigueur la première *Loi sur les ressources minérales* (LRM) des Territoires du Nord-Ouest.

Au début du processus d'élaboration de cette loi, il a été collectivement convenu qu'un examen complet du régime de redevances des TNO ferait partie de son élaboration réglementaire.

Les redevances servent à convertir une ressource non renouvelable en un actif financier pour le bien public de tous les résidents. Partout dans le monde, les redevances sont déterminées de différentes manières, mais la plupart appartiennent à l'un des cinq types.

Le système de redevances des TNO est basé sur le profit. Les redevances sont calculées en pourcentage de la valeur de production des minéraux extraits moins les coûts engagés pour extraire ces minéraux.

Les redevances minières doivent être payées annuellement. La réglementation minière actuelle des TNO prescrit des taux de redevance plus élevés pour les développements plus rentables et des taux de redevance plus bas pour les développements moins rentables.

Dans tous les cas, les frais de construction et d'exploitation d'une mine sont déduits avant le calcul des redevances. Dans les cas où un projet n'est pas rentable, aucune redevance n'est versée.

Le GTNO perçoit 100 pour cent des redevances versées aux TNO. Un pourcentage de ce total est partagé avec les gouvernements autochtones en vertu d'accords de traités modernes.

À partir de là, le GTNO et le gouvernement fédéral se partagent les redevances perçues sur l'exploitation des ressources (50-50). Le GTNO partage ensuite 25 % de sa part avec les gouvernements autochtones qui sont signataires de l'Entente sur le transfert des responsabilités.

Au cours des 20 dernières années, l'extraction de diamants a constitué la plus grande partie du PIB des TNO, contribuant pour 814,1 millions de dollars au PIB en 2020, et un total de 23 milliards de dollars depuis 1999.

Depuis 2014, 11 milliards de dollars de diamants ont été produits aux Territoires du Nord-Ouest et environ 250 millions de dollars en redevances ont été payés.

Depuis 2015, le GTNO a perçu en moyenne environ 90 millions de dollars par an en revenus supplémentaires provenant des mines de diamants (comme les taxes).

Depuis 2014, 11 milliards de dollars de diamants ont été produits aux Territoires du Nord-Ouest et environ 250 millions de dollars en redevances ont été payés.

En reconnaissant les avantages extraordinaires que l'exploitation minière peut apporter à une région, les gouvernements peuvent choisir d'inciter ou d'attirer des entreprises pour exploiter une mine sur leur territoire en tenant compte des régimes fiscaux ou de redevances qui amélioreront la faisabilité d'un projet proposé.

Les règles actuelles d'administration des redevances sur les ressources aux Territoires du Nord-Ouest sont les mêmes que celles utilisées par Affaires autochtones et du Nord Canada pendant plus de 60 ans.

Pour façonner le débat public et l'élaboration du régime de redevances sur les ressources des TNO, le Conseil intergouvernemental a établi trois grandes mesures par lesquelles il propose d'examiner la réglementation des redevances pour l'exploitation minière aux TNO.

1. Les règlements sur les redevances des TNO prévoient-ils une juste part des bénéfices?
2. La réglementation des redevances des TNO contribue-t-elle à un environnement d'investissement stable et concurrentiel aux TNO?
3. L'utilité de la réglementation des redevances des TNO est-elle maximisée?

Tous les éléments du système de redevances (à l'exception de la formule de répartition des revenus des ressources) sont ouverts à la discussion et une combinaison de concepts et d'éléments pourrait finalement être utilisée pour établir le système de redevances des TNO à l'avenir.

Avant d'envisager toute nouvelle réglementation, les ajustements et les changements proposés devront être modélisés et simulés afin que l'on puisse déterminer l'ensemble de leurs répercussions et avantages financiers.

Les commentaires reçus des gouvernements et des organisations autochtones, de l'industrie, des élus et du public seront combinés avec ce qui est appris de la modélisation financière, et avec d'autres recherches et analyses qui seront effectuées par le ministère de l'Industrie, du Tourisme et de l'Investissement du GTNO pour finalement former des options stratégiques à des fins de réglementation future.

Introduction

THE NORTHWEST TERRITORIES MINERAL RESOURCES ACT

The 18th Legislative Assembly of the Northwest Territories passed the *NWT Mineral Resources Act (MRA)* in 2019. It is the first-ever legislation governing mineral resources drafted in the NWT.

The MRA presents a unique and made-in-the-NWT approach to governing mineral development in the NWT.

The collaborative approach taken in its development reflects the partnership that exists between the NWT's territorial and Indigenous governments and was guided by mutually shared goals to:

1. regulate mineral interests efficiently, effectively and in a transparent manner;
2. support the economy of the NWT;
3. realize benefits from mineral development for indigenous governments and organizations, communities and the people of the NWT;
4. ensure that wealth generated by mineral resources will be used for the benefit of present and future generations of the people of the NWT;
5. encourage positive relationships between proponents, indigenous governments and organizations, communities and the Government of the NWT;
6. respect Aboriginal and treaty rights;
7. complement the systems for collaborative management of land and natural resources;
8. improve geological knowledge; and
9. recognize sustainable land use.

These same principles will underpin the work to develop regulations that will serve to interpret and define the intent and purpose of the Act.

REGULATIONS

IGC partners are now designing the regulations needed to bring the Mineral Resources Act into force.

Regulations governing royalties are one part of this bigger body of work.

Early in the process to develop the *Mineral Resource Act*, it was collectively agreed, that a fulsome review of the NWT's royalty regime would be part of this regulatory development.

The process to engage and consult with NWT leaders, residents and industry and business representatives on the NWT's resource royalty regime has now begun.

This document has been developed as a starting point for this important NWT-wide conversation.

It is intended to provide a common understanding of what resource royalties are, how they work and what options exist to define how they are used in the NWT.

What is a Royalty?

In its simplest form, a royalty is a payment made by a third party to the owner of a product for its use.

Because natural resources are commonly understood to be public property, the developer of a resource extraction project is required to pay a royalty to the government of the jurisdiction from which the resource is removed.

Royalties serve to convert a non-renewable resource into a financial asset for the public benefit of all residents. It is not a tax.

The Constitution of Canada empowers provinces to manage their individual resources and to impose resource taxes and royalties. Thanks to the signing of the Devolution Agreement in 2014, the NWT also has this responsibility.

How do Royalty Regimes Work?

Around the world, royalties are determined in many different ways but most fall into one of five types.

Some royalty types are relatively easy to assess and monitor; some are better for low value/large volume minerals like iron, while others are better for higher risk/higher value minerals like gold and diamonds.

The type of royalty applied will have an impact on the amount of benefits that accrue to a jurisdiction.

While they can differ in approach, royalty systems generally hold true to three common and globally-recognized guiding principles:

- As the owners of a resource, the residents of a jurisdiction are entitled to a fair share of profits;
- To attract the best producers, a royalty system should provide stability and a competitive rate of return consistent with competing jurisdictions; and
- A jurisdiction's royalty system should ensure that decisions regarding resource extraction are made to maximize the resource utility and minimize wastage to ensure long-term sustainable development.

Each of the following five main royalty types has advantages and challenges that require a jurisdiction to fully consider, evaluate and understand and its unique objectives and circumstances.

1. PRODUCTION ROYALTIES (BASED ON VOLUME OR WEIGHT)

This approach is typically used for materials of low value that don't need much processing, such as sand, gravel, or stone. As every truck of material is weighed, this royalty is easy to calculate and audit. The information needed is not proprietary and easy to confirm, making it transparent.

As long as materials are mined, the government collects royalty. However, this method does not work for metals or other minerals that require further processing or treatment like smelting before they can be sold. This royalty is not used in Canada except for quarrying purposes.

2. AD VALOREM ROYALTIES (BASED ON THE GROSS VALUE OF PRODUCTION)

This is the most common royalty type in the world. The royalty calculation is based on the value of the minerals that leave the mine site. Amount of royalty paid fluctuates with the price of the minerals. It is simple to administer, but because it does not consider if a mine is making money or not, it can influence a mine to close when the price of the mineral is low. While globally recognized, it is not used as a stand-alone royalty in any regime in Canada.

3. PROFIT BASED ROYALTIES (BASED ON A MINE'S INCOME)

With this kind of a royalty, operating costs and allowances are subtracted to establish the value of the resource. Royalties are collected as a percentage of this value. As mineral prices change, the payment to government can go up and down. In the first few years of operations where capital and operating cost expenditures can be relatively high, or when commodity prices are low, companies may not be profitable and therefore pay no royalty. This approach is considered effective at adjusting to market conditions and getting the most benefits and revenue from an operation. On the other hand, the accounting is technical and is reliant on the self-reporting of proprietary corporate information which challenges the public's desire for transparency. This approach is the most common in Canada and developed nations with a strong administrative capability. (All of the systems used in Canada allow the cost of building the mine and mining the ore to be deducted from the gross value of production before royalties are calculated.)

4. RESOURCE RENT ROYALTIES (BASED ON THE ABSOLUTE VALUE OF THE RESOURCE)

This approach taxes the portion of income that exceeds a given return-on-investment threshold. Economists view this as the ideal calculation to get the most value from a resource. In reality, however, the application of this approach is problematic because the full size of the resource is not usually known until mining is completed. As with the Profit Based Royalty system, the reliance on the self-reporting of proprietary corporate information counters the public's desire for transparency. Using this system is complicated and requires complex underlying tax concepts with respect to the notion of rent.

5. HYBRID REGIME COMBINING AD VALOREM ROYALTIES AND PROFIT/RENT ROYALTIES

Hybrid regimes usually combine minimum royalties based on gross value of production with those based on profits or rent. The general goal of a hybrid regime is to ensure the government receives revenue even if a mine never becomes profitable. Variations of this regime are used in British Columbia, Saskatchewan, Quebec and Alberta.

How do Royalties Work in the NWT?

The NWT Royalty system is profit based (see page 5). Royalties are calculated on the production value of the minerals mined minus the costs incurred to extract those minerals.

Compared to other Canadian regimes, the calculation and administration of NWT royalties is relatively-simple: (see page 16)

- Calculations are limited to one project at a time (called ring-fencing);
- Independent experts are used to value minerals;
- All royalty returns are subject to audit; and
- Financing costs (loans, or streaming or hedging) and transfer pricing (meaning sales from one part of a company to another) are not allowed in the calculation of royalties.

Mineral royalties must be paid annually. The NWT's existing mining regulations prescribe higher royalty rates from more-profitable developments and lower royalty rates from less-profitable developments. Rates are calculated as the lesser of:

- 13 percent; or
- On a tiered scale that varies from zero percent to 14 percent depending on the value of the output of the mine. (see page 16)

In all cases, the costs of building and operating a mine are deducted before calculating the royalties. In cases where a project is not profitable, no royalties are paid.

RESOURCE REVENUE SHARING

The GNWT collects 100 percent of royalties paid in the NWT. Off the top, a percentage of this total is shared with Indigenous governments under modern treaties agreements.

Aboriginal Government	Percentage of Royalties (First $2 Million)	Percentage of Royalties (Over $2 Million)
Tłı̨chǫ Government	10.429%	2.086%
Sahtú Secretariat Inc.	7.5%	1.5%
Gwich'in Tribal Council	7.5%	1.5%
Total	**25.429%**	**5.086%**

From there, the GNWT and federal governments split the royalties collected from resource development (50-50). The GNWT then shares 25% of its share with those Indigenous governments that are signatories to the Devolution Agreement (known collectively as the Intergovernmental Council).

Indigenous Group	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20
Acho Dene Koe First Nation	188,133	135,105	197,272	174,755	74,162	117,712
Deninu Kue First Nation	238,226	181,971	265,450	244,861	102,559	94,305
Gwich'in Tribal Council	1,182,521	942,063	1,373,398	1,254,427	527,224	483,126
Inuvialuit Regional Corporation	1,815,566	1,441,671	2,101,856	1,973,271	821,920	759,980
Kátł'odeeche First Nation	131,661	126,627	184,153	167,322	70,503	64,442
Northwest Territory Métis Nation	627,601	497,521	725,368	645,201	273,568	248,491
Sahtú Secretariat Inc.	1,335,446	1,067,134	1,555,666	1,448,762	605,048	557,972
Salt River First Nation	250,542	191,636	279,544	247,922	105,205	95,484
Tłı̨chǫ Government	1,213,736	961,408	1,401,716	1,269,178	534,950	488,807
Total Distributed Resource Revenues	**6,983,432**	**5,545,136**	**8,084,423**	**7,425,698**	**3,115,140**	**2,910,318**

(As the NWT receives transfer payments from the federal government, a royalty cap has been placed on the GNWT equal to 5% of the NWT's Territorial Formula Financing's Gross Expenditure Base; a cap that has not yet been reached.)

Royalties and Other Revenues

For the past 20 years, diamond mining has made up the largest segment of the NWT's GDP, contributing $814.1 million to GDP in 2020, and a total of $23 billion since 1999.

Since 2014, $11 billion worth of diamonds have been produced in the NWT and approximately $250 million in royalties paid.

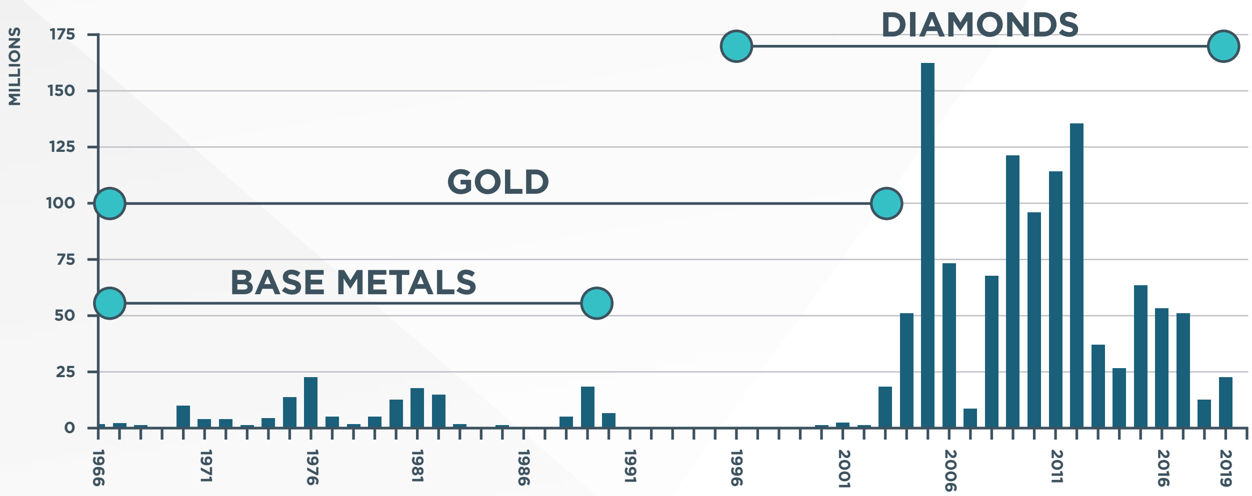

Figure 1 – The amount of royalties paid in the NWT from 1966-2019. Presented in 2019 Canadian Constant Dollars.

Royalties are only a small part of what mines pay to work in the NWT and only one way that NWT residents benefit from mining.

Since 2015, the GNWT has collected an average of about $90 million annually in revenues from diamond mines.

TAXES

In addition to collecting royalties for resources extracted from the NWT, the GNWT collects taxes from the mining companies that develop them.

Collectively, these revenues are invested in infrastructure, health, social services, economic development and government programs and services.

The GNWT collects an average of $53 million/year in taxes from the mining sector including:

- Corporate taxes – A percentage of money taken from profits of companies doing business in the NWT. Currently, the corporate tax rate is 11.5% of corporate taxable income. (This is distinct from the federal government's collection of a 15% income tax.)
- Carbon tax – Effective July 1 2021, this was assessed at CAD $40 per tonne and will increase annually to CAD $50 per tonne by July 1, 2022.
- Property taxes – Mines in the NWT are charged taxes for the properties they hold. The NWT has some of the highest property taxes on mines in Canada.
- Fuel taxes – Mines sites that are continually running power generation facilities. Haul trucks and processing equipment use a lot of fuel. The NWT applies taxes on all fuels used for purposes other than heating.
- Payroll taxes – Everybody who works in the NWT is charged a 2% tax on their employment incomes.

In addition to GNWT revenues, there are a number of ways that NWT residents, business and communities benefit directly from the NWT's mining industry.

IMPACT BENEFIT AGREEMENTS/BENEFIT AGREEMENTS

Mining companies operating in the NWT commonly enter voluntarily into Impact Benefit Agreements with Indigenous governments in jurisdictions close to where they are operating. (The MRA empowers the development of Benefit Agreements which will be similar but mandatory.)

These agreements are negotiated confidentially and can cover a variety of benefits like community infrastructure investments and local training; and environmental or wildlife monitoring programs.

The agreed-upon investments are made by the companies directly into the communities.

EMPLOYMENT

NWT mines employ a lot of people. And while there are workers who fly in and out of our territory, many jobs are filled by NWT residents.

As a proposed mine project completes the necessary regulatory reviews and approvals process, in the NWT, a Socio-Economic Agreement (SEA) must be established. These agreements formalize commitments made by a company during its regulatory review and include targets for local employment.

Since 1996, the year the first SEA was signed with Ekati Diamond Mine, NWT mines have created 31,000 person-years of direct employment.

From transportation to construction, to grocery stores, hotels - and even government, countless more jobs are filled by NWT residents working to service the local presence, need and consumption of the NWT mining sector.

BUSINESS

SEAs also set targets for the local procurement of goods and services that accrue benefits to NWT residents.

NWT diamond mines have spent $16 billion with NWT businesses since 1996, including nearly $7.5 billion with Indigenous-owned businesses.

Thanks, in large part, to the mining industry’s commitment to northern procurement, Indigenous companies are on the rise and play a pivotal role in almost every area of businesses and industry – providing significant opportunities for investment - and driving the development of a northern workforce.

TRAINING

Supported by joint investments from NWT and federal governments, the mining industry has also spurred a great deal of training opportunities for NWT residents. These opportunities help workers develop skills that remain relevant far beyond the mine site.

EXPLORATION

Even before a mine is built, the search for minerals in the NWT is a big undertaking. As much as $200 million has been spent on exploration in a single year. In addition to the direct economic benefit that this exploration investment provides, millions-of-dollars-worth of assessment reports and geoscience data, is generated by mining and exploration companies and archived for public use by the Northwest Territories Geological Survey.

COMMUNITY SUPPORT

NWT mining companies sponsor countless events and initiatives that serve to build and support NWT communities. Each of the NWT's diamond mines fund scholarships for NWT students; encouraging young people to stay in school, seek higher learning and take control of their future.

The Business of Mining

The cycle of finding, mining and processing non-renewable resources is big business.

While the ultimate pay-off can be substantial, mining companies and their investors are also exposed to significant risks up front. They include geopolitical factors, fluctuations in commodities prices and the cost of accessing remote geological areas to explore and stake a claim.

Mining companies must balance the estimated size and grade of their prospective asset against the costs and difficulties of extracting it. If the deposit will fetch more money on the market than it costs to mine, a project is considered feasible.

Recognizing the extraordinary benefits that mining can bring to a jurisdiction, (see Royalties and Revenues page 7), governments can choose to entice or attract companies to mine in their jurisdiction by making allowances to tax or royalty regimes that will improve the feasibility of a proposed project.

A commonly held assertion is that an "ideal" or "neutral" tax and royalty regime is one that balances the needs of the government with the requirements of investors and industry. In this context, a well-designed mineral fiscal regime would be one that provides a fair return for government while also allowing investors to generate their needed return on investment.

The standard as expressed by the World Bank and the International Monetary Fund is that the government share (the amount that government receives from the sector in terms of taxes and royalty) should be in the range of between 40 to 60 percent of pre-tax cash flow generated by a project – i.e. government and investors should share pre-tax cash flow over the life of a mine roughly on a 50:50 basis. This is the range that all Canadian jurisdictions fall into.

By making a conscious decision to move closer to, or away from, this balance, a jurisdiction can choose to become more or less "mine friendly". This determination can impact the amount of money generated for government, how long a mining operation will last – or even if a mine is established at all.

Possible Concepts and Changes

HISTORIC CHANGES

The current rules for administering resource royalties in the NWT are the same ones that were used by Indian and Northern Affairs Canada for over 60 years.

The basic rules have not changed since their inception:

- Royalties are calculated using the value of production reported by each mine;
- The costs for extraction, processing, and marketing are subtracted from that profit;
- Rates increase as the mine becomes more profitable;
- Royalties are the same for all minerals; and
- The regulations are prescriptive with limited administrative discretion.

While fiscal systems related to the mining sector are generally reviewed every ten years, the last significant review of the NWT's royalty regulations (called the Two Ducks Report) was completed by the Government of Canada in 2007/08. No amendments or changes were deemed necessary at the time.

The last revision of the NWT's resource regulations came in the 1990's in response to the emergence of the diamond industry in the NWT. New rules were implemented to manage the grading and sales of rough diamonds.

2021 REVIEW

To shape the public discussion and development of the NWT's resource royalty regime, the Intergovernmental Council has set out three broad measures by which it proposes to consider royalty regulations for mineral development in the NWT.

A. **Are NWT royalty regulations providing a fair share of the profit?**

   What is a fair share? Should the overall revenue and benefit of resource development to the NWT be a consideration? This could include long term capital assets like infrastructure and training that will outlast the mining project itself.

B. **Are NWT royalty regulations contributing to a stable and competitive investment environment in the NWT?**

   Investors and proponents of major projects require clarity and certainty. Is the NWT regulatory system attractive to investors when compared to other Canadian and international jurisdictions?

C. **Is the utility of NWT royalty regulations being maximized?**

   Are there other ways to realize benefits for the NWT using royalties? For example, could we leverage their value to increase employment, procurement or investments in infrastructure and environmental sustainability?

   All elements of the royalty system (except for the resource revenue distribution formula) are open for discussion and a combination of concepts and elements may ultimately be employed to establish the NWT's royalty system moving forward.

This review may also choose to consider or test the notions of:

- A Minimum Tax – a production-based or ad valorem tax to ensure every mine pays some amount of royalty every year.
- Interest Rate Refinement – a royalty specific interest rate
- A Progressive Reclamation Deduction – that would reduce the risks to the NWT by encouraging the progressive reclamation of a mine site
- Reclamation Trust Revision – a reclamation trust is currently part of the regulations but does not function in the current federal/territorial regulatory setting.

- Northern Head Office Incentive – would encourage mines to maintain a head office presence with associated employment in the north.
- Property Tax Deduction – the NWT is the one of only two Canadian jurisdictions that charge property taxes for remote mine operations.
- Restructured Processing Allowance – to encourage investment in NWT value-added mineral processing infrastructure and associated employment and business activity
- Enhanced Mine Property Exploration Incentive – mine property exploration would be encouraged to maximize the life of an existing mine.
- Off-Property Exploration Incentive – while a company may be focused on running a mine, exploration would be encouraged to discover new resources off of the mine property.
- Royalty confidentiality levels – there is a desire to see increased transparency as part of global efforts to deter corruption in the extractive sector. A revision of the regulations could ensure that the NWT is aligned with these goals.

Before any new regulations can be considered, proposed adjustments and changes will need to be modelled and simulated to determine what their full financial impacts and benefits will be.

Using Models

Every mine is different. This makes it a challenge, not only to compare one mine to another, but also to determine or predict how successful any one mine may, or may not, be.

In order to choose successful projects to invest in mining companies and their financiers have developed sophisticated tools to assess and evaluate specific projects in the interest of providing greater certainty to potential investors. These same tools can be used by governments, economists and think tanks to answer their questions.

“Financial modeling” is the most widely used tool for this type of economic analysis.

As exploration reveals the nature of a project, assessments of its cost, risk, and return are completed. Economic analysis is applied for every stage, from exploration to remediation, in order to predict a projects overall life and value – even before it is begun. By assembling a numeric model of the finances of different types of mines, we can test the impact of different policy options to ensure that they work to derive the most value from a resource and meet governance objectives while not discouraging the investment needed to put a resource into production.

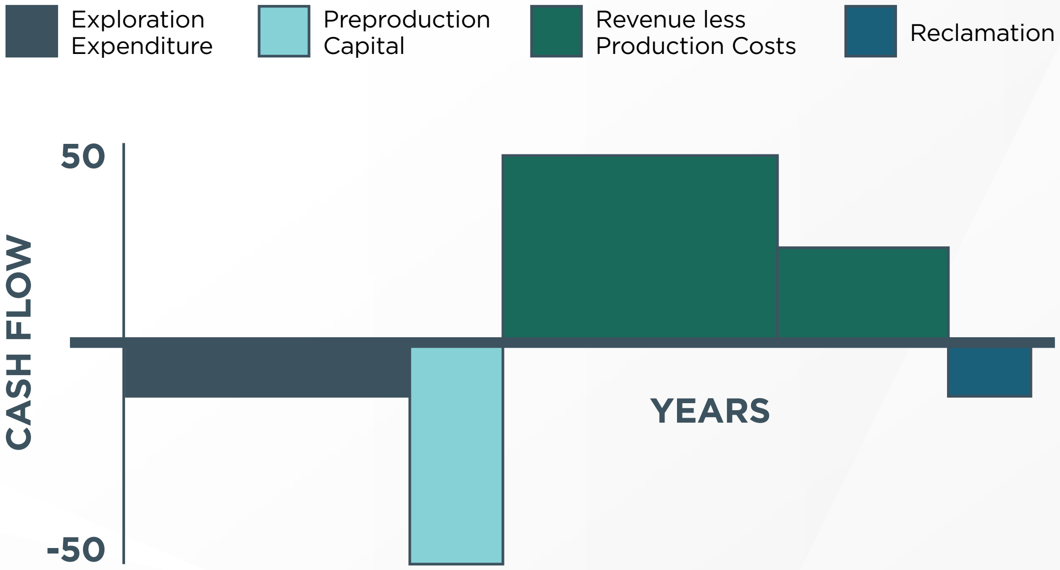

Figure 2. A plot that allows the presentation of the time distribution of average cash flows for an economic mineral deposit through the exploration and the three mine cycle phases. The height of the bars represents the amount of money, and the width represents the period being represented.

The application of financial modelling involves using a range of established and available financial data and calculations, together with known costs, information and experience to create a "model" mine fully reflective of the conditions and environment in which it might exist and operate.

By altering or adjusting the fiscal, environmental or policy inputs to the model, the resulting output or impact of these changes can be predicted or, perhaps more-importantly, compared.

We know that changing the nature or the basis of the NWT royalty system will have impacts on the revenues that are realized by NWT governments and the benefits that accrue to NWT residents, businesses and communities.

Some of these impacts may not be fully intended or immediately obvious so understanding and testing proposed changes using proven and established financial models will be an important part of this review process.

Steps Forward

The introduction of this NWT-wide dialogue on resource royalties is the first of many steps that will be taken to review and define the NWT's next royalty system.

The input received from Indigenous governments and organizations, industry, elected officials and the public will be combined with what is learned from financial modelling and other research and analysis that will be completed by the GNWT's Department of Industry Tourism and Investment to ultimately form policy options for future regulations.

Ongoing discussions and work with Indigenous governments is being advanced in accordance to the *Intergovernmental Council on Land and Resource Management: Legislative Development Protocol* developed to formalize the collaborative development process for land and resource legislation development by the Intergovernmental Council (IGC) and participating Indigenous governments and organizations.

A series of additional steps, including Section 35 consultation, will ensure a robust review is completed before any changes to the NWT's royalty regime are recommended for the new *NWT Mineral Resources Act*.

For access to additional research and information; or to provide input or submissions to this process, individual NWT residents and organizations are encouraged to visit: **www.gov.nt.ca/en/engagements/TBC**

Or, contact the Department of Industry, Tourism and Investment at **royalty_administration@gov.nt.ca**.

Table 1 – Calculation of the NWT royalties from section 69(4) Northwest Territories Mining Regulations.

Royalties are calculated on the “value of the output of the mine.”
In simple terms, this is the total money made by the mine revenue minus the expenses and costs of mining.

The equation used is **A + B – C + D + E + F + G + H – I + J**

A = Sales/Revenue
B = Closing balance of inventory on hand at yer-end
C = Opening balance of inventory on hand
D = Funds received that offset Deductions
E = Asset Disposals
F = Funds withdrawn for reclamation and restoration provisions
G = Funds received from insurance claims
H = Forgiven Government Grants
I = Deductions and Allowances
J = Funds paid to other facilities for the sorting and processing of goods

In the example of diamonds, the first calculation to get the money made by the mine. It starts with adding the sales dollars to the value of inventory (unsold diamonds) to get the production revenue. The amount of money from Sales based on the dollar value received for the diamonds by the producer when they are sold. The diamonds not sold at Year-end are given a value by the Government Diamond Valuator.

The next step in the calculations is to find the amount of money that was used to earn the revenue. Expenses that are used as Deductions can include:

Initial Construction – Mine construction is expensive and the costs for the equipment and buildings that the mine needs are expenses. This includes the camp and processing facilities, on site roads, airport, power plant, water treatment plant, tailing containment, fuel tank farms.

Development Cost – These costs would be for the removal of any dirt, rock or water located over the ore body or to create the tunnels to access the ore in an underground mine.

Depreciable Allowance – This is what it costs to purchase new equipment or repair equipment.

Operating Cost – These are the costs that are needed to run the mine like diesel to run the site, worker pay and the cost to house and feed employees, flights to and from the site, maintenance of equipment and facilities, mining and processing. Once the diamonds leave the mine site there are also the additional costs to market and sell the diamonds.

Processing Asset – These are the costs to run part of the mine or facilities that can process a raw mineral to bring to saleable form. The lesser of 8% of the total money spent on equipment to build and sustain the processing facilitiy that is still being used in the processing of materials or 65% of the value of the output of the mine can be deducted.

Mineral royalties are calculated and paid annually, based on the value of the output of the mine. The amount of mineral royalties owed are calculated the lower of either a percentage calculation of 13 percent of the mine output value or based on a stepped calculation scale (Table 2). The scale has the mine paying from 5 percent to 14 percent of the value of the output of the mine depending on how much the mine makes. Thus, the royalty revenue is tied to the profitability of the operation.

Table 2 – Schedule 3 of the Mining Regulations showing the sum of the royalty payable for the corresponding dollar value of the output.

Value of Output of the Mine	Percent Payable
On the first $10,000	0%
> $10,000 to $5 million	5%
> $5 million to $10 million	6%
> $10 million to $15 million	7%
> $15 million to $20 million	8%
> $20 million to $25 million	9%
> $25 million to $30 million	10%
> $30 million to $35 million	11%
> $35 million to $40 million	12%
> $40 million to $45 million	13%
> $45 million	14%

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