Exploring the Mining “Money Trail”: Assessing British Columbia’s Mining Tax Regime and Unearting Legal Tools That Foster Greater Returns for Local Communities

Maya Stano *

The metal mining industry has long been an important pillar of the British Columbia (BC) economy. As mineral ore is a nonrenewable resource, however, its value to the local region can quickly dissipate once the resource has been exhausted, leaving few long-term benefits. The tax regime can be a powerful tool for overcoming this problem. This article begins with an assessment of the tax regime under which the metal mining industry in BC currently operates. This review highlights several concerns that indicate that the tax regime is falling short of its full potential for securing long-term benefits to local communities. Methods of increasing the retention and distribution of social and economic benefits are thus explored based on approaches adopted in other jurisdictions both within Canada and abroad. These include generalized tax measures, as well as specific provisions aimed at benefiting local communities, protecting the environment, and encouraging greater innovation in the industry. With an increasing emphasis on expanding existing mines and building new ones across BC, this study comes at an opportune time and offers some concrete means to forge a more valuable tax regime—one that retains benefits in locally impacted communities long after the metal resources have been mined.

L’industrie minière des métaux a longtemps été un pilier important de l’économie de la Colombie Britannique. Or, puisque le minerai est un élément non-renouvelable, elle représente peu d’avantage à long terme. En effet, la valeur que cette ressource apporte à sa région disparaît rapidement dès qu’elle est épuisée. Le régime fiscal peut être un outil puissant pour surmonter ce problème. Cet article commence par une évaluation du régime fiscal sous lequel l’industrie de l’exploitation minière des métaux opère présentement en Colombie Britannique. Un tel examen révèle plusieurs soucis qui indiquent que ce régime fiscal peine à garantir aux communautés locales les avantages à long terme dont elle est capable de fournir. Inspiré des démarches adoptées par d’autres juridictions au Canada comme à l’étranger, l’article analyse ensuite les diverses méthodes qui pourraient servir à conserver et à distribuer ces avantages sociaux et économiques, tel que, entre autres, des mesures fiscales générales, ainsi que des dispositions spécifiques qui auraient pour but de bénéficier les communautés locales, protéger l’environnement, et encourager l’innovation au sein de l’industrie. Cette étude ne peut arriver à un meilleur moment. À une époque où la Colombie Britannique tente d’intensifier l’expansion et construction de mines, elle offre les moyens concrets pour élaborer un régime fiscal plus adéquat qui saura conserver les avantages qui découlent de l’exploitation minière des métaux au sein de la communauté locale longtemps après que les ressources aient été exploitées.

* P.Eng., LL.M. Prior to law school, Maya worked as a geological engineer on mining projects both domestically and abroad. Spurred by an interest in the legal dimensions associated with this work, she then studied law at the University of British Columbia and the University of Victoria, focusing on environmental and First Nations issues related to resource development. After graduation, Maya clerked at the Federal Court of Canada and completed a LL.M. at the University of Ottawa, focusing on the use of certification programs to encourage sustainable development through the full lifecycle of metal resources. At present, Maya is completing her articles in Vancouver.
1. TRAILHEAD: INTRODUCING THE MINING MONEY TRAIL
   
   1.1 Definitions and Limitations
   
   1.2 Mapping the Trail

2. SURVEYING THE PATH: EVALUATING THE MINING TAX REGIME IN BC
   
   2.1 Current State of Affairs
   
   2.2 Potholes in the Trail

3. PATCHING THE POTHOLES: RECOVERING GREATER VALUE FROM MINERAL CAPITAL

   3.1 Guiding Concepts and Principles
   
   3.2 General Tax Considerations
   
   3.3 Benefiting Local Communities
   
   3.4 Protecting the Environment
   
   3.5 Encouraging Innovation

4. A SUSTAINABLE PATH: WITHSTANDING THE INDUSTRY’S FOOTPRINTS OF TIME

   4.1 The Extra Mile
1. TRAILHEAD: INTRODUCING THE MINING MONEY TRAIL

The metal mining industry has long been an important pillar of the British Columbia (BC) economy.¹ As mineral ore is a nonrenewable resource, however, its value to the local region can quickly dissipate once the resource has been exhausted. The corresponding loss to local communities, particularly in long-term benefits, is caused by various factors. For example, the process of exposing acid-generating minerals can damage local ecosystems and degrade biodiversity. Financial dependency on a single industry can also render the local economy extremely vulnerable to sudden drops in capital flows caused by the fluctuating market. From a social perspective, the sudden influx of mine workers can disrupt the existing culture and community: this is exacerbated by the growing trend of importing workers from abroad, especially for those mines operated by foreign companies. The government, being the party responsible for administering Crown land resources on behalf of the public, bears the inherent responsibility of addressing these diverse challenges in a manner that promotes sustainable development.² The tax regime is a valuable tool for achieving this goal.

¹ Mining in BC has a long history going back to the early gold rushes of the 1800s. See "B.C. Mining: A Rich History and a Promising Future", online: BC Ministry of Energy and Mines <http://www.empr.gov.bc.ca/Mining/Pages/History.aspx>. Today, BC is Canada's top producer of copper and molybdenum and a significant producer of gold, silver, lead, zinc. See "Rank and Production of Selected Metals within Canada", online: BC Ministry of Energy and Mines <http://www.empr.gov.bc.ca/Mining/MineralStatistics/MineralSectors/Metals/ProductionandValues/Pages/RankandProduction.aspx>.

² See Ministry of Lands, Parks and Housing Act, RSBC 1996, c 307, s 5(a); see also Ministry of Environment Act, RSBC 1996, c 299, ss 4(2)(a), (c).
This article assesses how the metal mining tax regime is being used as a tool for sustainable development in BC. The current tax regime is first reviewed to illustrate the present state of affairs. Methods of increasing the long-term distribution of social and economic benefits to local communities are then explored based on approaches adopted in other jurisdictions both within Canada and abroad. Recently announced plans to dramatically increase both the number of mines and the size of existing operations in BC suggests that this is an opportune time to assess the current tax regime and prioritize means of retaining benefits in local communities long after the ore is gone.  

1.1 Definitions and Limitations

In this article, terms such as “mining industry” and “mineral resources” refer to metal mining exploration and operation activities conducted in BC. Mining of industrial minerals and coal, as well as extraction of oil and gas, are also important contributors to BC’s revenue stream; however, these resources are regulated under separate statutes or raise other complex issues, such as the direct generation of greenhouse gases. They are therefore excluded from the discussion in this article. Uranium mining is also outside the scope of this article because it is currently banned in BC. Although the focus of this article is not on these particular resources, the discussion at times pertains more broadly to all nonrenewable resources, and when used, the term “nonrenewable resources” refers to all of the above.

Another limitation relates to the complexity of taxation and resource revenue regimes. As a full assessment of the true costs and benefits of various tax regimes would entail a qualified independent analysis, this type of analysis falls beyond the scope of this article. For similar reasons, investment and mineral valuation are not covered in great depth. Finally, the term “subsidies” is broadly used to refer to government expenditures of direct benefit to the mining sector.

1.2 Mapping the Trail

This article has three parts. The first part describes the current tax regime governing BC’s mining industry. This regime includes both federal and provincial taxes on income, as well as mining-specific taxes at the provincial level. The article highlights problems with the current regime, including its economic distortions and promotion of mineral resource over-exploita-

---


4 For example, petroleum and natural gas are regulated under the Petroleum and Natural Gas Act, RSBC 1996, c 361.


tion. The second part seeks to identify approaches from other jurisdictions, which, if applied in BC, could have beneficial effects. These include generalized tax measures, as well as specific provisions aimed at benefiting local communities, protecting the environment, and encouraging greater innovation in the industry. Finally, the third part summarizes the findings, and notes other issues, including Aboriginal rights, meaningful public participation and no-go zones, that should also be considered in any efforts adopted to promote the sustainable use of BC's mineral resources.

2. SURVEYING THE PATH: EVALUATING THE MINING TAX REGIME IN BC

2.1 Current State of Affairs

A multifaceted tax regime applies to the mining industry in BC. This regime includes both provincial and federal corporate income taxes. In addition, the provincial government collects industry-specific taxes (i.e., "mining taxes") to compensate for the extraction of mineral resources. A wide range of other business-related taxes—including property, sale, fuel, and payroll taxes—are also collected from the BC mining industry.

2.1.1 Data Limitations

Unfortunately, access to metal mining revenue data in BC is limited and therefore insufficient to support a comprehensive assessment of the current system. Any information obtained under the Mineral Tax Act is treated as confidential, and may only be used by Ministry staff to administer the Act. Further, although various mineral statistics are available on the Ministry of Energy and Mines website, this data is limited and generally aggregated as total production values. No statistics are available on regular tax payments made by individual companies.

Overall revenues are reported annually in the public account reports published by the Ministry of Finance; however, these records lump all revenues from petroleum, natural gas, and minerals together as "natural resource revenues". As such, the data does not allow members of the public to assess the value of revenues generated specifically from metal mining operations in the province.

Corporate Social Responsibility (CSR) instruments advocate greater transparency in the reporting published by the extractive industry. For example, under the Extractive Industries Transparency Initiative (EITI), extraction companies disclose how much they pay governments in taxes and other payments, and governments publish what they receive from extraction companies. Unfortunately, although Canada has signed on as an EITI supporter, it has not yet implemented this valuable financial disclosure instrument. As a result, there are also

---


9 See initiative generally, online: Extractive Industries Transparency Initiative <http://eiti.org>.

no EITI reports available to allow the public to assess tax revenues from mines operating in the province.

One exception to the relative lack of data is the PricewaterhouseCoopers (PwC) annual series of financial reports on the BC mining industry.\textsuperscript{11} These reports have been published continuously since 1968 and offer a source of comprehensive data. Appropriate caution, however, must be taken in relying on this data as industry-funded studies are not always completely reliable.\textsuperscript{12} In addition, companies have not always consistently participated in the PwC reports; therefore, historical figures are not fully comparable from year to year. Nevertheless, PwC still considers its reporting as representative of the overall industry in BC.\textsuperscript{13} Thus, despite its potential limitations, data reported in the PwC annual reports has been incorporated below.

### 2.1.2 Income Taxes

Over the past decade, the income tax regime has become increasingly favourable to the mining industry in BC. Corporate income tax rates are steadily dropping at both the federal and provincial levels.\textsuperscript{14} The corporate tax climate is especially generous in BC: as shown in the following chart, BC is on the lower end of provincial corporate tax rates, as compared with other Canadian provinces and territories.

![Figure 1: Corporate Income Tax Rates for Mining (31 December 2010)](image)

\textsuperscript{11} "The Mining Industry in British Columbia", online: PricewaterhouseCoopers <http://www.pwc.com/ca/bcminingsurvey>.

\textsuperscript{12} See Amanda L. Weinstein & Mark D. Partridge, \textit{The Economic Value of Shale Natural Gas in Ohio} (Columbus: Ohio State University, 2011) at 26, online: Department of Agricultural, Environmental and Development Economics <http://aede.osu.edu>.


\textsuperscript{14} \textit{Digging Deeper: Canadian Mining Taxation}, (Toronto: PwC, 2011) at 3, online: PricewaterhouseCoopers <http://www.pwc.com/ca/canminingtax> (the general rate of federal income tax on corporate income in 2010 is 18%, dropping to 16.5% in 2011 and to 15% in 2012) [PwC, \textit{Digging Deeper}].

\textsuperscript{15} \textit{Ibid} at 17.
The recent elimination of the federal Large Corporations Tax (LCT) on taxable capital adds to this increasingly generous tax regime for extractive companies.\textsuperscript{16} When in force, this tax applied to corporations whose taxable capital exceeded its capital deductions for the year.\textsuperscript{17} However, the LCT tax rate decreased annually from 2004 before being completely eliminated in 2007. The effect of this change over the past decade is shown in the following chart:

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{chart.png}
\caption{Large Corporation Tax Paid by BC's Mining Industry\textsuperscript{18}}
\end{figure}

Several provisions also permit corporations to reduce their taxable income, thereby further reducing the accumulation of resource-related revenues in the public purse. For example, in the same year that the LCT was eliminated, provincial mining-specific taxes became fully deductible for federal tax purposes.\textsuperscript{19} Generous loss carry-over rules also allow companies to carry losses incurred in their operations back three years and forward twenty years, transforming them into credits against future taxes owing.\textsuperscript{20} The twenty-year timeline for losses carried forward is significant as it exceeds the average lifetime of major metal mines currently under construction in BC.\textsuperscript{21} As such, losses can be carried forward well beyond the operational


\textsuperscript{19} PwC, Digging Deeper, supra note 14 at 2.

\textsuperscript{20} NRC, Corporate Income Tax Rules, supra note 16.

lives of mines. BC is also the sole jurisdiction in Canada to provide tax relief for operating losses of prior years.22

2.1.3 Spotlight on Federal Taxation

A number of specific deductions are also available to the mining industry at the federal income tax level. The Canadian Exploration Expense (CEE) allows for full deduction of expenses incurred while exploring for mineral deposits.23 Eligible expenses include those incurred in prospecting, surveying, drilling, trenching, and preliminary sampling.24 They also include expenses incurred in bringing a new mine into commercial production, including those associated with clearing a site, removing overburden, stripping the land, sinking a mine shaft, and constructing underground entries such as adits—thereby virtually eliminating any tax payments into the public purse while a mine is under development.25 CEEs may also be renounced in full to the benefit of flow-through shareholders against personal taxable income (flow-through shares are discussed in greater detail below). The Organisation for Economic Co-operation and Development (OECD) has criticized Canada for granting these types of subsidies to the mining industry and has recommended that the preferential tax system for minerals and metals be eliminated.26

Canadian Development Expenses (CDEs) are also available under the federal income tax regime.27 Eligible CDEs include those mentioned above for CEEs, and also costs associated with buying property for mine development or exploration. CDEs can be deducted from the corporation’s taxable income at up to 30% of their cost on a declining balance annually. As with CEEs, CDEs can also be renounced in full to flow-through shareholders as deductions against their personal taxable incomes.

Additionally, the Capital Cost Allowance (CCA) provisions under the federal income tax regime allow companies to depreciate assets more quickly than generally accepted accounting principles, which further postpones the flow of tax revenues to public coffers for several years.28 Depreciable properties are grouped into different classes with separate CCA rates; class 41 generally applies to property acquired after 1990 for use in a mining operation and is currently set at a rate of 25% on a declining balance basis.29 Class 41 covers a wide range of mining assets,

22 Overview of Main Tax Instruments (Ottawa: Minerals and Metals Sector, 2011), online: Natural Resources Canada <http://www.nrcan.gc.ca> [NRC, Overview of Main Tax Instruments].
23 Income Tax Act, RSC 1985, c 1 (5th Supp), s 66.1(6).
24 Ibid, s 66.1(6)(f).
25 Ibid, s 66.1(6)(g).
27 Income Tax Act, supra note 23, s 66.2.
29 Income Tax Act, supra note 23, s 20(1)(a); Income Tax Regulations, CRC, c 945, s 1100(1)(a)(xxvii); Property acquired before 1990 for the purpose of gaining or producing income from one or more mines
including: most machinery, equipment and buildings or other structures (excluding offices
not located on the mine site and property used for processing another tax-payer’s ore); railway
track and ancillary machinery, such as equipment used to earn income from a mine; and plant
and power-generation distribution equipment used in operating a mine, ore mill, smelter, or
refinery. It also includes social assets, defined as property used to provide services to the mine
or to a community where a substantial portion of the mine’s workforce resides (e.g., hospitals,
houses, roads, or recreational facilities).

Accelerated CCA provisions further lighten the tax burden on mining companies. These
provisions allow for the full write-off of capital costs on assets acquired before a mine starts
paying income tax. To be eligible, the assets must have been acquired before the mine reaches
commercial production, or before major expansions.

Finally, the federal income tax regime also includes provisions to encourage Canadian
mining companies to explore and operate abroad. However, as these expenses only apply to
mining outside BC they are beyond the scope of this article and are not discussed here.

2.1.4 Spotlight on Provincial Taxation

There are also a number of benefits granted to the mining industry under the provincial income
tax regime. Foremost among these benefits is the Mining Exploration Tax Credit, which can
be applied against payable provincial income taxes. This credit comprises 20% of the qualifying
mining exploration expenditures less any grants or assistance provided. Qualifying mining
exploration expenditures under the provincial regime are similar to those under the federal
regime and generally include the costs of goods and services spent in BC prior to commercial
production. Non-qualifying expenditures include overhead costs not directly related to explo-
ration, insurance costs, taxes, and the capital cost of depreciable assets. The Mining Exploration
Tax Credit was recently extended and is now available until the end of 2016. By way of con-
trast to BC’s generous provincial tax regime, Ontario’s Commission on the Reform of Ontario’s
Public Services recently highlighted the importance to that province of receiving a fair return
on its natural resources, and recommended the elimination of resource tax credits in Ontario.

operated by the taxpayer and situated in Canada may qualify under class 28 rather than class 41 (ibid,
Schedule II, class 28). The rate for class 28 is 30% (ibid, s 1100(1)(a)(xx)).

Income Tax Regulations, supra note 29, Schedule II.

See Mining-Specific Tax Provisions (Ottawa: Minerals and Metals Sector, 2011), online: Natural Resources
Canada <http://www.nrcan.gc.ca>.

Ibid.

See Interpretation Bulletin CIT-006, “Mining Exploration Tax Credit” (July 2010) at 2, online: BC
Ministry of Finance <http://www.sbr.gov.bc.ca> (mining exploration expenses include the costs for
determining the existence, location, extent or quality of a mineral resource in BC, including any expenses
for the following activities: prospecting, carrying out geological, geophysical or geochemical surveys,
drilling by rotary, diamond, percussion or other methods, or trenching, digging test pits and preliminary
sampling).

See “Corporation Income Tax: Tax Credits – Mining Exploration Tax Credit”, online: Government
of British Columbia <http://www.sbr.gov.bc.ca/business/income_taxes/corporation_income_tax/tax
credits/metc.htm>.

Commission on the Reform of Ontario’s Public Services, Public Services for Ontarians: A Path to
Sustainability and Excellence (Toronto: Ontario Ministry of Finance, 2012) at 520, online: Ontario
Additional incentives have been granted for exploration activities in designated areas affected by the mountain pine beetle. Exploration expenses incurred in these areas can be deducted at a higher rate of 30%, as compared to the standard 20% rate described above. The areas designated for this higher deduction rate extend across most of BC's landmass.36

2.1.5 Flow-through Shares

Flow-through shares (FTSs) were briefly mentioned above. These distinctive shares are available for the use of the resource sector in Canada and represent one of the few instances in which taxpayers are permitted to sell the benefit of their tax deductions to others. FTSs allow mining companies to pass on the benefits of CEEs and CDEs to their investors as personal or corporate taxable income deductions. In effect, investors are treated as if they, rather than the mining company, had incurred the CEE or CDE. Investors gain this benefit through the purchase of shares sold at higher than normal rates. Funds from the sale of these shares allow mining companies to raise capital for exploration and development at a lower cost than could be achieved using other sources of financing. The federal 15% super FTS program for mineral exploration expenses has further amplified these benefits.37

At the provincial level, FTSs are also available to reduce the provincial income tax owed by investors; this is accomplished by deducting qualifying expenditures from investors' personal taxable incomes. The availability of FTS at the provincial level is arguably one of the main reasons for the abundance of junior mining companies based out of BC.38 Currently, this 20% nonrefundable credit is available for shares that finance qualifying grassroots exploration by companies in BC. In the 2010 provincial budget, this credit was extended through the end of 2013.39

Mining industry data presented in the PwC reports over the past eight years has been compiled in the following chart, which depicts net revenues versus income taxes.40 The total mining revenue and income tax data is industry-wide and includes taxes generated from both metal and coal mining. Conversely, the metal mining revenue data includes only revenue generated from metal mining operations in the province. As indicated in the chart, aside from the 2008-


38 See "Mining Facts", online: Mining Association of British Columbia <http://www.mining.bc.ca> (60% of Canadian exploration and mining companies are based in BC). Note also that where a BC investor donates flow-through shares to a charity, the investor can actually receive tax credits that exceed the cost of the share. See Liam Fitzgerald, Flow-Through Shares Explained, (Vancouver: PwC, 2012) at 31, online: PricewaterhouseCoopers <http://www.pwc.com/en_CA/ca/mining/publications/pwc-2012-05-03-flow-through-shares-explained.pdf>.


40 The paucity of relevant pre-2002 data limits the scope of this chart.
2009 financial crisis, metal mining revenues have generally been on the rise. Notably, in 2010, metal mining revenues were almost double what they were in 2002. Concurrently, provincial income taxes were half what they were in 2002, while federal income taxes were even less.

![Figure 3: Net Mining Revenues vs Income Taxes Generated from BC’s Mining Industry](image)

**2.1.6 Mining-specific Taxes**

The Canadian Constitution explicitly recognizes the provinces’ right to manage their own nonrenewable natural resources. As a result, provinces collect mining-specific taxes—called mining taxes or royalties—to compensate for the extraction of nonrenewable resources within their provincial borders. In BC, these mining taxes are regulated under the *Mineral Tax Act*. This legislation sets out a two-part hybrid mining taxation system where the aggregate of *ad valorem* or profits-based taxes are payable.

The first part of this hybrid system is the Net Current Proceeds Tax—an *ad valorem* tax. This 2% tax applies once a mine has a positive annual operating cash flow. The purpose of this tax is to ensure that minimum compensation is paid to the provincial government for the depletion of the resource even if production does not yield a reasonable profit for the mining company. As the name suggests, the calculation of this tax is based on a mine’s net current proceeds. Net current proceeds represent the amount of revenues and recoveries that exceed operating costs. Operating costs include all expenditures in the fiscal year used to extract revenue but exclude costs associated with bringing the mine into commercial production.

The second part of the hybrid system is the Net Revenue Tax—a profits-based tax. Set at a rate of 13%, this tax applies once the costs of discovering and opening the mine have been recouped. Net revenue is calculated cumulatively from the beginning of the lifecycle of the

---


mine. Generally, expenditures are deducted from the revenue calculation. However, some expenditures are specifically excluded, such as: interest; dividends and costs of financing; costs and losses of hedging; federal and provincial income taxes; costs of incorporating or restructuring; and, any annual salaries, wages or payments above C$75,000 to a significant shareholder of the company. Furthermore, although costs associated with acquiring mineral rights are non-deductible, costs associated with acquiring surface rights are deductible. To ensure that only one tax is paid at any given time, the Net Current Proceeds Tax is deductible from the Net Revenue Tax.

BC's mining tax regime also confers various tax allowances on the industry. For example, the Investment Allowance, which is designed to approximate the cost of capital to the industry, treats equity capital the same as borrowed capital. It consists of a gross-up of the Cumulative Expenditure Account (CEA) remaining at the end of a year by a generous 125% of the prevailing federal bank rate.

BC's New Mine Allowance is intended to encourage new mine development. It provides an allowance of one-third of the capital costs for both new mines and expansions of existing mines that begin production in reasonable commercial quantities before the end of 2015. This means that "133.3% of qualifying capital expenditures can be added to the CEA of the mine." As such, this allowance provides for an increase in the deduction of qualifying capital expenditures before the mine begins production.

BC is also one of the few Canadian jurisdictions that still permits its mining taxes to be considered on a corporate basis as opposed to a mine-by-mine approach. The mine-by-mine approach mandates that profits be calculated for each individual mine as opposed to all of those owned by a company or venture. As such, companies can delay allocating exploration expenses until there is a corresponding tax benefit. Recognizing the vulnerabilities of this approach, many jurisdictions, including Quebec and Saskatchewan, have adopted the more responsible mine-by-mine approach.

45 Expenditures are listed in ibid, s 2(1).
46 Mineral Tax Handbook, supra note 7 at 7; Mineral Tax Costs and Expenditures Regulation, supra note 44, s 2(1).
47 Mineral Tax Costs and Expenditures Regulation, supra note 44, s 2(1).
49 Ibid at 7.
50 Mineral Tax Act, c 291, supra note 7, ss 1, 3.
51 Mineral Tax Costs and Expenditures Regulation, supra note 44, s 5.
52 Mineral Tax Handbook, supra note 7 at 7.
53 Mineral Tax Costs and Expenditures Regulation, supra note 44, s 5.
54 Mineral Tax Handbook, supra note 7 ("If an operator has more than one mine, exploration costs can be allocated to whatever mine the operator chooses ... This means exploration expenditures do not have to be allocated to a specific mine until it is certain that there will be some tax benefit" at 8).
55 See Jocelyne Lamothe, "A Regime Revised to Reflect the Current Situation of the Mining Industry", Canadian Mining Magazine (Spring 2011) 11 at 11 (in Quebec's March 2010 reform of its mining duties regime, the operator's annual profit is calculated based on a "mine-by-mine" approach rather than on a corporate basis); The Mineral Disposition Regulations, 1986, Sask Reg 30/1986, ss 2.1(1)(k), 3(1).
This review highlights how extensively the provincial tax regime supports the mining industry. Although a number of deductions are available, each are separate and investment dollars cannot be claimed more than once. Nevertheless, this generous tax regime raises serious questions about how fair a return the government is securing from the extraction of irreplaceable mineral resources in BC.

2.1.7 Other Taxes and Rents

Other taxes are also payable under more general land-use and business-related tax regimes. For example, property taxes are generally levied to raise revenues for public services. Interests in Crown land occupied by a mine access road, however, are exempt from property tax.56 This eliminates an important source of revenue for essential public services, including public roads heavily used and impacted by mine traffic. Specific mineral land taxes are also mandated under the Mineral Land Tax Act.57 These taxes apply to mineral lands, other than Crown lands, in which miners are entitled to extract minerals.58 The greater the size of the miner’s total mineral land, the greater the tax rate; at present, the mineral land tax rate remains below C$5.00 per hectare, ranging from $1.25 to $4.94 per hectare.59

Under the BC Mineral Tenure Act, mineral leaseholders must pay the provincial government an annual rent of C$10 per hectare.60 Minerals leases are interests in land with terms of up to thirty years. Mineral claims must be upgraded to leases when annual production exceeds one thousand tonnes of ore.61 The following chart shows the total annual rent collected in 2010.62

---

56 Exempt Interests Regulation, BC Reg 302/1990, s 2(d) (Interests in Crown land occupied by a mine access road are exempt from assessment under the Assessment Act, RSBC 1996, c 20).
58 Ibid, s 1.
59 Ibid, s 3(1).
61 Mineral Tenure Act, supra note 60, ss 42(4), (5), 48(2). Note: mineral claims and chattel interests in the subsurface are not subject to annual rents, but they are subject to exploration expenditure obligations. See Mineral Tenure Act Regulation, supra note 60, s 8(4).
Table: Rent from Operating Metal Mines in British Columbia, 2010

As indicated in the above table, the total rent from operating metal mines amounted to approximately C$600,000 in 2010. The bulk of this rent came from the large Highland Valley Copper mine, located near Kamloops, BC, while the remaining mines paid less than C$25,000 in rent for their mineral leases.

Sales taxes are also important instruments used by both levels of government to recover costs and generate revenue. Under the current BC sales tax regime, however, mining machines and equipment are excluded from provincial sales tax.\(^5\) Similarly, BC grants preferential treatment on fuel taxes to the mining industry.\(^6\) This preferential treatment allows for a tax of only three cents per litre on fuel used for trucks transporting minerals and for crew crummies or buses used to transport employees and contractors.\(^6\)

Finally, payroll taxes also apply to the mining industry.\(^6\) Payroll levies include employment insurance and Canada Pension Plan payments. Health and Workers’ Compensation levies also apply in all provinces and territories. These payments generally apply to all businesses and industries operating in the province and are therefore not discussed in detail here.

\(^{5}\) Social Service Tax Act Regulations, BC Reg 84/1958, s 13.5. Note that this is a relatively common approach. For example, in Manitoba, there is no provincial sales tax on exploration equipment and prototype mining equipment, and provincial sales tax does not apply to electricity used in mining and manufacturing. See The Retail Sales Tax Act, CCSM c R130, ss 2(1.7), 3(31), 3(32).

\(^{6}\) Motor Fuel Tax Act, RSBC 1996, c 317, ss 5(1), 5(2), 15(1)(e); Motor Fuel Tax Regulation, BC Reg 414/1985 ss 15.2(2)(a), (b). Note that exemptions from fuel taxes are commonly granted to mining activities across Canada. For example, in Manitoba, fuel used for off-road exploration for minerals and select purposes in a mining operation is also exempt from provincial fuel tax. See Fuel Tax Act, CCSM c F192, s 9(1).

\(^{6}\) Motor Fuel Tax Act, supra note 64.

\(^{6}\) See NRC, Overview of Main Tax Instruments, supra note 22.

<table>
<thead>
<tr>
<th>Metal Mine (operating in 2010)</th>
<th>Size of leases (hectares)</th>
<th>Total Rent (C$10/hec)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Endako</td>
<td>516.35</td>
<td>$5,163.50</td>
</tr>
<tr>
<td>Gibraltar</td>
<td>1,890.00</td>
<td>$18,900.00</td>
</tr>
<tr>
<td>Highland Valley Copper</td>
<td>47,296.00</td>
<td>$472,960.00</td>
</tr>
<tr>
<td>Huckleberry</td>
<td>1,912.00</td>
<td>$19,120.00</td>
</tr>
<tr>
<td>Kemess South</td>
<td>3,483.33</td>
<td>$34,833.30</td>
</tr>
<tr>
<td>Mount Polley</td>
<td>1,867.00</td>
<td>$18,670.00</td>
</tr>
<tr>
<td>Myra Falls</td>
<td>2,209.97</td>
<td>$22,099.70</td>
</tr>
<tr>
<td><strong>TOTAL:</strong></td>
<td><strong>59,173.65</strong></td>
<td><strong>$591,746.50</strong></td>
</tr>
</tbody>
</table>
The following chart was compiled from PwC annual reports. It compares the net revenues generated from the metal mining industry with provincial sales, fuel, and property taxes generated from the mining industry as a whole (including both metal and coal mining) in BC.

![Net Mining Revenues vs Other Taxes Generated from BC's Mining Industry](chart.png)

**Figure 4: Net Mining Revenues vs Other Taxes Generated from BC’s Mining Industry**

This chart shows that the mining industry has benefited from reductions in both sales and total property taxes over the past decade.

2.2 Potholes in the Trail

As described above, both the federal and provincial governments provide preferential tax treatment to the mining industry in BC. This treatment includes persistent reductions in income tax rates, generous loss carry-over rules, flow-through shares that allow shareholders to make deductions from their personal taxable incomes, numerous exploration benefits, corporate rather than mine-by-mine consideration of mining taxes, tax credits, and exclusions from other taxes. Meanwhile, larger mines are being constructed to access lower-grade ore, natural diversity is at best replaced with simple ecosystems, and expensive facilities are required for long-term water treatment.\(^6\) Aside from a minor increase in jobs and some economic spin-offs, the

---

\(^6\) These issues are well documented throughout mining literature. See e.g. T Prior et al, “Resource Depletion, Peak Minerals and the Implications for Sustainable Resource Management” (Paper delivered at the International Society for Ecological Economics (ISSE) 11th Biennial Conference, Oldenburg/ Bremen, Germany, 22-25 August 2010), [unpublished], online: University of Technology Sidney <http://www.isf.uts.edu.au/publications/prioretal2010resource depletion.pdf> (on lower-grade ore). BC legislation sets out several basic requirements for re-vegetation to reclaim areas disturbed by mining activities. See Health, Safety and Reclamation Code for Mines in British Columbia, (Victoria: BC Ministry of Energy, Mines and Petroleum Resources—Mining and Minerals Division, 2008) at s 10.7. However, there are a dearth of specific legal requirements for re-establishing natural successional trajectories and natural processes (nutrient cycling, soil formation etc.). Finally, the Britannia Mine illustrates the cost of long-term water treatment where the private company, EPCOR, has been retained to operate a water treatment plant for twenty years at the cost of C$27.2 million (under a private-public partnership). After twenty years, additional taxpayer funds will be required to assess and carry out continued treatment. See Auditor General of British Columbia, Audit of Two P3 Projects in the Sea-to-Sky Corridor, (July 2012) at 26-27, online: Office of the Auditor General of British Columbia <http://www.bcauditor.com/pubs/2012/report4/audits-two-p3-projects-sea-sky-corridor>.
public purse remains inadequately compensated for the lost natural capital that the industry displaces.68 This lost capital includes both the depleted “nest-egg” of metal ore for future generations and the loss of valuable ecological goods and services.

Ecological goods and services are produced from the natural interactions that occur between flora, fauna, microbes, and the physical environment that collectively make up an ecosystem.69 Unfortunately, their true value is seldom accounted for in the industry’s balance sheets. BC is particularly poor at valuing these goods and services as evidenced by the lack of charges for extracting groundwater in the province.70 In overlooking these important externalities the current system creates a market failure.71 To mend this failure, many scholars have advocated for the internalization of externalities through greater government charges and taxes.72

As noted above, publicly available information on mine taxes in BC is limited; the PwC reports provide the most extensive data. The most recent PwC report indicates that the BC mining industry made total direct tax payments of C$509 million in 2010.73 This amount includes federal and provincial income taxes, BC mining tax, property taxes, and sales taxes.74 The report also shows that 2010 direct tax payments rose by C$266 million from 2009; however, just under half of this increase was attributed to increases in coal mineral taxes, and not metal mining taxes.75

The following chart shows the trend over the past five years in tax payments in relation to net income (pre-tax) for the BC mining industry (in C$ millions).

---

68 See PwC, Seize the Day, supra note 13 at 14. See Mark Anielski & Sara Wilson, Counting Canada’s Natural Capital: Assessing The Real Value of Canada’s Boreal Ecosystems (Victoria: The Pembina Institute and Canadian Boreal Initiative, 2005) at 1 (the term natural capital is used here to refer to the resources, living systems, and ecosystem services provided by Earth’s biosphere, including the ecological systems that support life).

69 See Anielski & Wilson, supra note 68.

70 See Linda Nowlan, Buried Treasure: Groundwater Permitting and Pricing in Canada (Vancouver: The Walter and Duncan Gordon Foundation, 2005) at 74. Conversely, the Drummond Report recently recommended that Ontario extend water charges to mining operations and the water they use. See supra note 35 at 336.

71 See Jackie Robinson & Sean Ryan, A Review of Economic Instruments for Environmental Management in Queensland (Brisbane: The University of Queensland, 2002) (“Where the market does not take into account spillover effects or externalities arising from production of a good or service such that the marginal private costs of production do not equate with the marginal social costs, then there is market failure” at 1).

72 A renowned scholar in this area is the economist Arthur Pigou who is recognized for his work on economic externalities. See e.g. The Economics of Welfare (London: Macmillan, 1920).

73 See PwC, Seize the Day, supra note 13 at 19.

74 Ibid.

75 Ibid.
As shown above, the provincial government collects a very small percentage of taxes in relation to the industry's net income. This amount has been steadily decreasing over the past five years. The provincial property tax is also relatively insignificant, raising concerns about the mining industry's contribution to essential public services in BC. These services include expensive infrastructure such as the extensive road networks used to transport mineral ore for shipment overseas.

In December 2011, Alan Mehlenbacher, Adjunct Professor of Economics at the University of Victoria, completed a brief assessment of security deposits collected to cover reclamation costs at mines in BC. The depth of the assessment was again limited by the lack of data, and it therefore also focused on the PwC reports. Using this data, Professor Mehlenbacher compared mining taxes to operating income. This comparison indicated that over the past fifteen years the mineral tax averaged only 3.53% of operating income. At less than 5% of the operating income, these taxes were deemed quite low, particularly in light of their nonrenewable nature.

---

76 Ibid.
78 Ibid.
79 Ibid.
3. PATCHING THE POTHoles: RECOVERING GREATER VALUE FROM MINERAL CAPITAL

As discussed above, the current tax regime is relatively generous to the mining industry in BC. This is problematic as it suggests that the full value of mineral capital is not being adequately recovered. In response to this situation, this section of this article aims to identify approaches adopted in other jurisdictions that have promoted greater recovery of the full value of important nonrenewable mineral resources. It is recognized that care must be taken in researching other jurisdictions as tax regimes are complex and discrete taxes are only one determinant of overall levels of taxation. Nevertheless, there are some basic approaches that have been implemented in other jurisdictions that could be incorporated into BC’s tax regime to promote greater revenue recovery from the province’s valuable mineral reserves.

3.1 Guiding Concepts and Principles

The sustainable development framework guides the research conducted for this section of this article. The framework seeks to meet the needs of the present without compromising the ability of future generations to meet their own needs. With regards to tax regimes, the goal is therefore to uncover provisions that promote the use of revenues from the depletion of nonrenewables as a bridge to a more durable future well-being.

Recently, an independent group of experts in economically sustainable resource extraction proposed a blueprint for more widespread distribution of social and economic benefits from resource profits. This proposal, titled the Natural Resource Charter (the “Charter”), is intended to assist resource-rich countries in managing their assets in “a way that generates economic growth, promotes the welfare of the population, and is environmentally sustainable.”

One Charter principle that clearly supports this goal mandates increased equity and quality of public spending so that resource revenues result in higher living standards.

The author of this article relied on many of the Charter’s principles when researching legislation from other jurisdictions to identify approaches that could fill some of the gaps in BC’s current system. This research shares the Charter’s underlying rationale that “[u]sed well, these resources can create greater prosperity for current and future generations; used poorly, they can cause economic instability, social conflict, and lasting environmental damage.” Indeed, as Bruce Hannon states, “[t]o achieve a sustainable economy, we must learn to value the economic contributions of all natural resources to the economy.”

---

80 See Otto, supra note 28 at 118.
83 See ibid at 2.
84 Ibid at 1.
This article also seeks to recognize the inherent, yet often overlooked, value of ecological goods and services.\footnote{The concept of natural capital accounting, which consists of accounting for the full value of the lost ecological goods and services from land disturbance activities, has also been considered throughout this research.} This includes vital ecosystem supporting, regulating and sink services that directly benefit human activities and survival.\footnote{See Mateo Cordier et al, "Quantification of Interdependencies between Economic Systems and Ecosystem Services: An Input–Output Model Applied to the Seine Estuary" (2011) 70 Ecological Economics 1660 at 1661.} Closely related to valuing ecological goods and services is the “polluter pays” principle. This principle advocates greater internalizing of pollution externalities and reduction of government financial assistance to pollution abatement and control. As the OECD recognizes, Canada still has a long way to go in successfully implementing this principle.\footnote{See OECD, \textit{Environmental Performance Reviews}, supra note 26 at 17.}

Finally, this research recognizes the unique financial challenges facing the mining industry. These challenges arise from the fact that mine start-up and profit generation is generally preceded by lengthy and costly exploration programs; mining operations are capital intensive, requiring large and specialized equipment; the value of raw ore is subject to constantly fluctuating market prices; and, long-term closure and reclamation costs can be significant.

Therefore, an appropriate balance must be found between supporting incentives to mine while concurrently recovering adequate revenues to serve the public welfare.\footnote{See Otto, \textit{supra} note 28 at 5.} These challenges must be carefully considered in designing an appropriate tax regime for the BC mining industry.

3.2 General Tax Considerations

3.2.1 Limiting Allowable Deductions to Intended Purpose

Tax deductions to the mining industry are often granted to help it develop capital-intensive projects. To ensure fair returns, however, these deductions must be limited to their intended purpose. To a certain extent, BC’s tax regime incorporates this concept. For example, in calculating expenditures, the cost of capital assets used directly in the administration of a particular mine can only be included to the extent they are so used.\footnote{\textit{Mineral Tax Costs and Expenditures Regulation}, supra note 44, s 2(1)(c)(ii).} Concurrently, management fees can only be included when they are directly related to the operation of a particular mine.\footnote{\textit{Ibid}, s 2(1)(f).} In addition, annual salaries, wages, fees, or benefits exceeding C$75,000 and related to services provided by a significant shareholder of the corporation are excluded from allowable expenditures.\footnote{\textit{Ibid}, s 2(1)(v).}

Other jurisdictions, however, provide clearer restrictions on deductions of corporate costs not directly related to the challenge of developing capital-intensive projects. For example, the following costs are explicitly prohibited from being deducted in some Canadian provinces and
territories: corporate administrative costs and expenses;\(^9^3\) depletion in value of the mine due to mineral exhaustion;\(^9^4\) and, remuneration of executives and administration not connected directly to the mine.\(^9^5\) By limiting deductions to their intended purpose, these provisions promote more fair returns from the mining industry.

3.2.2 Increasing Revenues When Profits Increase

BC has a two-part taxation system with a minimum 2% rate on all mines and an increase to 13% once mines become profitable.\(^9^6\) This hybrid approach is beneficial since it ensures a minimum return regardless of whether the operation is profitable. However, once it is profitable, the tax rate remains at 13%. Conversely, other jurisdictions apply different rates based on profitability. This ensures that the public purse recovers a fair portion of a business's profits. For example, in Manitoba, tax rates range from 10% to 17% depending on an operation's total profit.\(^9^7\) Similarly, in the Yukon, annual royalties on mineral mines with profits exceeding C$10,000 are applied at progressively higher rates for each increment up to C$35 million.\(^9^8\)

Other jurisdictions have enacted legal provisions to ensure that the public also benefits when unexpected commodity price jumps create a windfall. This type of provision is particularly relevant in the mining industry where, due to the volatile nature of the mineral market, windfall profits can be a relatively common occurrence.\(^9^9\)

Finally, a provision in the recently enacted Ecuador Constitution is both notable and inspirational. It mandates that the State share in profits earned from extracting nonrenewable resources "in an amount that is no less than the profits earned by the company producing them".\(^10^0\) This provision promotes a fair distribution of profits to the state, which ultimately holds the mineral resources in trust for its citizens.

3.2.3 Planning Ahead for Cyclical Resource Markets

One of the greatest challenges with managing resource wealth is the cyclical nature of resource value. Some jurisdictions have sought to overcome the challenges posed by revenue cycles, and the corresponding fluctuations in the revenue stream, by creating special revenue stabilization

\(^9^3\) For Ontario, see e.g. Mining Tax Act, RSO 1990, c M 15, s 3(5)(d) [Mineral Tax Act, RSO 1990].
\(^9^4\) For Nova Scotia, see e.g. Mineral Resources Act, SNS 1990, c 18, s 125(d).
\(^9^5\) For the Yukon, see e.g. Quartz Mining Royalty Regulation, YOIC 2010/91, s 21(b).
\(^9^6\) See Mineral Tax Costs and Expenditures Regulation, supra note 44 at ss 3, 2(1).
\(^9^7\) The Mining Tax Act, CCSM c M195, s 13 [The Mining Tax Act, c M195].
\(^9^8\) Quartz Mining Act, SY 2003, c 14, s 102(1).
\(^10^0\) Constitution of the Republic of Ecuador (2008), online: Political Database of the Americas, Georgetown University <http://pdba.georgetown.edu/Constitutions/Ecuador/english08.html>, art 408 [emphasis added].
funds. This practice is promoted in the *Natural Resource Charter*, which recommends "saving a portion of revenues during high revenue periods, holding the surplus in a 'stabilization fund', and then drawing from the saved revenues during low revenue periods."^{101}

Stabilization funds have been adopted in numerous jurisdictions including Alaska, Nauru, Norway, and the Russian Federation.^{102} Unfortunately, all revenue currently generated from the mining industry in BC is collected in the general public account, with no specific fund established to ensure that some of the benefits derived from nonrenewable resources are still available during low-revenue periods and for future generations.

Another consideration in planning for the cyclical nature of resource markets is the life of the mine. A sufficiently long mine life, ideally more than twenty years, allows for extreme shifts in commodity prices and greater potential for the expected return of investment.\(^{103}\) Government policies that promote longer mine life therefore also inherently help ease the burden of cyclical resource markets.

3.2.4 Ensuring Taxes are Paid

To ensure industry pays its taxes, strong provisions should be in place to incentivize compliance. In BC, if a mining company is late in paying its taxes, it will be liable for interest on that amount.\(^{104}\) This is a good first step. However, legislation adopted in the Yukon goes further: if a mining company fails to pay its royalties in time to the territorial government, 10\% will automatically be added to the royalty owed.\(^{105}\) This provides greater incentive for on time payment of mining taxes (royalties), and ensures uninterrupted revenue flow into the public purse.

3.3 Benefiting Local Communities

The *Natural Resource Charter* recognizes the importance of adequately compensating local communities for the disproportionate social, economic, and environmental costs resulting from mining activities. It proposes that local citizens be entitled to claim compensation in the form of services, infrastructure, or dividends.\(^{106}\) But to promote sustainable development, a legal regime should do more than simply compensate local citizens; it should also ensure that they benefit from local mining activities. Recognizing this need, the following sections highlight some approaches that have been adopted in other jurisdictions to ensure local citizens adequately benefit, and are compensated where necessary, from intrusive mining activities carried out in and around their communities.

---

101 *Natural Resource Charter*, supra note 82 at 13.
102 See Otto, supra note 28 at 31.
104 See Mineral Tax Act, c 291, supra note 7, s 16(1).
105 See Quartz Mining Act, supra note 98, s 102(17).
106 See *Natural Resource Charter*, supra note 82 at 9.
3.3.1 Increasing Local Employment

The extractive industry often relies on employment figures to promote new mining activity.\textsuperscript{107} Unfortunately, as the trends in the following two graphs indicate, direct employment from mining has dropped significantly over the past three decades while mineral sales have steadily increased.\textsuperscript{108}

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{metal_sectors_employment.png}
\caption{Metal Sector Employment}
\end{figure}

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{bcm_sales.png}
\caption{British Columbia Mineral Sales 1980-2010}
\end{figure}

\textsuperscript{107} See “Human Resources”, online: Mining Association of British Columbia <http://www.mining.bc.ca>.

Relatively low employment numbers result from the fact that mining is a capital-intensive activity: once the infrastructure has been built, the number of long-term jobs associated with the mining operation drops significantly. A carefully planned tax regime, however, can help promote greater use of local employees; this would ensure that some of the mineral capital value remains in the community.

Some jurisdictions have enacted provisions to promote greater use of local employees in mining operations. For example, in Saskatchewan, corporations whose gross assets are less than C$100 million are taxed on sales exceeding C$2.5 million. This exemption is reduced by the proportion of wages and salaries of employees outside Saskatchewan compared to those within it.

Unexpected mine closure can also have a drastic impact on local communities, which are often heavily dependent on revenues generated by the operation. Care must therefore be taken to ensure that mine profitability remains adequate to maintain operations. The government's role in overseeing this is recognized in South Africa where mine operators must notify the government when mine profitability could affect employment. In this manner, the government is promptly made aware of vulnerable situations, which allows it to try to manage the challenges before they develop into more difficult problems.

### 3.3.2 Diversifying the Economy

It is well-recognized that mining activities can foster longer-term benefits for the local community where efforts are taken to diversify the local economic base. There are many ways through which the mining tax regime can promote such diversification.

First, greater investment in local economy diversification projects is more likely where this investment counts as a tax-deductible mining activity. For example, in the Yukon, a Community and Economic Development Expense Allowance is provided under the mining tax law. This allowance is available for approved expenditures that benefit one or more communities in the vicinity of the mine through the construction or repair of infrastructure (i.e., utilities, roads, bridges, etc.); construction, operation, or maintenance of community facilities; or, education, scholarship or training programs for the community and local businesses.

As mentioned above, a somewhat similar approach has been adopted under Canada's Income Tax Act. Under class 41 of the CCA, social assets are included as depreciable property. These social assets include property such as hospitals, houses, roads, or recreational facilities that are used to provide services to the mine or to a community where a substantial portion of the mine's workforce resides.

---

110 *Corporation Capital Tax Regulations*, 1984, RRS c C-38.1 Reg 1, s 8.1(2).
114 *Quartz Mining Royalty Regulation, supra* note 95, ss 47-51.
Provisions that promote local processing and manufacturing also help diversify the local economy. One instrument adopted by some jurisdictions to accomplish this goal is a processing allowance. Processing allowances are generally tied to the stages of processing done within the province or territory and encourage local processing of mineral ore.

For example, in Manitoba, an allowance for processing by way of return on capital may be approved where “processing of any mineral or mineral product mined in Manitoba from a mineral processing establishment is done in Manitoba by the operator in a fiscal year”. In Ontario, the processing allowance allows the capital cost of the assets to be deducted at 8% (concentrating), 12% (concentrating and smelting), or 16% (concentrating, smelting and refining). Where processing facilities are both operated by the company and located in Northern Ontario, they can be deducted at 20%. For processing done inside Ontario, the expense is reduced to the proportion of minerals processed by the facility that were mined within Ontario. For processing done outside of Ontario but within Canada, the operator’s expenses are reduced to the proportion of minerals processed by the facility that were mined in Ontario. No deduction is allowed for processing done outside of Canada.

In addition to having a processing allowance, Manitoba also imposes an additional tax of 0.5% on all mining company profits. This additional tax is refundable in full or in part depending on the proportion of operations the company conducts within Manitoba compared to outside. For a company operating fully within the province the tax may be fully refundable.

3.3.3 Compensating the Original Occupants

Aboriginal peoples, or First Nations, are the original occupants of the British Columbian landmass. However, since the arrival of Europeans, Aboriginal people across the province have been stripped of meaningful rights to their traditional territories. In addition, unlike in most other Canadian provinces and territories, few treaties have been signed with these original landowners. As such, most of the province remains unceded, resulting in frequent conflicts when mining activities are proposed and carried out on these lands without the prior informed consent of the local Aboriginal peoples.

In recent years, some advancement has been made in sharing mineral revenues with First Nations in the province. This recent change stems from the province’s commitment in the New

---

115 See The Mining Tax Act, c M195, supra note 97, s 10(3).
116 See ibid, s 13.1(2)(b); see also PwC, Digging Deeper, supra note 14 at 26.
117 See PwC, Digging Deeper, supra note 14; see also The Mining Tax Act, c M195, supra note 97, s 13.1(2) (b).
118 See Mining Tax Act, RSO 1990, supra note 93, s 3(5)(k); General, RRO 1990, Reg 769, s 9.
119 See The Mining Tax Act, c M195, supra note 97, s 13.1(2)(b); see PwC, Digging Deeper, supra note 14 at 26.
120 See Digging Deeper, supra note 14; see also The Mining Tax Act, c M195, supra note 97, s 13.1(2)(b).
\textit{The British Columbia Indian Reserves Mineral Resources Agreement}, SC 1943-44, c 19.}

The sharing of royalties is a big step forward from the previous practices adopted in the \textit{1943 British Columbia Indian Reserves Mineral Resources Agreement}.\footnote{123}{See Deborah Wilson, \textit{Mining and First Nations}, background brief (Victoria: Legislative Library of British Columbia, 2008) at 4.} Under this former agreement, mining revenues from reserve lands were split in equal proportions between the federal and provincial governments. However, the province interpreted the term “revenues” to exclude mineral taxes, and therefore little revenue actually flowed to the First Nation on whose reserve land mining occurred.\footnote{124}{See PwC, \textit{Seize the Day}, supra note 13 at 23; Ministry of Aboriginal Relations and Reconciliation, News Release, “Agreement provides benefits, improved co-operation” (March 18, 2008) online: MARR <http://www2.news.gov.bc.ca/news_releases_2005-2009/2008ARR0008-000381.htm>.
\textit{Mineral Tax Act}, c 291, supra note 7, ss 2.1, 2.11(2) (Nisga’a exemption); \textit{Toolkit}, supra note 126 at 415 (3.29.4), s 3.29.4 at 415 (the Nisga’a are the only First Nation in BC currently collecting income taxes. The Nisga’a keep all income taxes collected from their citizens and a share of taxes collected from noncitizens living on their lands).
\textit{Toolkit}, supra note 126 ("Under the Yukon tax arrangements, First Nations keep 95% of the taxes from persons residing on the First Nations’ lands and the territorial taxation system has been designed to accommodate First Nations taxation" at 415 (3.29.4)).}.

Recent examples of royalty sharing agreements between the provincial government and First Nations include Mt Milligan mine (McLeod Lake Economic and Community Development Agreement); New Afton mine (Stk’emlupsemc of the Sewepemc Nation Economic and Community Development Agreement; and, a series of agreements with various Treaty 8 First Nations for local mining activity).\footnote{125}{See PwC, \textit{Seize the Day}, supra note 13 at 23; Ministry of Aboriginal Relations and Reconciliation, News Release, “Agreement provides benefits, improved co-operation” (March 18, 2008) online: MARR <http://www2.news.gov.bc.ca/news_releases_2005-2009/2008ARR0008-000381.htm>.
\textit{Mineral Tax Act}, c 291, supra note 7, ss 2.1, 2.11(2) (Nisga’a exemption); \textit{Toolkit}, supra note 126 at 415 (3.29.4), s 3.29.4 at 415 (the Nisga’a are the only First Nation in BC currently collecting income taxes. The Nisga’a keep all income taxes collected from their citizens and a share of taxes collected from noncitizens living on their lands).
\textit{Toolkit}, supra note 126 ("Under the Yukon tax arrangements, First Nations keep 95% of the taxes from persons residing on the First Nations’ lands and the territorial taxation system has been designed to accommodate First Nations taxation" at 415 (3.29.4)).}.

\textit{Mineral Tax Act}, c 291, supra note 7, ss 2.1, 2.11(2) (Nisga’a exemption); \textit{Toolkit}, supra note 126 at 415 (3.29.4), s 3.29.4 at 415 (the Nisga’a are the only First Nation in BC currently collecting income taxes. The Nisga’a keep all income taxes collected from their citizens and a share of taxes collected from noncitizens living on their lands).
\textit{Toolkit}, supra note 126 ("Under the Yukon tax arrangements, First Nations keep 95% of the taxes from persons residing on the First Nations’ lands and the territorial taxation system has been designed to accommodate First Nations taxation" at 415 (3.29.4)).} this practice is not yet codified in law and is therefore limited to specific agreements and heavily dependent on negotiations. There is therefore no certainty that a portion of future revenues will also be shared with other affected First Nations. It also fails to address distribution questions where traditional territories of different First Nations overlap—a common occurrence across the province due to the continued unsettled land claims of most First Nations in BC.

\textit{Mineral Tax Act}, c 291, supra note 7, ss 2.1, 2.11(2) (Nisga’a exemption); \textit{Toolkit}, supra note 126 at 415 (3.29.4), s 3.29.4 at 415 (the Nisga’a are the only First Nation in BC currently collecting income taxes. The Nisga’a keep all income taxes collected from their citizens and a share of taxes collected from noncitizens living on their lands).
\textit{Toolkit}, supra note 126 ("Under the Yukon tax arrangements, First Nations keep 95% of the taxes from persons residing on the First Nations’ lands and the territorial taxation system has been designed to accommodate First Nations taxation" at 415 (3.29.4)).} Columbia provides another notable example: there, local municipalities that receive royalties from mines located in indigenous territories are required by law to devote the revenue to works and services that directly benefit indigenous communities and groups settled in those
Finally, the Drummond Report in Ontario also recently recommended that if voluntary efforts by business lag, the government should consider putting a levy on mining-related activities to directly fund initiatives to prepare Aboriginal peoples to participate economically in mineral development in the Ring of Fire. Also notable are impact benefit agreements, which are increasingly being signed between mining companies and First Nations. A detailed discussion of these agreements, on which there is extensive literature, is beyond the scope of this article.

3.3.4 Sharing Revenues with Local Governments

As discussed above, the provincial mining taxes recovered in BC are lumped into the province's general revenue purse. However, the disproportionate impact of resource development on local communities has led to recommendations for a share of royalties or mining taxes to be allocated to the affected region. This could be accomplished by requiring mining companies to either pay a share of the mining taxes directly to communities, or indirectly to the provincial government which must then distribute it in a transparent and timely manner.

Various jurisdictions have enacted legal provisions that ensure that part of the tax is distributed to local communities. For example, 20% of the surface area tax imposed under the Burkina Faso Mining Code must be paid to the local community. In Brazil, royalties are shared between federal (12%), state (23%) and municipal (65%) authorities. In Sweden, a mineral concession holder must pay mineral compensation, three-quarters of which flows to property owners within the concession area while one-quarter goes to the State.

Although the associated regulations are still under development, Ghana law states that a proportion of the royalties paid by a mine must be spent in the local community. In Turkey, a quarter of mining revenues are used to fund infrastructure development in the regions where mining licences are collected; additionally, half of the fees paid for mining operations are

---

129 Código de Minas, Law 685 of 2001, Colombia 2001, s 129.
130 Drummond Report, supra note 35 at 345.
132 Interview of Bruce Madu, Director, Mineral Development Office, Ministry of Energy and Mines and Responsible for Housing, British Columbia (20 December 2011).
135 See Naito, Remy & Williams, supra note 133 at 98; Code Minier, Law No 023/97/II/AN, Burkino Faso 1997, s 75. ILL.
138 See Oliver Cushing & Sharon Saylor, “Exclusive Interview with Hon. Alhaji Collins Dauda, Ghana’s Minister for Lands and Natural Resources” (September 2010) Engineering and Mining Journal 43 at 43.
invested to bring services to rural villages.\textsuperscript{139} BC can draw lessons from these approaches, thereby ensuring that some of the mineral revenue is shared with the locally impacted government and community.

Finally, increased costs to local government should also be considered when assessing revenue-generating needs. This is recognized in part in the State of Washington where mining companies must submit an “estimate of the increased capital and operating costs to local governmental units for providing services necessary as a result of the development of the mining operation.”\textsuperscript{140} This provision promotes early consideration of the increased capacity requirements that a new mine will impose on local governments.

\subsection*{3.3.5 Saving for Future Generations}

BC Legislative Assembly member, Joy MacPhail, frames this issue well by saying that “[w]hen new resource exploitation is being touted by this government as the next nirvana, it is local residents and First Nations that are saying that these resources must be managed as a trust for the benefit of the region in which the resources are found and not just for the profit of big business based in Vancouver or Calgary or Toronto or New York.”\textsuperscript{141} Numerous jurisdictions have implemented natural resource trust funds to set aside revenues for future use, ensuring equal distribution between present and future generations.\textsuperscript{142} Resource trust funds can help clarify how much revenue is generated from exploiting the resource, and how this revenue is to be spent.\textsuperscript{143} There are numerous examples of natural resource trust fund instruments,\textsuperscript{144} but whatever trust instrument is employed, stakeholder consultations and other public discussions must be held to discuss the use of such funds. Some examples of innovative trust fund features adopted in different jurisdictions are described below.

In Minnesota, minerals management accounts are created to enhance future mineral income and promote new mineral resource opportunities. If the balance in this account exceeds US$3 million on June 30 of every calendar year, the amount exceeding US$3 million must be distributed to the permanent school fund and the permanent university fund.\textsuperscript{145}

Timor-Leste has adopted the concept of Estimated Sustainable Income (ESI) for its Petroleum Trust Fund. ESI is the amount of revenue that can be withdrawn on a repeated

\begin{itemize}
  \item Caroline Stern, Jacopo Dettoni & Agostina Da Cunha, “Our Final Aim is to Transform Turkey” (January 2012) Engineering and Mining Journal 45 at 45.
  \item \textit{Revised Code of Washington, § 78.56.130(3)(c).}
  \item These types of funds are frequently employed in the oil and gas industry. See \textit{Governing the Management of Oil Revenues}, Law No 001/PR/99, Chad 1998, s 9 (allocates 10\% of oil revenues from designated fields into a fund on behalf of future generations); \textit{Oil Revenue Law}, Law No 8/2004, São Tomé and Príncipe 2004, s 10 (requires that a portion of the oil revenue be transferred to a subaccount, the Permanent Fund, for the benefit of future generations of Sao Tomeans).
  \item Drysdale, supra note 112 at 161-62.
  \item \textit{Minnesota Statutes}, § 93.2236 (2010).
\end{itemize}
annual basis without creating a zero balance in the fund. Where amounts exceeding the ESI are to be transferred from the trust fund, such transfers must have prior Parliament approval and can only occur after the budget has been published; this ensures that the transfer mechanism is clear and simple to monitor.

Some natural resource trust funds are directed specifically at indigenous peoples. For example, at the Brewery Creek Mine in the Yukon, lump sums were set aside for use by local First Nations in the form of apprenticeships and scholarships. In the Philippines, where an agreement is entered into with an indigenous cultural community, the royalty is paid into a trust fund for the socioeconomic well-being of the Indigenous cultural community. In Western Australia, a Community Partnership Agreement has been signed for the Boddington Mine. Under this agreement, the mining company provides annual financial assistance to the local Gnarla Karla Booja people by way of a charitable trust. Decisions on how to use the funds are made by a Relationship Committee comprising representatives from the Gnarla Karla Booja and the mining company.

The use of natural resource trust funds is not completely foreign to BC; however, rather than being mandated by law, these trust funds generally arise under agreements with industry. For example, at the Orca gravel mine operation on Vancouver Island, negotiations led to a community development fund for the local Namgis First Nation. This fund is managed by the Namgis First Nation and contributions are made per tonne of gravel, as determined during project negotiations. These agreements serve as a good starting point, but greater support by way of mandatory legal provisions would ensure more consistent use and fairness to communities province-wide.

3.4 Protecting the Environment

Tax law can also be used to effectively promote more environmentally sound operations. This is recognized in part in BC. For example, in 2000, the mineral tax on mine reclamation funds in BC was eliminated in an attempt to increase incentives for mine operators to establish such funds. In addition, bank fees paid for reclamation bonds (security) and costs of reclamation are included in expenditures. A reclamation tax credit is also available under the Mineral Tax Act. This tax credit is available to operators actively engaged in reclamation during the

---

147 Ibid, s 7.
151 See Centre for Indigenous Environmental Resources Inc, Meaningful Involvement of Aboriginal Peoples in Environmental Assessment (Winnipeg: Centre for Indigenous Environmental Resources Inc, 2009) at 20.
153 Mineral Tax Costs and Expenditures Regulation, supra note 44, ss 2(1)(l), (l.1).
relevant fiscal year. Further, where reclamation costs are incurred after mine closure, the operator is eligible for a refund of the previously paid net revenue taxes—this is in recognition of mine reclamation being a cost of mineral production. These approaches are intended to promote greater ongoing reclamation of environmental impacts from mining in the province. However, as the following discussion shows, other jurisdictions have enacted provisions that go further in promoting environmental protection from mining activities carried out within their boundaries.

3.4.1 Encouraging Environmentally Friendly Technologies

The use of exemptions, deductions, or tax credits can encourage the use of environmentally friendly technologies. For example, in the Philippines, pollution control devices are not considered as improvements on the land or buildings where they are placed, and are thereby not subject to real property and other taxes or assessments. In Colombia, tax incentives are available for the purchase of equipment for an operation's environmental protection program.

3.4.2 Reducing Waste Generation

Another approach to environmental protection is to look at waste generation, arguably the most environmentally hazardous aspect of mining operations. Some jurisdictions have enacted laws requiring payment for waste generation; these are essentially penalties to encourage companies to avoid or minimize an activity, such as a fee-per-unit volume of material placed in tailings. For example, in the State of Victoria, in Australia, mining operators must pay royalties for the disposal of tailings resulting from work under a licence on Crown land.

3.4.3 Financing Regulatory Supervision

To ensure ongoing environmental protection, adequate funding must also be secured to pay for government support. This need to cover costs of environmental monitoring and enforcement is recognized in Brazil where legal provisions mandated that a certain percentage of mining taxes (40%) be distributed to federal and state environmental agencies. As mentioned above, all mining revenues generated in BC go to the general public coffers. As a result, there is no guarantee that the necessary regulatory costs of the industry will be adequately covered.

3.4.4 Remediating Abandoned and Orphaned Mines

One of the key goals identified in the Whitehorse Mining Initiative, a multi-stakeholder process designed to create a strategic vision for a sustainable Canadian mining industry, was to establish funding means for reclaiming abandoned or orphaned mine sites where the reme-

---

155 Mineral Tax Handbook, supra note 7 at 8.
156 Philippine Mining Act of 1995, Republic Act No 7942, Philippines 1995 (pollution control devices are not subject to property and other taxes with the limitation that “[p]ayment of mine wastes and tailings fees is not exempted”, s 91).
158 Mineral Resources (Sustainable Development) Act (Vic), s 12A(4).
Idiation responsibility could not be assigned.\textsuperscript{160} However, in BC, the \textit{Mines Act} requires that orphaned mine remediation costs expended by the government drawn from the consolidated revenue fund.\textsuperscript{161} This has resulted in a significant burden on the public purse: between 2001 and 2009, the provincial government committed over C$200 million to the management of the province’s contaminated sites.\textsuperscript{162} Conversely, other jurisdictions have adopted legal provisions that ensure a more secure source of funding for cleaning up orphaned mines, for example:

- In Washington State, fines, interest, and other penalties collected by the mining department are used to reclaim surface mines abandoned before 1971.\textsuperscript{163}
- In West Virginia, a special trust is available for water treatment systems of orphaned (“forfeited”) sites.\textsuperscript{164}
- The \textit{United States Code} also established an abandoned mine reclamation fund from which funds are distributed to qualifying states for use in reclamation of abandoned mine sites and adjacent impacted areas.\textsuperscript{165} Coal mine operators are required to pay into this fund by way of a fee imposed on produced coal.\textsuperscript{166}
- In California, miners must pay fees on each ounce of silver and gold produced. These fees are deposited in an abandoned mine reclamation and minerals fund, which is used to “remediate features of historic abandoned mines and lands that they impact.”\textsuperscript{167}
- In New South Wales, the regulatory authority may sell any remaining mining infrastructure (buildings, plants, machinery, equipment, etc.,) on an orphaned mine site (“derelict mine site”), and apply the proceeds to a fund for remediating such sites.\textsuperscript{168}
- BC has provided a regulatory mechanism to deal with orphaned sites; however, this mechanism is only available for oil and gas sites, and not for orphaned metal mine sites.\textsuperscript{169}

It should be noted that BC’s New Mine Allowance is available for the costs of reclaiming mines that were abandoned or ceased operations prior to 1995.\textsuperscript{170} This is a step in the right direction, however, the Yukon has taken it a step further. There, a community and economic development expense allowance is used to cover costs for remediating environmental damage.

\textsuperscript{161} \textit{Mines Act}, RSBC 1996, c 293, s 17(2).
\textsuperscript{163} \textit{Revised Code of Washington}, § 78.44.045(3).
\textsuperscript{164} \textit{West Virginia Code}, § 22-3-11(g).
\textsuperscript{165} 30 \textit{USC} § 1231, § 1233(a)(1)(B)(ii).
\textsuperscript{166} \textit{Ibid.}, § 1232(a).
\textsuperscript{168} \textit{Mining Act 1992 (NSW)}, s 242C(3)(a).
\textsuperscript{169} \textit{Oil and Gas Activities Act}, SBC 2008, c 36, s 47.
\textsuperscript{170} \textit{Mineral Tax Costs and Expenditures Regulation}, supra note 44, s 5(1)(a).
outside the mining property; thereby providing greater environmental protection not only at
the mine site itself, but also on surrounding impacted areas.\footnote{Quartz Mining Royalty Regulation, supra note 95, s 50(1)(f).}

The examples described above merely offer a glimpse into the wide range of possibilities for creatively applying the tax regime. Many other tax tools for environmental protection exist that are beyond the scope of this article.\footnote{See e.g. Taxation, Innovation and the Environment (Paris: OECD, 2010) online: OECD <http://www.oecd.org/document/6/0,3746,en_2649_34281_46091974_1_1_1_1,00.html> [OECD, Taxation]. For further information on financial securities for mine reclamation see Maya Stano, "The Raven Mine: A Regulatory & Fiscal Black Hole? A Look at Environmental Enforcement & Securities at Mines in BC" (Victoria: The Environmental Law Centre Society, 2011) online: Coalwatch <http://www.coalwatch.ca/sites/default/files/RavenCoal_BlackHole_MayaStano_ELC-Spring2011.pdf>. For further information on the valuation of ecological goods and services see Millennium Ecosystem Assessment, online: MEA <http://www.maweb.org/en/index.aspx>. For further information on greenhouse gas cap and trade see PwC, Seize the Day, supra note 13 at 22.}

3.5 Encouraging Innovation

The OECD has recognized that "[i]nnovation is critical to achieving environmental goals."\footnote{Ibid.} Research and development (R&D) is key to building a long-term sustainable development strategy for the mining industry. There are several areas in which greater R&D is required. For example, acid mine water is a problem at mines across BC and thus more R&D is required for long-term control and management of this toxic drainage.\footnote{Ibid.} This concern will continue to grow as lower-grade deposits are exploited, which will create greater quantities of acid-generating wastes. Growing attention is also being focused on carbon emissions, to which mining activities are a significant contributor due to their heavy energy consumption. Reductions can be achieved by switching to clean power (like renewable sources and non-fossil fuels), using more efficient technologies, and through carbon capture and storage.\footnote{Ibid.} The technical feasibility of this latter method remains unproven, and will therefore still demand significant costs before it becomes viable.\footnote{Ibid.}

The increasing focus on sustainable development will also likely extend the need for R&D into product stewardship—specifically the manufacturing and recovery stages of metal resources. This entails a life-cycle analysis approach for which mines and smelters will need to conduct further research.\footnote{Ibid.} In addition, as climate change impacts increase, particularly the frequency and magnitude of extreme precipitation events, processes must become more dynamic and responsive to change. A key tool for achieving this goal is ongoing R&D.

Unfortunately, a recent review of R&D expenditures highlights the inadequate attention that the industry currently places on this important activity.\footnote{Ibid at 278 (few companies spent more than 0.5% of their revenues on R&D in the past decade—this level of R&D is extremely low in comparison to that spent in other high-tech sectors, even where}
the Canadian Mining Innovation Council show that the R&D funding for the mining sector has been declining since the 1990s. This drop has been linked to the increasing consolidation of mining companies—a rising trend in recent years.

Secure R&D funding is even more imperative in periods of market downturn. At such times, R&D budgets tend to be reduced and shortcuts are used to accelerate front-end (i.e., lab and pilot-scale) test work. This practice can have grave consequences on the eventual full-scale plant, leading to untested critical elements and increased risks of failure.

Tax incentives can be used to encourage greater R&D. In BC, R&D costs incurred at operating mines may be included as expenditures provided that the results are public property. This is a step in the right direction. Other jurisdictions, however, have gone further to encourage mining R&D. For example, in Ontario, scientific research costs reasonably related to mining within the province are fully deductible. In New Brunswick, a tax credit of 25% of research costs can be credited against the taxes owed on the 16% mining tax. The research must be aimed at recovering additional minerals from existing mines and must be pre-approved by the government. This has the added benefit of promoting more efficient mining at existing operations, which potentially reduces the overall footprint and environmental impact of the project.

4. A SUSTAINABLE PATH: WITHSTANDING THE INDUSTRY’S FOOTPRINTS OF TIME

Metal mining is an extremely intrusive activity that extracts not only mineral ore from the local region but also the inherent value of both the resource “nest-egg” and of undisturbed ecosystems. The revenue-generating regime must therefore be carefully constructed to ensure long-term retention of social and economic benefits in local communities. This necessitates careful and innovative structuring of the tax regime.

The current regime grants significant preference to mining companies. Generous loss carry-over rules allow mining companies to reduce their taxable incomes, while the distinctive Canadian flow-through share system allows investors to do the same with their personal taxable incomes. Both have the effect of reducing the revenue that accumulates in the public purse. This is exacerbated by substantial tax deductions and tax allowances from both levels of government. Preferential treatment is also provided under other taxes, including fuel and sales taxes. In recent years, the tax regime has become even more generous with reductions in corporate tax rates, the elimination of the federal Large Corporations Tax, expansions of the pine beetle classified areas, and time extensions for numerous exploration incentives. This approach

exploration costs are considered as R&D expenditures).

179 Ibid at 276-77.
180 Ibid.
181 Ibid at 282.
182 Mineral Tax Costs and Expenditures Regulation, supra note 44, ss 2(1)(m), 2(9).
183 Mining Tax Act, RSO 1990, supra note 93, ss 3(5)(g), 3(13).
184 See Winfield, supra note 152 at 4.
185 Metallic Minerals Tax Act, RSNB 1973, c M-11.01, s 2.1(2).
raises serious concerns about the current regime's ability to ensure that adequate long-term benefits flow to local communities.

As currently structured, the mining tax regime also prevents sustainable patterns of resource use. Public expenditures that support the mining industry reduce the costs of new materials compared to secondary materials or the redesign of existing products. This ultimately leads to unsustainable development. Conversely, as the OECD recognizes, if properly conceived and implemented, green tax reforms can contribute to a real structural adjustment of economies.

4.1 The Extra Mile

A number of innovative approaches have been adopted in other jurisdictions to promote greater revenue generation from the mining industry and fairer benefit distribution to local communities. These approaches include provisions that limit allowable deductions to their intended purpose, increase revenues in profitable times, plan for cyclical metal markets, and ensure taxes are paid when due. Innovative approaches have also been adopted to ensure that local communities benefit more directly from local mining activities. These include provisions that promote increased local employment, help diversify the local economy, compensate First Nations on whose traditional territories mining occurs, and share revenues with local governments and future generations. Finally, other jurisdictions have also adopted provisions to protect local ecosystems and encourage greater innovation to build a more sustainable mining industry.

Although these approaches would go a long way to ensuring more fair returns from the industry in BC, they cannot be considered alone. Other issues must be addressed alongside the revenue-generation question. Foremost is the fact that BC's landmass remains largely unceded by First Nations peoples. As such, these people are entitled to free prior informed consent, which includes the right to say no to mining.

Meaningful public participation should also be a prerequisite to development and defining real long-term benefits. As stated in the Natural Resource Charter, "[e]xtractive resources are public assets, and decisions concerning their exploitation and use should be a matter of public debate." This debate can only occur where citizens have sufficient capacity to participate meaningfully in the process. This necessitates a clear understanding of BC's geological potential so that informed choices can be made about when, and if, development should occur.

Some areas of the province are also extremely sensitive and cannot recover from intrusive mining activities. These areas must be mapped out and classified as "no-go" zones to protect the ecological and cultural integrity of the province. Examples of no-go zones include areas of significant national or international environmental or cultural importance, as well as areas of particular value for agriculture, fisheries, water, or indigenous peoples. These are but some

---

186 See Winfield, supra note 152 at 4.
188 Natural Resource Charter, supra note 82 at 3.
189 Ibid at 10.
of the issues that must be addressed alongside the revenue-generating question to promote a more sustainable mining industry in BC.

Mining has played an important role in the BC economy for over a century. Today, as plans proceed to extend the life of BC's mining industry well into the twenty-first century, the issues discussed in this article must be carefully considered to ensure that real, long-term benefits flow to local communities and citizens across the province. Government bears the responsibility of doing so and of ensuring that mineral wealth is adequately harnessed for the benefit of its citizens across generations.