

# Natural Common Wealth and Economic Rent in Canada

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This is a working paper from Common Wealth Canada. Feedback on this work is welcome and can be directed to Ben Earle at [ben@ubiworks.ca](mailto:ben@ubiworks.ca) or can be added directly at the following link: [Natural Common Wealth Working Paper for Comment](#)

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# Executive Summary

This paper is an attempt to demonstrate the value of Canada's common wealth that derives from our shared natural resources (the commons).<sup>1</sup> Influenced by similar attempts to value common wealth from Australia<sup>2</sup> and Vermont<sup>3</sup>, we examine the economic rents associated with natural common resources in Canada. The paper and calculations are presented to inform discussion and future research on common wealth in Canada and the potential income that could be derived for public purposes from the rental value of these resources. This work does not explore the policies by which to collect these economic rents for public benefit; that will be the subject of future work. We instead provide estimates to inform understanding and future research efforts on the amount of economic rents in Canada.

## *A note on Economic Rents*

Acknowledging that there has been debate in the literature on the precise usage and meaning of the term rent, we note that a general consensus has developed regarding its technical usage to refer to "those payments to a factor of production that are in excess of the minimum payment necessary to have it supplied."<sup>4</sup> That is, rent, as we understand and use the term here, is income earned by owners (of the resource or the rights to extract the resource) on resources above and beyond the required amount to support their extraction and productive use.

In the case of economic rent and common resources, the unearned income is derived from the common wealth of the resource, and therefore, should rightfully accrue for the benefit of everyone. As Adam Smith wrote in *The Wealth of Nations*: "It is the work of nature which remains after deducting or compensating the work of man. It is seldom less than a fourth, and frequently more than a third of the whole produce."

It is our contention that rent exists because of the existence of the community and gifts of nature that no one worked for, and should accrue to that community in the form of government revenue that may be used to support Canadians, either through programming, tax or income benefits.<sup>5</sup>

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<sup>1</sup> The commons can also include cultural, social, and digital resources that are part of our collective heritage. This paper focuses on natural resources but acknowledges that these other kinds of the commons are also important in discussions of common wealth and should be further explored.

<sup>2</sup> Prosper Australia, 2013, [Total Resource Rents of Australia: Harnessing the Power of Monopoly](#).

<sup>3</sup> Vermont Green Tax and Common Asset Project (University of Vermont), 2008, [Valuing Common Assets for Public Finance in Vermont](#).

<sup>4</sup> Varian, H.R. (2006) *Intermediate Microeconomics: A Modern Approach*. 7th Edition. WW Norton & Company, p. 412

<sup>5</sup> Nobel laureate [Joseph Stiglitz](#) showed that under often-met real world conditions, investments in public goods increase land rents by at least as much as the investment itself. The result is that the valuable contributions of a community often accrue value privately to landowners. A corollary of Stiglitz's finding is that a rent on land values could theoretically be sufficient to finance *all* public expenditures.

## Summary of Findings

Across all natural resource commons reviewed in this paper, the potential economic rent that could be newly collected with new and adjusted policy is estimated at \$421 billion / year. This is largely driven by the possible rent collection that could come from a national land value tax (\$362.5 billion). The balance derives from adjustments to existing rent and royalty regimes that capture more of the resource value for the collective benefit of all people in Canada.

**Table A: Summary of Potential Resource Rents in Canada**

<b>Natural Common Wealth</b>	<b>Proposed Additional Rent Collection<sup>6</sup></b>
Land	\$362.5 billion
Minerals	\$8.4 billion
Energy (Oil and Gas)	\$15.3 billion
Forestry	\$1.7 billion
Fisheries	\$213 million
Air (Carbon)	\$32.9 billion
<b>Total</b>	<b>\$421 billion</b>

### *Impacts on Revenue and Taxation*

The revenue potential of increased economic rent capture on Canada's commons are significant and clear. In total, all potential rent capture calculated in this report would exceed the income tax revenues of the federal, provincial and territorial governments combined in Canada. This could change how Canadians pay taxes, freeing up income from labour while also providing added income support from a *common wealth dividend* – a regular cash payments – for all Canadian adults. For example:

- 50% of the possible rent generated from a federal land value tax (\$181.3 billion) could eliminate personal income taxes (federal and provincial) on the first \$71,900 of income annually. As a result, 69.4% of Canadians would pay no personal income tax (PIT).
- 50% of the land value tax (\$181.3 billion) could be used to pay a federal common wealth dividend of \$6,817 annually to all Canadian adults.
- 50% of all potential rents collected (\$210.5 billion) could eliminate personal income taxes (federal and provincial) on the first \$111,500 of income annually. As a result, 73% of Canadians would pay no income tax.

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<sup>6</sup> This is all new rent/royalty income that could be collected - based on the analysis in this paper - in addition to what is currently collected through existing natural resource tax and royalty regimes in Canada.

- 50% of all potential rents collected (\$210.5 billion) could be used to pay a federal common wealth dividend of \$7,917 to all Canadian adults<sup>7</sup>.
- 100% of all new rents captured could pay a common wealth dividend to all Canadian adults of \$15,834 annually.

## **Conclusion**

The amount of rent that we believe could be collected from the commons in Canada is significant – enough to fundamentally change how Canadians pay taxes and receive benefits. Furthermore, sharing in the rental value of land and our natural resources can address some of our most dire economic and social challenges, including housing affordability, income and wealth inequality, and the very economic stability of our nation.

Understanding the true magnitude of these rents allows us to begin exploring bold new economic reforms that allow the value of our commons to be shared more equitably among Canadians.

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<sup>7</sup> For a comprehensive introduction to common wealth dividends, see Ranalli, B., 2021, [Common Wealth Dividends: History and Theory](#).

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# Introduction

Common wealth arises from the use of our shared natural, cultural, and social resources, to which all residents of the society have an equal moral right, even when they are held privately. Traditional examples of these shared resources include land, forests, fisheries, and subsurface resources (e.g. minerals, oil and gas). Increasingly, bodies of cultural and social artifacts have come to be viewed as shared resources, such as art, music and literature, as well as digital resources that have been collectively created and built by humans and entered into the public domain. Historically, the term the commons has been used to refer to the way communities managed shared natural resources, in particular land, that was held ‘in common’, and the agreed upon set of rules about how it was to be used.<sup>8</sup>

Acknowledging these other, cultural and social, parts of our common wealth, this paper is an attempt to demonstrate the potential value of the commons and the common wealth that may be derived from Canada’s shared natural resources with a nod to its potential impact on the finances of Canadians.<sup>9</sup> Common wealth is used here to describe the portion of the value that arises from the use and exploitation of Canada’s natural commons and that may provide a return to all Canadians in various forms.

Despite its enormous potential value to Canadians, much of our common wealth is being captured privately today, by those corporations who extract and use these resources, perpetuating a rentier economy that enriches some, impoverishes most, and divorces economic gain from productive contribution. Building and sharing common wealth with all Canadians will form the bedrock of a more inclusive economy, and will provide the basis for an inclusive, stable and sustainable future for the nation.

This can be achieved by examining the economic rents associated with natural and social common resources; that is, those resources that may be considered to be part of the collective commons that all Canadians share and could benefit from.

The paper and calculations are presented to inform discussion and future research of the commons in Canada and the potential income that could be derived for public purposes from the rental value of these resources. This work has also been influenced by similar attempts to value common wealth in Australia<sup>10</sup> and Vermont.<sup>11</sup>

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<sup>8</sup> International Association for the Study of the Commons, [About the Commons](#)

<sup>9</sup> While this paper focuses on natural resources, we acknowledge that other kinds of the commons are also important in discussions of common wealth and should be further explored.

<sup>10</sup> Prosper Australia, 2013, [Total Resource Rents of Australia: Harnessing the Power of Monopoly](#).

<sup>11</sup> Vermont Green Tax and Common Asset Project (University of Vermont), 2008, [Valuing Common Assets for Public Finance in Vermont](#).

# Economic Rent and Rent-Seeking

## The Commons and Economic Rent

For over 100 years, leading thinkers in economics considered the natural world, and the resources that it provides, to be part of the commons, and thus contributing to our common wealth.<sup>12</sup> Among the earliest thinkers on this subject, the Physiocrats, a group of 18th Century French thinkers who were pioneers of applied economic analysis,<sup>13</sup> believed that land is the source from which all wealth is created.<sup>14</sup> As a result, they argued that the net product of land created rents that were unearned by the landowners and thus the burden of all taxes ultimately should fall on these same landowners, rather than on the labourers who make the land productive.<sup>15</sup> Adam Smith,<sup>16</sup> widely thought of as the founder of modern economics, argued that the real wealth of a nation was derived from the annual production of land and labour. Thomas Paine<sup>17</sup> echoed this sentiment, noting that the earth was “the common property of the human race” and advocated using the rent of land to fund a citizens’ dividend. More fundamentally, Henry George<sup>18</sup> believed that land and all natural resources should rightfully be viewed as the common property of humanity, and thus a tax on land values - as a collection of rent - “is the most just and equal tax of all”. George and his subsequent followers (the Georgists) place land and land rent at the centre of their economic paradigm.

## A note on the term “economic rent”

It is important to note that the term economic rent (elsewhere referred to as “rent” in this paper) and its usage across fields and the body politic is subject to significant debate and has shifted over time. A consensus has developed regarding its technical usage as “those payments to a factor of production that are in excess of the minimum payment necessary to have it supplied.”<sup>19</sup> In pointing out that rents may arise both on the supply and demand side, Schwerhoff, Edenhofer, and Fleurbaey (2020)<sup>20</sup> expand that general definition to “those benefits to an agent that are in excess of the minimum necessary for the agent to accept the transaction.”

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<sup>12</sup> This premise formed the central debate of economics in the late 18th and 19th centuries. From the French Physiocrats to Adam Smith (1723-1790), David Ricardo (1772-1823), Thomas Malthus (1766-1834), John Stuart Mill (1806-1873), Karl Marx (1818-1883), Simon Patten (1852-1922) and Thorstein Veblen (1857-1929), they all focused on a theory of value that could quantify economic rent as unearned income.

<sup>13</sup> Gaffney, M., 1998, [Notes on the Physiocrats](#). Physiocracy can be considered the first economic school that attempted to define a true theory of the economy.

<sup>14</sup> Higgs, H., (2002 [1897]), [The Physiocrats: Six Lectures on the French Economists of the 18th Century](#).

<sup>15</sup> History of Economic Thought, No Date, [The Physiocrats](#).

<sup>16</sup> Adam Smith Works, 2017, [Wealth of Nations Reading Guide - Book II, Chapter 3](#). In addition, his views on land-rents have been favourably discussed by Georgists economists’ - who themselves place land and land rents at the forefront of their applied economics - Nicholaus Tideman and Mason Gaffney in the article [A Georgist Perspective on Adam Smith](#).

<sup>17</sup> Thomas Paine, 1797, [Agrarian Justice](#)

<sup>18</sup> [Henry George](#), 1879, [Progress and Poverty](#).

<sup>19</sup> Varian, H.R. (2006) Intermediate Microeconomics: A Modern Approach. 7th Edition. WW Norton & Company, p. 412

<sup>20</sup> Schwerhoff, G., Edenhofer, O., & Fleurbaey, M., 2020, [Taxation of Economic Rents](#), *Journal of Economic Surveys*, 34(2), p. 400.



In literature exploring the potential utility of economic rents as a source of public revenue the most common forms of economic rents identified are described as unearned income, windfall profit, or as revenue without a corresponding cost of production.<sup>21</sup> This is a view forwarded by Piketty<sup>22</sup> who defines it as “income on capital, whether in the form of rent, interest, dividends, profits, royalties, or any other legal category of revenue, provided that such income is simply remuneration for ownership of the asset, independent of any labor.” Piketty goes on to observe that the common definition has therefore taken on a pejorative connotation of an “undue or unjustified income”.

Many economists have refined this concept to differentiate types of rents based on the market inefficiencies or sources of the value that is being captured. Schwerhoff, Edenhofer, and Fleurbaey (2020),<sup>23</sup> for instance, identify seven types of rents present across the market and note that few are appropriate for non-distortionary revenue streams for governments. Most of the rents they identify are generated by imbalances in market and monopoly power. The authors note that these systems are best not entrenched or accounted for after the fact through taxation, but rather addressed before they arise through reducing market barriers and enacting policies to ensure competition. There are therefore two categories of rents that we put forward as efficient sources of potential levies: scarcity rents and regulation rents.

This paper concerns itself primarily with rents of which positive value is derived from the commons (e.g. mineral extraction) or whose negative values are externalised to the commons (e.g. carbon pollution). These two proposed levies belong, respectively, to the two efficiently taxable subclassifications of rents mentioned in the previous paragraph, scarcity and regulation rents. Scarcity rents are the cost of using and depleting a finite resource. This is a form of rent because the limited supply of the asset caps production, beyond which further demand will only increase the price with the difference accruing entirely to the owner or controller of the resource. Through this process, the value and benefits of the limited resource is depleted for future generations. Regulation rents occur when cost of production or use of the asset are externalised (e.g. pollution) and the social cost is greater than zero. According to Schwerhoff, “Regulation rents are those rents that result from regulation motivated by social and environmental concerns.”<sup>20</sup>

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<sup>21</sup> Henry George Foundation of Canada, No Date, [Economic Rent](#). In their 2019 paper, [Taxation of Economic Rents](#), (p.3), Schwerhoff, Edenhofer, and Fleurbaey note that there has been considerable debate on the precise meaning of the term. [Varian \(2006, p. 412\)](#) points out that modern public economics has settled on defining economic rent as payments to a good or factor of production that are in excess of the minimum payment necessary to have that factor supplied.

<sup>22</sup> Piketty, T., 2014, *Capital in the Twenty-First Century*. Harvard University Press.

<sup>23</sup> Schwerhoff, G., Edenhofer, O., & Fleurbaey, M., 2020, [Taxation of Economic Rents](#), *Journal of Economic Surveys*, 34(2), p. 398-423.

## Challenging Rent-Seeking

The practice of capturing unearned wealth from the commons is a primary form of rent-seeking<sup>24</sup>, the act of growing wealth without any reciprocal contribution of productivity. While it may be morally objectionable, importantly, rent-seeking can also have dire economic consequences. Contemporary economists have found the rise of rent-seeking behaviour in the economy of developed nations to be a major driver of extreme inequality, wage stagnation, and economic slowdown.<sup>25</sup> Thus, a system that challenges rent-seeking and uses economic rents derived from the commons for public needs is one that can revitalise an economy that works for all Canadians. Further, in reclaiming the commons for collective benefit, there is opportunity to align the imperative to share our common wealth with all Canadians with the imperative for environmental stewardship.<sup>26</sup>

While the introduction of rent recovery on the commons may increase costs for owners of common natural resources, it will not create disincentives for productive investment. As the Henry George Foundation of Canada explains, “collecting the economic rent from a resource does not inhibit extraction, use or economic activity, since rent is revenue without a cost of production”.<sup>27</sup> By definition, owners of resources do not require the totality of economic rent from the resource in order to stay in business<sup>28</sup>.

This work does not explore the policies by which to collect these economic rents for public benefit; that will be the subject of future work. We acknowledge that there will not be a uniform approach across resource sectors, and that policies to strengthen the commons must also interact with the economic realities of each sector. In addition, these policies should also address imperatives for preserving and protecting our natural resources where necessary. We instead provide estimates of the amount of economic rents from natural resources in Canada to inform understanding and future research efforts.

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<sup>24</sup> As Joseph Stiglitz notes in *The Price of Inequality* (p. 48), “The term rent was originally used to describe the returns to land, since the owner of land received payments by virtue of his ownership and not because of anything he does.” This thinking is now applied beyond land ownership to denote rent-seeking as any activity to collect or generate excess income by virtue of ownership, access or control of a resource. This rent is income above a reasonable operating return on the investment that an owner may make into the exploitation or use of the resource.

<sup>25</sup> In *The Price of Inequality: How Today's Divided Society Endangers Our Future*, Stiglitz's details the widespread consequences of rent-seeking on inequality, economic stagnation, and social and political instability.

<sup>26</sup> The authors acknowledge that these two imperatives are not necessarily aligned and that more work on how common wealth can support both the sharing of the benefits of the commons and the stewardship of our environment needs to be undertaken.

<sup>27</sup> Henry George Foundation of Canada, *Economic Rent*. In this article, HGFC further notes that “(e)ven in the oil industry, rent recovery does not slow down oil extraction, but it would make renewables more competitive, since investors in renewables and fossil fuels would each collect the same ROI, on a level playing field. Presently renewables only generate an “accounting profit” (if at all), as they do not generate significant economic rent, making renewables uncompetitive with fossil fuels which generate high economic rent.” Similarly, land value taxes (or land rent) would not inhibit productive use of land, but instead would incentivize putting it to its most economically productive use.

<sup>28</sup> In the current environment, land speculation may lead to scenarios where land owners who have taken mortgages to purchase the land do require some unearned income in order to service the debt and stay in business. To unravel this concern we will need to make a distinction between investment and speculation. Instituting a rent-tax on land would involve/require winding down existing speculation in land.

## Statement on Indigenous Perspectives

In preparing this paper, we are very aware of the unique and central place that indigenous peoples and communities have in relation to the lands within what many today call Canada. This is especially important when we talk about the commons and its collective benefits for all people.

The capitalist property regime and economic system have succeeded at producing remarkable surplus, but the benefits of this system too often flow to a small fraction of the population, while land, water, air and people pay the long-term price.

While indigenous values, beliefs and practices are as diverse as the indigenous peoples themselves, they find common roots in a relationship to land and water radically different from the notion of property. For indigenous peoples, land and water are regarded as sacred living relatives, ancestors, places of origin or any combination of the above.

Between the productivity of property and the recognition of indigenous rights and the rights of nature, there lies the potential for a more just future for the land, the water and their human relations.

The sentiment has been echoed by Richard Nerysoo of Fort McPherson in Canada's Northwest Territories, who explained that "being an Indian means saying the land is an old friend that your father knew, your grandfather knew -- your people have always known. If the land is destroyed, then we too are destroyed. If you people ever take our land, you will be taking our life."<sup>29</sup>

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<sup>29</sup> Cultural Survival, [This Land Knows Me: Indigenous Land Rights](#).

# Impacts of the Commons and Economic Rents

## Summary of Findings

Across all natural resource commons reviewed in this paper, the potential economic rent that could be collected with new and adjusted policy is estimated at \$421 billion a year (Table 1). This is largely driven by the possible new rent collected from a national land value tax (\$362.5 billion a year). The balance derives from adjustments to existing rent and royalty regimes that capture additional economic rent from other natural resources.

**Table 1: Summary of Current and Potential Resource Rents in Canada**

Natural Common Wealth	Total Possible Rent Collection (\$CN)	Current Rent Collection (\$CN)	Proposed Additional Rent Collection <sup>30</sup>
Land	\$401 billion	\$38.5 billion <sup>31</sup>	\$362.5 billion
Minerals	\$11.3 billion <sup>32</sup>	\$2.9 billion <sup>33</sup>	\$8.4 billion
Energy (Oil and Gas)	\$19.2 billion <sup>34</sup>	\$3.9 billion <sup>35</sup>	\$15.3 billion
Forestry	\$3.8 billion <sup>36</sup>	\$2.1 billion <sup>37</sup>	\$1.7 billion
Fisheries	\$253 million <sup>38</sup>	\$40 million <sup>39</sup>	\$213 million
Air (Carbon)	\$38.8 billion	\$5.9 billion <sup>40</sup>	\$32.9 billion
<b>Total</b>	<b>\$474.4 billion</b>	<b>\$53.3 billion</b>	<b>\$421.01</b>

<sup>30</sup> This is all new rent/royalty income that could be collected - based on the analysis in this paper - in addition to what is currently collected through existing natural resource tax and royalty regimes in Canada.

<sup>31</sup> This is the estimated amount of tax currently paid on the value of land through property tax regimes across Canada. This is based on a percentage of the total revenue (\$90.6 billion) from taxes paid on property in Canada that comes from land value excluding the value of dwellings and buildings. Data source: OECD Centre for Tax Policy and Administration, 2022, [Revenue Statistics 2022 - Canada](#).

<sup>32</sup> Based on the proposed royalty rate proposed by the Henry George Foundation of Canada.

<sup>33</sup> Based on current royalty payments made by the mining industry.

<sup>34</sup> This calculation is based on a scenario that allows a 15% return on investment for the oil and gas sector

<sup>35</sup> Statistics Canada. [Table 25-10-0065-01 Oil and gas extraction revenues, expenses and balance sheet \(x 1,000,000\)](#). This is the amount collected in 2020 based on current markets and royalty regimes.

<sup>36</sup> This is based on application of Alberta's Market Based Stumpage System Nationally and is calculated based on average stumpage rates for 2020. This model provides opportunity for significant annual shifts in rent capture based on the market for forest industry products.

<sup>37</sup> National Forestry Database, 2020 - [Revenues Tables](#).

<sup>38</sup> Based on a proposed 5% levy on 80% of the production value of fisheries in Canada.

<sup>39</sup> Based on licensing fees from fisheries and aquaculture.

<sup>40</sup> This is the amount collected under the Government of Canada's current carbon levy program in 2022.

## Impacts on Revenue and Taxation

If new policies were implemented to fully convert even a portion of the estimated rents in the paper into new federal and provincial revenues, they could have a significant impact on government revenues and have positive implications on the personal finances / disposable income of all Canadians from reduced personal income taxes and/or annual dividend payments.

In 2020-2021, all revenue from all sources for the federal government totaled \$396.8 billion, of which \$179.3 was federal personal income taxes (PIT). The same year, all provincial and territorial governments collected \$109.8 billion in PIT. In total, Canadians paid \$289 billion in personal income taxes in 2021.

**Table 2: Federal and Provincial Government Revenue versus Potential New Rent Collected - 2021 (\$CN)**

	<b>Total Revenue</b>
Federal (All Sources) <sup>41</sup>	\$396.8 billion
<b>Federal Personal Income Taxes Collected<sup>42</sup></b>	<b>\$179.2 billion</b>
Provincial/Territorial (All Sources) <sup>43</sup>	\$551.8 billion
<b>Provincial/Territorial Personal Income Taxes Collected<sup>44</sup></b>	<b>\$109.8 billion</b>
<b>Proposed Additional Rent Collection</b>	<b>\$421.01 billion</b>

While much work needs to be undertaken to fully understand the nature and impacts of a land value tax in Canada, and the potential adjustments to collect additional economic rent from other natural resource sectors, the possible fiscal implications of this shift in revenue sources are significant. If new measures were enacted to collect the potential rent that is available in Canada's natural resource sectors, the impact on the finances of Canadians could be significant, both in terms of possible reductions to Personal Income Taxes (PIT) and the possible distribution of an annual dividend payment (Table 3).

For example, if we applied 50% of the potential new rent generated from a federal land value tax (\$181.3 billion) to reducing personal income taxes, we could eliminate income taxes (federal and provincial) for all individuals on their first \$71,900 of income annually; as a result, 18.5 million (69.4%) of Canadians would pay no income tax.<sup>45</sup> The balance of the land value tax (\$181.3 billion) could be used to pay a federal common wealth dividend of \$6,817 annually to all Canadian adults.<sup>46</sup>

<sup>41</sup> Government of Canada, [The Fiscal Monitor - March 2022](#)

<sup>42</sup> Calculation from [Vivic Research](#). Results are based off of simulations conducted using SPSM 29.0 for the 2021 tax year.

<sup>43</sup> Statistics Canada, 2022, [Revenue, expenditures, and budgetary balance - General governments](#)

<sup>44</sup> Calculation from [Vivic Research](#). Results are based off of simulations conducted using SPSM 29.0 for the 2021 tax year.

<sup>45</sup> Ibid.

<sup>46</sup> For a comprehensive introduction to common wealth dividends, see Ranalli, B., 2021, [Common Wealth Dividends: History and Theory](#).

This could be taken further. If we applied 50% of all potential rents collected (\$210.5 billion) to reducing personal income taxes, we could eliminate income taxes (federal and provincial) for all individuals on their first \$111,500 of income annually; as a result, 19.4 million (73%) of Canadians would pay no income tax.<sup>47</sup> The balance of the rents collected (\$210.3 billion) could be used to pay a federal common wealth dividend of \$7,917 annually to all Canadian adults.

If we were to use all rents captured to pay a common wealth dividend, all Canadian adults would receive a payment of \$15,834 annually.

If we were to take the example of other jurisdictions, we could also use funds generated from the increased collection of rent on non-renewable natural resources, such as oil and natural gas and minerals, to create an investment fund that would pay returns to Canadians. This would be similar to the Alaska Permanent Fund that was established in 1980 to build a sustainable investment for all Alaskans as the state's oil reserves were extracted and depleted.<sup>48</sup> The rationale for the establishment of a permanent fund is to create a sustainable capital investment that can be maintained in perpetuity from the diminishing returns on a non-renewable resource.

Acknowledging that these scenarios require detailed analysis and planning to become policy proposals, this paper shows that there are real possibilities to change the ways in which governments collect revenue in Canada and that these possibilities start with a shared understanding of the commons and our significant common wealth in this country.

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<sup>47</sup> Calculation from [Vivic Research](#). Results are based off of simulations conducted using SPSM 29.0 for the 2021 tax year.

<sup>48</sup> [Alaska Permanent Fund](#).

**Table 3: Economic Rents Potential impact on the Finances of Canadian Adults (\$CN)<sup>49</sup>**

	Total Potential New Revenue	Tax Reduction (PIT)	% Canadians not paying PIT	# Canadians not paying PIT	Dividend Allocation	Annual Dividend per Adult <sup>50</sup>
<b>Land Rents applied Nationally (Land Value Tax)</b> 50% to tax reduction	\$362.5 billion <sup>51</sup>	\$181.3 billion <i>\$109.9 b federal</i> <i>\$71.4 b provincial</i>	69.4% <sup>52</sup>	18.5 million	\$181.3 billion	\$6,817
<b>Land Rents applied Nationally (LVT)</b> 100% to tax reduction	\$362.5 billion	\$289 billion <i>\$179.3 b federal</i> <i>\$109.8 b provincial</i>	100%	26.6 million	\$73.5 billion <sup>53</sup>	\$2,763
<b>Land Rents applied Nationally (Land Value Tax)</b> 100% dividend	\$362.5 billion	\$0	40.6%	10.8 million	\$362.5 billion	\$13,630
<b>All Potential New Rents</b> 50% to tax reduction	\$421.01 billion <sup>54</sup>	\$210.5 billion <i>\$127.8 b federal</i> <i>\$82.8 b provincial</i>	73.0% <sup>55</sup>	19.4 million	\$210.5 billion	\$7,917
<b>All Potential New Rents</b> 100% to tax reduction	\$421.01 billion	\$289 billion <i>\$179.3 b federal</i> <i>\$109.8 b provincial</i>	100%	26.6 million	\$132.1 billion	\$4,967
<b>All Potential New Rents</b> 100% dividend	\$421.01 billion	\$0	40.6%	10.8 million	\$421.01 billion	\$15,834

**Table 3.1: Economic Rents Potential Impacts on Finances of Canadian Adults with Establishment of Conservation Fund**

	Total Potential New Revenue	Tax Reduction (PIT)	% Canadians not paying PIT	Trust/Permanent Fund <sup>56</sup>	Dividend Allocation	Annual Dividend per adult
<b>All Potential New Rents</b> 100% tax reduction and conservation fund	\$421.01 billion	\$289 billion <i>\$179.3 b federal</i> <i>\$109.8 b provincial</i>	100%	\$58.6 billion	\$73.5 billion	\$2,763

<sup>49</sup> Calculation from [Vivic Research](#). Results are based off of simulations conducted using SPSM 29.0 for the 2021 tax year.

<sup>50</sup> Adult population in Canada was 26.6 million in 2022.

<sup>51</sup> Calculated from: \$401 billion in total potential revenue from a national land value tax (LVT), minus the current property tax collected that pertains to land (\$38.5 billion). This calculation is important, as current property taxes are collected at various levels of government, and specifically form the basis of municipal budgets in Canada. Our purpose is not to propose the redistribution of current rents, royalties, or taxes that are collected in relation to Canada's natural common wealth, but to show the immense potential for additional public revenue in these sectors.

<sup>52</sup> This scenario would eliminate income taxes (federal and provincial) for all individuals on their first \$71,900 of income annually.

<sup>53</sup> Balance after PIT replaced.

<sup>54</sup> Calculated from: \$421.01 billion in total potential revenue from all rent, minus the current rent collected from existing rent, tax, and royalty regimes (\$53.7 billion).

<sup>55</sup> This scenario would eliminate income taxes (federal and provincial) for all individuals on their first \$111,500 of income annually.

<sup>56</sup> This is a proposed option for the utilisation of the collection of new rents from non-renewable resources that could be set up in a similar way to the [Alaska Permanent Fund](#). In this example, rent collected from these resources would be used to create an investment fund that can provide benefits to Canadians in perpetuity.

# Natural Common Wealth

With vast tracts of land and forests, access to fresh water, and large resource industries in oil and gas, minerals and mining, and forestry, Canada is a global leader in natural resources. These resources form the foundation of the nation's economic growth, and continue to boost its world-leading economy. Thus, Canada is well placed to lead a global movement toward recognition of these resources as a collective asset and as the foundation for our common wealth and prosperity in a changing Twenty-First Century economy.

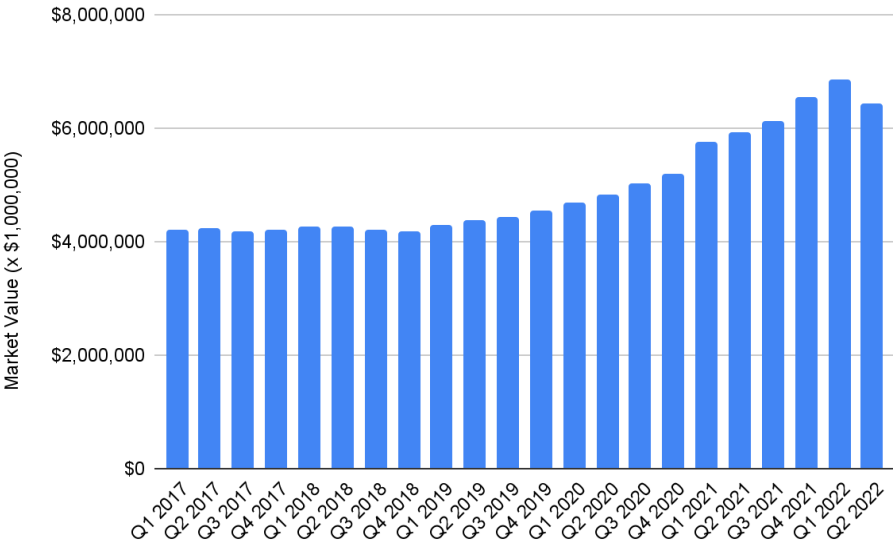
In this paper, we examine the economic rent that is currently being collected by private interests in Canada that could be redirected to support the prosperity of all Canadians. We specifically look at the rents associated with the use and extraction of Canada's natural resource common wealth: land, oil and gas, minerals and mining, forestry, fisheries.

## Land

Summary of Current and Potential Land Rents in Canada		
<b>Total Possible Rent (\$CN)</b> \$401 billion	<b>Current Rent Collection (\$CN)</b> \$38.5 billion	<b>Additional Rent Collection (\$CN)</b> \$362.5 billion

The real dollar, total value of all land in Canada was assessed at **\$6.423 trillion at the end of Q2 2022**.<sup>57</sup> Over the period of 2017 to 2022, land value in Canada increased by 52% (\$2.21 trillion), and in the period of 2020 to 2022, total land value in Canada increased by 33% (\$1.58 trillion).

**Chart 1: Total Land Value in Canada, Q1 2017 - Q2 2022 (\$CN)**



<sup>57</sup> Statistics Canada. [Table 36-10-0580-01 National Balance Sheet Accounts \(x 1,000,000\)](#)



Housing as an investment has historically generated annual returns of approximately 7% globally since 1950; with half of that stemming from property appreciation and the other from rental receipts.<sup>58</sup> These returns are in turn capitalised into the price of land, accounting for about 80% of house price appreciation since World War II.<sup>59</sup>

Following the examples of Prosper Australia and the Vermont Green Tax & Common Assets Project,<sup>60</sup> we can estimate total land rents by calculating the annual growth in land values. While the authors of the Vermont paper use median increases in housing prices as a proxy for land values, the authors recognize the error that this introduces. Like Prosper Australia, Canada's National Balance Sheet<sup>61</sup> accounting captures land values disaggregated from property values, which allows land values to be examined independently. Since 1990 (the date of first available data), land has increased in value in Canada on average 8.32% per year.<sup>62</sup> This calculation hides significant variability due to geography and use (i.e. residential, commercial, agricultural); for instance, land under dwellings grew at 9.34% annually over this same time period; however, it provides an aggregate estimation of the rents that land is generating and that are being capitalised into market prices. The economic conditions spurred by the COVID-19 pandemic are a likely source of much of the recent growth in land prices and a downward correction is likely. While this may present a distortion to the mean growth rate, such cycles appear elsewhere in this data and thus the entire set is used here, subject to update, to avoid the introduction of the authors' biases or predictions.

In theory, all land rent might be collected without market distortion or dysfunction, as land would continue have a productive yield. Previous proposals have advanced collect half of land rents, as in the case of the Green Party of Ontario<sup>63</sup>; 75% of the location value, as in the case of Rory Meakin in his proposal for taxing land rents in the UK,<sup>64</sup> nearly 100%, as in Prosper Australia's proposal, which sets the rate "just below trend growth terms;"<sup>65</sup> or the Vermont Green Tax & Common Assets Project, which sets it at "a number close to historic median gains in Vermont housing prices."<sup>66</sup>

Due to likely variability referenced above and the current tax burden on land (already accounted for in its market price), we selected a rate of 75% of the calculated annual land rent (6.24% =  $0.75 * 8.32%$  of land value) as a conservative rate which would allow for market function and some portion of the land rents to continue to accrue to owners to account for their capital's

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<sup>58</sup> Felix, B., 2018, [Housing: The Best Investment in History \(On Paper\)](#). Global housing geometric mean returns (1870-2015; 1950-2015): 6.61%; 7.10%. Canadian national average housing returns (1980-2017; 2012-17): 5.64%; 7.13%.

<sup>59</sup> Knoll, Katharina, Moritz Schularick, and Thomas Steger, 2017, [No Price Like Home: Global House Prices, 1870-2012](#).

<sup>60</sup> Vermont Green Tax and Common Asset Project (University of Vermont), 2008, [Valuing Common Assets for Public Finance in Vermont](#).

<sup>61</sup> Statistics Canada. [Table 36-10-0580-01 National Balance Sheet Accounts \(x 1,000,000\)](#)

<sup>62</sup> Ibid. UBI Works Analysis here: [Canada Land Value Time Series \(1990-2022\)](#).

<sup>63</sup> Green Party of Ontario, 2010, [Proposed Government of Canada Budget Based on Rent Recovery](#)

<sup>64</sup> Meakin, R., 2016, The future of taxation in the UK, In: Booth, P. (Ed.), [Taxation, Government Spending and Economic Growth](#)

<sup>65</sup> Prosper Australia, 2013, [Total Resource Rents of Australia: Harnessing the Power of Monopoly](#), p. 19

<sup>66</sup> Vermont Green Tax and Common Asset Project (University of Vermont), 2008, [Valuing Common Assets for Public Finance in Vermont](#).

opportunity costs<sup>67</sup>. Capturing 75% of the available rent would allow for some land use and geographic variability in the application of any rate. While any real world application would likely see a gradual introduction, we estimate that capturing 75% of land rents could generate **\$401 billion annually**.<sup>68</sup>

Of this \$401 billion, we subtract land rent that is already being levied by existing property taxes. An estimated \$38.5B of property taxes paid in 2020 were attributable to land value (rather than structures and improvements), comprising 42.5% of all property tax receipts from all levels of government that year (the most recent year with full and accurate data). This corresponds to an effective land value tax rate of 0.74% (in aggregate) in 2020.

We reduce the total land rent captured by this amount to arrive at \$362.5 billion, the proposed additional rent we could collect from land.

**Table 4: Potential Land Value Tax revenue in Canada (\$CN)<sup>69</sup>**

<b>Proposed Land Rent Capture Rates</b>	<b>Total Land Value in Canada (2022) <sup>70</sup></b>	<b>Potential Land Rent Capture</b>
<b>Prosper Australia<sup>71</sup></b> Rent at 5.5% of total land value	\$6.423 trillion	<b>\$353 billion</b> \$38.5 billion current capture Net new capture: \$314.5 billion
<b>Vermont Green Tax &amp; Common Assets Project<sup>72</sup></b> Rent at 5% of total land value	\$6.423 trillion	<b>\$321 billion</b> \$38.5 billion current capture Net new capture: \$282.5 billion
<b>Green Party of Canada</b> Capture of half of annual land rent	\$6.423 trillion	<b>\$267 billion</b> \$38.5 billion current capture Net new capture: \$305.5 billion
<b>Taxation, Government Spending and Economic Growth</b> Capture of 75% of annual land rents: 6.24% of land value	\$6.423 trillion	<b>\$401 billion</b> \$38.5 billion current capture Net new capture: \$362.5 billion

<sup>67</sup> Determined by the long term interest rate.

<sup>68</sup> The capture of 75% of the current available rent would generate \$401 billion annually. Our calculations considers that \$38.5 billion in land value is currently being collected through existing property tax regimes across Canada. The net additional rent value is thus presented.

<sup>69</sup> The authors acknowledge that the implementation of a LVT in Canada may have an impact on the viability of land speculation in Canada, which would, presumably, lead to a reduction in land values/prices to reflect use-values alone. This would, in turn, reduce the amount collected for public use through an LVT. More research on these impacts is recommended.

<sup>70</sup> Statistics Canada. [Table 36-10-0580-01 National Balance Sheet Accounts \(x 1,000,000\)](#)

<sup>71</sup> Prosper Australia, 2013, [Total Resource Rents of Australia: Harnessing the Power of Monopoly](#).

<sup>72</sup> Vermont Green Tax and Common Asset Project (University of Vermont), 2008, [Valuing Common Assets for Public Finance in Vermont](#).

## Natural Resources

Canada is a global leader in the mining, oil and gas, and forestry industries, with some of the largest and most valuable energy, mineral, and forest resources in the world. In 2021, Statistics Canada reported that the present value of key natural resource reserves in Canada was \$1.4 trillion, an increase of 149% since 2020.<sup>73</sup> While market conditions, emerging technologies, new reserves and other exogenous factors will continue to shape these estimates, Canada undoubtedly has enormous natural resource wealth. This paper concerns itself with how much of this wealth is accessed and the portion of its value that is returned to Canadians. To that end, we estimate **the annual production value of these resources at \$136.6 billion.**

## Mining Resources

Summary of Current and Potential Mineral Resource Rents in Canada		
<b>Total Possible Rent (\$CN)</b> \$11.3 billion	<b>Current Rent Collection (\$CN)</b> \$2.9 billion	<b>Additional Rent Collection (\$CN)</b> \$8.4 billion

Canada is a global leader in the mining of minerals and metals, with three quarters of global mining firms headquartered in the country. The country is a key provider of such resources as potash, diamonds and gemstones, gold, indium, platinum, and uranium. The **total value of mineral production in Canada was \$47 billion in 2019 and \$44 billion in 2020.**<sup>74</sup>

Currently, the mining sector in Canada contributes to government revenues in the form of corporate income taxes (federal and provincial) and through mining taxes and/or royalties. These mining taxes and royalties are intended to compensate the province and territories where mining activities take place, and act as a levy on the economic rents earned by the mining industry through extraction and processing of non-renewable mineral and metal resources that are collectively owned.<sup>75</sup>

In 2019, Canada's mining sector paid \$4.7 billion in corporate income taxes (federal, provincial and territorial) and mining taxes/royalties (provincial and territorial).<sup>76</sup> This represents 6.2% of the total production value that the mining sector paid in taxes and royalties in 2019. Of this, 61% (\$2.9 billion) was paid in provincial and territorial mining taxes and/or royalties.<sup>77</sup>

This royalty return is one of the lowest in the world for mineral resources, largely due to the fact that Canada generally assesses royalty payments after all costs have been calculated. This is

<sup>73</sup> Statistics Canada, 2022, [Canada's Natural Resource Wealth, 2021](#).

<sup>74</sup> Government of Canada, Natural Resources Canada, 2022, [Minerals and the economy](#); Government of Canada, 2021, [Canadian Mineral Production Information Bulletin](#).

<sup>75</sup> In Canada, mineral rights (subsurface resource rights) are usually owned by the province or territory in which they are located. This is in contrast to land rights (surface rights) that may be privately owned. As a result, the extraction of subsurface resources are generally subject to the payment of a royalty or mineral tax, paid to the province or territory of jurisdiction.

<sup>76</sup> Mining Association of Canada, 2020, [The State of Canada's Mining Industry: Facts and Figures 2020](#), p.16.

<sup>77</sup> Government of Canada, Natural Resources Canada, 2022, [Minerals and the economy](#).

increasingly rare in resource intensive countries, with most of the other major mining nations calculating royalties based on the value of the mineral extracted.<sup>78</sup> Movement toward a royalty system that is based on actual rent generated by the mining sector<sup>79</sup> would remedy this disparity. Such a system would shift the production function and is thus best thought of as a regulation rent which accounts for the substantial externalised costs that are involved in extraction.

**Table 5: Value of Mineral Production and Proposed Rent Capture in Canada (\$CN)**

Total Value of Mineral Production in Canada (2019)	\$47 billion <sup>80</sup>
Royalties paid Canada (2019)	\$2.9 billion (6.2% of total value)
<b>Potential Increased Rent (Royalty) Capture based on existing models and analysis:</b>	
<b>Vermont Green Tax &amp; Common Assets Project<sup>81</sup></b> Rent at 10% of total value of production	\$4.7 billion
<b>Henry George Foundation of Canada</b> Rent at 24% of total value of production	\$11.3 billion
<b>Prosper Australia<sup>82</sup></b> Rent at 40% of total value of production	\$18.8 billion

<sup>78</sup> Wilt, J., 2018, [Canada's mining giants pay billions less in taxes in Canada than abroad](#), The Narwal.

<sup>79</sup> See Chen, D., and Mintz, J., 2013, [Repairing Canada's Mining Tax System to be Less Distorting and Complex](#), University of Calgary, School of Public Policy Research Papers, 6(18).

<sup>80</sup> Breakdown by resource group: Metals - \$29.5 billion; Non-Metals - \$12.5 billion; Coal - \$5 billion

<sup>81</sup> Vermont Green Tax and Common Asset Project (University of Vermont), 2008, [Valuing Common Assets for Public Finance in Vermont](#).

<sup>82</sup> Prosper Australia, 2013, [Total Resource Rents of Australia: Harnessing the Power of Monopoly](#).

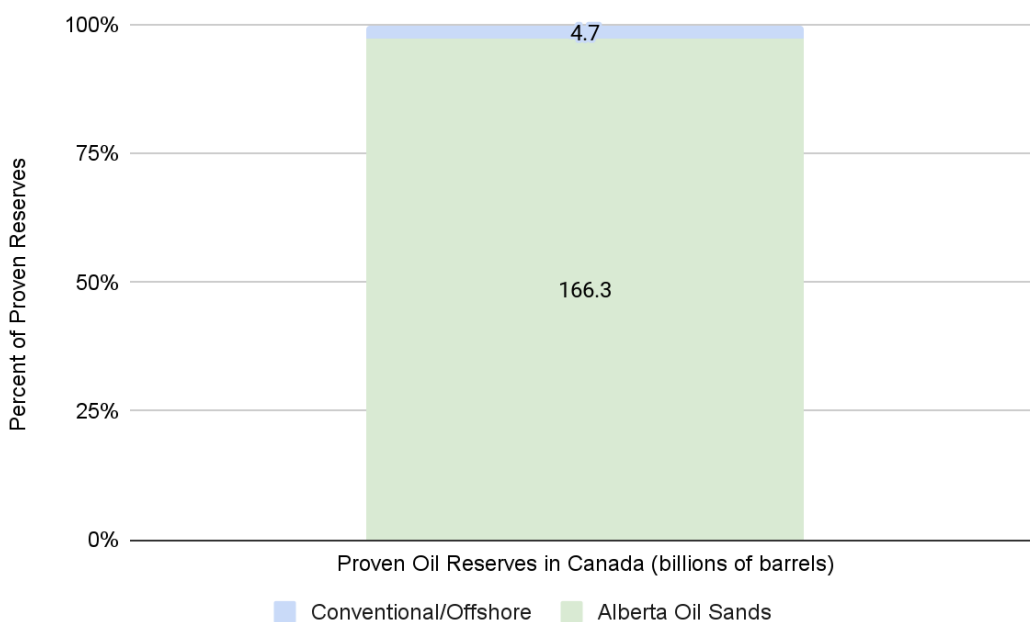
## Oil and Gas

### Summary of Current and Potential Oil and Gas Rents in Canada

Total Possible Rent (\$CN)	Current Rent Collection (\$CN)	Additional Rent Collection (\$CN)
\$19.2 billion	\$3.9 billion	\$15.3 billion

The oil and gas industry is a significant driver of Canada's resource economy, and has considerable impacts on the economies and labour markets of several provinces (e.g. British Columbia, Alberta, and Saskatchewan). Total proven oil reserves in Canada are estimated at 171 billion barrels (Chart 1), which represent 10.3% of proven global reserves.<sup>83</sup>

Chart 2: Total Canadian Proven Oil Reserves by Source<sup>84</sup>



In 2020, the industry had \$94 billion in revenues across Canada and combined capital and operating expenses of \$60 billion.<sup>85</sup> The case for rent/royalties on the oil and gas sector is based on the shared (public) ownership of the resources that are available (estimated to be 1.7 billion barrels of oil based on existing technological capacity). This is already an established principle in Canada, with royalty agreements in place across all relevant provincial, federal and indigenous jurisdictions.

<sup>83</sup> Natural Resources Canada, 2019, [Oil Resources](#). As technology evolves Canada's proven oil reserves are expected to increase significantly. For example, according to Natural Resources Canada (2019), technological improvements could increase recoverable oil reserves in the oil sands to more than 300 million barrels.

<sup>84</sup> Natural Resources Canada, 2019, [Oil Resources](#)

<sup>85</sup> Statistics Canada. [Table 25-10-0065-01 Oil and gas extraction revenues, expenses and balance sheet \(x 1,000,000\)](#)

In 2020, the oil and gas industry in Canada had revenues after operating and capital expenses of \$33.3 billion. Allowing for a return of 15%,<sup>86</sup> rent (excess profit) is calculated at \$19.2 billion. If we allow for a return of 22%,<sup>87</sup> rent (excess profit) is calculated at \$12.7 billion.

**Table 6: Revenues and Rent - Oil and Gas Sector in Canada (\$CN billions)**

	2017	2018	2019	2020
<b>Total Annual Revenue</b> (Oil and Gas Sector - Canadian Operations)	\$117.7	\$126.1	\$131.7	\$93.7
<b>Total Annual Expenses</b> (Capital & Operating - Canadian Operations)	\$82.9	\$84.8	\$82.1	\$60.4
<b>Earnings Before Interest, Depreciation, Amortisation (EBIDA)</b> (Revenue minus Expenses)	\$34.8	\$41.3	\$49.6	\$33.3
<b>Royalties (current regime)<sup>88</sup></b>	\$6.7	\$7.5	\$9.8	\$3.9
<b>Annual Return on Investment (profit) - 15% total return on Annual Revenue<sup>89</sup></b>	\$17.7	\$18.9	\$19.8	\$14.1
<b>Annual Return on Investment (profit) - 22 % total return Annual Revenue<sup>90</sup></b>	\$25.9	\$27.7	\$29.0	\$20.6
<b>Current Rent (allowing 15% profit)</b>	\$17.1	\$22.4	\$29.8	\$19.2
<b>Current Rent (allowing 22% profit)</b>	\$8.9	\$13.6	\$20.6	\$12.7

<sup>86</sup> This rate is based on industry analysis of the required rate of return for viable resource extraction.

<sup>87</sup> The rate of 22% is based on the current tax regime on the oil and gas sector in Norway.

<sup>88</sup> Royalties include provincial, federal Crown and non-Crown royalties and similar payments, as well as freehold royalties and provincial taxes. Source: Statistics Canada. [Table 25-10-0065-01 Oil and gas extraction revenues, expenses and balance sheet \(x 1,000,000\)](#)

<sup>89</sup> This rate is based on industry analysis of the required rate of return for viable resource extraction.

<sup>90</sup> The rate of 22% is based on the current tax regime on the oil and gas sector in Norway.

## Forests

### Summary of Current and Potential Forest Resource Rents in Canada

<b>Total Possible Rent (\$CN)</b> \$3.8 billion	<b>Current Rent Collection (\$CN)</b> \$2.1 billion	<b>Additional Rent Collection (\$CN)</b> \$1.7 billion
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Canada is the third most forested country in the world, with 362 million hectares of forests covering 40% of the nation's land (Table 5).<sup>91</sup> This represents 9% of the world's forests and 25% of the world's boreal forests.<sup>92</sup>

**Table 7: Most Forested Countries (2021)<sup>93</sup>**

	<b>Hectares of Forest</b>
Russia	815 million
Brazil	497 million
<b>Canada</b>	<b>362 million</b>
United States of America	310 million
China	220 million

In Canada, 90% of forest lands are publicly owned, with 87.4% owned by provincial and territorial governments (Chart 3).<sup>94</sup> Access to these lands, and the right to undertake logging activities for the forestry industry, are therefore regulated and managed primarily by provincial and territorial governments.

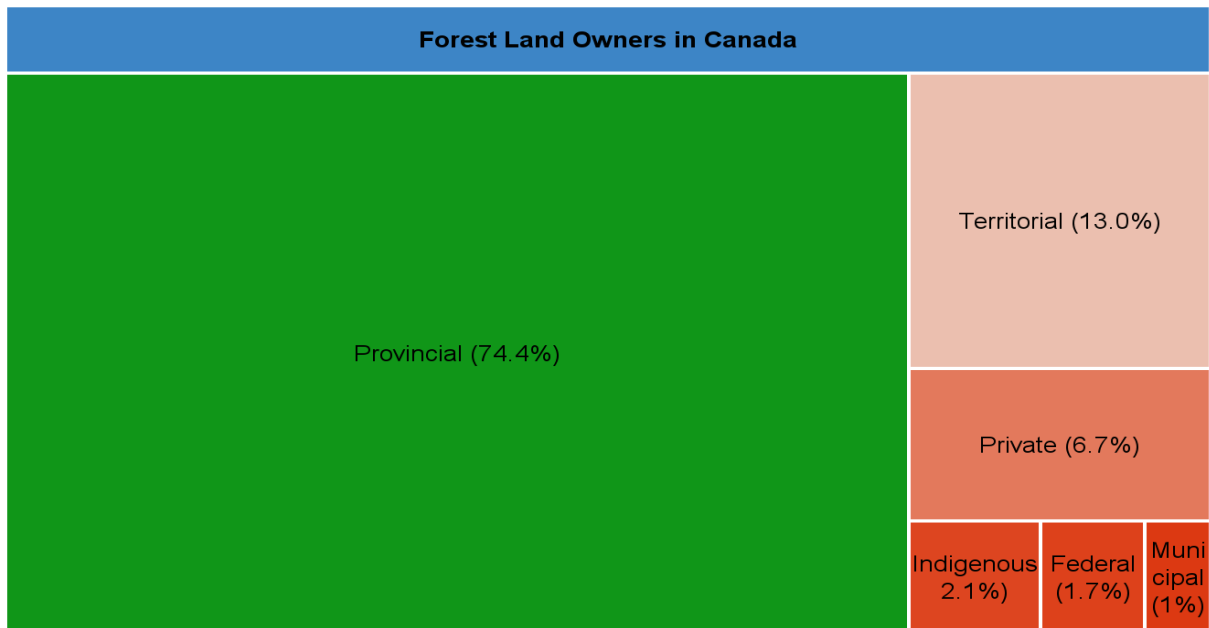
<sup>91</sup> Natural Resources Canada, 2021, [The State of Canada's Forests: Annual Report 2021](#), p. 8

<sup>92</sup> Ibid.

<sup>93</sup> Ibid.

<sup>94</sup> Natural Resources Canada, 2021, [The State of Canada's Forests: Annual Report 2021](#), p. 27

**Chart 3: Forest Land Ownership in Canada, (% of Forest Land Owned)<sup>95</sup>**



In 2019, the forestry industry in Canada harvested 757,000 hectares of Canadian forest lands, an increase of 6.6% over 2018, but well below the average of 1 million hectares annually harvested during the peak forestry period in Canada of 1995-2005.<sup>96</sup>

### Sector Revenues and Stumpage

In 2020, the forestry sector in Canada had total revenues of \$72.2 billion (Table 9).

Because forest lands in Canada are publicly owned, there exists a longstanding and complex system for the collection of rent on the use of these resources, known as stumpage. Stumpage is the rate that a private firm pays to the government for the right to harvest timber for use in the forestry sector. As Canada’s forest lands are generally owned by the provinces and territories, these governments set the stumpage rates and regulations for forest lands in their jurisdictions. This has resulted in a complex and diverse system of stumpage across Canada, with each province and territory having their own methods for the calculation and application of these rent charges.

In 2020, the overall stumpage paid in Canada, across all provinces and territories, was \$2.1 billion. As Table 6 shows, however, the amounts collected vary considerably across the country, reflecting both the size of the forestry sector in each province or territory and the considerable variability in methods used to assess the stumpage rate paid by the sector.

<sup>95</sup> Natural Resources Canada, 2021, [The State of Canada’s Forests: Annual Report 2021](#), p. 27

<sup>96</sup> Natural Resources Canada, 2021, [The State of Canada’s Forests: Annual Report 2021](#), p. 49



**Table 8: Stumpage Revenue by Provinces and Territories<sup>97</sup>, 2019 and 2020 (\$CN)<sup>98</sup>**

	2019	2020
British Columbia	\$906,062,666	\$1,177,330,773
Alberta	\$85,574,209	\$384,107,738
Quebec	\$240,626,000	\$265,401,850
Ontario	\$54,817,241	\$144,459,456
New Brunswick	\$61,100,000	\$70,400,000
Saskatchewan	\$4,110,009	\$56,775,542
Nova Scotia	\$6,218,000	\$7,200,000
Manitoba	\$3,228,000	\$3,228,000
Newfoundland & Labrador	\$1,229,604	\$1,301,458
Prince Edward Island	\$158,639	\$171,390
Yukon	No Data	\$39,968

In Alberta, stumpage prices are determined by a formula that considers lumber prices for the preceding 4 weeks. During the wood products price surge of 2020, Alberta saw stumpage rates as high as \$166/m<sup>3</sup>.<sup>99</sup> Similar rises in stumpage collected were seen in other provinces that also use market-based stumpage models. In contrast, New Brunswick saw relatively small gains in stumpage collected in 2020, compared to 2019 because this province had held its stumpage rate at the same level for previous six years, meaning that the province lost out on possible additional rent that could have been collected when lumber prices rose.<sup>100</sup>

If we were to apply a consistent approach to stumpage calculation across Canada, there could be an opportunity to increase the collection of rents on the forestry sector across provinces and territories with significant forest industries. For example, the application of the Alberta model nationally could have generated a minimum of \$3.8 billion in 2020 (as compared to the \$2.1 billion that was collected). In addition, this model could generate significantly more when there are market surges in lumber prices, although it could have the opposite effect as markets contract. In contrast, the New Brunswick approach of setting a consistent rate year-over-year may provide a more predictable revenue stream, while losing out when the market price for lumber increases. The latter model can lead to the growth of economic rent being collected by private interests at the expense of collecting public revenue, while the former model ensures public revenues more closely match market prices for Canadian forest products.

Applying the Alberta system nationwide might involve extracting rents at rates that exceed the existing profit margin of various operators. However, fiscally constraining some forestry

<sup>97</sup> North West Territories and Nunavut are not included due to nil values for stumpage in the period

<sup>98</sup> National Forestry Database - [Revenues Tables](#)

<sup>99</sup> Russ Taylor Global, 2021, [Analysis: A Perplexing Puzzle - Provincial Stumpage Rates in Canada](#)

<sup>100</sup> Ibid.

operations in this manner might not be a bad thing, since biodiversity and ecosystem services loss from removing or preventing the return of mature and old-growth forests poses a significant cost to society.<sup>101</sup>

**Table 9: Forestry Sector in Canada - Revenues, Rents, and Stumpage Rates (2020 baseline)**

<b>Total Annual Revenue - All Industries<sup>102</sup></b>	<b>\$72.2 billion</b>
Total Revenue - Logging	\$10.6 billion
Total Revenue - Pulp and Paper	\$30.0 billion
Total Revenue - Wood Products	\$31.6 billion
<b>Annual Expenses - All Industries<sup>103</sup></b>	<b>\$15.9 billion</b>
Wages/Salaries	\$10.8 billion
Capital	\$2.1 billion
Repairs	\$3.0 billion
Annual Revenue - All Industries (after wages, capital and repairs)	<b>\$56.3 billion</b>
Annual Exports of Canadian Forest Products <sup>104</sup>	\$35.3 billion
<b>Actual Stumpage Charges<sup>105</sup> - all jurisdictions<sup>106</sup> (current rent capture)</b>	<b>\$2.1 billion</b>
<b>Estimated Stumpage Charges Collected based on Scenario Changes:</b>	
<b>Match United States Market Based Stumpage Model Nationally</b> (2020 Average rate of \$23.53/ton harvested <sup>107</sup> )	\$2.9 billion
<b>Match Alberta Market Based Stumpage Model Nationally</b> (2020 Average rate of \$26.77/m <sup>3</sup> harvested <sup>108</sup> ) (2021 Average rate of \$85.78/m <sup>3</sup> harvested <sup>109</sup> )	\$3.8 billion <b>\$12.2 billion</b>
<b>Match New Brunswick's Flat Rate Stumpage Model Nationally</b> (2017 - 2020 rate of \$27/m <sup>3</sup> harvested)	\$3.8 billion
<b>Match British Columbia's Market Model (3 month price lag) Nationally:</b> (2020 Average rate of \$25.92/m <sup>3</sup> harvested <sup>110</sup> ) (2021 Average rate of \$52.89/m <sup>3</sup> harvested <sup>111</sup> )	\$3.7 billion <b>\$7.5 billion</b>

<sup>101</sup> Hunt, S.L., A.M. Gordon and D. M. Morris, 2005, [Aspects of ecological development in managed stands of jack pine and black spruce in northern Ontario: Understory vegetation and nutrient relations](#).

<sup>102</sup> Natural Resources Canada, 2021, [The State of Canada's Forests: Annual Report 2021](#), p. 61

<sup>103</sup> Ibid.

<sup>104</sup> Natural Resources Canada, 2022, [How does the forest sector contribute to Canada's economy?](#)

<sup>105</sup> Stumpage is the price that a private enterprise pays to the provincial and territorial government for the right to harvest timber from Crown forest lands; this is the rent charged to use this common resource. These rates are set and regulated by provincial and territorial governments across Canada, and can vary significantly from jurisdiction to jurisdiction. See the article from [Russ Taylor Global \(2021\)](#) on the variations in provincial stumpage rates in Canada.

<sup>106</sup> National Forestry Database - [Revenues Tables](#)

<sup>107</sup> Maggard, A., and Zhang, D., 2021, [Why Stumpage Prices are Low Despite Historic High Lumber Prices](#)

<sup>108</sup> Average stumpage rate based on data from Russ Taylor Global, 2021, [Analysis: A Perplexing Puzzle - Provincial Stumpage Rates in Canada](#)

<sup>109</sup> Ibid.

<sup>110</sup> Ibid.

<sup>111</sup> Ibid.

## Fisheries

### Summary of Current and Potential Fisheries Rents in Canada

Total Possible Rent (\$CN)	Current Rent Collection (\$CN)	Additional Rent Collection (\$CN)
\$253 million	\$40 million	\$213 million

Fisheries have been called the “classic example of the tragedy of the commons”: when overconsumption of a common resource beyond a sustainable level causes depletion of the common pool, resulting in large social and environmental costs.<sup>112</sup>

To prevent overfishing, Fisheries and Oceans Canada (DFO) administers licences for fisheries management, the fees for which totaled \$39 million in 2020-21.<sup>113</sup> The revenue derived from these licence fees could be categorised as “pure economic rent”.<sup>114</sup> However, DFO licence fee revenues have historically been only a small fraction of the costs incurred in their administration, and a smaller fraction still of the total value of commercial fishing production in Canada.

In 2020, the total production value of commercial fishing in Canada was **\$2.53 billion**.<sup>115</sup> There is also evidence of increasing resource rents in this sector: between 2008 and 2018, the quantity produced in Canada decreased by 10%, while its value increased by 55%.<sup>116</sup>

### Calculating Rent

In their report on Australia’s total resource rents, Prosper Australia proposed a 40% resource rent on the value of production in the fishing industry.<sup>117</sup> The report highlighted the large difference between the value of fishing licences (to their holders) and the fees collected by the state: the 2009-10 value of production in the Australian fishing industry was \$2.18 billion, 158 times the estimated \$13.8 million in licence fees that year. Similarly in Canada, although to a lesser magnitude, the total production value of commercial fishing was \$2.53 billion in 2021-21, 65 times the fees collected on fisheries licences.

<sup>112</sup> Benjamin, D., 2001, *Fisheries are Classic Example of the “Tragedy of the Commons”*.

<sup>113</sup> Other [fees collected by the DFO](#) include services (icebreaking, hydrography, dredging, and marin navigation) and small craft harbours fees, authorizations of rights or privileges related to the use of Canada’s waters. We exclude these fees from our calculation of rents.

<sup>114</sup> Vermont Green Tax and Common Asset Project (University of Vermont), 2008, [Valuing Common Assets for Public Finance in Vermont](#), p. 17: “The revenue derived from hunting, fishing, and trapping licences is pure economic rent. Besides the minor costs for the paper and stickers going into the physical licences, everything else is unearned profit by the state of Vermont.”

<sup>115</sup> We exclude aquaculture (otherwise known as fish farming) from our analysis, as it does not extract from a common pool resource like commercial fisheries. While the negative externalities of aquaculture, including impacts on neighbouring wild ecosystems, pollution, and environmental degradation, have been a major topic of debate, it is [What is the Environmental Impact of Aquaculture?](#)

<sup>116</sup> [https://www.oecd.org/agriculture/topics/fisheries-and-aquaculture/documents/report\\_cn\\_fish\\_can.pdf](https://www.oecd.org/agriculture/topics/fisheries-and-aquaculture/documents/report_cn_fish_can.pdf), pg. 1

<sup>117</sup> [https://www.prosper.org.au/wp-content/uploads/2013/12/TRRA\\_2013\\_final.pdf](https://www.prosper.org.au/wp-content/uploads/2013/12/TRRA_2013_final.pdf), pg. 35: “According to the Australian Fisheries Management Authority, just \$13.8 million is expected in levy fees this year... The 2009-10 value of production in the fishing industry was \$2.18 billion. A 40% resource rent on \$2.18 billion is \$840 million. The licence value is ultimately what calculations should focus on.”

Imposing a 40% resource rent on commercial fishing production, in line with Prosper Australia’s proposal, would generate \$1.01 billion in revenue.<sup>118</sup> We propose a more moderate levy of 10%, closer to the average total sales tax rate across provinces, which would generate \$253 million in annual revenue.<sup>119</sup>

**Table 10: Resource Rents in Fisheries and Aquaculture (\$CN)**

Commercial Fishing – Gross production value	\$2.53 billion
Rent at 40% of total production value (Prosper Australia)	\$1.01 billion
<b>Rent at 10% of total production value</b>	<b>\$253 million</b>

<sup>118</sup> Prosper Australia, 2013, [Total Resource Rents of Australia: Harnessing the Power of Monopoly](#).

<sup>119</sup> <https://www.canada.ca/en/revenue-agency/services/tax/businesses/topics/gst-hst-businesses/charge-collect-which-rate.html>

## Air

### Summary of Current and Potential Rents on Air Pollution Canada

Total Possible Rent (\$CN)	Current Rent Collection (\$CN)	Additional Rent Collection (\$CN)
\$38.8 billion	\$5.9 billion	\$32.9 billion

### The Costs of Pollution

To assess the economic rent on air, we estimate the externalised costs of use of air resources in Canada.<sup>120</sup> These externalised costs are based on the airborne pollutants that are produced by industry. These costs are borne by all Canadians.

The International Institute for Sustainable Development<sup>121</sup> estimates that air pollution costs Canadians **\$38.8 billion annually** in both Direct Welfare Costs<sup>122</sup> and Lost Income Costs.<sup>123</sup> These costs are the monetized values of the impacts that ongoing air pollution has on the environment and the associated human health impacts on Canadians. These are the externalised costs incurred by the public based on the activities of polluters and may thus be considered the current rental value of our common air resources.<sup>124</sup> The authors acknowledge that this section does not account for the unqualified costs of global warming resulting from air pollution. This limits the estimation of externalised costs to the areas noted.<sup>125</sup>

**Table 11: Annual Costs of Air Pollution in Canada (\$CN)**

	Direct Welfare Costs	Income Costs
<b>Air Pollutants</b>	\$36 billion	\$2.8 billion

<sup>120</sup> For a detailed discussion on how use of natural resources, like our air resources, can have a value assessment, see Peter Barnes, 2002, *Who Owns the Sky?: Our Common Assets and the Future of Capitalism*.

<sup>121</sup> The International Institute of Sustainable Development, 2017, [Costs of Pollution in Canada: Measuring the impacts on families, businesses and governments](#), p. 16.

<sup>122</sup> Direct Welfare Costs are the impacts that pollution has on the full range of what Canadians find valuable, apart from what they purchase. This includes the environments that we inhabit and enjoy, but also include impacts on health and well-being. The International Institute for Sustainable Development measured these impacts and assigned values to them in their 2017 report, [Costs of Pollution in Canada: Measuring the impacts on families, businesses and governments](#).

<sup>123</sup> The income costs of pollution are the impacts that pollution has on market production and consumption. This can include, (1) lost production and/or increased costs due to impacts on human health, (2) lost production and/or increased costs due to impacts on produced assets, (3) lost production and increased costs due to impacts on natural assets, and, (4) increased costs due to the need to limit the amount of pollution that reaches humans and produced/natural assets.

<sup>124</sup> These activities are market transactions that create a negative externality (impact), or additional cost, to those not directly involved in this transaction (the public). Pigouvian taxes are one way of capturing some of the value of these transactions and are designed to both regulate and manage the negative impacts of these activities as well as generate public revenue from their occurrence. Examples of Pigouvian Taxes in Canada are carbon taxes and taxes on tobacco products.

<sup>125</sup> Recent work from the [Institute for Sustainable Finance at Queen's University](#) estimates that global warming could cost the Canadian economy from \$2.773-trillion under a 2°C warming scenario to almost double that amount at \$5.520-trillion under a 5°C ("Business As Usual") scenario. These costs are associated with the physical impacts of global warming, such as biodiversity loss, sea-level rise, and infrastructure loss due to fire and floods, etc.

## Carbon Taxes

Carbon pricing regimes are a primary fiscal response in mitigating the societal costs of air pollution. In Canada, there is a national stringency standard for carbon pricing that applies to all provinces and territories who do not have carbon pricing plans of their own. Currently, the federal plan applies to five provinces and two territories, with the remaining provinces and one territory having provincial programs in place.

The carbon pricing system in Canada places a charge on fossil fuels (fuel charge) and has a performance-based system that captures the activities of industries (Output-Based Pricing System). Thus, the program places a Carbon Tax on primary activities that contribute to air pollution.

In the fiscal year 2022-2023, the Parliamentary Budget Office estimates that the federal fuel charge in Canada will generate \$8.3 billion. The David Suzuki Foundation proposed an even more aggressive approach to carbon taxes in 2008, which if applied, would more than double the amount collected in 2022-23 to **\$15.3 billion**.

**Table 12: Parliamentary Budget Office Estimate of Revenue of Carbon Levy Under HEHE (\$CN millions)<sup>126</sup>**

Fiscal Year	21-22	22-23	23-24	24-25	25-26	26-27	27-28	28-29	29-30
Fuel Charge Proceeds	6,607	8,294	10,673	12,890	14,991	16,954	18,815	20,444	21,296
OBPS	216	83	93	112	136	159	164	166	177
Goods and Service Tax on the Carbon Levy <sup>127</sup>	239	296	382	461	536	606	673	731	784
Personal Income Tax Reduction <sup>128</sup>	-1,144	-1,524	-2,059	-2,598	-3,186	-3,757	-4,323	-4,895	-5,451
<b>Total Revenue</b>	<b>5,918</b>	<b>7,149</b>	<b>9,089</b>	<b>10,864</b>	<b>12,477</b>	<b>13,964</b>	<b>15,364</b>	<b>16,446</b>	<b>17,432</b>
<b>Carbon Levy \$/tonne HEHE (2021)</b>	<b>50</b>	<b>65</b>	<b>80</b>	<b>95</b>	<b>110</b>	<b>125</b>	<b>140</b>	<b>155</b>	<b>170</b>

**Table 13: Estimated Revenue of Federal Carbon Levy Under Alternate Model (\$CN millions)<sup>129</sup>**

Fiscal Year	21-22	22-23	23-24	24-25	25-26	26-27	27-28	28-29	29-30
Revenue	13,875	15,312	18,011	20,353	22,487	24,414	26,207	27,698	28,186
<b>Carbon Levy \$/tonne</b>	<b>105</b>	<b>120</b>	<b>135</b>	<b>150</b>	<b>165</b>	<b>180</b>	<b>195</b>	<b>210</b>	<b>225</b>

<sup>126</sup> Parliamentary Budget Office, 2022, [A Distributional Analysis of Federal Carbon Pricing Under A Healthy Environment and a Healthy Economy \(HEHE\)](#).

<sup>127</sup> Ibid, see p. 16 for details on the collection of GST on the Carbon Levy.

<sup>128</sup> According to the PBO, 2022, "When the economic ("source-side") impact is incorporated into [the] analysis [of the HEHE impacts], there is a decrease in employment and investment income, which leads to a reduction in federal personal income tax (PIT) revenues in the backstop provinces" (p. 16). This reduction is factored into the net revenue calculation presented in Table 10.

<sup>129</sup> Rivers, N. (M.K. Jaccard & Associates) and Sawyer, D. (Enviroeconomics), 2008, [Pricing Carbon: Saving Green: A Carbon price to lower emissions, taxes and barriers to green technology](#).

## Water

### The Costs of Pollution

Externalised costs of use of water resources were used to assess part of the rent for the use of this common asset. These externalised costs are based on the waterborne pollutants that are produced by industry and consumption. The costs are borne by all Canadians.

While a regulatory rent on water pollution is therefore appropriate, the highly fractured water management landscape in Canada prioritises returning water to the environment in a similar quantity and quality. Additionally the majority of water pollution examined here originates from poor waste management, which might itself be more appropriate for a regulatory rent. Finally, the complexity of the water cycle itself and the legal regimes that govern its access resist a straightforward rental value estimate. Therefore, while we have collected estimates of its cost, we have not estimated a rent that can be applied on water.

The International Institute for Sustainable Development<sup>130</sup> estimates that waterborne pollutants cost Canadians **\$1.04 billion annually**.<sup>131</sup> These costs are the monetized values of the impacts of ongoing water pollution on the environment and their associated downstream impacts. These are the externalised costs incurred by the public based on the activities of polluters and thus may be considered the current rental value of our common water resources.

**Table 14: Costs of Water Pollution in Canada (\$CN)<sup>132</sup>**

	Costs
Annual direct welfare impacts of waterborne pollutants	\$895 million
Lost existence value from freshwater pollution	\$87 million
Lost of recreational experiences from freshwater pollution	\$56 million

Just as mapping the water cycle itself, valuing the total cost of water pollution across Canada is an incredibly detailed and complex challenge. The many difficulties and limitations of our current water models likely explain the dearth of reliable estimates in the literature. However the true costs of water pollution are likely many times greater than cited above. In one example, the International Institute for Sustainable Development examined increased agricultural and golf course runoff leading to algae blooms in Lake Erie and estimated that the costs of this specific

<sup>130</sup> The International Institute of Sustainable Development, 2017, [Costs of Pollution in Canada: Measuring the impacts on families, businesses and governments](#), p. 16.

<sup>131</sup> Direct Welfare Costs are the impacts that pollution has on the full range of what Canadians find valuable, apart from what they purchase. This includes the environments that we inhabit and enjoy, but also include impacts on health and well-being. The International Institute for Sustainable Development measured these impacts and assigned values to them in their 2017 report, [Costs of Pollution in Canada: Measuring the impacts on families, businesses and governments](#).

<sup>132</sup> This estimate is from the International Institute of Sustainable Development (2017) and is based on Canadians response to the presence of water borne pollutants in water supply, which includes the total spending on bottled water and water filtration devices.

instance of pollution alone amount to more than **\$8.5 billion**. These numbers provide an idea of what similar costs may be incurred in rivers, lakes, oceans and watersheds across Canada.

**Table 15: Costs of Water Pollution in Lake Erie (\$CN)**

	<b>Costs</b>
Ecosystem Services loss due to Algae (Lake Erie)	\$3.8 billion
Cumulative asset value loss due to Algae (Lake Erie)	\$4 billion
Annual increase treatment costs to Algae (Lake Erie)	\$4 million
Waterfront property value loss (Lake Erie)	\$712 million

Ocean pollution, specifically plastic marine pollution, is another major area of externalised costs that are borne by all Canadians. A 2019 paper from Marine Pollution Bulletin estimates the environmental cost of marine plastic at \$3,300 - \$33,000 per tonne.<sup>133</sup> Canadians currently discard more than 29,000 tonnes of plastic that ends up in our oceans every year. If we take the upper bound of Marine Pollution Bulletin’s estimate to account for an expanding understanding of the knock-on impact of marine plastic pollution to aquatic and terrestrial life, the downstream cost likely totals over \$957 million.

It is important to note that none of these models take into account the compounding and complicating issues related to climate change driving changes in the water cycle and the heavy costs of water scarcity and inundation associated with it.

### **Industrial Water Use in Canada**

The water intake of Canadian industry is 27.6 billion cubic metres annually.<sup>134</sup> Of the 16.8 million cubic metres used by manufacturers, 95% is consumed by 5 industries (Table 10). For this intake, manufacturing industries pay \$1.05 billion annually, which includes the cost of acquisition, treatment, and recirculation.<sup>135</sup>

The acquisition cost of the water alone in manufacturing industries totals \$382.4 million annually. Of this, only 0.9% (\$3.44 million) is paid for licensing fees for the use of public water resources (Table 14).

The largest portion of the acquisition costs was payments to public utilities, which accounted for 80.8% of the total costs. Payments for operation and maintenance costs were responsible for another 18.3% of the total acquisition costs while licensing fees contributed only 0.9% of the total.

<sup>133</sup> Beaumont, N.J. et. al., 2019, [Global ecological, social and economic impacts of marine plastic](#), *Marine Pollution Bulletin*, 142, p. 189-195.

<sup>134</sup> Statistics Canada, 2014, [Industrial Water Use \(2011\)](#), p. 8.

<sup>135</sup> According to Statistics Canada (2014), In 2011, of the total water intake costs, 37.6% were for the treatment of effluent, and the treatment of intake water before it was used accounted for another 16.3% of total costs. Costs related to the acquisition of water were 36.5% of total costs and costs related to the recirculation of water were another 9.6% of the total.



**Table 16: Water Consumption by Industry in Canada (annual, 2011)<sup>136</sup>**

Industry	Millions of Cubic Metres
Paper	1,322.5
Primary Metal (mining)	1,076.1
Chemical	451.0
Food	346.4
Petroleum and Coal	288.8
All Other	192.7

Industry uses and treats water and returns it to the watershed to varying degrees. In many jurisdictions, users are only charged for the water they do not return in “similar quality and quantity” to the watershed.<sup>137</sup> Mineral refinement and extraction ‘returns’ more water to the watershed than it utilises due to the pumping of groundwater. Therefore, the majority of industrial water usage in Canada is accounted for by thermal power generation. Estimates of the current value of all industrial water use as well as the currently collected fees are explored below.

**Table 17: Water Consumption by Industry in Canada (annual, 2011)<sup>138</sup>**

Source	Net Water Use m <sup>3</sup>	Estimated value \$/m <sup>3</sup>	Total Value	Current Fees
Manufacturing	450,700,000	0.33	\$148,731,000	\$3,440,000
Mineral	-158,700,000	0.695	-	\$980,000
Thermal Power	298,300,000	0.7	\$208,810,000	\$250,000
<b>Total</b>	590,300,000		<b>\$357,541,000</b>	<b>\$4,670,000</b>

Given the enormity of the cost of water usage, on top of the disruptions to the water cycle, the application of a regulation rent (a rent applied to include externalised costs in the price) is appropriate. Given the competing legal regimes, it is not clear how such a levy might best be applied. However, given Canadians’ willingness to bear these costs in order to disincentivize pollution and provide for improvements to water quality, it is certainly appropriate to price in a regulatory rent<sup>139</sup>. If a similar number were used as that proposed by Prosper Australia - a 2.6%

<sup>136</sup> Statistics Canada, 2014, [Industrial Water Use \(2011\)](#), p. 9.

<sup>137</sup> Program on Water Governance, [Fact Sheet: Water Rights Across Canada](#).

<sup>138</sup> Statistics Canada, 2014, [Industrial Water Use \(2011\)](#), p. 9.

<sup>139</sup> Marbek, 2010, Government of Ontario, [Assessing the Economic Value of Protecting the Great Lakes Ecosystems](#), Report submitted to the Government of Ontario.

scarcity levy on water assets<sup>140</sup> - \$4.626 million could be generated annually on industrial usage alone.

## Social Common Wealth

We have shown that Canada's natural common wealth is abundant in rent that can be levied as public revenue. It is important to consider also the potential rent of our social common wealth: technologies and tools that are the result of immeasurable collaborative effort, cumulative human knowledge, and public investment. While we do not fully explore these categories in this work, the reader may find comprehensive reviews of rents in the social common wealth of modern industrial nations by Brett Christophers (2019)<sup>141</sup> and Mariana Mazzucato et. al. (2020)<sup>142</sup>.

These socially created technologies and tools are not naturally scarce in an economic sense, except as the result of market power, regulation, or a combination of those factors. While it is beyond the scope of this paper to quantify the total rental value of Canada's social commons, we present them here as important future avenues for exploration.

## Telecommunications, Internet and the EM spectrum

As Nobel prize-winning economist Joseph Stiglitz remarked: "The public owns the airwaves that the TV stations use."<sup>143</sup> These airwaves, which comprise the electromagnetic (EM) spectrum, have become a core part of our telecommunications infrastructure, enabling the near-universal digital connectivity that we enjoy today.

More than 99% of Canadians use the internet; 94% are users of wireless mobile internet.<sup>144</sup> There are strong signs of rent in this sector: Canada was found to be the most expensive nation globally for mobile data across several metrics<sup>145</sup> and continues to have some of the most expensive internet prices in the world.<sup>146</sup> The Canadian telecommunications sector is a \$71B/year industry that continues to enjoy high rents from the internet and our public airwaves.<sup>147</sup>

## Patents and Intellectual Property Rights

Intellectual property (IP) rights – which include patents, trademarks, and copyright, as well as trade secrets and industrial designs – were originally designed to protect the interests of their

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<sup>140</sup> Prosper Australia, 2013, [Total Resource Rents of Australia: Harnessing the Power of Monopoly](#), p. 28.

<sup>141</sup> Christophers, B., 2019, [The rentierization of the United Kingdom economy](#).

<sup>142</sup> Mazzucato, M., Ryan-Collins, J. & Gouzoulis, G., 2020, [Theorising and mapping modern economic rents](#).

<sup>143</sup> Prosper Australia, 2013, [Total Resource Rents of Australia: Harnessing the Power of Monopoly](#), p. 27.

<sup>144</sup> Statista Research Department, 2022, [Internet usage in Canada - statistics and facts](#).

<sup>145</sup> Hopper, T., 2022, ['Worst in the world': Here are all the rankings in which Canada is now last](#).

<sup>146</sup> Rewheel/research, 2021, [The state of 4G and 5G pricing - country rankings](#).

<sup>147</sup> Canadian Wireless Telecommunications Association, 2021, [Industry Facts and Figures](#).

holders by providing certain monopoly rights and legal recourse against infringement. A central motivation is to encourage innovation and reward inventors and creators.

Yet much of the IP rights granted today are the result of public research and development (R&D) spending, which makes up 49% of all R&D spending in Canada.<sup>148</sup> As Common Wealth UK writes: “any intellectual property that results from publicly funded research does not belong to the public, who paid for it, but instead is available for the private sector to enclose and profit from”.<sup>149</sup> This practice undermines the public interest stemming from public investment, placing the benefit of R&D in private hands. The development of a knowledge commons that recognizes and provides benefit to public investment in intellectual property development would return some benefit from these resources to all Canadians. As economist Guy Standing argues, all forms of rentier income arising from private ownership of physical, financial and *intellectual* property should be subject to a discrete levy, held in a commons fund, from where it should be shared.<sup>150</sup>

The role of IP as an increasingly important economic driver in Canada and around the world cannot be ignored. At its worst, rentier exploitation of IP has led to absurd economic outcomes (like RIM’s historic \$613M settlement with non-practicing entity NTP in 2006<sup>151</sup>) and even risk to human life (Canada has among the highest patented drug prices in the world<sup>152</sup>). Further exploration is needed to understand the true magnitude of IP rents in Canada.

## Banking and Financial Services

The financial services industry is Canada’s third-largest private sector, contributing \$144B/year to our GDP<sup>153</sup>, and one rife with economic rent.<sup>154</sup> Canada is home to 2 of the largest banks in the world (TD and RBC are ranked 9th and 10th globally by market capitalization<sup>155</sup>) and 3 of the largest 15 life insurance companies in the world.<sup>156</sup> Meanwhile, financialization (the process through which the financial sector has increased in size as a share of the economy and has become increasingly divorced from the production of real goods and services) and the expansion of credit markets has played a significant role in fuelling the growth of land rents.

Profit margins in this sector have grown consistently over the last 2 decades and have averaged over 30% in the last 7 years, while profit margins in the non-financial sector have remained below 10%. This rise in profit margins has not been accompanied by an increase in taxes paid.

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<sup>148</sup> The Conference Board of Canada, 2013, [Public R&D Spending](#).

<sup>149</sup> McCann, D., 2020, [Commoning Intellectual Property Public funding and the creation of a knowledge commons](#)

<sup>150</sup> Standing, G., 2019, *Plunder of the Commons: A Manifesto for Sharing Public Wealth*

<sup>151</sup> Burton, B., 2015, [Industry Canada proposes regulation for patent trolls](#).

<sup>152</sup> Crowe, K., 2018, [Canada has found the key to lowering drug prices. but it won't be used any time soon.](#)

<sup>153</sup> The Conference Board of Canada (Issue Briefing), March 2020, [The Impact of Toronto's Financial Sector](#).

<sup>154</sup> Statistics Canada. [Table 36-10-0402-01 Gross domestic product \(GDP\) at basic prices, by industry, provinces and territories \(x 1,000,000\)](#).

<sup>155</sup> Statista Research Department, 2022, [Largest banks globally 2021, by market capitalization](#).

<sup>156</sup> Canadian Bankers Association, 2021, [Focus: Banks and the Economy](#).

In fact, since 2012 the financial sector has enjoyed an effective tax rate lower than that of the non-financial sector.<sup>157</sup>

There is a strong trend of financialization in Canada. The financial sector made up 9.1% of Canada's GDP in 2021, a number which has increased steadily year-to-year over the last 2 decades.<sup>158</sup> Meanwhile, the assets of the financial industry have grown from about 2.7 times Canada's GDP in 1990 to nearly 7 times GDP in 2019.<sup>159</sup>

Our financial systems are a form of socially created common wealth, a financial commons for the creation, storage, and exchange of value in society. As our economy becomes increasingly financialized, more and more rent is being captured by centralised, private actors. As Peter Barnes, author of *Capitalism 3.0: A Guide to Reclaiming the Commons*, writes: "For those of you who haven't been involved in a public stock offering, investment bankers are like fancy doormen to a free palace. While the public charges almost nothing to use the capital markets, investment bankers exact hefty fees."<sup>160</sup>

## Artificial Intelligence

Finally, it is worth mentioning the growing significance of transformational artificial intelligence and the real possibility of extreme wealth concentration and rent capture at a societal scale. In light of this, some leading AI firms have adopted a "Windfall Clause", an *ex ante* commitment to donate a significant amount of any historically unprecedented profits due to the development of advanced AI. By distributing these profits, AI firms "could compensate those rendered faultlessly unemployed due to advances in technology, mitigate potential increases in inequality, and smooth the economic transition for the most vulnerable". This coordinated effort aims to pre-empt a potentially catastrophic outcome of technology-driven economic disruption, laying a foundation to distribute the benefits of AI for the common good.<sup>161</sup>

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<sup>157</sup> Vivic Research, 2021, [Funding a Basic Income: Proposed Federal Tax Measures and Funding Paths](#), p. 8-9.

<sup>158</sup> Statistics Canada. [Table 36-10-0402-01 Gross domestic product \(GDP\) at basic prices, by industry, provinces and territories \(x 1,000,000\)](#).

<sup>159</sup> Vivic Research, 2021, [Funding a Basic Income: Proposed Federal Tax Measures and Funding Paths](#), p. 8.

<sup>160</sup> Prosper Australia, 2013, [Total Resource Rents of Australia: Harnessing the Power of Monopoly](#), p. 27.

<sup>161</sup> O'Keefe, C. et. al., 2020, [The Windfall Clause: Distributing the Benefits of AI for the Common Good](#).

# Conclusion

We have identified **\$421 billion / year** of potential economic rent from our shared natural resources, including \$362.5 billion / year of land rent, that could be collected and reinvested to benefit all people of Canada. The amount of rent here is significant, exceeding all annual income tax revenues of our federal, provincial, and territorial governments combined. This vast revenue potential opens up possibilities to improve the well-being of the majority of Canadians, whether through reducing or eliminating personal income taxes; or through common wealth dividends paid equally to every member of our nation; or through a permanent fund stewarded for the benefit of future generations.

Common wealth arises from the use of our shared natural, cultural and social resources. By creating new ways to capture this wealth, we could increase the wealth and well-being of all Canadians. Yet, this value is largely being captured privately today, perpetuating a rentier economy that enriches some, impoverishes most, and divorces economic gain from productive contribution. Building and sharing common wealth with all Canadians will go a long way in addressing our most pressing economic and social challenges: housing affordability, inequality, environmental conservation, and the very economic stability of our nation.

How we can collect this economic rent, and how we may decide to reinvest it, is beyond the scope of this work. But we hope that our examination may help galvanise a broader national debate on how to better steward nature's gifts and our co-created wealth, so that we may build a more equitable, efficient, and sustainable future for all.