

 **CPAWS·SNAP**
CANADIAN PARKS AND WILDERNESS SOCIETY SOCIÉTÉ POUR LA NATURE ET LES PARCS DU CANADA

WIDELY ENJOYED BUT INADEQUATELY VALUED

*UNDERSTANDING THE ECONOMIC,
ENVIRONMENTAL, AND HEALTH BENEFITS
OF CANADA'S PROTECTED AND
CONSERVED AREAS*

2026

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PREPARED BY THE CANADIAN PARKS AND WILDERNESS SOCIETY

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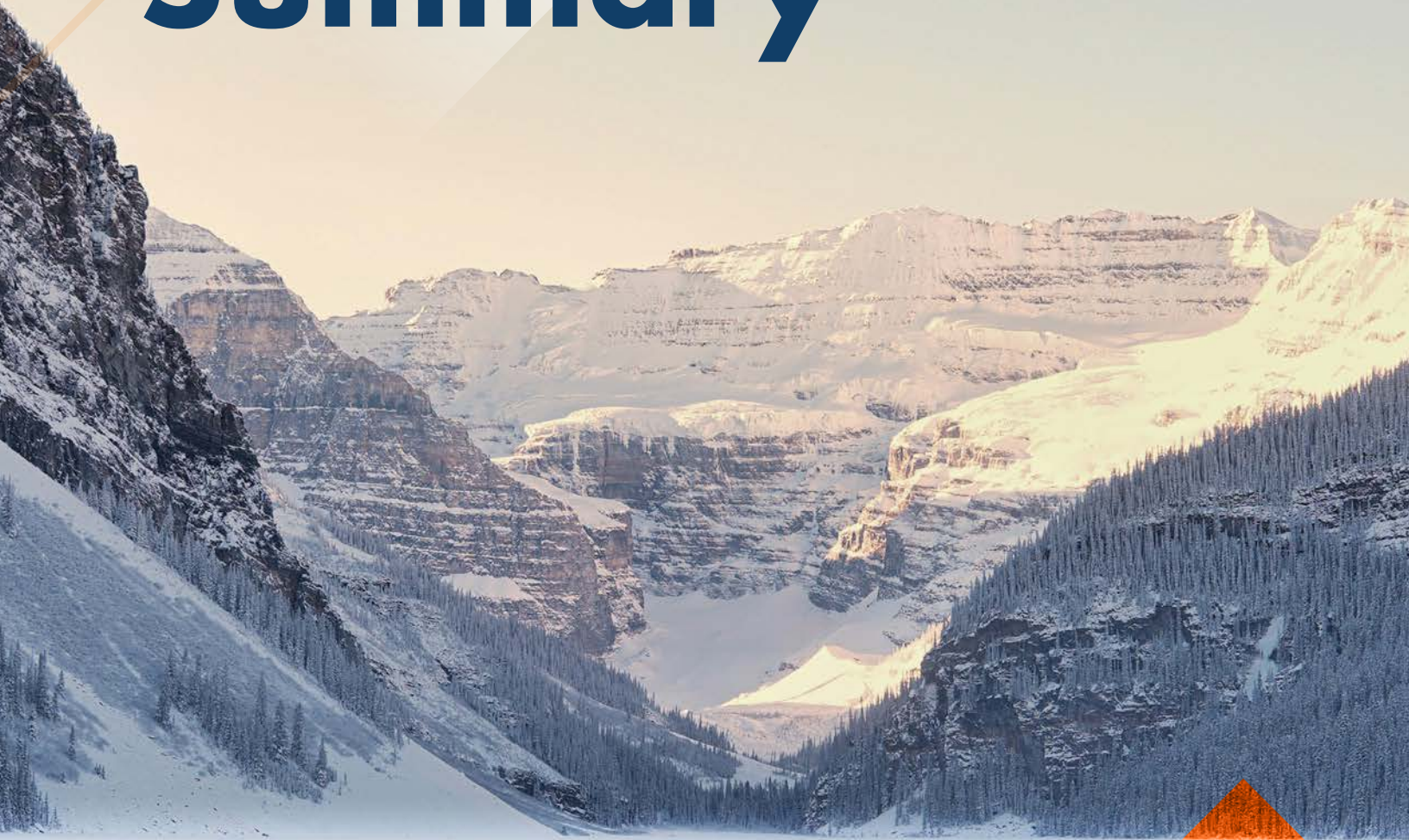
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Notes on Content & Approach

This is a technical report informed by, and referencing, research conducted using western science methods and methodology.

CPAWS acknowledges that other relevant perspectives on the socio-economic benefits of protected and conserved areas exist, based on knowledge foundations, including but not limited to, Indigenous knowledges and Traditional Ecological Knowledges. These forms of expertise should be equitably consulted and incorporated both when planning and evaluating places as protected areas, and when considering the socio-economic benefits therein.

Executive Summary



Lake Louise, AB

Photo: Wenhao Ji (Unsplash)

EXECUTIVE SUMMARY

Canada's investments in establishing parks, protected areas and other effective area-based conservation measures (referred to collectively as "protected and conserved areas") have created profound and sustainable economic opportunities, while protecting nature and promoting community resilience to climate change. This report provides comprehensive estimates of the impacts of protected and conserved areas in Canada, which cover 13.8% of land and freshwater (after this termed "terrestrial"), and 15.5% of Canada's ocean as of December 2024 (ECCC, 2025b).

The Canadian Parks and Wilderness Society (CPAWS) finds that protected and conserved areas provide important benefits to Canada's economy, environment, and public health. These can be summarized as follows:

ECONOMIC CONTRIBUTIONS

In the 2023-2024 fiscal year Canada's terrestrial and ocean protected and conserved areas provided:



+\$10.9B

TO CANADA'S GDP compared to \$1.8B in expenditures by the federal government



+150,000

JOB



+\$6.6B

TO LABOUR INCOME



+\$1.4B

IN TAX REVENUE

From 2008-2024, a 50% increase in expenditures in Canadian park agencies corresponded with a 51% - 250% increase in their contributions to GDP, labour income, and tax revenue.

EXECUTIVE SUMMARY

CARBON AND ECOSYSTEM SERVICE VALUES



51,400Gt

NEARLY 51,400 GIGATONNES OF CARBON ARE CONTAINED in protected areas: 93% of this is held in soil, 5% in vegetation and 2% in seabed sediment.



\$156-\$588B

ECOSYSTEM SERVICES PROVIDE RECURRING ECONOMIC VALUE: Parks Canada estimates this at \$156 to \$588 billion per year for National Parks and National Marine Conservation Areas, which make up only 25% and 13.5% of Canada's terrestrial and ocean protected areas.



\$51.1T

CANADA'S PROTECTED AND CONSERVED AREAS HOLD CARBON VALUED AT \$51.1 TRILLION, based on the 2025 social cost of carbon established by the Canadian federal government.

HEALTH & WELL-BEING



A growing body of Canadian research, including a 2023 pan-Canadian survey, shows that **PROTECTED AND CONSERVED AREAS PROVIDE WIDE-RANGING HEALTH BENEFITS, AND SUPPORT SOCIAL AND COMMUNITY WELL-BEING.**



HEALTHY, WELL-MANAGED ECOSYSTEMS ARE STRONGLY LINKED TO HUMAN HEALTH BENEFITS and support both public health and conservation outcomes.



ACCESS TO PROTECTED AND CONSERVED AREAS HAS THE POTENTIAL TO BE A COST-EFFECTIVE STRATEGY for advancing Canada's economic, environmental, and public health outcomes.

Protected areas also contribute to diversifying local economies while improving the quality of life of nearby communities. This report presents three case studies to illustrate the local impact of protected and conserved areas.

In British Columbia, the Great Bear Rainforest¹ is an innovation in conservation finance led by First Nations groups that has resulted in economic success. The Saguenay-St Lawrence Marine Park in Quebec has demonstrated the value of large scale marine protected areas to thriving ecotourism operations and local economies. Finally, Gros Morne National Park in Newfoundland and Labrador has evolved into a resilient bedrock of the local economy over the course of half a century. These case studies present valuable and practical lessons in replicating and scaling socio-economic successes, advancing Truth and Reconciliation, and safeguarding Canada's nature.

¹ The Great Bear Rainforest is both a geographic region, and a broad term applied to a 'protected area,' which, in this instance is comprised of an agreement, a land use order and supporting legislation.

The scope of socio-economic benefits presented in this report reflect varied perspectives on the value of conserved areas, ranging from cash-flow to ecosystem service-based values. This approach is intended to offer meaningful reference points for a wide array of policy insights and to familiarize readers with the productive and sustainable activities that take place within protected and conserved areas.

The estimates and calculations in this report are conservative and likely underestimate the full socio-economic value of protected and conserved areas. Nonetheless, this work provides policymakers with a baseline measure of the very significant socio-economic benefits derived from protected areas, and of how conservation helps sustain Canada’s economy and healthy communities.

To support the growth of Canada’s protected and conserved area network, we provide the following key recommendations that both recognize the value of nature, and aim to maximize its interrelated socio-economic benefits.



Photo: guruXOX (Shutterstock)

Key Recommendations

1

Ensure Long-Term Funding: Expand federal support for protected areas through direct funding, partnerships, and innovative financing. Stable investment will sustain economic benefits, including jobs and tourism revenue.



2

Adopt Natural Capital Accounting: Work towards a national framework considering the value of public natural assets—lands, waters, and oceans—on Canada’s balance sheets, recognizing their economic and social contributions.



3

Strengthen Monitoring: Develop site-specific monitoring programs for protected areas that capture both ecological and socio-economic impacts, with active involvement of Indigenous peoples, stakeholders, and local communities.



(continued on next page)

Key Recommendations

4

Integrate Ecosystem Services & Blue Carbon: Incorporate the value of ecosystem services and carbon storage into planning, for example, by prioritizing protection of carbon-rich coastal and seabed areas.



5

Protect Carbon-Rich Landscapes: Prioritize conservation of carbon-dense ecosystems (e.g., wetlands) to secure climate, ecological, and economic co-benefits.



6

Elevate Social Capital in Conservation: Integrate health and well-being outcomes into conservation policy across all levels of government, ensuring social benefits are valued alongside economic and ecological ones.



7

Advance Equity in Access: Expand and diversify protected areas to ensure equitable access for underserved communities, enhancing social, cultural, and health benefits.



1. Introduction



Vancouver, BC

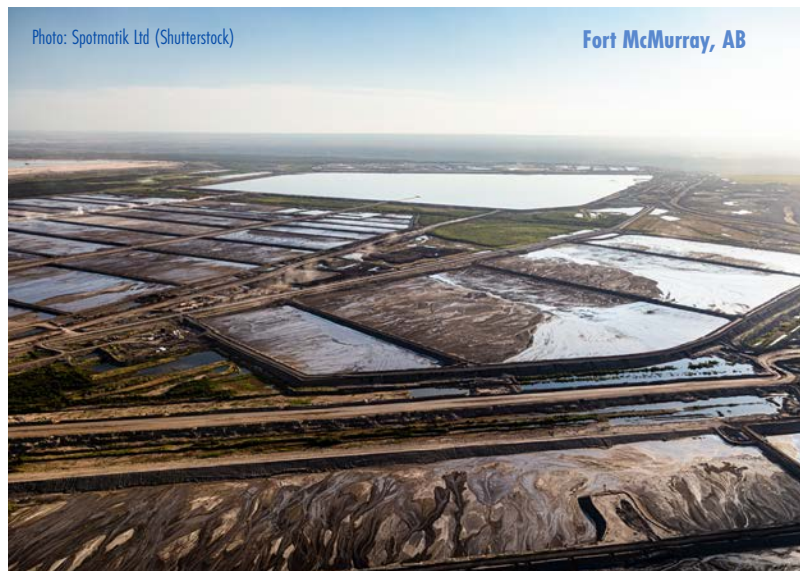
Photo: James Wheeler (Unsplash)

1. INTRODUCTION

In Canada, as in many parts of the world, human activities and developments have significantly altered ecosystems, with lasting consequences. Canada is facing unprecedented challenges related to biodiversity loss and climate change (Lulham et al., 2023). Biodiversity supports human and societal needs, including food and nutrition, security, energy, development of medicines, and freshwater, all of which together underpin good health (WHO, 2025).

The World Economic Forum's 2025 Global Risks Report summarizes insights from 900 experts worldwide and looks at risks emerging in current, two-year, and ten-year time-frames (2025). Over the long-term, extreme weather events, biodiversity loss and ecosystem collapse, critical change to earth systems, and natural resource shortages filled the top four places (World Economic Forum, 2025). Closer to home, Canada's Disruptions on the Horizon (2024) report assessed 35 possible disturbances that could impact Canadian society and beyond in the coming years. Input from 500 experts and stakeholders identifies biodiversity loss and ecosystems collapse as both the disruption second most likely to occur and second highest impact (Policy Horizons Canada, 2024). The time horizon for this is by 2031.

Loss of biodiversity and the risks it presents can disrupt ecosystem functioning and diminish nature's contributions to people and the economy. While the economy experienced modest growth in the latter part of 2024, Canada faces potential adjustments as long-term problematic trends for economic measures of productivity, competitiveness and affordability persisted into early 2025. The ensuing escalation of Canada-US trade tensions also impacted business and consumer sentiment (Gellatly & McCormack, 2025). At the same time, mental and physical health benefits associated with access to natural areas are threatened by loss of biodiversity. The erosion of natural systems is particularly concerning as Canada faces rising public health pressures, such as mental health challenges and chronic disease (PHAC, 2016, 2022), alongside steadily growing health care costs reaching \$372 billion in 2024, accounting for 12.4% of GDP (CIHI, 2024). Together, these pressures underscore how the loss of healthy ecosystems can compound both economic and health vulnerabilities.



1. INTRODUCTION

Conservation of nature has consistently been a high priority for the Canadian public. More than a decade ago, the 2012 Canadian Nature Survey indicated that “Canadians understand that healthy ecosystems provide vital life support and security functions as well as supporting a positive quality of life” (Federal, Provincial, and Territorial Governments of Canada, 2014). More recently, a 2025 poll found that ‘nature’ and ‘National Parks’ topped the list of events, objects or values contributing to Canadians’ sense of identity (EKOS Politics, 2025). Global evidence reinforces these perceptions as the World Health Organization estimates that healthier environments could prevent nearly one-quarter of the burden of disease (Prüss-Üstün et al., 2016). The growing uptake of preventative healthcare programs such as nature prescriptions further reflects this recognition that human health, biodiversity, and economic well-being are deeply interconnected (Lemieux et al., 2025).

In 2022, Canada endorsed a global target of protecting at least 30% of land, freshwater and ocean in under a decade as part of the Kunming-Montreal Global Biodiversity Framework (GBF), negotiated under the UN Convention on Biological Diversity (ECCC, 2022). Canada’s associated 2030 Nature Strategy, approved in 2024, acknowledges that “the transition to a nature-positive Canada will have profoundly positive impacts on our collective well-being, economic prosperity, and quality of life now and into the future” (ECCC, 2024b). With a 2025 study revealing that 78% of Canadians are worried about environmental damage caused by industry and business (EnviroNics Research, 2025), the federal government’s commitment is both timely and essential. Canada’s pledge to protect and conserve more of its lands and waters reflects a growing recognition of nature’s vital role in supporting Canada’s collective well-being.

Internationally, the shift in thinking around the value of natural assets is evident in the development of a draft accounting standard on tangible natural resources. This establishes the principles to report to “users of financial statements about the nature, amounts, timing, and uncertainties arising from tangible natural resources” (International Public Sector Accounting Standards Board, 2024). This proposed standard specifies that when future service potential or economic benefits arising from a natural resource flow to a public sector entity (such as a government), the resource may be identified as an asset on the entity’s balance sheet – assuming the entity controls the resource, which can also be measured. In contrast, Canada’s Public Sector Accounting Standards and the Government of Canada accounting policies prevent the inclusion of Crown lands and natural resources as capital assets in financial reporting (Treasury Board of Canada Secretariat, 2023). Given that private companies regularly include the value of their natural assets in their accounting, addressing this situation for Crown lands would potentially add billions of dollars to Canada’s balance sheets and would allow for better decision making, as decisions to degrade ecologically significant areas would now have a direct impact on Canada’s wealth.

As of December 2024, 13.8% of Canada’s land and freshwater, and 15.5% of its marine areas were designated as protected areas (PAs) and other effective area-based conservation



1. INTRODUCTION

measures (OECMs)², with a goal of protecting 30% of Canada’s land and waters by 2030 (ECCC, 2025b). Canada’s protected and conserved areas (see Figure 1) contribute to safeguarding the biodiversity and ecological assets that Canada’s economy and citizens depend on. However, the extent to which these areas are themselves drivers of economic activity and social wellbeing has not been clearly quantified or recognized.

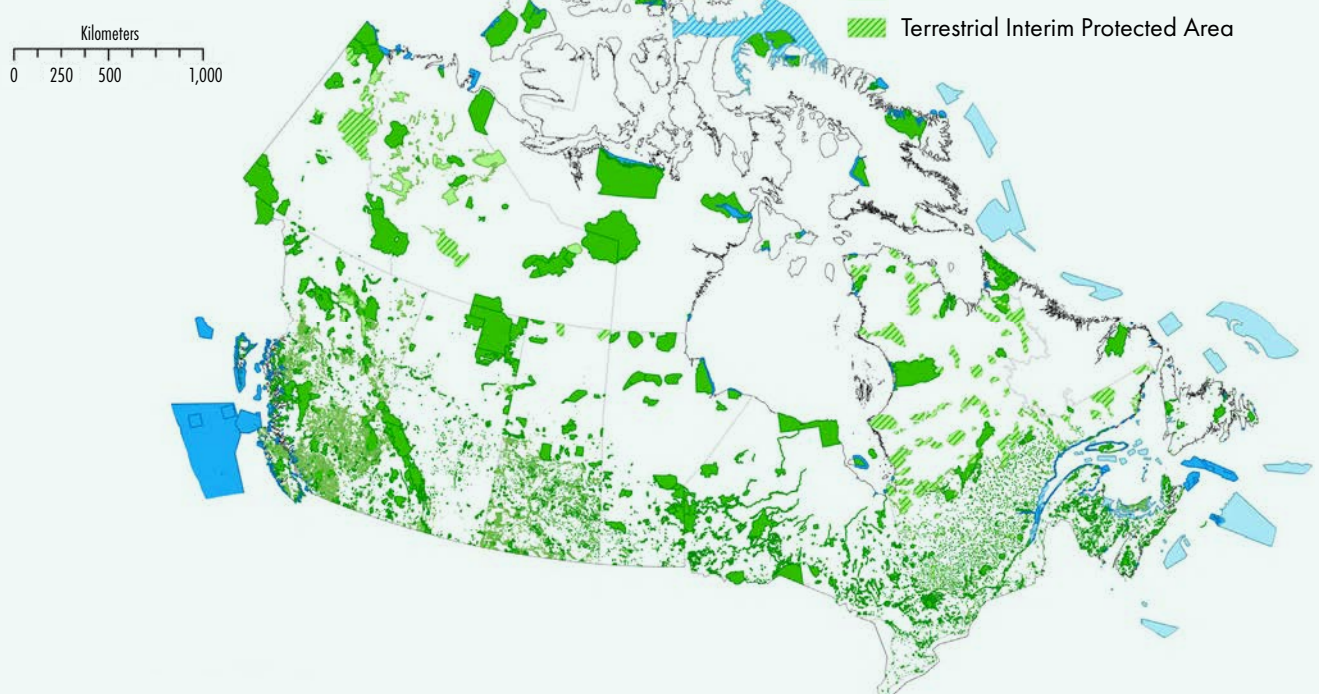
This study aims to address this gap by equipping decision-makers with comprehensive estimates of the benefits of Canada’s existing protected and conserved areas at the national and provincial/territorial level. Additionally, the effects of conservation at the local level will be explored through a series of case studies. These substantiate the value of protected and conserved areas and bolster the case that conserving more of Canada’s lands and waters will not only safeguard our life support system, but will also deliver significant socio-economic benefits to Canadians.

² Protected areas are defined as geographic areas dedicated and managed to achieve the long-term conservation of nature, ecosystem services, and associated cultural values. OECMs are areas that may be established for other purposes but must still deliver effective conservation outcomes.

FIGURE 1

Extent of Canada’s existing Protected Areas and Other Effective area-based Conservation Measures (OECMs) as of December 2024.

Date source: ECCC, 2024a.



2. Assessment Framework



2. ASSESSMENT FRAMEWORK

As governments increasingly acknowledge the connection between natural systems and the health and productivity of their respective economies, numerous frameworks and studies have been developed to account for the value of nature, both material and non-material. Efforts to capture the value of nature to humans in western economic terms distinguish between use and non-use benefits (SEEA, n.d.). Use of nature includes various ecosystem services, referring to the benefits that people receive from the environment including provisioning, regulating, cultural, and supporting services (SEEA, n.d.).³ Non-use benefits relate to the value of knowing that natural environments currently exist and will exist for future generations (Statistics Canada, 2018).

Canada's terrestrial and marine protected areas contain a diverse collection of natural features and services. In addition to a variety of site-specific landscapes and water bodies, different peoples and knowledge systems perceive the value of nature in a range of ways. These ways of knowing are often grouped as 'western science' and 'Indigenous knowledges,' and while sometimes opposed, such knowledge systems may not be mutually exclusive in composition, substance or history (Díaz et al., 2015).

³ The System of Environmental Economic Accounts (SEEA) is the agreed-upon international standard for natural capital accounting. It defines services as provisioning: material and energy generated by or in an ecosystem to economic and human activities (e.g. plants provide food, fuel or timber); regulating: ecosystem regulation of climate, water and biochemical cycles, earth surface and some biological processes (e.g. pollination); cultural: the physical locations, situations or settings that create intellectual and symbolic benefits experienced by people (e.g. recreation, spiritual reflection, relaxation and knowledge development).

2. ASSESSMENT FRAMEWORK

To establish a common framework for the multitude of values offered by Canada’s nature, this report has adopted guidance created in 2022 by the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) referred to as the Values Assessment. The Values Assessment proposes a wide-ranging framework of nature’s values that includes how various worldviews and knowledge systems affect the different ways people relate to and value nature (IPBES, 2022).

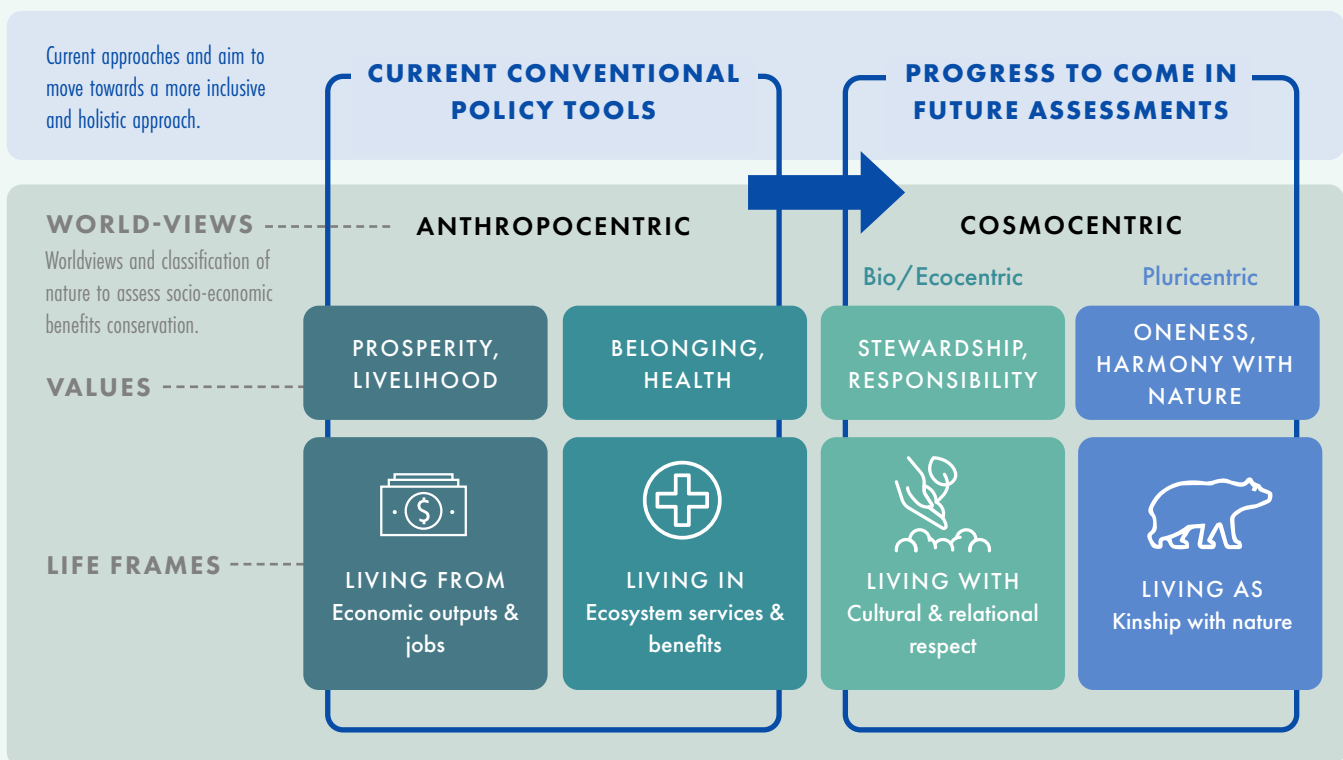
CPAWS’s assessment of the value of nature is an ongoing effort. This initial report largely focuses on the anthropocentric values such as those in *Living from* and *Living in* frames of the IPBES framework (see Figure 2) (IPBES, 2022). As more granular nation-wide data sources become available, future efforts will include other views of nature including cultural and existence values. Thus, this report is a foundation for a continual effort to include the frames of *Living with* and *Living as*, as well as valuations that reflect Indigenous and context-specific knowledge and stewardship (Figure 2).

Life frames of nature’s values allow the organization and communication of the richness of the relationships between people and nature. A set of life frames (e.g., living from, with, in and as nature) can be used to organize and reflect distinct sets of values found in the [values assessment] typology. Life frames are diverse and not mutually exclusive, but help to understand how certain values are highlighted in particular decision-making contexts and can inform the design of integrated valuations.”
 – IPBES, 2022, p. xxiv

FIGURE 2

Diverse Values of Nature

CPAWS’s adaptation of the IPBES values assessment framework, which was designed to emphasize fundamental concepts and interrelationships to recognise the diverse values of nature. Data source: IPBES, 2022.



2. ASSESSMENT FRAMEWORK

All areas designated as PAs or OECMs as of December 2024 in the Canadian Protected and Conserved Areas Database (CPCAD) are considered and collectively referred to as “protected and conserved areas” in this study (ECCC, 2025b). CPAWS understands that some areas in Canada have been deemed protected under Indigenous laws and governance systems by Indigenous Peoples as the traditional stewards of these places, yet are not captured in CPCAD. We regret this assessment framework cannot include such areas at present and hope our work is nevertheless meaningful in advancing Indigenous-led conservation. Ultimately, CPAWS supports recognition of Indigenous decision making and governance of protected areas.

We have assessed direct, indirect, and induced economic outputs, carbon and ecosystem service values, and human health outcomes. These are aligned with conventional policy tools and understood indicators of public benefit. Economic, select environmental, and health benefits are presented at the national and sub-national level, data permitting. We also make recommendations on potential improvements to data generation, and on use of our findings.

While there is broad acceptance of ecosystem services and their value, their integration into traditional western economic systems remains a challenge. For example, broad consideration and production of data related to ecosystem assets by Statistics Canada has only begun in 2021. The inclusion and a fuller accounting of nature’s value in decision-making requires a two-fold approach: augmenting awareness and understanding by key policy-makers, leading to improved study, reporting at local and national levels; and a structural redesign of financial accounting to incorporate nature’s true value. To meet the first aim, this report provides both well-understood traditional measures of economic activity and newer valuations based on ecosystem services to present a well-rounded assessment of the value of nature.

Photo: Willyam (CPAWS)



3. Economic Contributions of the Conservation Sector

CHAPTER AUTHORS: JASON WONG, CHRIS RIDER, KIRSTEN SCOTT

Banff, AB

Photo: Ryunosuke Kikuno (Unsplash)



3. ECONOMIC CONTRIBUTORS

Globally, investments in conservation have been found to create economic benefits across multiple sectors. Establishing protected and conserved areas to safeguard biodiversity results in higher nature tourism revenues, avoidance of costs related to filtering water, long term increased revenues for fisheries, and many more benefits (Waldron et al., 2020). Protected and conserved areas can also socially anchor communities, provide economic opportunities (particularly for rural areas), and lower costs to governments through reduced use of social subsidies (explored further in section 6).

3.1 Expenditures on Protected & Conserved Areas

The number of expenditures on protected and conserved areas indicates the level of economic activity in these areas. This report identified a total of nearly \$12.1 billion in government, non-profit, and visitor spending on protected and conserved areas in Canada in the 2023-2024 fiscal year (Table 1). This expenditure total is likely an underestimate, as estimates of visitor spending at provincial and territorial parks were based on day-visits only (see Appendix A – Methodology for more details). Of this total, 78% of expenditures were by visitors. Every dollar spent on protected and conserved areas by government and non-profits generated \$3.62 in visitor spending.

Sub-nationally, expenditures were highest in Alberta and British Columbia (\$3.6 billion each) and lowest in Yukon (\$0.05 billion). Large, well-established parks that welcome millions of visitors annually

Table 1.

Identified expenditures in protected and conserved areas in fiscal year 2023-2024, in millions (\$).

Area	Provincial government	Federal government	Non-profit	Visitor Spending in National & Provincial/Territorial Parks	Total
BC	\$ 128	\$ 366	\$ 25	\$ 3,049	\$ 3,569
AB	\$ 95	\$ 285	\$ 16	\$ 3,241	\$ 3,637
SK	\$ 36	\$ 54	\$ 5	\$ 214	\$ 309
MB	\$ 38	\$ 100	\$ 35	\$ 513	\$ 687
ON	\$ 96	\$ 228	\$ 196	\$ 1,301	\$ 1,821
QC	\$ 113	\$ 223	\$ 5	\$ 591	\$ 932
NB	\$ 16	\$ 71	\$ 2	\$ 186	\$ 275
NS	\$ 5	\$ 73	\$ 3	\$ 171	\$ 252
PE	\$ 5	\$ 58	-	\$ 100	\$ 163
NL	\$ 7	\$ 93	-	\$ 56	\$ 156
YT	\$ 8	\$ 15	-	\$ 23	\$ 47
NT	\$ 17	\$ 114	-	\$ 6	\$ 137
NU	\$ 3	\$ 77	-	\$ 3	\$ 83
Total	\$ 567	\$ 1,757	\$ 287	\$ 9,454	\$ 12,068

Note: Approximately \$1.8 billion in identified expenditures were publicly reported by the federal government of Canada without breakdowns by province/territory. This sum was allocated to each province/territory based on proportional weights (see Appendix A – Methodology for more details).

3. ECONOMIC CONTRIBUTIONS

such as those in mountainous British Columbia and Alberta are the primary drivers of visitor spending and expenditures overall in protected and conserved areas. According to available data, government and non-profit spending made up the highest proportion of overall spending in Nunavut and Northwest Territories (96% each) and the lowest proportion in Alberta (11%). Governments' higher proportion of overall expenditures in Nunavut and Northwest Territories is due to the relative remoteness of parks in these jurisdictions, leading to low visitation and low levels of visitor spending.

The economic impacts of Canada's national, provincial, and territorial parks in 2008-2009 were estimated by a coalition of Canadian park agencies and economic experts (Outspan Group Inc, 2011b). These parks are a subset of Canada's total protected and conserved areas, and a valuable reference point to assess how the economic impact of nature has changed over time. In this report, subsequent comparisons of our estimates with those of the Outspan Group Inc's (2011) results refer only to the expenditures and economic impacts of national, provincial, and territorial parks in Canada.

For the 2008-2009 fiscal year, The Outspan Group Inc (2011b) found that national, provincial and territorial park organizations spent \$1.1 billion and visitors spent \$6.2 billion in these parks for a total of \$7.3 billion (all figures 2024 CAD). For 2023-2024, this current study estimates that those same organizations spent \$1.6 billion and visitors spent \$9.5 billion for a total of \$11.1 billion. From 2008 to 2024, government and visitor expenditures linked to national and provincial/territorial parks grew by 45%, indicating increased economic activity in protected and conserved areas over this time.



3.2 Economic Impact of Protected & Conserved Areas

We used an input-output analysis to estimate the direct, indirect, and induced economic impact of protected and conserved areas on the Canadian economy. Economic impacts are measured in contribution to GDP, jobs, labour income, and tax revenue. A detailed discussion of our methodology can be found in Appendix A.







3. ECONOMIC CONTRIBUTIONS

Canada’s investments in protected and conserved areas have a profound impact on the national economy. In the 2023-2024 fiscal year, protected and conserved areas were responsible for an estimated \$10.9 billion in GDP, 150,000 jobs, \$6.6 billion in labour income, and \$1.4 billion in gross tax revenue through direct, indirect, and induced impacts (Figure 3).⁴ These results likely understate the economic impact of these areas, due to this report’s conservative approach towards calculating jobs created and estimates of visitor expenditures at provincial/territorial parks.

FIGURE 3

Summary of economic impacts of Canada’s protected and conserved areas, in the 2023-2024 fiscal year. Data source: ECCC, 2024a.

ALL PROTECTED AND CONSERVED AREAS

 FISCAL YEAR	 GDP	 JOBS	 LABOUR INCOME	 GROSS TAX REVENUE	 % CANADA PROTECTED*
2023-2024	\$10.9 billion	150,000	\$6.6 billion	\$1.4 billion	13.8% terrestrial 15.5% marine

For 2008-2009, The Outspan Group Inc (2011b) found that federal, provincial and territorial parks contributed \$4.6 billion to GDP (or \$6.5 billion in 2024 dollars), generated \$2.9 billion in labour income (\$4.1 billion in 2024 dollars), and \$300 million (\$424 million in 2024 dollars) in tax revenue. Fifteen years later, the contributions of these parks had grown by 55% (GDP), 51% (labour income), and 250% (tax revenue) (Figure 4, all figures 2024 CAD).⁵

4 Direct impacts are the immediate effects and employment generated by businesses in a sector. Indirect impacts refer to the effects on businesses that supply goods and services to the businesses in the original sector. Induced impacts are the further spending by households due to the income created by the direct and indirect impacts.

5 We have not compared jobs figures because The Outspan Group Inc’s 2008-2009 estimate represents Full-Time Equivalents (FTEs), whereas this study’s 2023-2024 value represents total jobs.

Photo: Michael Kogan (Unsplash)

North Shore, PEI








3. ECONOMIC CONTRIBUTIONS

FIGURE 4

Summary of economic impacts of Canada’s national and provincial/territorial parks, 2008-2009 and 2023-2024. Data source: CPAWS modeling, The Outspan Group Inc., 2011b.

ALL NATIONAL, PROVINCIAL, AND TERRITORIAL PARKS

					
FISCAL YEAR	GDP	JOBS	LABOUR INCOME	GROSS TAX REVENUE	
2023-2024	\$10.1 billion	134,000	\$6.2 billion	\$1.4 billion	
<i>adjusted to \$2024</i> 2008-2009	\$6.5 billion	-	\$4.1 billion	\$0.4 billion	
2008-2009	\$4.6 billion	64,050 full time equivalents	\$2.9 billion	\$0.3 billion	

Economic impacts are not evenly distributed across protected and conserved areas. As previously identified in section 3.1, nearly three quarters of expenditures are by visitors. The majority of these expenditures and their economic impacts tend to be directed towards large, well-established protected and conserved areas that have overnight accommodations. Among sites that reported visitor numbers in 2023-2024, the cluster of seven mountain parks comprised of Banff, Jasper, Yoho, Kootenay, Waterton Lakes, Mount Revelstoke, and Glacier alone accounted for 58% of all visitors to national parks (Parks Canada, 2024a). The tourism appeal and economic importance of major sites is an example of potential alignment between conservation and economic returns: developing clusters of protected areas can offer broader, multi-visit tourism experiences for greater economic returns while also establishing ecological corridors that maintain animal habitats and connectivity crucial for functional ecosystems.



3. ECONOMIC CONTRIBUTIONS

The economic impact of protected and conserved areas is greatest in Alberta, British Columbia, Ontario, and Quebec., with protected and conserved areas in each province contributing \$3.1 billion, \$2.8 billion, \$2.2 billion, and \$1.1 billion to GDP respectively (Table 2).

A significant portion of Canada’s park and protected areas expenditure in 2023-2024 focused on the establishment of new protected areas, which have not yet been completed. It will take time for the impact of these investments to fully develop, and it will be important to track their economic impact over the coming years. As more sites (particularly those around well-established parks) complete the establishment processes for new protected and conserved areas, it is plausible to surmise that GDP, jobs, labour income, and tax revenue impacts will continue to increase. This also means the ratio of government expenditure to each economic impact is likely to continue becoming more favourable.

Table 2.
Economic impacts of protected and conserved areas by province/territory, fiscal year 2023-2024.
Data source: CPAWS modeling.

Area	GDP (\$ millions)	Jobs	Labour Income (\$ millions)	Gross tax revenue (\$ millions)
BC	\$ 2,796	46,000	\$ 1,702	\$ 460
AB	\$ 3,064	39,000	\$ 1,807	\$ 328
SK	\$ 333	5,000	\$ 182	\$ 42
MB	\$ 515	9,000	\$ 323	\$ 93
ON	\$ 2,228	28,000	\$ 1,345	\$ 260
QC	\$ 1,105	14,000	\$ 704	\$ 143
NB	\$ 207	5,000	\$ 135	\$ 39
NS	\$ 226	4,000	\$ 143	\$ 37
PE	\$ 90	1,000	\$ 58	\$ 20
NL	\$ 134	3,000	\$ 86	\$ 18
YT	\$ 37	400	\$ 26	\$ 4
NT	\$ 89	-	\$ 51	\$ 4
NU	\$ 54	-	\$ 36	\$ 2
Canada	\$ 10,878	154,400	\$ 6,598	\$ 1,450

Note: While protected and conserved areas undoubtedly contribute to jobs in Northwest Territories and Nunavut, job estimates are not provided for these territories as a combination of limited productivity data and relatively high salaries due to Northern allowances skew the data. Job estimates are omitted for these territories to represent a conservative approach. For more details on how job impacts were calculated, see Appendix A – Methodology.



GROSS DOMESTIC PRODUCT

In addition to supporting progress towards Canada’s commitments to protect more land, freshwater, and ocean, investments in protected areas over the past decade have also advanced economic development. In 2008, 8.0% of Canada’s land and freshwater, and a meagre 0.7% of its marine areas were conserved (ECCC, 2024c). With political will from the Canadian government and leadership from Indigenous Nations, people and organizations, these proportions increased to 13.8% and 15.5% respectively by 2024.

Alongside progress in protecting and conserving more of Canada’s terrestrial and marine areas, the economic impact of these areas has also increased over time. In 2018, the federal government invested \$1.3 billion over five years for the Canada Nature Fund and a further collective \$3.28 billion over five years was announced in 2021 for the Enhanced Nature Legacy Fund and Marine Conservation Targets. While park visitation was affected by several factors including market conditions, political sentiment, and the COVID-19 pandemic, these investments contributed to a 19% increase in visitation to national parks from 2002 – 2025 (Figure 5). In turn, national parks contributed \$3.56 billion to GDP in 2008, climbing to \$4.74 billion in 2019 (Parks Canada, 2022; The Outspan Group Inc., 2011a) (all figures in 2024 CAD). Despite a downturn to \$4.20 billion in 2023 due to the

3. ECONOMIC CONTRIBUTIONS

far-reaching impacts of COVID-19, Canada’s national parks have recovered to a \$5 billion impact on GDP in 2024 (Parks Canada, 2024b, 2025).

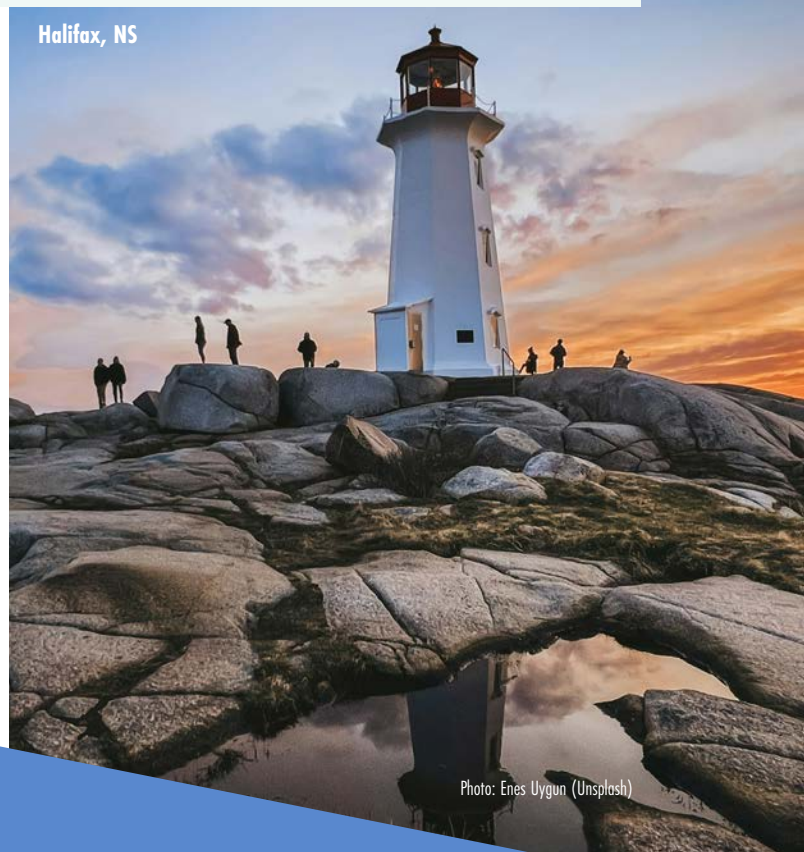
FIGURE 5

Visitation to national parks over time and Parks Canada’s GDP impact for select years, 2024 CAD equivalents. Data source: (Parks Canada, 2025).



Overall, protected and conserved areas in Canada contributed \$10.9 billion to the national GDP in 2023-2024. For comparison in terms of scale, the private seafood sector including commercial fishing, aquaculture, and fish processing contributed \$8.4 billion in the same year (DFO, 2024a). The nature of protected and conserved areas’ GDP contribution can often be nation-building as well. Canada’s natural assets frequently hold value as a cultural point of national identity, as evidenced by surveys (EKOS, 2025) and measures such as the Canada Strong Pass.⁶ By area, over 97% of existing marine and terrestrial protected and conserved areas are managed by various levels of government. As a result, much of the economic benefit they

⁶ The Canada Strong Pass was a temporary measure introduced for the summer of 2025 to encourage Canadians to travel domestically, partially in response to challenges to Canada’s sovereignty. The Pass incentivized visits to national parks (and other cultural institutions) by reducing visitor fees.



3. ECONOMIC CONTRIBUTIONS

provide are retained within the domestic economy and strengthen Canadian sovereignty (ECCC, 2024c). This effect is particularly pronounced in rural regions which contain many of Canada's existing protected and conserved areas. Rural areas of Canada are estimated to be responsible for 23.1% of national GDP (Statistics Canada, 2025b). Given a projected nominal national GDP of \$2,942 billion in 2024 (Department of Finance, 2024), rural areas are responsible for \$680 billion in GDP. As protected and conserved areas are primarily located in rural locations, the GDP impact of \$10.9 billion therefore is responsible for up to 1.6% of rural GDP nationally.

It should also be noted that establishing protected and conserved areas, particularly on Crown lands and oceans, is generally a time-consuming exercise. This is due to the need to develop meaningful partnerships among different levels of government and with Indigenous Nations, to undertake multiple rounds of public consultation, and to address the interests of various stakeholders. For this reason, there are many sites under consideration for designation as a protected or conserved areas whose contributions to Canada's GDP are not included in this analysis. We expect the impacts to Canada's GDP will consequently continue to grow as more protected and conserved areas are fully established and managed, and visitation to these new areas increases.

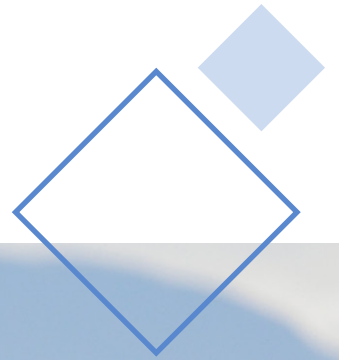


Photo: Markus Thalassia



3. ECONOMIC CONTRIBUTIONS



NUMBER OF JOBS

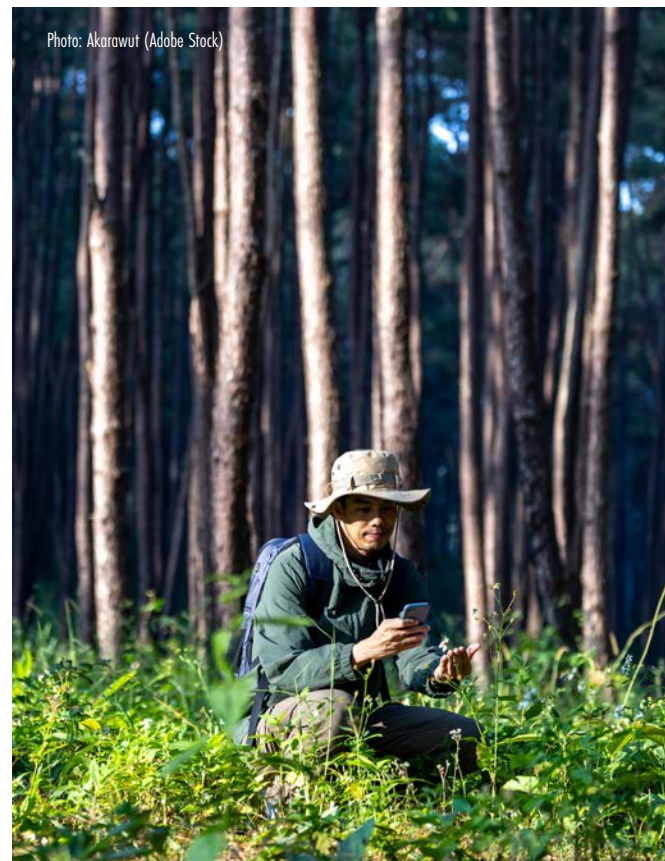
Our analysis found that protected and conserved areas were responsible for 150,000 jobs in the 2023-2024 fiscal year, connected to \$6.6 billion of labour income. This includes jobs directly related to the establishment and operation of protected and conserved areas, as well as industries that work within or benefit from Canada's park system such as hospitality and tourism, outdoor equipment outfitters, and retail. We estimate that for approximately every two jobs directly related to protected and conserved areas, another one job is created in supporting or adjacent industries (i.e. indirect and induced impacts; see Appendix A – Methodology for more details). Because of the seasonal nature of Canada's tourism industry, it can be fairly assumed that this number includes a percentage of part time and seasonal roles.

For 2008-2009, The Outspan Group Inc (2011) found that national, provincial, and territorial parks supported 64,050 full-time equivalents (FTE)⁷ of employment and \$2.9 billion (2009 dollars) income to labour generated by spending. This current study estimates that these same parks supported 98,000 FTEs, an increase of 53% from 2008 – 2024. Over the same period, their impact on labour income also grew 51% from \$4.1 billion to \$6.2 billion (all figures 2024 CAD).

One thing that remains consistent is that many of the jobs connected to Canada's protected and conserved areas are located in rural and remote regions of Canada, where unemployment is otherwise higher than urban areas (Housing, Infrastructure and Communities Canada, 2020). Employment in rural communities continues to be stressed by the restructuring and automation of traditional, resource-extraction industries. Protected and conserved areas represent opportunities to diversify and buffer rural economies from volatile commodity markets and to provide jobs that offer meaningful economic opportunities.

The impact on Indigenous communities is particularly notable, in large part due to the growth of Indigenous-led conservation initiatives, as well as the rapid growth of Indigenous Guardians programs across Canada. Indigenous Guardians are trained experts who care for landscapes, waters, wildlife, and their communities. In 2016 there were only 30 Indigenous Guardians, but this number has grown to more than 1,000 in 2024 (Yellowstone to Yukon Conservation Initiative, 2024). Jobs created through the Indigenous Guardians program are an example of advancing effective conservation alongside culturally meaningful employment for Indigenous populations.

As new parks and protected areas are completed in the coming years, it will be important to track growth in employment – particularly if funding is renewed to support Indigenous-led conservation initiatives and Guardian programs and as Canada's domestic tourism industry continues to grow.



⁷ Full-time equivalents (FTE) equate to one year's work for one person. Thus, three people each working a seasonal position that is four months long would be one FTE, while two FTEs might represent two people each in a full-time job for one year.

3. ECONOMIC CONTRIBUTIONS



LABOUR INCOME

Of the total \$10.9 billion impact on national GDP, 61% or \$6.6 billion is directed towards labour income, with an average employment income of approximately \$43,000 per job supported by protected and conserved areas. In addition to income to workers, economic activity supported by protected and conserved areas also creates crucial infrastructure and social services for both visitors and local residents (for an example of this, see section 6.3's study on Gros Morne National Park, Newfoundland and Labrador).

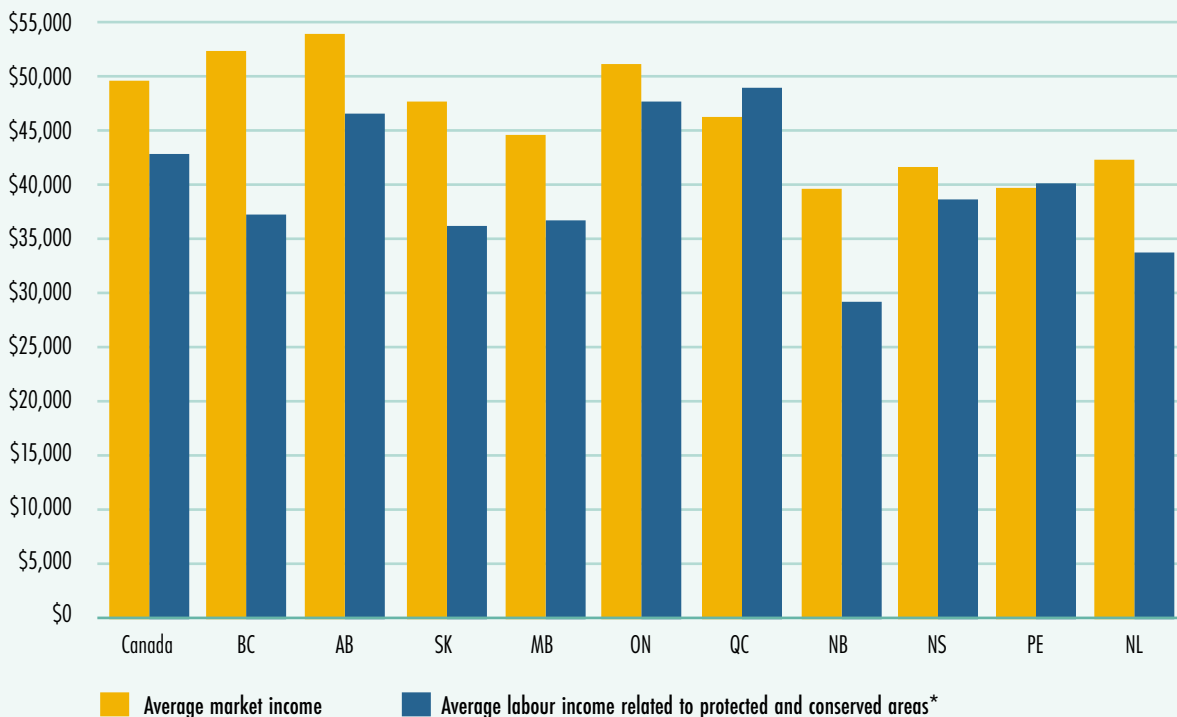
Among the provinces, this income was highest in Quebec, Ontario, and Alberta at over \$46,000 each, and lowest in New Brunswick (\$29,000). As noted in the previous section, some jobs related to protected and conserved areas are seasonal or part-time in nature. Therefore, in addition to the labour income shown below, workers may also supplement their earnings through other employment during off-seasons.

For context, average market incomes across Canada for 2023 are shown in Figure 6 (Statistics Canada, 2024a). Jobs supported by protected and conserved areas have a comparable (within 10% difference) or higher income than the average market income in four of the jurisdictions with available data. These findings indicate that protected and conserved areas support jobs that provide meaningful income.

FIGURE 6

Mean market income of individuals across Canada, 2023 (at the time of publication, the most recent year available)

* As estimated by this report. No data available for the territories. Data source: Statistics Canada, 2024a; CPAWS modelling.



3. ECONOMIC CONTRIBUTIONS

Rural Labour Benefits of Protected & Conserved Areas

The vast majority of terrestrial protected and conserved areas are located outside of urban environments (ECCC, 2024c). As a result, much of the economic impact of these areas is in rural, and remote communities across Canada, offering economic opportunities, training, and diversification of local economies.

Specifically among rural areas, small businesses⁸ in the Heritage Institution sector, which includes nature parks,⁹ had an average net profit of over \$37,000 per business location¹⁰ per year from 2017 to 2022 (Statistics Canada, 2023). For all small business types the national rural average net profit is approximately \$40,000 (Figure 7). In contrast, rural small businesses in agriculture, forestry, fishing, and hunting had an average loss of nearly \$48,000 over the same period (Statistics Canada, 2023). This result underscores inherent differences and economic vulnerabilities between the two industries. While studies indicate rural small and medium enterprises generally face challenges of rising input costs and skilled labour shortages (ISED, 2023), it is reasonable to expect that resource-extractive industries will require more inputs and therefore be more vulnerable to rising costs than service-based Heritage institutions. Furthermore, political factors such as tariffs on certain commodities can challenge the profitability of agriculture and forest industries compared to that of nature parks.

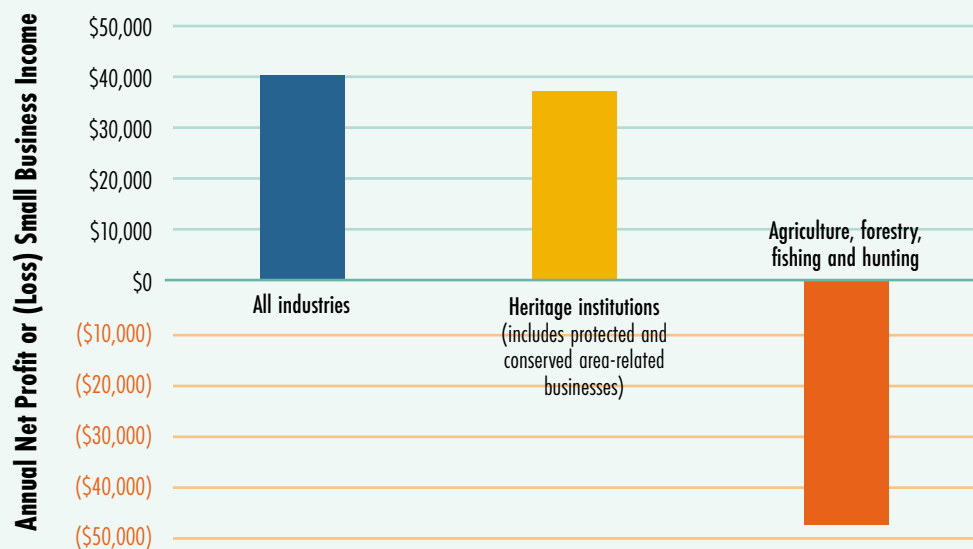
8 Small businesses are defined as those that have annual revenues of \$30,000 to \$5,000,000 (Statistics Canada, 2024b).

9 Heritage Institutions is an economic sector defined by Statistics Canada (2009) and also includes Museums, Historic and heritage sites, and Zoos and botanical gardens.

10 A business or statistical location is the most granular level at which Statistics Canada tracks businesses, such as a single storefront (Statistics Canada, 2025f).

FIGURE 7

Net profit/loss of small rural businesses per business, by industry, average of 2017-2022, Canada. Data source: Statistics Canada, 2023.



3. ECONOMIC CONTRIBUTIONS

These findings reveal that rural small businesses directly involved in the Heritage Institution and/or protected and conserved areas sector performed comparably to the average rural small business economically, but simultaneously delivered environmental and social benefits, to complete the triple bottom line effect (further examined in Chapters 4 and 5).¹¹ The cumulative effect of protected and conserved areas is such that even where their economic impact may not be large in the national context, the social cohesion and opportunity afforded by these areas can still have a profound effect on small communities (for examples of this, see Chapter 6).



GROSS TAX REVENUE

In the 2023-2024 fiscal year Canada's protected and conserved areas generated a combined \$1.4 billion in tax revenue for Canada's federal, provincial and territorial governments, compared to \$2.3 billion in government expenditures for the establishment and operation of these areas. Visitor spending is the primary source of tax revenue, which is enabled by government expenditures in maintaining and expanding parks. For each government dollar spent on protected and conserved areas in 2023-2024, \$0.62 returned as tax revenue.

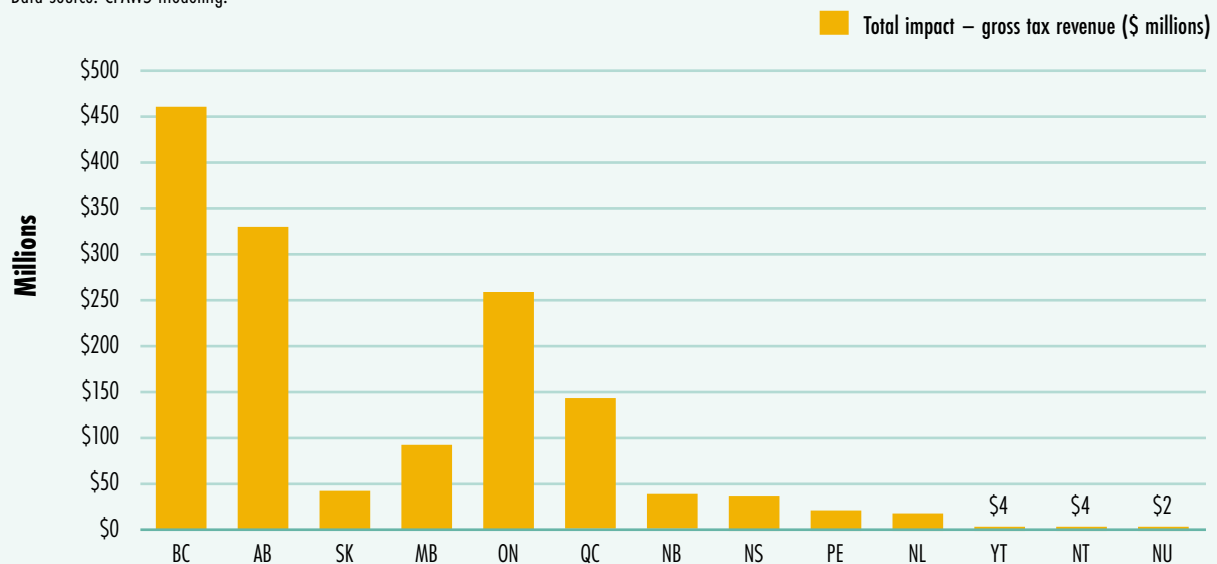
Sub-nationally, protected and conserved areas (including both provincial and national parks) situated in British Columbia generated the highest tax revenues of \$460 million, followed by Alberta with \$328 million and Ontario with \$260 million (Figure 8). These three jurisdictions captured over 70% of all gross tax revenue impacts in Canada, which are distributed across all levels of government.

¹¹ Triple bottom line refers to an accounting framework that measures the social (human), environmental (or ecological) and economic (profit) successes of businesses.

FIGURE 8

Gross tax revenue impacts by province and territory, 2023-2024

Data source: CPAWS modeling.



3. ECONOMIC CONTRIBUTIONS

Of the \$1.4 billion in tax revenue, this study’s methodology estimates that 98% of this impact was due to park agency (national, provincial, and territorial) expenditures and visitor spending. By comparison, in 2008-2009, \$337 million (2009 dollars) was generated in tax revenue from these same spending categories (The Outspan Group Inc., 2011b). Furthermore, the Outspan Group Inc’s (2011b) analysis concluded that “visitors generate twice as much tax revenue (\$223 million) through their spending than do park agencies (\$115 million).”

After adjusting for inflation, tax revenues more than tripled from 2008-2024. These findings suggest that there may be increases in generated tax revenue as parks become more established over time, developing more awareness and providing more tourism offerings for visitors whose spending is largely responsible for tax revenues.

Overall, we may conclude that while there are important ecological and cultural benefits of creating parks in remote areas, from a tax perspective, parks located in more visitor-accessible locales will generate more spending and greater tax revenues for public coffers.



Photo: Cavan (Adobe Stock)



Photo: Kwan Fung (Unsplash)

Yellowknife, NT



Photo: unai (Adobe Stock)

Banff, AB

4. Select Environmental Benefits: Carbon Stocks & Ecosystem Services

CHAPTER AUTHORS: KIRSTEN SCOTT, JASON WONG,
ALEXANDRA BARRON, TATYANA FEINER



4. SELECT ENVIRONMENTAL BENEFITS

As Canada seeks effective strategies to address climate change and to halt biodiversity loss, protecting nature has emerged as a fundamental solution. Protected and conserved areas provide beneficial conditions for thriving ecosystems. While carbon management and protection of biodiversity have separate challenges and approaches, proper investments and planning of protected and conserved areas can enhance, modify, and expand these areas to deliver simultaneous climate and biodiversity benefits locally, nationally and around the world (ECCC, 2024b). Expanding and investing in these areas not only strengthens climate resilience, but also encourages long-term environmental, social, and economic benefits.

The ecological and cultural significance of these areas is deeply tied to the environmental processes and species they sustain. Protected and conserved areas provide multiple environmental benefits at many scales, for example, the protection of water quality, quantity and hydrological flows; the prevention of erosion and loss of soil nutrients; and the provision of fish and wildlife habitat.

Due to limited data availability at a national scale, this chapter examines only two of these environmental benefits: carbon storage (and associated economic value) in protected and conserved areas across Canada, and the ecosystem service values offered by our National Parks system. There remain ample future opportunities in this area to gather and incorporate measures of various other environmental benefits that arise from protecting nature.



Photo: Max Mustermann (Unsplash)

Thompson-Nicola, BC

4.1 Canada’s Emission Reduction Targets

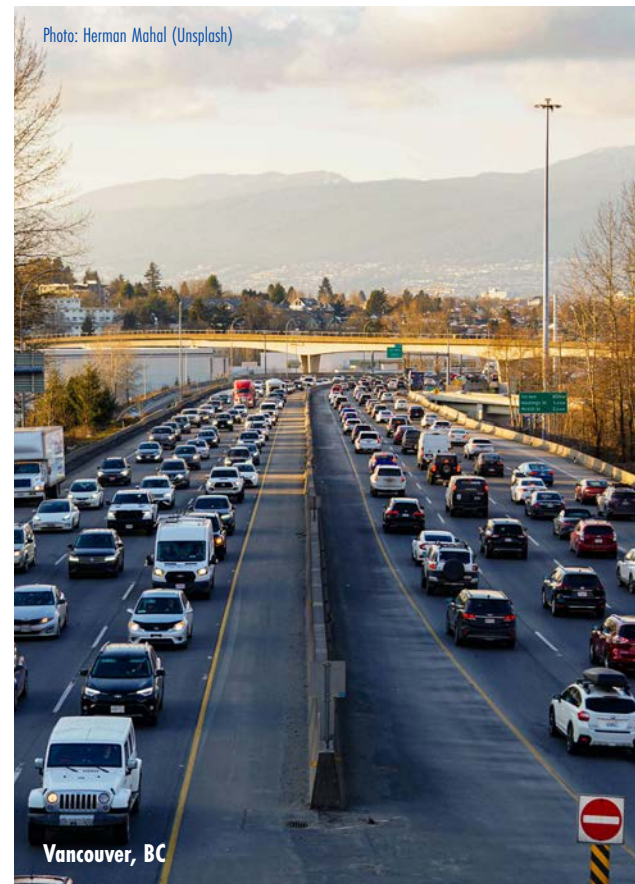
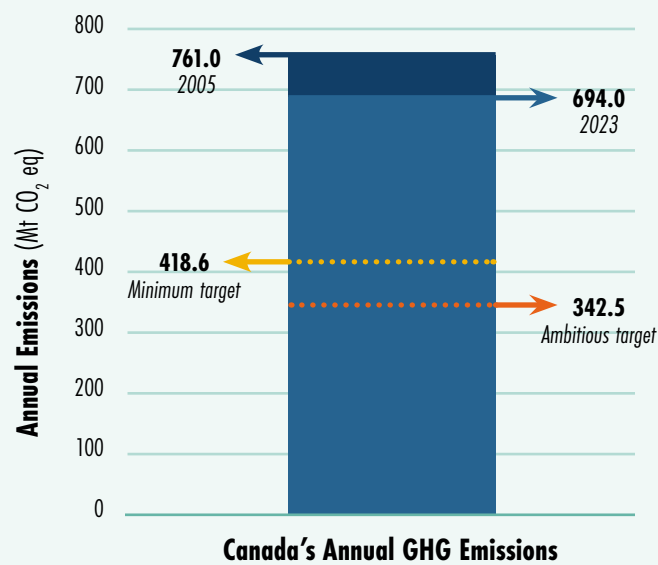
To help combat climate change, Canada has committed to reducing annual greenhouse gas (GHG) emissions a minimum of 45 to 50% below 2005 levels by 2035, though independent experts recommend a more ambitious target of 50 to 55% by 2035 to effectively achieve net zero GHG emissions by 2050 (ECCC, 2025a; Net-Zero Advisory Body, 2024).¹²

In 2023, the most recent data available at the time of writing, Canada emitted 694 megatonnes of carbon dioxide equivalent (Mt CO₂eq) (Figure 9) (ECCC, 2025a). This is a modest reduction of 67 Mt CO₂eq from 2005, and further reductions of 275.5 to 351.6 Mt CO₂eq are required to reach the minimum and ambitious targets respectively with only ten years remaining to achieve this. Reaching the latter target would require removing annual emissions approximately equivalent to those of Canada’s oil and gas, buildings, and agriculture sectors in 2023 (ECCC, 2025a).

¹² The preliminary targets for 2030 and 2035 correspond to Canada’s commitment to Net Zero emissions by 2050, outlined in the *Canadian Net-Zero Emissions Accountability Act*.

FIGURE 9

Canada’s annual emissions targets to net-zero GHG emissions, Mt CO₂eq. Data source: ECCC, 2025.



4. SELECT ENVIRONMENTAL BENEFITS

No matter how we look at these numbers, Canada has a long way to go to meet its GHG emission reduction targets. Consequently, all viable pathways to significantly decrease atmospheric carbon require both emission reductions and the removal of CO₂ from the atmosphere. While the federal government has shown growing interest in carbon capture, utilization, and storage strategies, these large-scale technical and industrial projects remain costly, face complex regulatory challenges, and are not yet ready for widespread implementation. In contrast, nature-based climate solutions (NbCS), which are defined as “conservation, restoration and improved land management actions that increase carbon storage and/or avoid greenhouse gas emissions across [natural areas]” (Griscom et al., 2017), offer a practical, low-cost, and immediately actionable approach to decarbonization.

One part of Canada’s emissions reduction strategy, the Natural Climate Solutions Fund, supports projects that conserve, restore and enhance nature, with the aim to reduce GHG emissions by 7 to 10 Mt CO₂eq per year by 2030 and 16 to 20 Mt CO₂eq by 2050 (ECCC, 2024b, p. 63). Along with other decarbonization strategies such as renewable energy and energy efficiency, the adoption of NbCS in the form of land- and ocean-based conservation policy must begin immediately to help Canada achieve net-zero emissions by 2050 (Canadian Institute for Climate Choices, 2021).

4.2 Carbon in Canada’s Land & Seascape

Understanding the amount of carbon stored in Canada’s environment helps identify the important land and seascapes to be protected for climate mitigation and adaptation purposes. Accurate counts of carbon stocks across the country help identify those areas that possess high carbon storage potential, and those that are at high risk of carbon re-emission if environmental disturbances such as wildfires¹³ occur. Sites possessing these characteristics can then be flagged as candidate sites for conservation measures. Additionally, quantifying and monitoring carbon stock changes across ecosystems enables more accurate and informed planning by highlighting the climate impacts of various land-use decisions (e.g., mining, forestry, bottom trawling, etc.).

Terrestrial and marine ecosystems like forests, peatlands, tidal marshes, and eelgrass beds have been proven to sequester and store substantial amounts of carbon dioxide (CO₂) from the atmosphere into plant biomass, soils and sediments (Kulshreshtha et al., 2000).



Canada can leverage nature as an important tool towards reducing its greenhouse gas (GHG) emissions by increasing the protection of key ecosystems.... The greatest short-term benefit (by 2030) comes from protection of carbon-dense ecosystems, to ensure that the carbon they are storing is secure and that their ability to remove CO₂ from the atmosphere is maintained.”
– Dr. Risa Smith, 2023

Photo: CPAWS Nova Scotia



Eastern Shore Islands, NS

¹³ Parks Canada’s (2023a) study of 31 national parks from 1990 – 2020 found that they were a net source of GHG emissions over this period, largely due to wildfires in just three of the studied parks. As wildfires become increasingly common due to climate change, understanding the distribution of carbon stocks is crucial to properly account for and limit Canada’s overall GHG emissions.

4. SELECT ENVIRONMENTAL BENEFITS

Notably, when these ecosystems are formally protected, they have proven to both improve biodiversity and sequester and store more CO₂ compared to unprotected landscapes (Geldmann et al., 2013; Graham et al., 2021).

Carbon is stored in material like soil, vegetation or seabed sediments. When discussing climate change, we are concerned with the gas carbon dioxide, CO₂ (or the standardized measurement of all greenhouse gases, CO₂ equivalent). As a result, it is helpful to understand how to convert the weight of carbon to its greenhouse gas counterpart, CO₂.

To do this, a factor of 3.667 is used (from the atomic mass of a molecule of CO₂ divided by the atomic mass of a carbon atom: $44/12 = 3.667$) (Freund et al., 2005). So, to determine the amount of CO₂ that 1 tonne of carbon can produce:

$$1 \text{ tonne of carbon} \times 3.667 = 3.667 \text{ tonnes of CO}_2$$

Due to its carbon-rich landscapes and vast ocean areas, Canada can contribute to globally meaningful storage of carbon through the protection and conservation of these natural areas. However, it must be noted that there is significant geographical variation in carbon sequestration potential and research suggests that carbon sequestration by some coastal ecosystems in temperate regions like Canada may be lower than the global average (Bertram et al., 2021; Prentice et al., 2020).

Previous research shows that Canada's forests contain about 6% (20.9 billion tonnes, or gigatonnes, Gt) of all carbon stored in global forests, and the top 1 metre of Canada's soils hold 20.4% of the planet's soil carbon stocks, or 306 ± 147 Gt (Sothe et al., 2022). Furthermore, while peatlands cover only about 3% of the globe, approximately one third of all peatlands are located within Canada covering 12% of the country and these contain 98 Gt of carbon, or 32% of Canada's soil carbon (Sothe et al., 2022).

Photo: Alex Baker (Unsplash)

Jasper National Park, AB

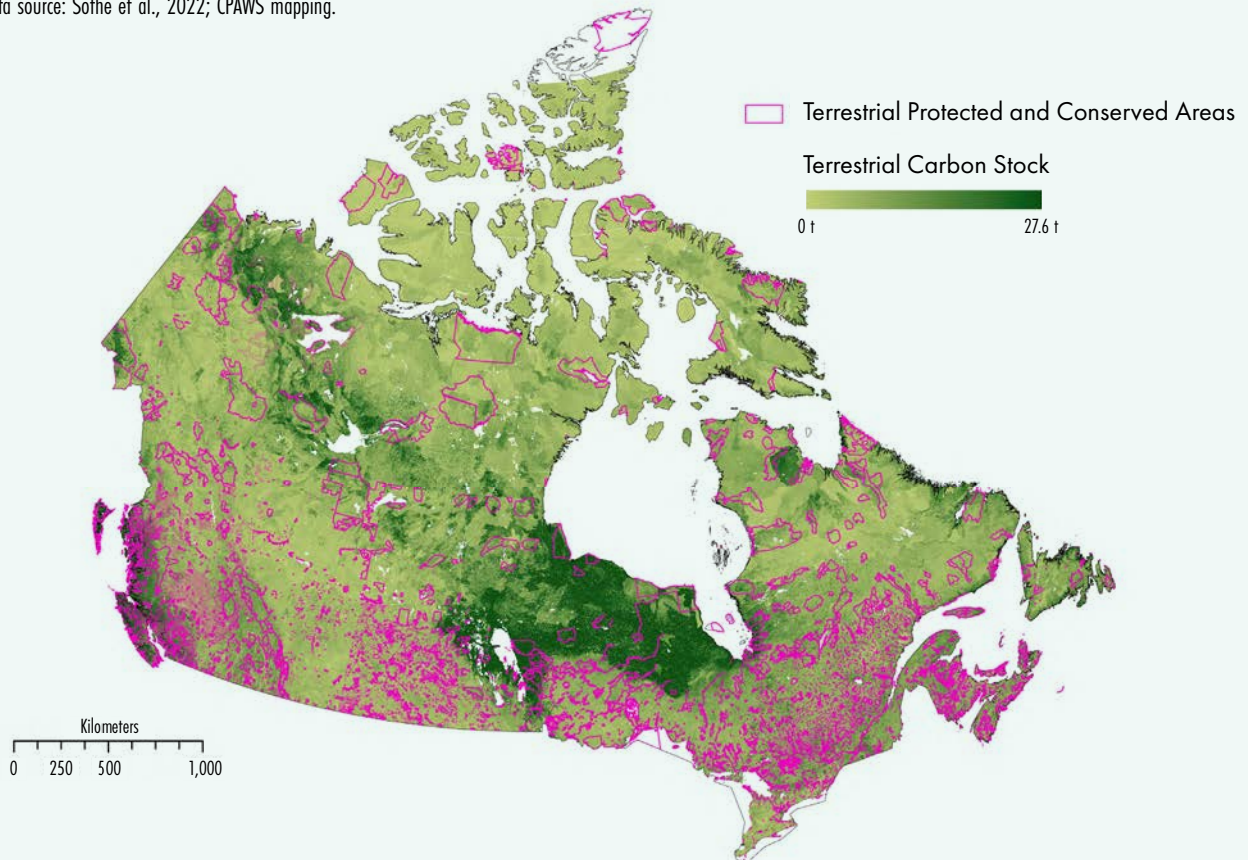
4. SELECT ENVIRONMENTAL BENEFITS

The extent of Canada's current terrestrial protected and conserved areas and the carbon stocks within are shown in Figure 10.

FIGURE 10

Canada's terrestrial protected and conserved areas and spatial distribution of estimated terrestrial carbon stocks. Darker colours represent more carbon.

Data source: Sothe et al., 2022; CPAWS mapping.



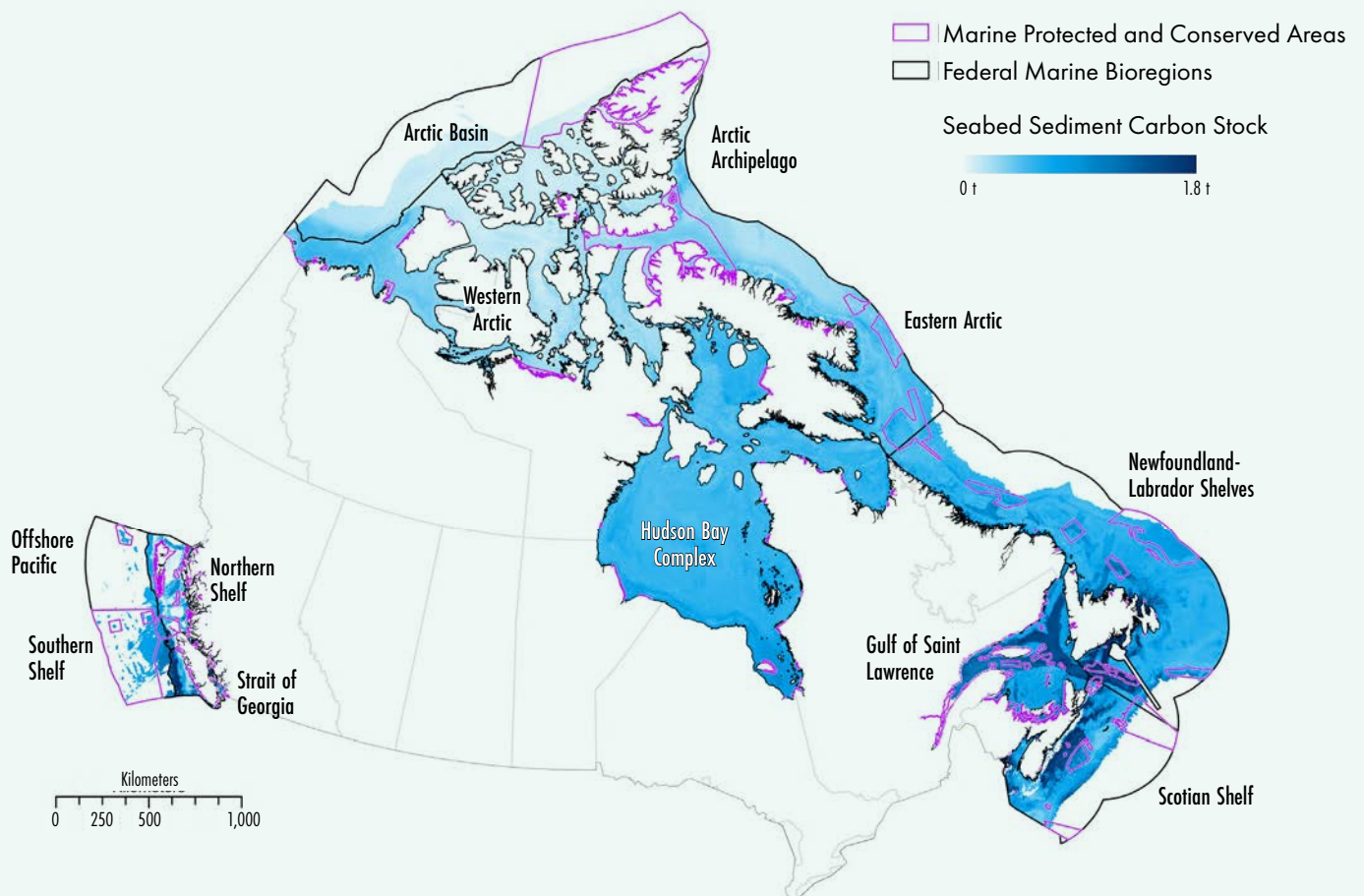
Globally, estimates show seabed sediments hold 87 Gt of carbon in the uppermost 5 cm, 168 Gt in the top 10 cm, and around 2,300 Gt in the topmost metre (Atwood et al., 2024; LaRowe et al., 2020; Lee et al., 2021; Epstein et al., 2024). For the Canadian continental margin, modelling shows the top 30 cm of the seafloor contains 10.9 Gt of carbon (Epstein et al., 2024a).

4. SELECT ENVIRONMENTAL BENEFITS

The seabed carbon content in Canada's ocean waters, marine protected and conserved areas, and the bioregions dividing Canada's oceans into biologically similar areas are shown in Figure 11.

FIGURE 11

Canada's marine protected and conserved areas, federal marine bioregions, and predictive mapping of carbon content in seabed sediments across the Canadian continental margin. Data source: Epstein et al., 2024; DFO, 2018; CPAWS mapping.



There is limited data available on carbon content and sequestration potential of vegetated marine ecosystems across Canada. Coupled with methodological differences in evaluating carbon, sparsity of data makes a coherent evaluation of the carbon stored in these ecosystems challenging (James et al., 2024). Consequently, coastal vegetated ecosystems have not been included in this analysis, although they provide important ecosystem services such as flood protection. As coastal vegetated systems cover a limited spatial extent in Canada, we have underestimated carbon storage in marine protected and conserved areas but likely not by a significant amount.

4. SELECT ENVIRONMENTAL BENEFITS

CARBON STOCKS IN CANADA'S PROTECTED & CONSERVED AREAS

While managing and stewarding protected and conserved areas for carbon storage is not identical to doing so for biodiversity outcomes, both may be achieved with thoughtful planning. However, Canada's carbon-dense ecosystems are, to date, poorly represented throughout protected and conserved areas, with only 12% of land and freshwater and 13% of seabed carbon hotspots located within the existing protected areas network (Epstein et al., 2025a; Mitchell et al., 2021). Thus, the establishment of new protected and conserved areas represents a critical opportunity in Canada's climate strategy, given their ability to store carbon and support biodiversity.

CPAWS estimated the carbon stocks in existing protected and conserved areas based on datasets of carbon concentrations in soils and vegetated areas, and in seabed sediments (Epstein et al., 2024a; Sothe et al., 2022). These were aligned to the boundaries of protected and conserved areas from CPCAD for carbon in soils and vegetation and federal marine bioregions for carbon in seabed sediments. For more on the methodology behind these estimates, refer to Appendix A.

Using the work highlighted in Figure 10 and Figure 11 as a basis for our accounting of carbon stocks in Canada's protected and conserved areas, we calculate nearly 51.4 billion tons (Gt) of carbon are stored in the soils, vegetation, and seabed sediments of these places, equivalent to the annual emissions of 57.8 billion cars (Natural Resources Canada, 2017).

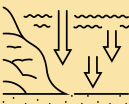
Of the total carbon stock this report calculates is contained within Canada's current terrestrial and marine protected and conserved areas:



Of Canada's stores of carbon in the top metre of soil, including carbon-rich peatlands and wetlands, nearly 16% (47.5 Gt out of 306 Gt) is contained in protected and conserved areas (Figure 12).



13% (2.7 Gt of 20.9 Gt) of Canada's terrestrial carbon in vegetation, largely forests, is located in protected and conserved areas (Figure 12).



11% (1.2 Gt out of 10.9 Gt) of Canada's marine carbon in the top 30cm of seabed sediments is protected and conserved (Figure 12). This relatively lower figure is mainly because many current marine protected areas have not been designed to encompass carbon-dense locations in the ocean.



4. SELECT ENVIRONMENTAL BENEFITS

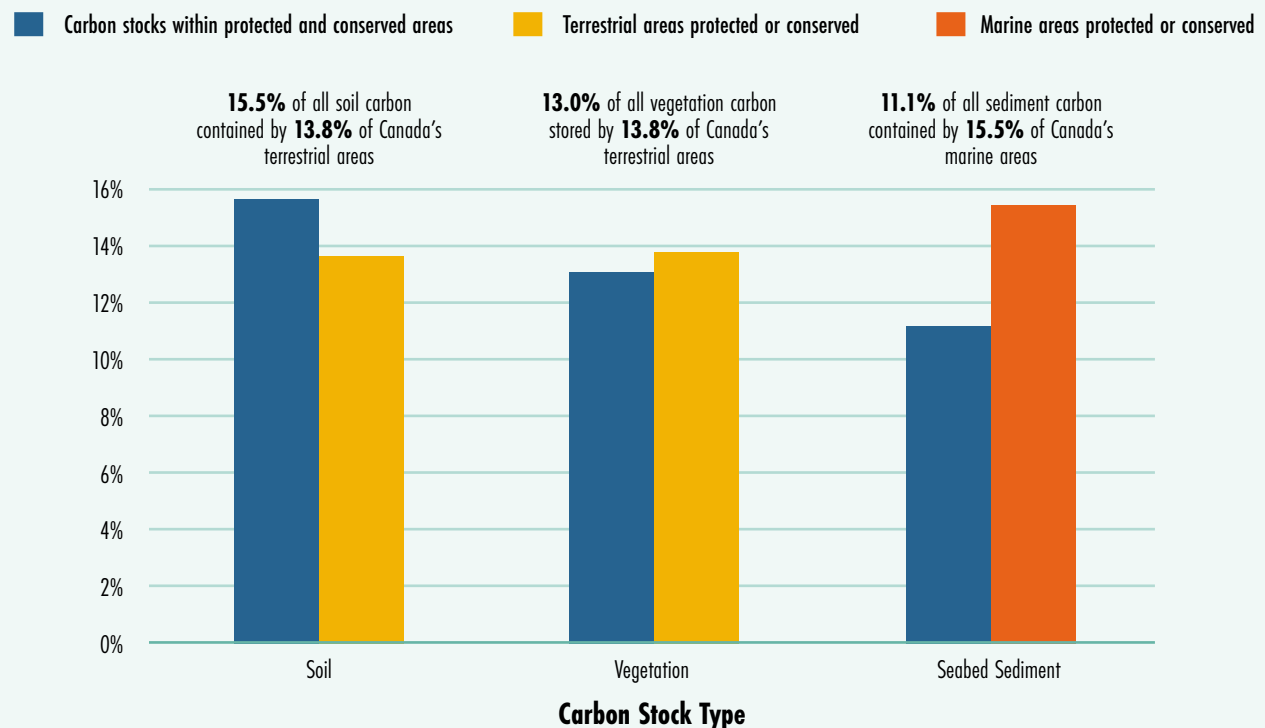
Protected and conserved areas, both terrestrial and marine, are critical to carbon storage because these are generally important ecosystems that will not experience the types of industrial disturbance (mining, logging, draining of wetlands, bottom trawling, etc.) causing the emission of stored carbon as CO₂.¹⁴

Comparing the percentage of carbon contained in protected and conserved areas to the percentage of Canada's area that is protected is a useful indicator of how efficient the boundaries of current areas are at containing dense carbon stores. For example, the higher ratio for the soil carbon pool (15.5% to 13.8%) indicates that current terrestrial protected and conserved areas are relatively more efficient in encompassing carbon stored in Canada's soils compared to marine areas (Figure 12). In comparison, the lower ratios for the vegetation (13.0% to 13.8%) and seabed sediment (11.1% to 15.5%) carbon pools suggest that there are opportunities to improve and emphasize the consideration of carbon stocks when planning protected and conserved areas, particularly in these ecosystems.

¹⁴ Natural disturbances, such as wildfires and landslides, can still cause carbon stored within protected areas to be released into the atmosphere. However, protected areas can be proactively stewarded to reduce wildfire risks using prescribed burns that avoid stand-replacing fires.

FIGURE 12

Percent of Canada's carbon stocks contained in protected and conserved areas by carbon pool, and percent of Canada's terrestrial and marine areas protected or conserved. Data source: ECCC, 2025c.



4. SELECT ENVIRONMENTAL BENEFITS

Terrestrially, we note that there is significant opportunity for the protection of carbon-dense peatlands. While Canada contains nearly one third of the world’s peat wetlands, to date, only about 13% of these have been protected, below the global average of 17% (Goodday et al., 2025).

Overall, protected areas aid in climate change mitigation by ensuring that stored carbon, accumulated over hundreds or more years, is not emitted back into the atmosphere, and by upholding ecosystems’ ability to sequester CO₂ from the atmosphere (Smith, 2023).

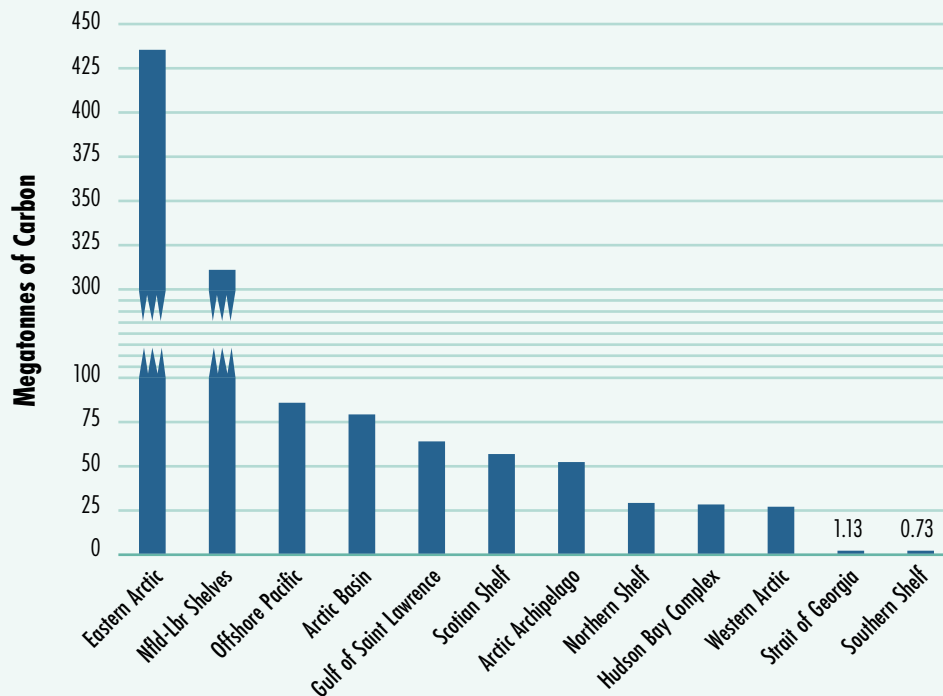
REGIONAL MARINE CARBON STORAGE

Canada’s waters are divided into thirteen bioregions, each of which have similar biological attributes (DFO, 2018).¹⁵ Compared to administrative boundaries, this division allows for more effective marine planning for conservation purposes. Of the 1.2 Gt of seabed sediment carbon contained in marine protected and conserved areas, the Eastern Arctic and Newfoundland-Labrador Shelves bioregions contain nearly two-thirds of this total (Figure 13). The presence of relatively large MPAs in the Eastern Arctic, such as Tallurutiup Imanga NMCA, likely accounts for the high carbon stocks found here, as well as the bioregion itself being rather large. MPAs in the Newfoundland-Labrador Shelves also encompass some of the highest densities of carbon, such as Laurentian Channel.

¹⁵ The Great Lakes bioregion is excluded from this graph because freshwater is considered under terrestrial protected areas rather than marine; no seabed carbon was mapped in this region.

FIGURE 13

Marine carbon stocks (seabed sediments only) in protected and conserved areas by bioregion (Mt C). Data source: CPAWS mapping.



4. SELECT ENVIRONMENTAL BENEFITS

Aside from the carbon stored in seabed sediments shown above, coastal vegetated systems such as salt marshes and seagrasses¹⁶ also capture and store carbon dioxide from the ocean. While limited in extent in Canada, these systems accumulate and sequester carbon more efficiently than forests and soils on a per unit area basis (Chastain et al., 2022). Furthermore, these ecosystems provide important ecological processes that can support fisheries and biodiversity (Drever et al., 2021). As a result, the restoration, protection, and monitoring of salt marshes and seagrasses in Canada should continue to be a priority.

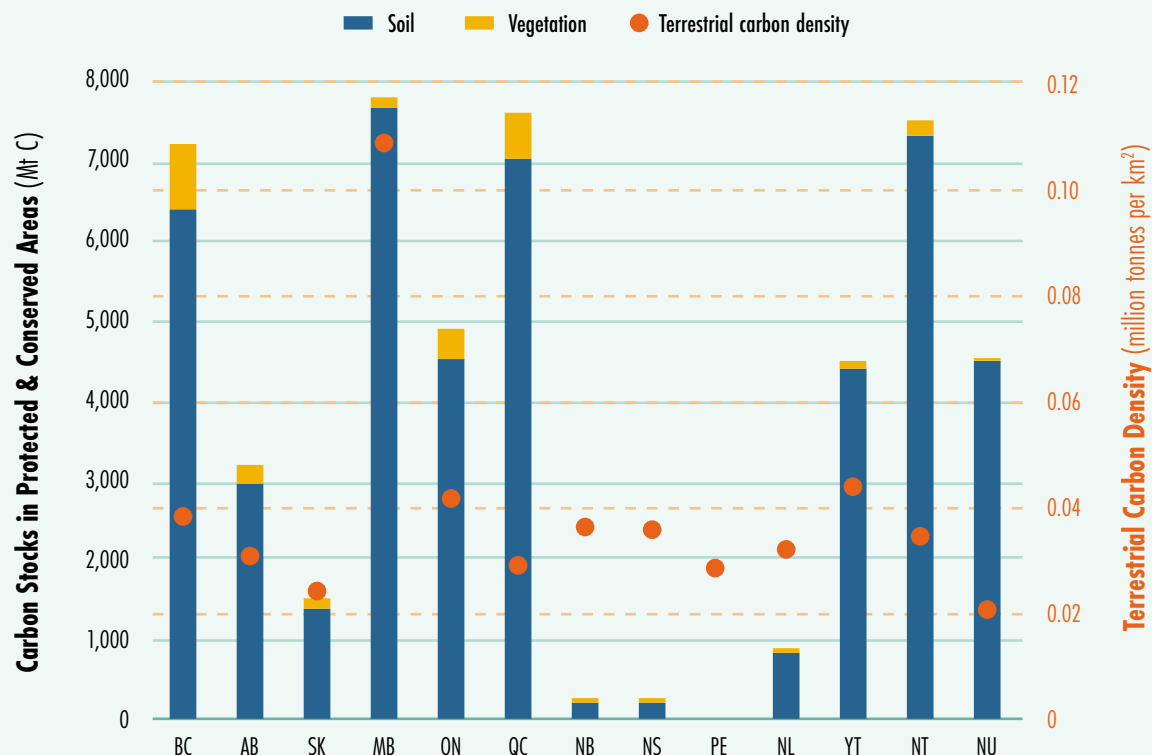
REGIONAL TERRESTRIAL CARBON STORAGE & CARBON DENSITY

Sub-nationally, terrestrial protected and conserved areas in Manitoba hold the most carbon at nearly 7,800 Mt (16% of the national terrestrial total), while four provinces and territories contain more than 30,000 Mt of carbon (60% of the national amount; Figure 14). Soil carbon is the dominant carbon pool for all regions, with vegetation carbon most represented in British Columbia (11% of the provincial carbon stock in protected and conserved areas).

¹⁶ There is also growing interest in the potential contributions of kelp to deep sea carbon stocks but insufficient data on offshore export and decomposition rates to quantify this (Kelly et al., 2023).

FIGURE 14

Terrestrial carbon stocks in protected and conserved areas by province/territory (Mt C) and carbon density (Mt C/km²). Data source: CPAWS mapping.



4. SELECT ENVIRONMENTAL BENEFITS

As total carbon stock values may be biased towards provinces and territories that contain larger protected and conserved areas, the carbon density was also calculated for each region to identify areas of high carbon concentration (see points on Figure 14). Carbon density is expressed as million tonnes of carbon per square kilometre (Mt/km²) of protected and conserved areas.

When considering the density of carbon stored in protected and conserved areas across Canada, Manitoba had the highest value of 0.11 Mt/km². This indicates that protected and conserved areas in Manitoba hold some of the most significant carbon stocks in the country including portions of the Hudson Bay Lowlands, one of the world's largest wetlands that has not be impacted by industrial activities (Goodday et al., 2025; Puzyreva et al., 2025).



4.3 The Value of Carbon in Protected & Conserved Areas

Valuations of carbon can vary widely depending on the framework used. Mechanisms to assign a price to carbon range from Canada's federal carbon pollution pricing (which aims to provide a market-based disincentive to emit GHGs) to costings of GHG emissions that account for damages to human health and productivity (ECCC, 2023a, 2023b).

Given the numerous intersections between nature and socio-economic outcomes demonstrated throughout, this report adopts the Canadian federal government's social cost of greenhouse gas estimates.¹⁷ We use the social cost of carbon dioxide, which for 2025 is \$271 per additional tonne of CO₂ emitted to the atmosphere (ECCC, 2023a).¹⁸ The social cost metric is intended to quantify the economic benefit of reducing emissions. Here that is accomplished by keeping carbon stored in protected and conserved areas rather than it being emitted to the atmosphere as a GHG.

¹⁷ The social cost of greenhouse gas emissions (SC-GHG) estimates include damages from a variety of climate change impacts caused by GHGs in the atmosphere. This includes "changes in net agricultural productivity, human health effects, property damage from increased flood risk, disruption of energy systems, and the value of ecosystem services" (ECCC, 2023a).

¹⁸ Dollar figures in 2021 Canadian dollars.



4. SELECT ENVIRONMENTAL BENEFITS

When we convert carbon stocks in protected and conserved areas to their carbon dioxide equivalents and multiply by the social cost value, we find a total value of \$51.07 trillion nationwide (Table 3).

Table 3.
Carbon and carbon dioxide equivalent stocks of protected and conserved areas and values, by region.
Data source: CPAWS mapping.

Region	Carbon stock in Protected Areas (Mt)	CO2eq stock (Mt)	Value (\$ millions)
Canada	51,388.7	188,442.4	\$51,067,894
BC	7,206.2	26,425.3	\$7,161,251
AB	3,186.9	11,686.4	\$3,167,015
SK	1,514.8	5,554.7	\$1,505,331
MB	7,796.9	28,591.2	\$7,748,218
ON	4,901.5	17,973.7	\$4,870,886
QC	7,599.4	27,867.1	\$7,551,979
NB	268.7	985.3	\$267,022
NS	267.9	982.4	\$266,238
PE	8.8	32.3	\$8,753
NL	899.7	3,299.2	\$894,070
YT	4,484.5	16,444.5	\$4,456,459
NT	7,533.4	27,624.8	\$7,486,333
NU	4,510.0	16,538.4	\$4,481,894
Strait of Georgia	1.1	4.1	\$1,123
Southern Shelf	0.7	2.7	\$725
Offshore Pacific	85.4	313.3	\$84,903
Northern Shelf	28.4	104.0	\$28,179
Arctic Basin	79.0	289.7	\$78,517
Western Arctic	26.1	95.8	\$25,960
Arctic Archipelago	51.8	189.9	\$51,457
Eastern Arctic	436.7	1,601.4	\$433,969
Hudson Bay Complex	27.7	101.6	\$27,545
Newfoundland-Labrador Shelves	312.0	1,144.1	\$310,045
Scotian Shelf	56.4	206.8	\$56,047
Gulf of Saint Lawrence	63.2	231.7	\$62,780

4. SELECT ENVIRONMENTAL BENEFITS

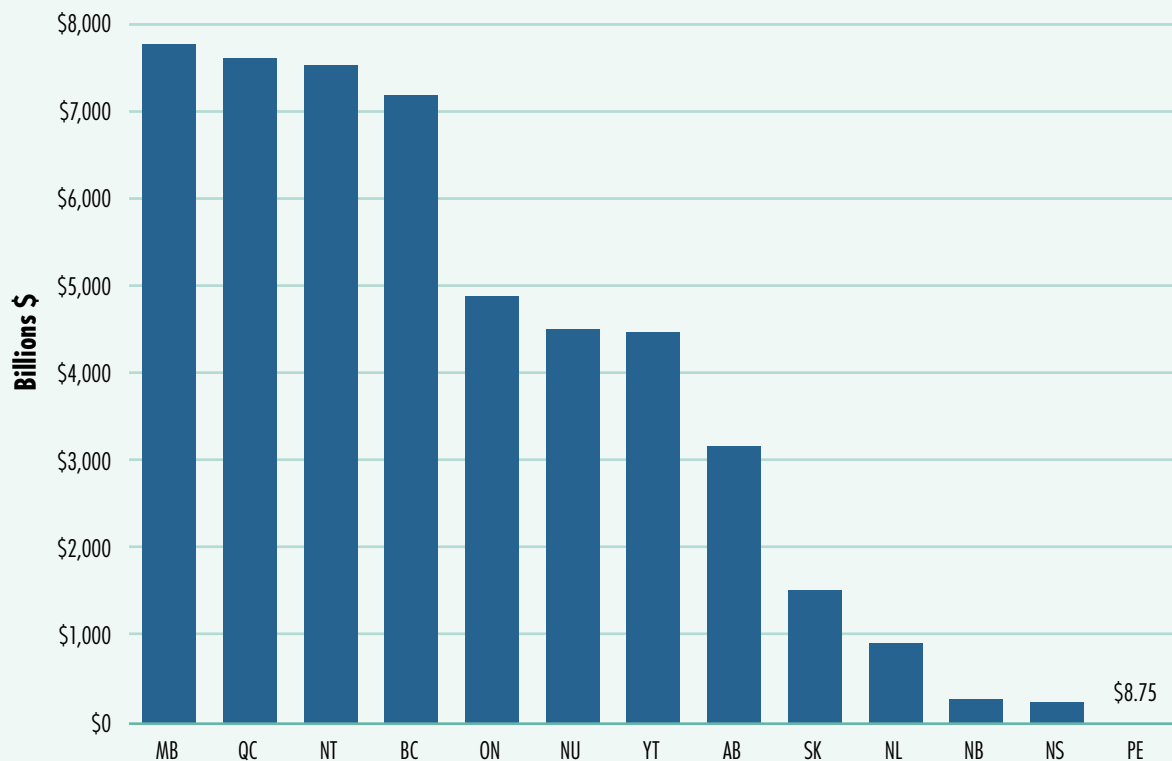
Of this, Manitoba, Quebec, the Northwest Territories, and British Columbia hold the greatest value of carbon within terrestrial protected and conserved areas (Figure 15). It is important to state that the \$51.07 trillion figure is likely a conservative, underestimated value given limitations in modelling techniques to capture the extent and depth to which climate change affects systems worldwide (ECCC, 2023a).¹⁹

¹⁹ Other valuation methods such as the (now-rescinded) 2025 federal consumer carbon tax of \$95/tonne equate to \$17.9 trillion, corroborating our findings that the carbon stored in Canada's protected and conserved areas is worth trillions of dollars.



FIGURE 15

Estimated value of carbon stocks in Canada's current terrestrial protected and conserved areas. Data source: CPAWS mapping.

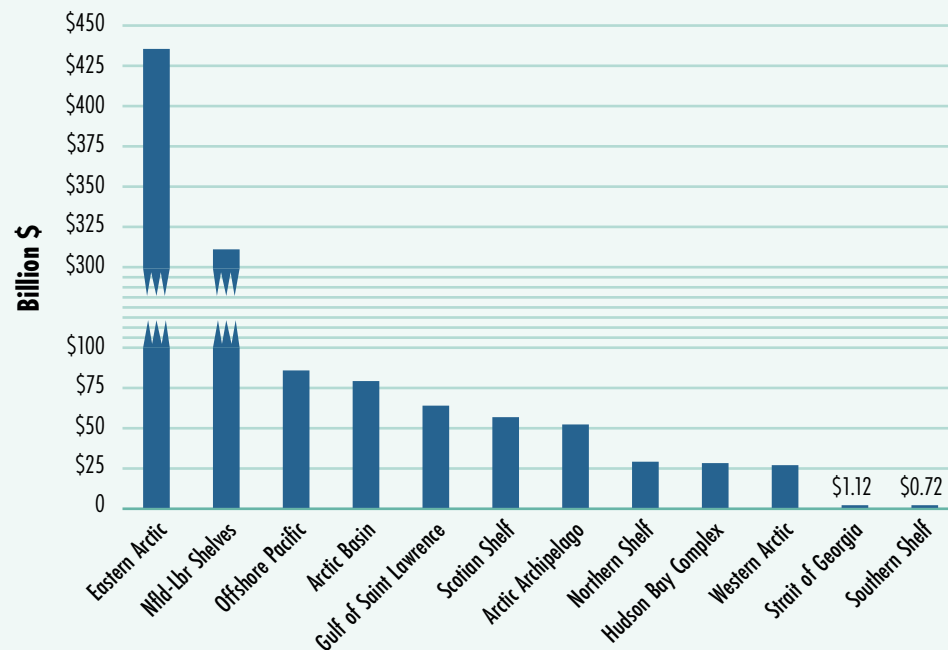


4. SELECT ENVIRONMENTAL BENEFITS

In terms of carbon in the marine environment, protected and conserved areas in the Eastern Arctic bioregion store the greatest value of carbon (Figure 16).

FIGURE 16

Estimated value of carbon stocks in Canada's current marine protected and conserved areas by marine bioregion. Data source: CPAWS mapping.



However at a national scale, the marine protected and conserved areas only cover 10.8% of Canada's seabed carbon, and 13.4% of high carbon density locales (Epstein et al., 2025b). This is primarily due to the fact that marine protected and conserved areas in Canada have focused on protecting or recovering ecological values which do not necessarily coincide with carbon rich areas (DFO, 2024b; Jankowska et al., 2022). There are some marine protected areas – notably the Laurentian Channel MPA – that inadvertently protect high carbon areas, but carbon storage has not been a priority conservation objective to date. If all currently proposed marine protected areas are designated, they would protect an additional 8.8% of seabed carbon (Epstein et al., 2025b). Furthermore, there is considerable potential and need to prioritize the creation of new marine protected and conserved areas to protect carbon rich coastal and offshore ecosystems that are also ecologically important.

Additionally, it is critical to note that Canada's marine protected and conserved areas will only protect carbon stocks if they prohibit activities all activities that are likely to disturb sediments including bottom trawling, dredging, mining, drilling, anchoring, cable-laying, tidal turbines, and seafloor construction.

4.4 Ecosystem Service Values in National Parks & Marine Conservation Areas

Estimates of the value of biodiversity and ecosystem services vary widely depending on the specific ecosystems, species, and species or services of interest. While calculating these values for all protected and conserved areas is beyond the scope of this report, we highlight work done by Parks Canada. This effort considered seven landscapes and twelve ecosystem services²⁰ as a preliminary, non-exhaustive evaluation of nature’s value within only Canada’s national parks and national marine conservation areas (NMCAs), otherwise referred to here as “Canada’s national parks system.” This approach also did not include Indigenous knowledge or worldviews.

The study estimates potential dollar figures for ecosystem services for the various landcover and water types in Canada’s national parks system by drawing from other research identifying ranges of values²¹ for the ecosystem services offered by landscape types (Mulrooney & Jones, 2023). Wetlands have the widest range of possible ecosystem service values (ESVs) and the greatest average ESV per hectare, while shrublands have the lowest ESV per hectare, and no values were found for ice and snow land cover due to no data availability (see explanation in later section) (Figure 17).

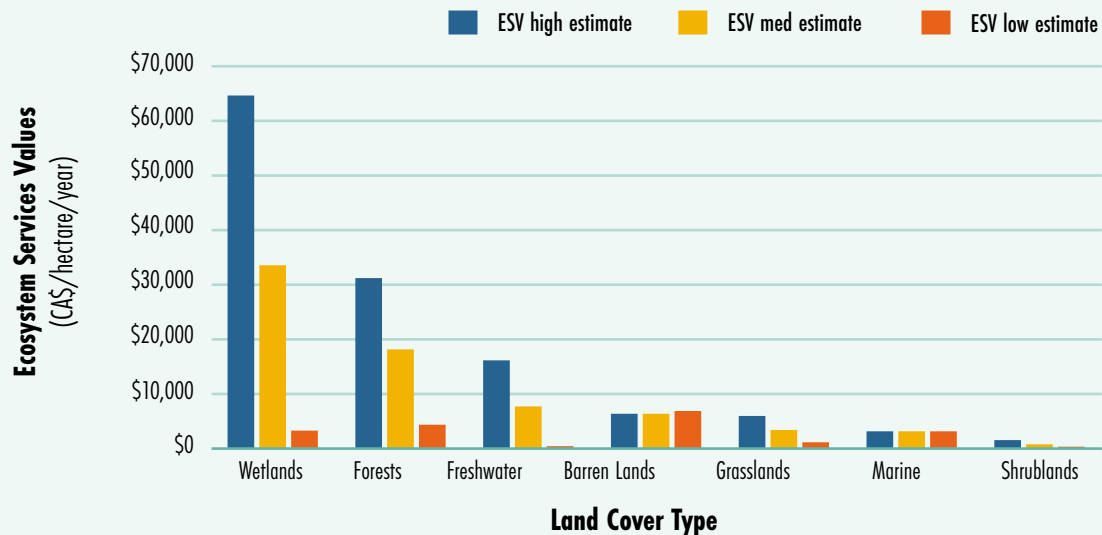
20 Services provided by ecosystems are identified as: climate regulation, habitat /refugia, nutrient cycling, waste treatment, disturbance regulation, water supply, water regulation, pollination, pest and disease control, gas regulation, erosion control, and “other.”

21 It is common for ecosystem service value estimates to cover a range of values due to different valuation methods and services assessed. “Considering a range for a preliminary estimate is prudent as it is indicative of a level of uncertainty when estimating ESVs for such a large and diverse protected system” (Mulrooney & Jones, 2023).

FIGURE 17

Range of ecosystem service values (ESV) in CA\$ per hectare per year for landscapes in Canada’s National Parks and Marine Conservation Areas.

Data source: Mulrooney & Jones, 2023.



4. SELECT ENVIRONMENTAL BENEFITS

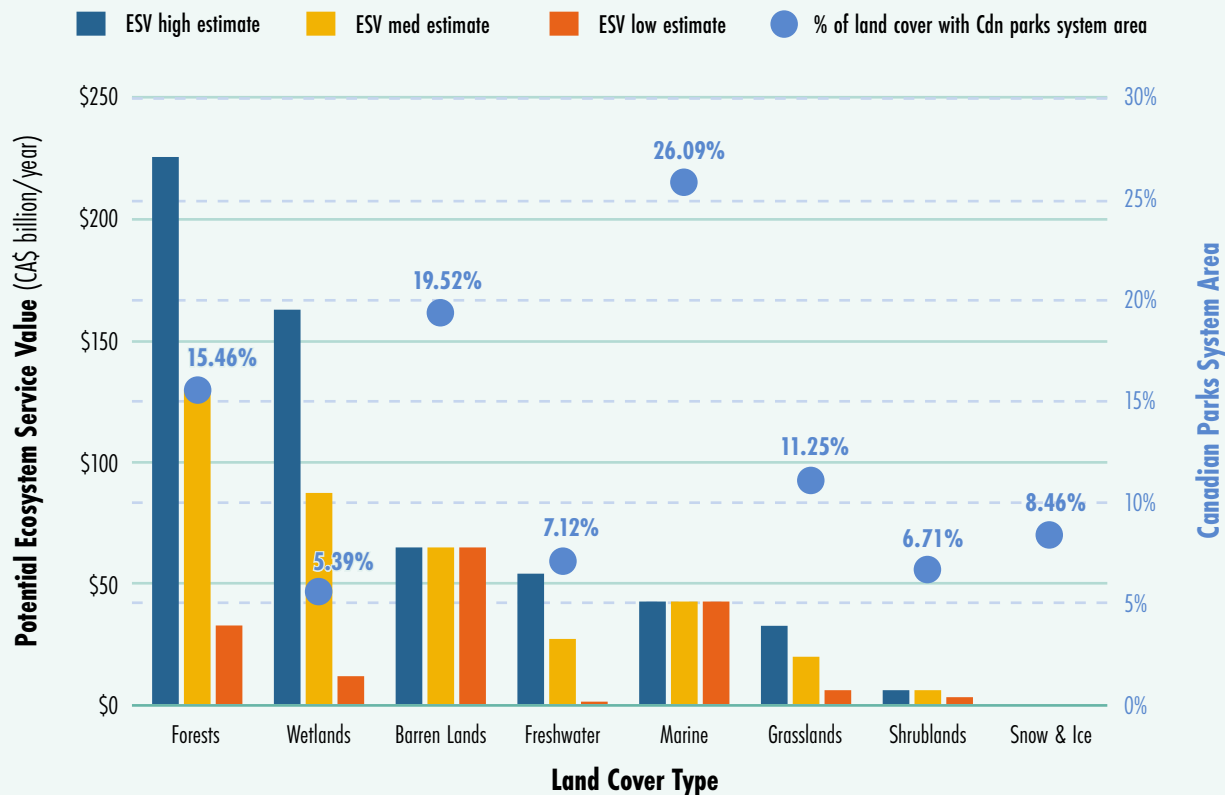
From this, the area of each landscape type in Canada’s 53 national parks and NMCAs was multiplied by the ESV of each land type and summed. The results indicate Canada’s national parks and NMCAs provide annual value ranging from \$156 billion to \$588 billion in ecosystem services (Mulrooney & Jones, 2023).²²

At 12.248 million hectares, marine ecosystems cover 26% of Canada’s national parks system but, based on the models used, provides a moderate ESV contribution estimated at \$42 billion per year (Figure 18) (Mulrooney & Jones, 2023). Section 4.3 of this report discusses carbon in the ocean and the need to prioritize future protected and conserved areas in Canada’s oceans based on carbon values, which could bring additional economic values. The current ESV estimate for the ocean portion of Canada’s parks also does not account for the added monetary value that marine protected areas provided to fisheries. These “spill-over effects” occur when healthier fish populations within marine protected areas move beyond the area’s boundaries into fishable waters.

22 Adjusted to 2024 Canadian dollars: \$184 - \$692 billion/year. Dollar value estimates are based on the assumption that protected areas are not converted to other land uses. The actual realized dollar values at any given site may differ significantly from potential estimates due to differences in methodology and local conditions.

FIGURE 18

Estimated potential ecosystem service values (ESV) for landscapes in Canada’s National Parks and Marine Conservation Areas, and percent area of land types in park system. Data source: Mulrooney & Jones, 2023.



4. SELECT ENVIRONMENTAL BENEFITS

When considering estimated ESVs for terrestrial landscapes (Figure 18) we note:

- Forests provide the greatest value (\$33 to \$226 billion per year) and cover the second largest amount of land, 15.46%, in Canada’s national parks. As an ecosystem with notable ability to contribute to human welfare and the economy via beneficial services, Canada should continue to strategically protect forests, including boreal areas that are underrepresented in the national park system (Parks Canada, 2024c).
- Wetlands contribute the next highest service value (range of \$10 to \$164 billion per year) but are geographically the least covered landscape in national parks, comprising 2.533 million hectares or 5.39% of Canada’s park system (Mulrooney & Jones, 2023). Given findings on carbon in section 4.2, there is significant opportunity to protect more wetland areas in Canada’s parks.
- There is no ESV currently assigned to the 3.972 million hectares (8.46%) of Canada’s parks perennially covered with ice and snow simply because no method exists (Mulrooney & Jones, 2023). This does not imply more protection of these landscapes would not convey additional ESVs – in light of climate change, where high-elevation mountain systems are expected to provide greater habitat benefits and refugia (Hayes & Berger, 2023; Phillips et al., 2025), these areas are apt to be more valuable. Rather, this gap indicates the system for counting the monetary benefits of various land types in Canada needs improvement.

Other recent work in various protected areas has shown comparable estimated values for ecosystem services (Table 4).



Table 4.
Other estimates of ecosystem service values for protected areas.
Data source: as identified.

Research Date	Original Findings	Adapted to all of Canada’s National Parks	Adjusted to 2024 CA\$
2023	\$156 - \$588 billion/year (in 2020 CA\$) in potential total ecosystem services managed in the Canada’s national parks and national marine conservation areas (Mulrooney & Jones, 2023).	Baseline study area = Canada’s national parks at 46.953 million hectares.	\$184 - \$692 billion/year
2021	Used Ecosystem Services Valuation Database on land cover of British Columbia’s 14.1 million hectares of provincial parks and protected areas; estimated value of ecosystem services at \$132 billion/year in BC (Hrkac, 2021).	Expand to national parks area 46.953 million ha and asset types = \$440 billion estimated economic value per year.	\$518 billion/year
2019	Used The Economics of Ecosystems and Biodiversity (TEEB) global database to estimate total annual ecosystem services for national parks in the contiguous United States (7.7 million hectares) at US\$98.7 billion per year (Sutton et al., 2019).	Convert to 2020 CA\$. Expand to national parks area 46.953 million ha and asset types = \$178 billion estimated economic value.	\$209 billion/year
2018	Regional Assessment Report estimated monetary value of ecosystem services annually for Canada at US\$3,590 / CA\$4,783 per hectare (IPBES, 2018).	Expand to national parks area 46.953 million ha (no matter asset types) = \$225 billion estimated economic value of annual ecosystem services.	\$265 billion/year

4. SELECT ENVIRONMENTAL BENEFITS

When adapted to the landscape types and total area of Canada’s national parks, all results show a similar annual range of ecosystem service values, confirming the Parks Canada value estimates are sound (Mulrooney & Jones, 2023).

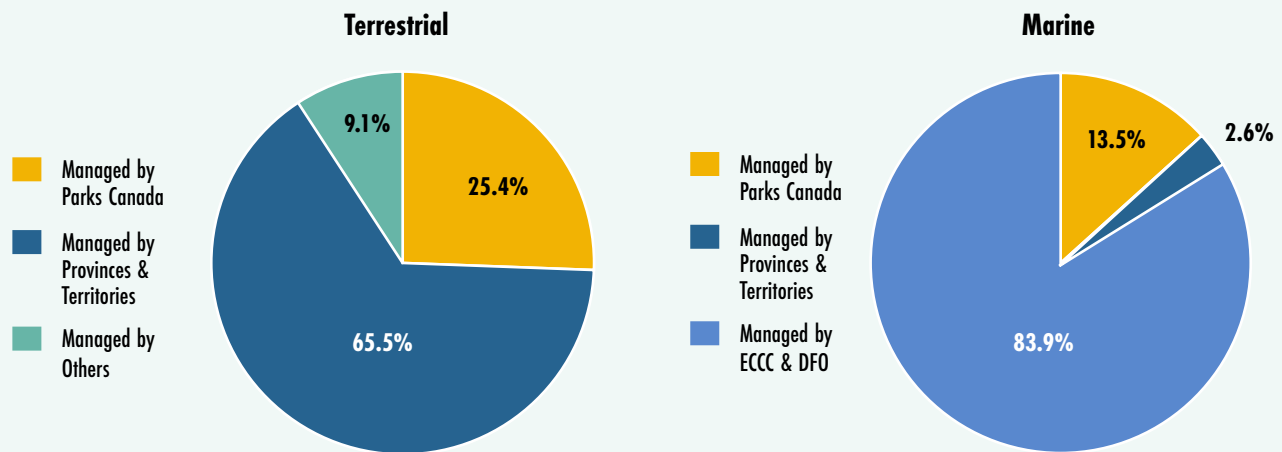
Overall, these figures for ecosystem services and natural capital provide a sense of the scope of the value that Canada’s national parks and national marine conservation areas provide every year, sustaining critical processes and communities. Nevertheless, we note these calculations **do not include** the value provided by private land conservation efforts, OECMs, municipal, provincial or territorial parks and protected areas.

This is an important gap: in 2023, Parks Canada had responsibility for only about 25% of Canada’s terrestrial protected and conserved areas, 65% were managed by provinces and territories, and 9% by other federal agencies, municipal governments and private entities (Figure 19) (ECCC, 2024c). On the ocean front, Parks Canada managed 13.5%, while two federal departments (ECCC and DFO) were responsible for around 84% of marine protected and conserved areas, and provinces and territories for the remaining 2.6%.



FIGURE 19

Canada’s terrestrial and marine protected and conserved areas by jurisdiction, 2023. Data source: ECCC, 2024c.



The value of ecosystem services provided by all of Canada’s protected and conserved areas is therefore likely to be significantly greater than the estimates presented here. These values should be formalized into Canada’s balance sheets as tangible natural resources to more accurately reflect the nation’s natural assets and their direct contributions to the economy (International Public Sector Accounting Standards Board, 2024).

4. SELECT ENVIRONMENTAL BENEFITS

In summary, Canada's national park system has an ecosystem service value of \$156 to \$588 billion per year (\$184 to \$692 billion/year in 2024 CA\$) (Mulrooney & Jones, 2023). Given Canada's GDP in 2024 was just under \$12,290 billion (current prices, Statistics Canada, 2025b), this estimate of ESV equates to between 1.5% and 5.6% of the total value of all goods and services produced within the country over that time.

We note, however, these ESVs correspond to only 25.4% of terrestrial and 13.5% of marine protected and conserved areas across Canada. While it is beyond the scope of this report to calculate ESVs in the remaining 74.6% of land and 86.5% of ocean areas under federal, provincial/territorial or private protection, we conclude the potential financial contribution of ecosystem services provided by these places has significant positive impacts on Canada's economy.



In the context of protected areas, measuring the extent and value of natural capital, and by extension demonstrating benefits of healthy environments, can assist with justifying investments in land acquisition to expand the network of protected areas, expand the size of a protected area, or connect protected areas through ecological corridors.”
– Mulrooney & Jones, 2023

Photo: Jorge Vasquez (Unsplash)



Humpback whale calf

Photo: Jeremy Hynes (Unsplash)



Ontario



Icefields Parkway, AB

Photo: Ben Turnbull (Unsplash)



5. Health & Well-Being Benefits

CHAPTER AUTHORS: CATHERINE REINING, TATYANA FEINER



5. HEALTH & WELL-BEING BENEFITS

As many nations commit to expanding protected and conserved areas by 2030, mounting evidence supports the role of these spaces in enhancing human health and well-being, highlighting the physical, psychological, social, cognitive, and spiritual benefits of connecting with nature (Ban et al., 2019; Jimenez et al., 2021; Lemieux et al., 2022; Maller et al., 2009). Understanding these benefits in an economic context is increasingly important, given roughly 80% of human health is shaped by social, economic, and environmental conditions, while clinical care accounts for only 20% (Hood et al., 2016).

Biodiversity, positioned as the single most important indicator of natural system health, underpins nature's contributions to people and supports key sectors such as pharmaceuticals, recreation and tourism, and the food system. As such, the health benefits from protected and conserved areas range from broad ecosystem services to specific measurable outcomes (King et al., 2025). A conservative global estimate using quality-adjusted life years places the mental health benefits of contact with nature at US \$6 trillion per year (Buckley et al., 2019). This is an order of magnitude greater than the global value of protected area tourism and two to three orders of magnitude greater than worldwide protected-area management budgets (Buckley et al., 2019).



Protected and conserved spaces are more than just ecological assets – they are integral to public health and social well-being. In Canada, access to protected and conserved areas has shown to reduce stress and anxiety, encourage physical activity, strengthen social connections, and foster healthy family development. Such benefits translate into tangible and highly valued outcomes: lower healthcare costs related to mental and physical health, improved workforce productivity through reduced stress and increased employee engagement, and

5. HEALTH & WELL-BEING BENEFITS

stronger communities that foster local stability and resilience (Canadian Parks Council, 2014). Research in Canada continues to grow, with a small but robust body of work pointing to the health benefits afforded by protected and conserved areas. These studies span diverse landscapes – from the Rocky Mountain parks of Alberta to the forests and freshwater systems of Ontario and Quebec, to the coastal settings of New Brunswick – reflecting the ecological richness and geographic breadth of Canada’s natural heritage (Figure 20).²³

FIGURE 20

Locations of health and well-being studies used as examples in this report.

Data source: CPAWS mapping.



A recent national survey of 1,382 Canadian residents examined public attitudes and visitation patterns related to the use of protected and conserved areas for health promotion. Conducted as part of a pan-Canadian initiative led by researchers at Western University and Wilfrid Laurier University in Ontario (referred to in this report as the ParkSeek survey), this work provides new insights into how Canadians engage with nature- and culture-rich spaces.

23 For an Indigenous-focused example, please see the Great Bear Rainforest case study, Cultural Renewal and Community Well-Being.

5. HEALTH & WELL-BEING BENEFITS

This chapter presents key findings from the ParkSeek survey, alongside examples of existing in-park research on the health benefits of protected and conserved areas. It highlights how these spaces support health and well-being, and efforts that maximize the health-promoting potential of protected and conserved areas.

5.1 Visitor Motivations & Perceived Well-Being Benefits

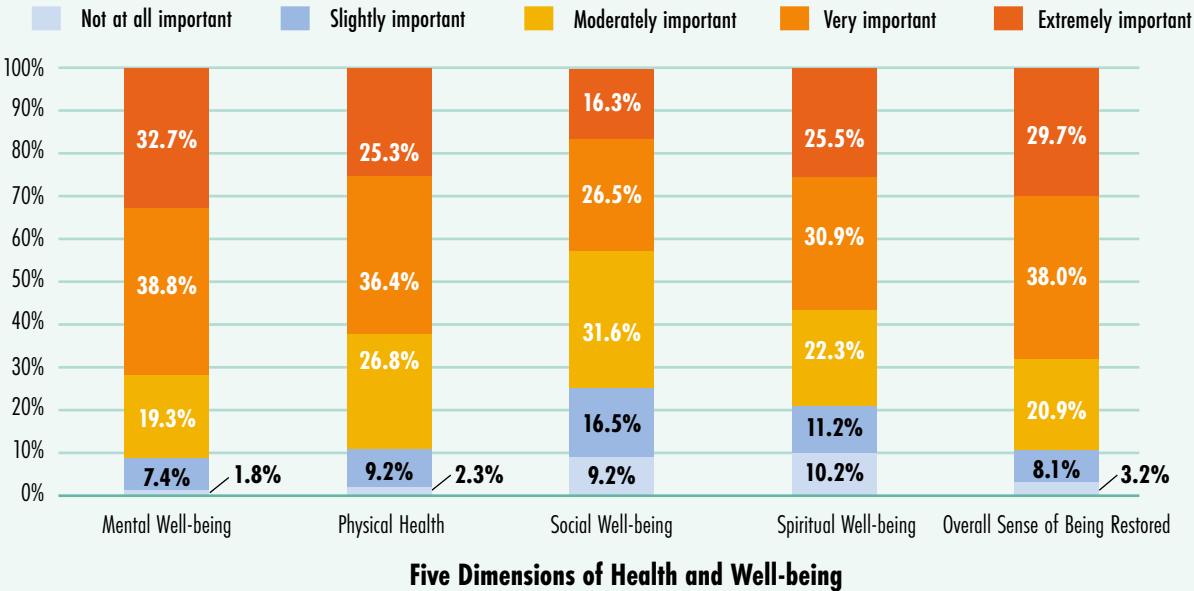
People visit protected and conserved areas to fulfil specific motivations and gain personal benefits (Needham et al., 2016). These motivations offer valuable insights into visitors’ needs and behaviours. Notably, health-related motivations have proven to be particularly important as demonstrated in the ParkSeek survey:

- **Physical and mental health were key drivers for visiting protected and conserved areas** (mean score 3.95²⁴), with respondents expressing a strong desire to *feel healthier* (93%), *relax physically* (90%), *give their mind a rest* (92%), and *stay healthy and fit* (90%).
- **The majority of respondents agreed that visits can positively impact aspects of health and well-being**, with over 84% reporting protected and conserved areas can moderately to extremely improve their *mental, physical, spiritual, and social well-being*, as well as an *overall sense of being restored* (Figure 21).

24 All means are based on a 5-point scale, where 1 represents “Not at all important” and 5 represents “Extremely important.”

FIGURE 21

Perceived health and well-being benefits associated with visiting protected areas. Data source: ParkSeek survey.



5. HEALTH & WELL-BEING BENEFITS

These findings align with previous in-park studies (Chandler, 2024; Lemieux et al., 2012, 2015). For example, visitors to Pinery Provincial Park in Ontario and Gatineau Park in Quebec identified health benefits, particularly improvements in physical (93%) and psychological/emotional (95%) well-being, as key personal motivators for visiting (Lemieux et al., 2012).

INSIGHT FROM PARKS CANADA: PERCEIVED HEALTH, WELL-BEING, AND QUALITY OF LIFE BENEFITS OF PROTECTED AREAS

From June 2023 to March 2025, Parks Canada surveyed 16,467 respondents to understand how protected areas contribute to Canadians' health, well-being, and overall quality of life (Parks Canada, 2024d). The results revealed that:

- 87.5% feel that spending time in protected areas helps improve mental well-being.
- 83.3% agree that spending time in protected areas helps improve their physical health or fitness.
- 89% believe that spending time in protected areas makes them feel better overall.
- 95% consider protected areas to be important to their overall quality of life.

These findings highlight the strong public belief that protected and conserved areas are critical in supporting healthier people and enhancing overall life satisfaction across Canada.

Photo: Austin Walker (Unsplash)



5.2 Gender & Parental Status Influence Visitor Experience

An emerging trend in the ParkSeek survey shows the significant role of both gender and family context in shaping visitor experiences, particularly in relation to health promotion:

- **Women consistently reported physical and mental health as more important reasons** for visiting protected areas compared to men (4.04 vs. 3.81).
- **Women also reported greater perceived benefits from visits** across all five dimensions of well-being (mental, physical, spiritual, social, and an overall sense of being restored).
- **Respondents with children under 18 reported higher perceived benefits** for *mental well-being* (4.06 vs. 3.90) and an *overall sense of being restored* (3.97 vs. 3.79) compared to those without children.

The consistently stronger motivations and reported outcomes among women in the ParkSeek survey align with findings from previous Canadian studies (Lemieux et al., 2015; Reining et al., 2021) and international research (2017; Romagosa, 2018). To fully realize the health benefits of these spaces, there is a clear need for gender-informed outreach strategies that build on the strong environmental and health-related values often held by women, especially those with care-giving responsibilities.

ALBERTA'S PROVINCIAL PARKS AND KANANASKIS COUNTRY RECREATION AREAS

A survey of 1,515 park visitors to Alberta's provincial parks and Kananaskis country over the span of two summers, found that women perceived greater benefits from park visits, especially for spiritual, social, psychological/emotional, and financial well-being (Lemieux et al., 2015). Women were also more strongly motivated to visit protected areas for these expected benefits.

Additionally, women placed higher value in the well-being benefits of park visits for several aspects of child development (anxiety, personal-social behaviour, and social knowledge and competence) compared to men.

This suggests women may be especially drawn to protected and conserved areas for restoration and stress relief and consider these spaces to be valuable for their families. Despite this study being conducted across six different parks and/or recreation areas, visitors consistently and strongly felt park visits were important for child development, irrespective of the protected area visited.



5.3 Commitment to Place & Contribution to Personal Identity

Protected and conserved areas are integral to a system that sustains us and our national identity. Representing more than scenic tourist destinations, visiting protected and conserved areas has the potential to support multiple dimensions of health and well-being, especially when visits are frequent. The ParkSeek survey illustrated:

- **A moderate but significant relationship²⁵ between how often people visit and all five dimensions of well-being** (mental, physical, spiritual, social, and an overall sense of being restored), indicating more frequent visits to protected and conserved areas are linked to greater perceived health benefits.

Similarly, research found visitors to an Ontario provincial park who spent more time in protected areas reported higher restorative benefits than those who visited only briefly (Reining et al., 2021). Likewise, it has been demonstrated that visitors with a strong commitment to parks felt more motivated to visit and experienced greater (Lemieux et al., 2015). This is likely due to a sense of compatibility enhancing the restorative quality of the experience (see the New Brunswick example for further evidence). These studies confirm something that many Canadians know intuitively: nature is deeply connected to our collective identity and plays a vital role in sustaining both personal and societal health.

²⁵ Where $p < 0.01$, indicating moderate evidence that it is unlikely for there to be no relationship between visit frequency and well-being.

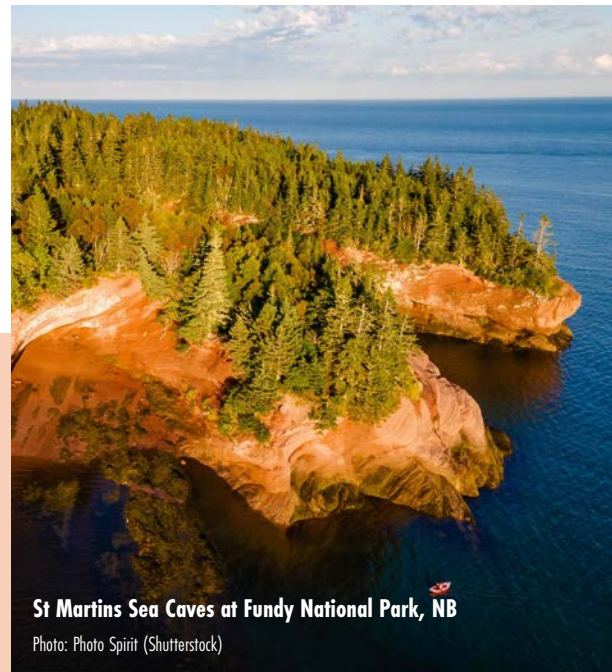
FUNDY NATIONAL PARK, NEW BRUNSWICK

A study conducted in Fundy National Park revealed that visitors experienced meaningful health and well-being benefits from coastal ecosystems and blue spaces (Chandler, 2024). Despite visitors already reporting an average of “good” and “very good” physical and mental health:

- 66% of respondents reported improvements to their physical and mental well-being;
- 65% reported social benefits; and
- 72% noted enhanced feelings of family or friend bonding due to their visit to Fundy.

An important element of this research is place attachment, referring to the emotional, social, and functional bonds people form with specific places (Kil et al., 2021). Notably:

- 84% of respondents agreed “time spent in this place allows me to bond with family and friends,” reflecting the strong sense of social connection afforded by Fundy National Park.
- Furthermore, 70% of visitors agreed with the statements “I identify strongly with this place” and “This place means a lot to me” indicating a meaningful alignment between the park, their personal identity, and their emotional connection to the natural environment.



5.4 Perceived Ecosystem Quality Affects Well-Being Benefits

In considering the role of protected and conserved areas in fostering a sense of identity and connection, it is equally important to recognize the ecological foundations enabling these values to flourish. Ecosystem quality (ecological integrity) is central to the health and well-being benefits associated with these spaces.²⁶ Effective environmental management therefore presents a key opportunity to fully realize the human health benefits of protected and conserved areas while aligning with the core mandate of many protected area agencies. When ecosystems are well managed and perceived as healthy, visitors are more likely to experience greater mental and physical well-being benefits (Reining et al., 2021).

A strong commitment to preserving or restoring ecological integrity is essential to sustaining the ecosystem services that support human health and well-being (Reining et al., 2021), a theme further explored in the Ontario example. Broader research on visitor experiences in Ontario and Quebec reinforces this connection: nearly all visitors surveyed (96%) agreed contact with nature improves the quality of life for Canadians, while 94% felt having nature nearby, or simply knowing it exists, is important regardless of whether they are regular users of it (Lemieux et al., 2012).

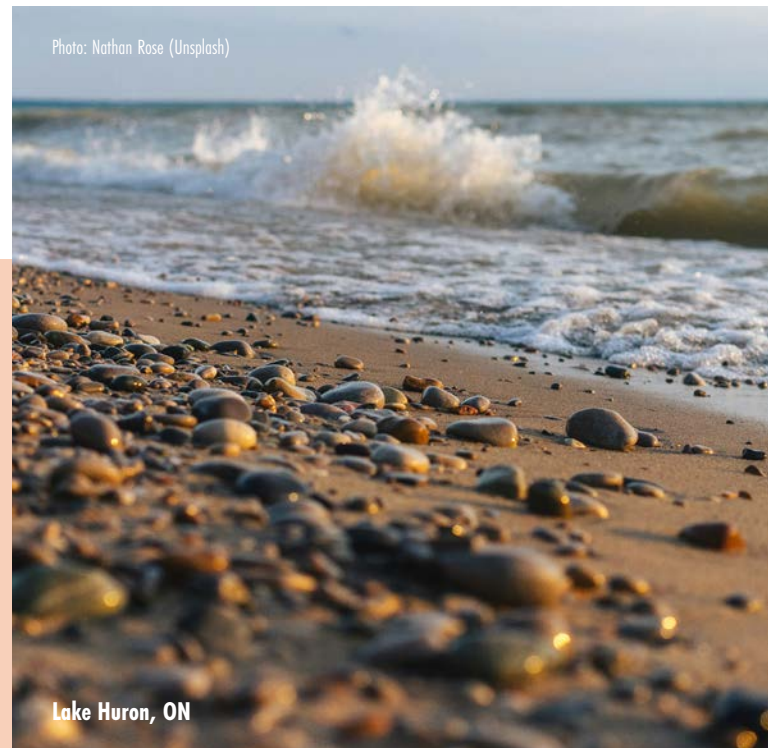
²⁶ According to Parks Canada (2021), an ecosystem has ecological integrity when “it has the living and non-living pieces expected in its natural region, and its processes (e.g., fire, flooding, predation, etc.) occur with the frequency and intensity expected in its natural region.”

PINERY PROVINCIAL PARK, ONTARIO

Located in a highly developed region of southwestern Ontario, Pinery Provincial Park plays a critical role in protecting a relatively high proportion of species-at-risk at both the provincial and national levels. In a study surveying 467 visitors, Reining et al. (2021) found high restorative outcomes across nearly 15 different ecosystem types, including savanna, woodland, sand dunes, and aquatic environments. Visitors who preferred the environment they were in and valued time in nature, reported higher restorative outcomes. This suggests a link between perceived benefits, environmental preference, and the importance placed on natural experiences.

Most significantly, the study was the first to investigate perceived ecological integrity as a contributor to restorative benefits. Perceived ecosystem quality, including species richness, naturalness, and ecological integrity, were all found to have the greatest influence on visitors feeling restored.

This highlights the importance of maintaining high environmental quality and suggests that park management should adopt a holistic approach prioritizing ecological integrity while accommodating diverse visitor uses.



5.5 Social Equity & Access

Although the above findings indicate protected and conserved areas have considerable benefits to the public, applying a social equity lens reveals that not all Canadians experience the benefits of protected and conserved areas equally. For example, the ParkSeek survey found that employment status influenced motivations for visiting and the associated health benefits. Compared to those not in the labour force (e.g., retired):

- **Both employed and unemployed individuals reported higher perceived benefits**, especially for *mental well-being, physical health, spiritual well-being, and overall restoration*.
- **Unemployed individuals were more likely to report physical and mental health as important reasons** for visiting protected and conserved areas.

Income level and access to personal transportation also affected the motivations of respondents:

- Those with an **annual household income below \$40,000 consistently rated physical and mental health motivations as less important** compared to the next income bracket.
- Those with **access to a vehicle perceived greater benefits, and stronger physical and mental health motives for visiting**, especially “*to feel healthier,*” compared to respondents without vehicle access.

These findings point to deeper health and access inequities where structural factors like income, employment, and transportation shape who can meaningfully engage with nature and experience its health promoting potential.

Photo: Alfred Boivin (Unsplash)



5.6 Health & Well-Being Opportunities & Takeaways

Findings from both the ParkSeek survey and in-park research reinforce what many have long believed: protected and conserved areas play a vital role in supporting public health. They encourage physical activity, reduce stress, support mental restoration, strengthen social connections, and foster a sense of community. Such benefits are increasingly important due to the rising prevalence of mental health concerns and chronic conditions. As such, protected areas offer a cost-effective and scalable strategy for advancing a range of public health objectives across Canada.

Respondents to the pan-Canadian ParkSeek survey identified improving physical and mental health as a key motivation for spending time in protected and conserved areas. Most agreed that these visits can positively impact various aspects of health and well-being, with women and individuals with children reporting even greater perceived benefits than men or those without caregiving responsibilities. More frequent visits to protected and conserved areas were also associated with greater perceived health benefits.

Although Canadian research on the health and well-being benefits of protected and conserved areas is still emerging, years of consistent and credible findings have contributed to a solid and expanding knowledge base. This work highlights the importance of understanding how different social contexts, such as gender roles and parental responsibilities, shape experiences and outcomes.²⁷ Ongoing, inclusive research is needed to build on this foundation and to guide more equitable policy and program development.

Results also suggest that access to nature, and its associated benefits, may not be experienced equally. While protected and conserved areas are both ecological assets and vital public health resources supporting the mental and physical well-being of Canadians (CPAWS, 2020), decades of evidence show their use and access have disproportionately

²⁷ This report is not positioned to speak to Indigenous knowledges about the health and well-being values associated with protected and conserved areas, spending time in nature, or undertaking stewardship responsibilities. These perspectives are not excluded to elevate academic findings or suggest that empirical research surpasses Indigenous ways of knowing. Rather, as settler-colonial authors, academic research is the only field of knowledge we can justifiably present.



Photo: CPAWS



Photo: Devon Mackay (Unsplash)

Ucluelet, BC

5. HEALTH & WELL-BEING BENEFITS

favoured affluent, white, able-bodied individuals (Frumkin et al., 2017; Lemieux et al., 2022). Factors such as transportation and proximity to high-quality natural spaces continue to shape who can access and benefit from these environments. Given that natural settings have the potential to be a low-cost, easy-to-use complement to formal healthcare (Astell-Burt et al., 2023), expanding access and inclusivity is both a public health and conservation necessity. This presents an opportunity for policymakers across all levels of government and departments to work together to fully leverage the multifaceted benefits of protected and conserved areas.

Recognizing the growing role of nature in promoting health and well-being calls for coordinated transformations across healthcare, health promotion, and biodiversity conservation (King et al., 2023). Investing in equitable access to protected areas, and in the protection and expansion of these spaces, is essential to addressing the intersecting challenges of population health, social inequity, and ecological sustainability.

Photo: Tristan Frank (Unsplash)



Banff, AB

Photo: Random Mono (Unsplash)



Tofino, BC



Photo: Pressmaster

6. Case studies

Protected areas have profound impacts on the local communities around them. These local impacts are explored in the following three case studies of Great Bear Rainforest, British Columbia, Saguenay-St. Lawrence Marine Park, Quebec, and Gros Morne, Newfoundland and Labrador.



6.1 GREAT BEAR RAINFOREST: Indigenous-led Protection & Conservation Finance Innovation

SECTION AUTHOR: QINGYANG LI

AT A GLANCE

Stretching along the rugged coast of British Columbia, the Great Bear Rainforest (GBR) is one of the largest remaining coastal temperate rainforests in the world (Figure 22) conserving 64,000 km². Featuring old-growth forests and endemic

wildlife like the white Spirit (Kermode) bear, the rainforest contains productive habitats for wildlife and vegetation.

Once at the heart of industrial-scale logging conflicts, GBR has been transformed into an example of sustainable development and Indigenous-led conservation and well-being. This model shifted from a landscape once dominated by extraction into a globally recognized example of socio-ecological prosperity. This change reflects a holistic Indigenous perspective of social well-being centering on relationships to land, cultural renewal, food security, and community governance. Central to this transformation are 26 First Nations whose ancestral stewardship principles drive land-use decisions through formal co-governance structures with the provincial government (Government of British Columbia, 2024d).

FIGURE 22

Geographic extent of the Great Bear Rainforest.

Data source: Government of British Columbia 2024d; Coast Funds 2025a.



KEY THEMES



LEGAL PROTECTION FOR 85% OF FOREST

balancing conservation, social well-being and economic development



\$445 MILLION INVESTED IN CONSERVATION FINANCING

supporting Indigenous-led projects and economic empowerment



FIRST NATIONS CO-GOVERNANCE

for land stewardship and development

6. CASE STUDIES: GREAT BEAR RAINFOREST

FROM CONFLICT TO TRANSFORMATION

In the 1990s, the local economy relied on isolated logging camps, diminished fishing fleets, and scattered tourist lodges. This contributed to a high local unemployment rate of 80%, poor livelihoods, and lack of resource accessibility in Indigenous communities (Smith & Sterritt, n.d.). These issues, coupled with increasing ecological concerns, triggered the “War in the Woods” in Clayoquot Sound (Smith & Sterritt, n.d.). A series of strikes, protests, and road blockades, which attracted international attention through mass arrests and boycotts of BC forest products, promoted broader awareness of Indigenous rights, sustainable land use, and the need for systemic change (Smith & Sterritt, n.d.).²⁸ It laid the groundwork for new models of Indigenous-led stewardship, including the establishment of First Nations Tree Farm Licenses (Borno, 2019; Griess et al., 2019).

Momentum from these events led to a pivotal moment in 2000, when environmental organizations, Indigenous leaders, industry representatives, and the provincial government focused on relationship building and developed a strategic approach to land-use planning (Smith & Sterritt, n.d.). After years of negotiation around ecosystem-based management guidelines, consultation frameworks, and conservation financing mechanisms, the landmark 2006 Great Bear Rainforest Agreement was enacted.²⁹

CONSERVATION AS ECONOMIC CATALYST

The GBR was the first Project Finance for Permanence (PFP) initiative in Canada (ECCC, 2023c; Government of British Columbia, 2024e). By pooling investment funds from government and private actors into a long-term endowment, PFPs provide catalytic capital, enabling sustainable funding for long-term and large-scale conservation efforts, stewardship, and economic diversification in areas such as the GBR.

Since 2008, the capital investment of approximately \$120M acted as an incentive to attract \$316M in new investment, which has diversified the regional economy

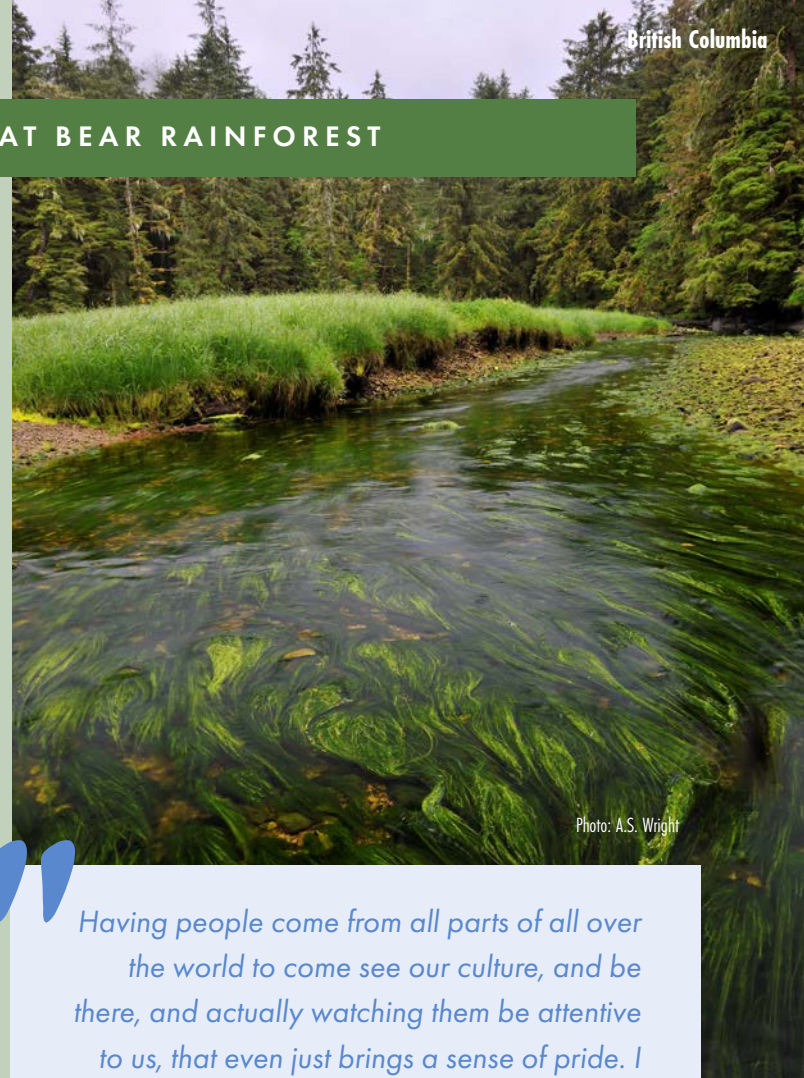


Photo: A.S. Wright

“Having people come from all parts of all over the world to come see our culture, and be there, and actually watching them be attentive to us, that even just brings a sense of pride. I think that’s something that really benefited our community in the long run.” – Indigenous Female Stewardship Staff based in British Columbia (Popa, 2020).

beyond resource extraction (Coast Funds, 2025b). Each dollar invested has generated an additional \$2.63 in new investments. These investments have supported the development of an economy based on Indigenous-led conservation including ecotourism, non-timber forest products, shellfish aquaculture, small-scale forestry, and renewable energy (Coast Funds, 2025a). Diversified First Nation-owned economies also reduced social subsidies and empowered Nations’ long-term economic capacity by creating stable jobs and boosting municipal revenues through tourism and sustainable fisheries.

²⁸ Boycotting applied direct economic pressure to forestry corporations. There was some understanding that as much as a mass movement of people was necessary to safeguard coastal forests, so too was an economic incentive (or disincentive, as the case may be).

²⁹ For more information about the process of establishing the GBR Agreement, please see “Great Bear Rainforest agreement highlights” (Government of British Columbia, 2024e).

6. CASE STUDIES: GREAT BEAR RAINFOREST

CULTURAL RENEWAL & COMMUNITY WELL-BEING

The Indigenous Guardian³⁰ program in GBR employs community members to monitor ecosystems, enforce stewardship rules, and pass on cultural knowledge, contributing to both ecological and social benefits. These roles strengthen cultural identity, improve youth engagement, and support mental health. Such social and cultural benefits reflect broader Indigenous definitions of well-being that emphasizes intergenerational knowledge, place-based identity, and collective governance, suggesting substantial returns through Indigenous leadership and empowerment (Heid et al., 2022; Okpalauwaekwe et al., 2022). Through these practices, First Nations communities are working to heal the land, and in doing so, they are also healing themselves (Popa, 2020).

Renewable energy projects like microgrids have also reduced dependence on diesel fuel in relatively remote communities (Fraser Basin Council, n.d.; Government of British Columbia, 2024c). Many of these communities are off the main BC Hydro grid, historically depending on diesel generators for electricity, resulting in air pollution and the risk of fuel spills on land and in water with negative health impacts (Pollon, 2016). Transitioning to clean energy reduces these risks while improving quality of life and lowering household energy costs.

30 Indigenous Guardians are federally funded programs across Canada providing Indigenous Peoples with a greater opportunity to undertake stewardship responsibilities of traditional lands, waters, and ice.

In 2024 alone, around \$10M has been delivered through the Community Energy Diesel Reduction program, supporting 17 sustainable energy initiatives (Coast Funds, 2025a). This funding includes \$5.5M for 9 projects in the GBR and Haida Gwaii specifically (Coast Funds, 2025a).

“Healing the land, it’s not just about healing the ecosystem. We have a saying around here what you do to the land you do to yourself. In healing the land you’re also healing the community and the culture. It’s all interconnected.” – Non-Indigenous Male Stewardship Director based in British Columbia (Popa, 2020).

Gitga’at’s hydroelectricity facility is expecting to power 95% of homes in Hartley Bay, reducing respiratory and hearing illness and improving water and food security (Agarwal, 2024; Energy BC, 2017; Gitga’at Power, 2023)

Photo: A.S. Wright



6. CASE STUDIES: GREAT BEAR RAINFOREST

NATURE'S HIDDEN WEALTH: CARBON & BIODIVERSITY

Given its substantial carbon storage capacity, GBR became one of the earliest regions to monetize forest carbon under BC's provincial protocol (see section 4.3 for more details on carbon monetization) (Carbonzero, n.d.; Coast Funds, 2024; Government of British Columbia, 2024b). Three forest carbon offset projects have been launched since 2009, and these generate revenue for stewardship, create job and energy opportunities, and revitalize economic opportunities (Mehta, 2024; Oxley & Warren, 2022). Regional Indigenous organizations, including the Nanwakolas Council and Coastal First Nations, play key roles in developing and managing these carbon projects. Their leadership ensures projects align with community values and conservation goals.

The achievements of these forest carbon projects catalysed marine conservation financing efforts (Figure 23), in particular, the protection of the Great Bear Sea through its associated PFP initiative (Fisheries and Oceans Canada,

2024). Since June 2024, this project has attracted \$335M in investment to support the Marine Protected Area network and emerging blue carbon projects across 30,000 km² of ocean territory (Coastal First Nations, 2025).

The stewardship efforts have completed 444 research or habitat restoration programs benefiting 77 species (Coast Funds, 2025a). These initiatives support Indigenous protected and conserved areas (IPCAs), thereby fulfilling both national biodiversity targets and the obligations of First Nations under their own laws and governance systems. This work aligns with BC's *Declaration Act*, which requires provincial laws to uphold Indigenous rights and enable shared decision-making (Government of British Columbia, 2025). It also supports Canada's *United Nations Declaration on the Rights of Indigenous Peoples [UNDRIP] Act* (Bill C-15), which commits to aligning federal laws with UNDRIP and co-developing an action plan with Indigenous partners.

FIGURE 23

Summary of carbon projects in the Great Bear Rainforest.

Data source: Oxley & Warren, 2022; Coast Funds, 2025b; Delta Management Group, 2025; BC Carbon Registry, n.d.; Great Bear Carbon, n.d..



FOREST CARBON

- **1M+** carbon credits generated annually
- **3 ACTIVE FOREST CARBON PROJECTS** under BC Carbon Registry issued credits from 2009-2033
- **CARBON OFFSETS: \$85M+** in carbon credit revenues received by Indigenous shareholders



BLUE CARBON

- **200M+ TONNES OF CO_{2e}** in seabed sediments (2023)
- **\$48M INVESTMENT** in exploring blue carbon credits through Marine Plan Partnership (MaPP)

6. CASE STUDIES: GREAT BEAR RAINFOREST

The GBR overlaps with four Key Biodiversity Areas (KBAs) and provides refuge for iconic Spirit Bears, salmon runs, and ancient cedars (Figure 24). Since 2008, \$2.8M has been invested specifically in conservation and stewardship initiatives with job creation and employment support, as part of the broader \$445 million in total investment mobilized through Coast Funds (Coast Funds, 2025a).

LESSONS LEARNED: INVESTING IN INDIGENOUS-LED CONSERVATION RESULTS IN WIDESPREAD PROSPERITY

The Great Bear Rainforest demonstrates that over time, conservation economies perform very well in terms of long-term employment, social well-being, and ecosystem resilience. This case exemplifies how reconciliation supported by co-governance and resource access leads to equitable, prosperous futures. By respecting Indigenous sovereignty, GBR transformed conflict into multifaceted prosperity:

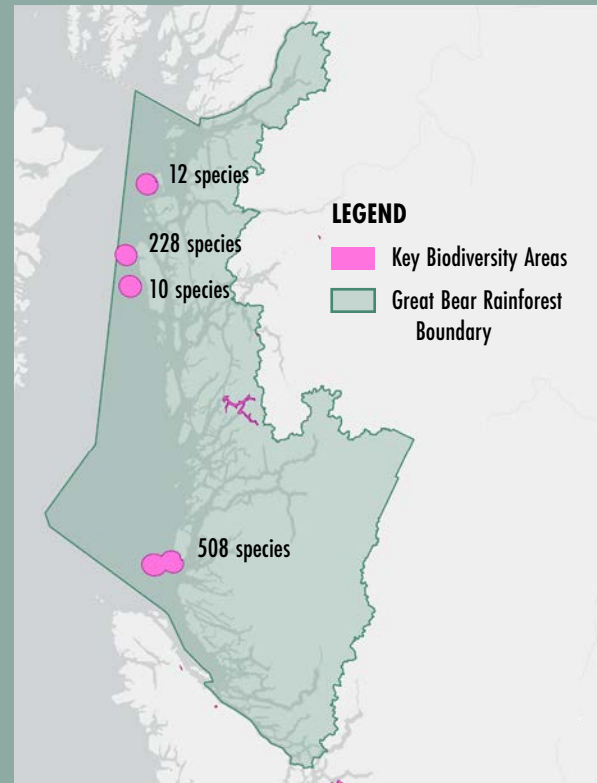
- **Economic stability:** money flows from year-round jobs and diverse Indigenous-led businesses rather than the shorter-term affluence generated by resource extraction
- **Social success:** Guardian programs revive cultural identity, reduce mental health issues, improve social well-being, and empower Indigenous communities.
- **Environmental benefits:** Carbon, biodiversity conservation, and nature-based economies generate long-term revenue.

As Canada advances toward its 2030 climate and biodiversity targets, the GBR offers a replicable blueprint: invest in Indigenous-led conservation and economic capacity-building, and prosperity will follow.

FIGURE 24

KBAs within the GBR

Data source: Arril, 2021; KBA Canada, 2025.



6.2 SAGUENAY-ST. LAWRENCE MARINE PARK:

Importance of Collaboration for Ecological Sustainability and Economic Success

SECTION AUTHORS: ALEXANDRA FRIEDMAN, JASON WONG

FIGURE 25

Geographic extent of the Saguenay - St. Lawrence Marine Park.

Data source: Parks Canada, 2025; Boquet & Rioux, 2018.



AT A GLANCE

The Saguenay–St. Lawrence Marine Park covers over 1,200 km² of marine ecosystems at the meeting point of the Saguenay River and St. Lawrence Estuary (Figure 25). Created in 1998, this marine park emerged from the initiative of local communities and environmental researchers to protect St. Lawrence Estuary beluga whales, a specie at risk. This marine park currently covers part of these beluga whales’ critical habitat. The goal of the Saguenay–St. Lawrence Marine Park is to safeguard these ecosystems to ensure current and future generations can benefit from this conserved area and use it for education, recreation and research (Boquet & Rioux, 2018). The 12 communities bordering the Marine Park have an estimated population of 19,000 in 2024 (Parc marin du Saguenay–Saint-Laurent, 2025).

KEY THEMES



\$126 MILLION spent by visitors on activities in this Marine Protected Area



\$28-33 MILLION PER YEAR in ecosystem services



COLLABORATION AND CO-GOVERNANCE to protect endangered species and marine ecosystems

6. CASE STUDIES: SAGUENAY–ST. LAWRENCE MARINE PARK

Co-management and participatory governance help support the sustainability of the Saguenay–St Lawrence Marine Park. The marine park is successfully co-managed by the Government of Quebec and Canada, which receive recommendations from a coordinating committee. This committee is a participatory governance entity composed of representatives from the Innu Essipit First Nation, the Wolastoqiyik Wamspekekuk First Nation,

LINKING CONSERVATION TO ECONOMIC RETURNS

The Saguenay–St. Lawrence Marine Park is one of the largest marine protected areas in Québec and provides habitat for a diversity of marine species including endangered beluga whales, endangered blue whales, barrow’s goldeneye, and harbour porpoises (Parks Canada, 2023c).

Eco-tourism in the region has grown and benefited from the protection of marine ecosystems, including those areas covered by the Marine Park (Parks Canada, 2010). In 2023-2024, 1.1 million visitors to the park spent an estimated \$126 million (Parks Canada, 2024a, 2025). Abundant wildlife viewing opportunities, including seabirds, seals, and whales, support 32 companies that provide water-based activities such as kayaking and whale-watching (Parc marin du Saguenay–Saint-Laurent, 2025). Numerous studies globally have found that eco-tourism activities directly contribute substantial economic returns and also buoy other local industries such as hotels,

ECOSYSTEM SERVICES AND SOCIAL BENEFITS, GOING BEYOND ECOTOURISM REVENUE

When including crucial services like environmental regulation, food production, and cultural and educational uses, experts estimate that the ecosystem services provided by the Marine Park have a value ranging from \$28 million - \$33 million per year (Boquet & Rioux, 2018).

As part of its main goal, the marine park also directly supports educational activities including visitor outreach and scientific research. In 2024 alone, 94 research projects were undertaken at the marine park (Parc marin du Saguenay–Saint-Laurent, 2025). The results from this work inform management of the marine park. For example, the Saguenay–St. Lawrence Marine Park is a highly active shipping channel, and researchers are working with the

from municipalities bordering the park, and the scientific community.

The resulting collaboration has created an ecologically and economically prosperous marine park that is a focal point of the region and attracts over one million tourists every year, both domestic and international (Parc marin du Saguenay–Saint-Laurent, 2025; Parks Canada, 2023b).

restaurants, and other tourist attractions (Cossengue et al., 2025; Koetje, 2020; Kirkby et al., 2010). These eco-tourism dollars support related employment, offering opportunities and strengthening the local economy by an estimated 4,000 jobs in 2005 (Parks Canada, 2010).



The Eco-Whale Alliance is a voluntary and rigorous initiative that targets the highest standards in eco-responsible whale-watching practices, thanks to some twenty performance indicators. The members are excursion companies operating in the Saguenay–St. Lawrence Marine Park, the Group for Research and Education on Marine Mammals, Sépaq and Parks Canada. They have been working together since 2010 to limit the impacts and ensure the sustainable development of whale-watching activities in the marine park.”

– Alliance Éco-Baleine

6. CASE STUDIES: SAGUENAY–ST. LAWRENCE MARINE PARK

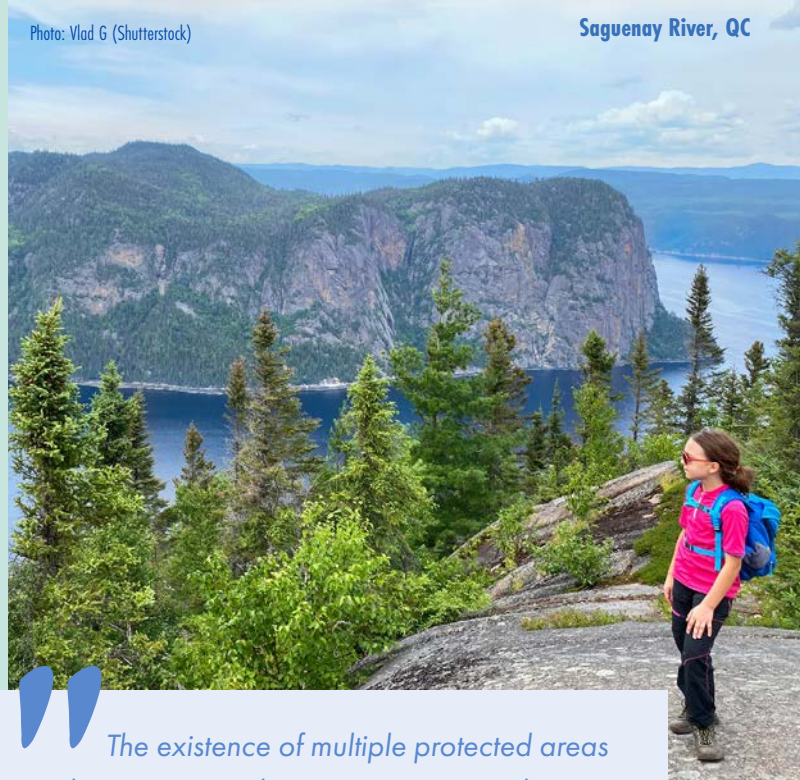
marine transportation industry to implement sustainable management measures. Academic research led to the implementation of slow-down and no-go zones for transiting boats to reduce the risk of collisions and noise disturbance to rorquals and belugas.

Additionally, other management initiatives have been implemented, such as the Eco-Baleine program, which teaches vessel operators best practices for whale watching (Alliance Éco-Baleine, 2019). Many land-based observations sites are promoted throughout the marine park for visitors to observe marine species which reduces the number of boats on the water. These management measures improve marine habitats for whales and other species by minimizing disturbances, therefore creating better educational and viewing experiences for visitors.

Finally, establishment of the marine park supported the launch of an Indigenous Guardians program in 2022. Led by the Wolastoqiyik First Nation and the Innu Essipit First Nation and supported by Parks Canada, Indigenous Guardians are trained in core skills like navigation and environmental monitoring to provide opportunities for increased stewardship of traditional lands and waters (Parks Canada, 2023b). Guardian programs have far-reaching benefits by supporting traditional cultural practices and knowledge sharing and empowering the traditional stewards of these waters and lands, thereby taking a tangible step towards Canada's commitments to Reconciliation with Indigenous Peoples.

LESSONS LEARNED: SUCCESSFUL COLLABORATION LEADS TO SUSTAINABILITY, AND A FUTURE EXPANSION OF THE PROTECTED AREA

The environmental and economic success of the Saguenay–St. Lawrence Marine Park is strongly based on effective co-management and has led to an ongoing initiative to expand the area under protection. The proposed marine park expansion is progressing and would more than triple the area currently protected, in part to protect the entire critical habitat of the St. Lawrence Estuary beluga whales and other ecologically significant areas (Gouvernement du Québec, 2024). The current marine park along with the expansion would cover 37 municipalities with a population of over 125,500 (Gouvernement du Québec, 2024). This



The existence of multiple protected areas with various complementary statuses enhances the health of ecosystems in the current [Saguenay–St. Lawrence] Marine Park as well as efforts to preserve and promote the estuary. This patchwork of protected areas testifies to the region's natural and cultural treasures as well as the will to protect and promote them.”
– Saguenay–St. Lawrence Marine Park expansion project team

would provide the opportunity for these additional communities to participate in the management of the marine park and benefit from increased tourism.

Overall, effective collaboration and conservation measures have led to significant economic benefits through conservation and enabled the expansion initiative. The collaborative planning processes utilized in the marine park have made it an ambitious, large-scale protected area that promotes both economic and ecological sustainability and which will soon protect the entirety of critical habitat ranges for key species.

6.3 GROS MORNE NATIONAL PARK:

Long-term Socio-economics of Conservation

SECTION AUTHOR: JASON WONG

AT A GLANCE

The Gros Morne area spans 1,805 km² or more than twice the geographic extent of Calgary, and contains many rare plants including the Newfoundland Chickweed, a rare endemic plant species found in only four locations worldwide (KBA Canada, 2024). The region is home to seven small

communities (Figure 26) with an estimated combined population of less than 3,200 in 2024 (Statistics Canada, 2025a). Prior to the establishment of Gros Morne National Park in 1973, the economies of these rural communities relied on logging and fishing.

Over a period of more than fifty years, regular investment by the federal government since the park's inception has reinforced strong protection of the natural landscape based on collaboration and trust between government and local stakeholders. Park establishment also catalyzed private investment and stemmed the flight of residents from rural communities. Due to the enduring partnership of stakeholders over time, substantial infrastructure and social benefits have arisen from the increasing involvement of private investment. Overall, decades of local leadership and collaboration with the federal government have

FIGURE 26

Geographic extent of Gros Morne National Park. Data source: TCAR, 2025



KEY THEMES



KEY INFRASTRUCTURE

developed for rural residents due to the National Park



\$596 MILLION

spent by non-resident visitors to the province



QUALITY OF LIFE IMPROVEMENTS

to stabilize local demographic trends

6. CASE STUDIES: GROS MORNE NATIONAL PARK

transformed Gros Morne into a nationally recognized park, where the spirit and active involvement of its communities continue to drive a flourishing tourism and cultural hub (C. Kennedy, personal communication, July 2, 2025)

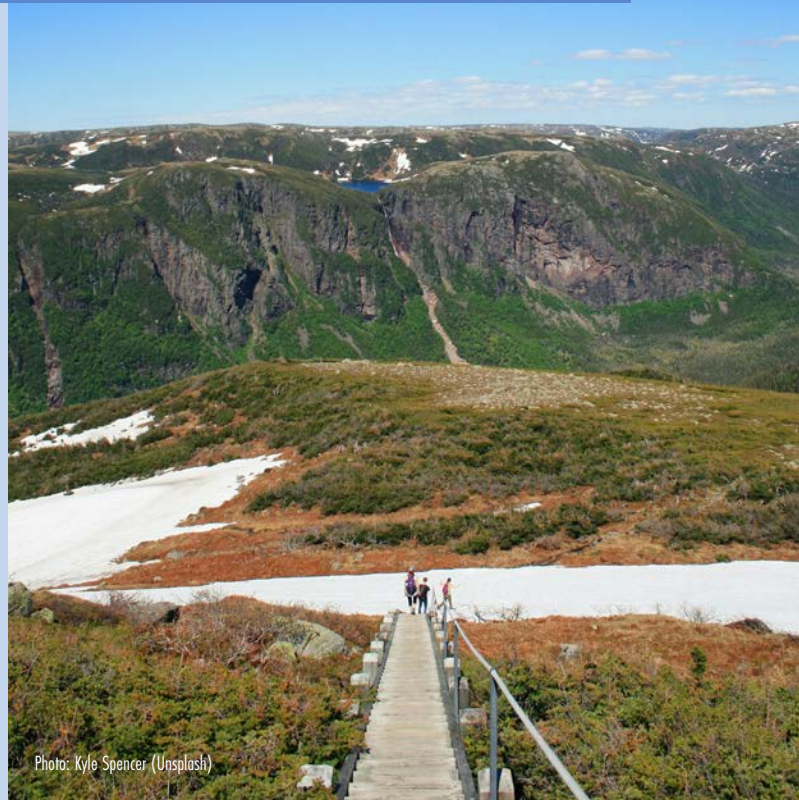
EMERGENCE OF TOURISM AS AN ECONOMIC BEDROCK FOR GROS MORNE

Located on the western coast of Newfoundland, the Gros Morne area includes the communities of Cow's Head, St. Paul's, Rocky Harbour, Norris Point, Trout River, Woody Point, and Glenburnie-Birchy Head-Shoal Brook (Figure 26).

These communities historically relied upon fishing, supplemented by forestry (Library and Archives Canada, n.d.). Overfishing due to technological advances and poor management led to the collapse of several cod fisheries and a moratorium on cod fishing in 1992 (Roy et al., 2006). As a result, focus shifted towards the economic opportunities of tourism and the appeal of premiere destinations such as Gros Morne National Park.

In the 1990s, the park had a short tourism season of six to eight weeks. Since that time, the development of Gros Morne's transportation infrastructure, number of accommodations, and season extension festivals has expanded the tourism season to a five-month window, with ongoing efforts to further extend into the winter months. Through a strong partnership between Parks Canada, Tourism Newfoundland, Gros Morne Co-operating Association, and local communities, reinforced by significant investments by government, nature-based tourism has become the main economic engine for these seven communities (Dodds, 2024).

The success of Gros Morne as a tourist destination has been well documented, with over 210,000 visitors estimated in 2023-2024 and 86% of surveyed residents indicating that tourism improves the quality of life in their town (Dodds, 2024; GMTRIP Evaluation Team, 2022). The provincial government has estimated that non-resident visitors spent \$596.3 million in the province in 2024 (TCAR, 2025). Federal investment has largely supported the tourism industry through the construction and expansion of trails, roads, and bridges. However, these investments have also attracted additional private expenditures, creating



spillover effects in terms of social and health infrastructure in the area. Strong environmental protections have helped sustain Gros Morne's economy and have supported the development of key infrastructure including:

- Bonne Bay Health Centre in Norris Point;
- Two pharmacies;
- The National Park Discovery Centre, educating visitors on the traditional lands and activities of the Mi'kmaq Nation; and
- The Bonne Bay Aquarium and Research Station operated by Memorial University, a publicly accessible exhibit on the intersection between conservation and education (C. Kennedy, personal communication, July 2, 2025).

The majority of Gros Morne residents (63%) believe tourism is the reason for improved public infrastructure in and around their communities town (Dodds, 2024; GMTRIP Evaluation Team, 2022). The strong economic potential of Gros Morne continues to attract private enterprises, drawing further private investment and amplifying the impact of government expenditures.

6. CASE STUDIES: GROS MORNE NATIONAL PARK

GROS MORNE'S GREEN ECONOMY AND QUALITY OF LIFE

A green economy founded on the tourism appeal of Gros Morne National Park has provided tangible economic benefits to residents. The median income of residents in the Bonne Bay Area (covering all Gros Morne communities except for Cow's Head) grew 63% from approximately \$21,300 in 2001 (adjusted to 2022 dollars) to \$34,700 in 2022 (Government of Newfoundland and Labrador, n.d.-c), with the largest proportion of residents (47%) employed in tourism-related industries.³¹

Additionally, there has been a consistent trend of fewer cases of people receiving income support assistance (ISA) in the Gros Morne area, dropping from a high of 20.7% in 1996 to 6.1% in 2023 (Figure 27) (Government of Newfoundland and Labrador, n.d.-a). As the last option of income for low-income households, a low uptake of ISA indicates residents have a strong financial ability, buoyed by the economic opportunities of Gros Morne's tourism industry, to meet their living expenses.

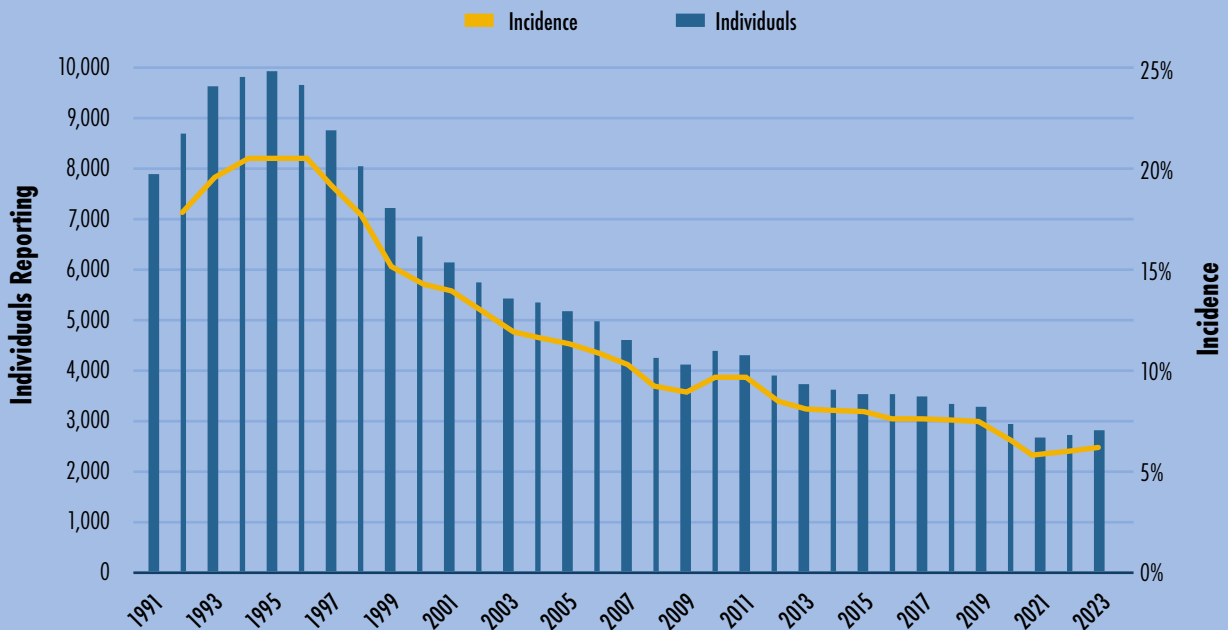
31 Consisting of the sectors of health care and social assistance; arts, entertainment, and recreation; and retail trade industries (Statistics Canada, 2022).



FIGURE 27

Incidence and count of individuals on Income Support Assistance, Corner Brook - Rocky Harbour Rural Secretariat Region, 1991 – 2023.

Data Source: Newfoundland and Labrador Department of Children, Seniors and Social Development, 2024.



The benefits of Gros Morne extend beyond economics into residents' quality of life, offering an environmentally sustainable path based on local values and pride of place. For example, the enclave of Woody Point hosts the annual Writers at Woody Point festival, drawing international visitors for comedy, concerts, and writing workshops. This festival has become a leading cultural event in Canada (C. Kennedy, personal communication, July 2, 2025).

The cumulative effect of these types of cultural offerings and increased diversity likely contributes to more residents staying in their communities, as compared to other rural regions in the province.

Aside from Avalon Peninsula, home of the provincial capital of St. John's, the Gros Morne region (encompassed by the Corner Brook-Rocky Harbour Rural Secretariat) had the lowest average population decrease (-2.3%) from 1986 to 2021 of all rural regions in Newfoundland. Over this 35-year period, the Corner Brook-Rocky Harbour Rural Secretariat had either more modest population losses or even population gain compared to all other rural regions excluding Avalon Peninsula (Figure 28) (Government of Newfoundland and Labrador, n.d.-b). Gros Morne National Park's social impacts contribute to stabilizing the population of local communities, supporting school enrolments and maintaining the social fabric of rural towns.

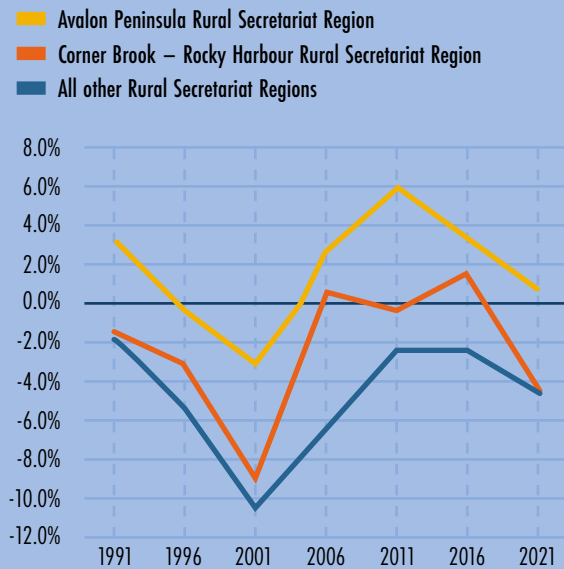
**LESSONS LEARNED:
CONSERVATION BRINGS LONG-TERM SOCIO-ECONOMIC BENEFITS TO LOCAL RESIDENTS**

Gros Morne National Park's success in protecting its unique environment and revitalizing the surrounding rural economies demonstrates the long-term socio-economic benefits of conservation. Alongside higher incomes and a longer high season of activity, effective conservation can bring improvements in social infrastructure and a better quality of life for local residents.

FIGURE 28

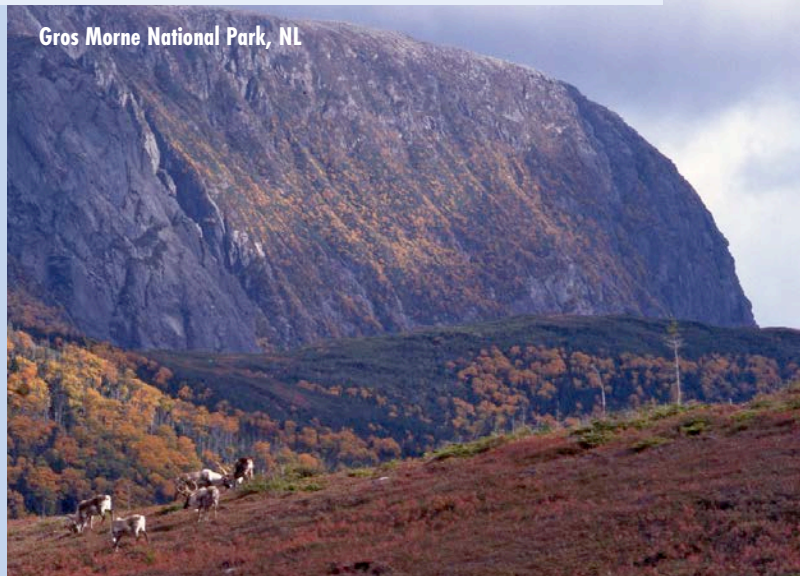
Population changes from 1986 - 2021 by Rural Secretariat Region, Newfoundland and Labrador.

Data source: Newfoundland and Labrador Department of Children, Seniors and Social Development, 2024.



There is a feeling of empowerment... that is connected to the potential... [of] the tourism industry that does not exist in other communities in this province."
– Gros Morne resident, GMTRIP 2021 Survey

Gros Morne National Park, NL





Conclusion & Recommendations



CONCLUSION & RECOMMENDATIONS

Canada's nature is a point of national pride and the foundation for its economic and social resilience. The estimates of the socio-economic benefits of existing protected and conserved areas presented in this study serve as evidence, based on the latest available data, for the numerous positive outcomes of investing in conservation.

Alongside economic considerations, respecting the sovereignty and leadership of Indigenous nations on conservation values and sustainable development is equally and critically important. Indeed, Indigenous communities have been at the forefront of exploring the benefits of conservation-based economies – experiences which can be scaled up across Canada. Including Indigenous interests in the planning of protected and conserved areas therefore represents an opportunity to maximize the socio-economic benefits of conservation.

The responsibility falls upon all levels of government to consider these economic, environmental, and health benefits when designing and implementing conservation and development policies. **To continue Canada's momentum toward meeting its commitment to protect 30% of its land and waters by 2030, we recommend that:**

Photo: Chris Robert (Unsplash)



1



The federal government continue to support the establishment and management of protected and conserved areas, utilizing a variety of mechanisms that include direct funding to Indigenous peoples, Parks Canada and provincial/territorial governments, as well as other instruments that include additional Project Finance for Permanence (PFP) investments and the proposed Canadian Nature Protection Fund. Reliable long-term funding will lead to continued growth of the economic benefits generated by Canada's protected and conserved area network, which already supports nearly 125,000 jobs – particularly in rural communities – and generates visitor expenditures 270% greater than government outlays.

CONCLUSION & RECOMMENDATIONS

2



Canada should establish a working group on natural capital accounting to implement a mechanism to include the value of protected and conserved areas in our balance sheets, with the goal of eventually including all of Canada's public lands, freshwater and ocean. Many of the ecological values of Canada's natural areas outlined in this report are already tracked through national statistics but unlike privately held land, have zero value assigned on Canada's government balance sheets. Adding the value of these "natural assets" to the balance sheets would recognize the many benefits they bring to the health and wellbeing of Canadians and the economy.

3



Canada should significantly improve its monitoring of protected and conserved areas to include socio-economic benefits and reliably measure the effect of protection on ecological features. For marine protected areas in particular, existing fisheries stock assessments and oceanographic surveys are often not at an appropriate spatial scale to allow for conclusions at a site-specific level or inside/outside protected area comparisons and should be supplemented by new and tailored monitoring programs for each site. Rightsholders, stakeholders, and local communities should be actively engaged in all monitoring efforts.

4



All levels of government and industry integrate the value of ecosystem services and blue carbon into conservation planning and management plans for activities in Canada's ocean, land and freshwater.

This may mean expanding the boundaries of proposed protected areas to include carbon rich areas, considering the effects of activities on seabed carbon stores, and prioritizing the protection of carbon rich coastal ecosystems.

5



All levels of government and communities intensify and increase focus on continuing to carry out the work already underway to protect carbon-rich landscapes and recognize carbon-richness as a key factor in identifying future terrestrial protected and conserved areas. This may mean prioritizing the protection of carbon-dense landscapes, such as wetlands, that also offer high ecosystem services, and accounting for the socioeconomic value of carbon stored in soils and plants. By protecting carbon-rich environments, ecological and economic co-benefits are achieved by preventing disturbances that emit GHGs and their associated social costs.

Whistler, BC



Photo: Dmitry Spravko (Unsplash)

CONCLUSION & RECOMMENDATIONS

6



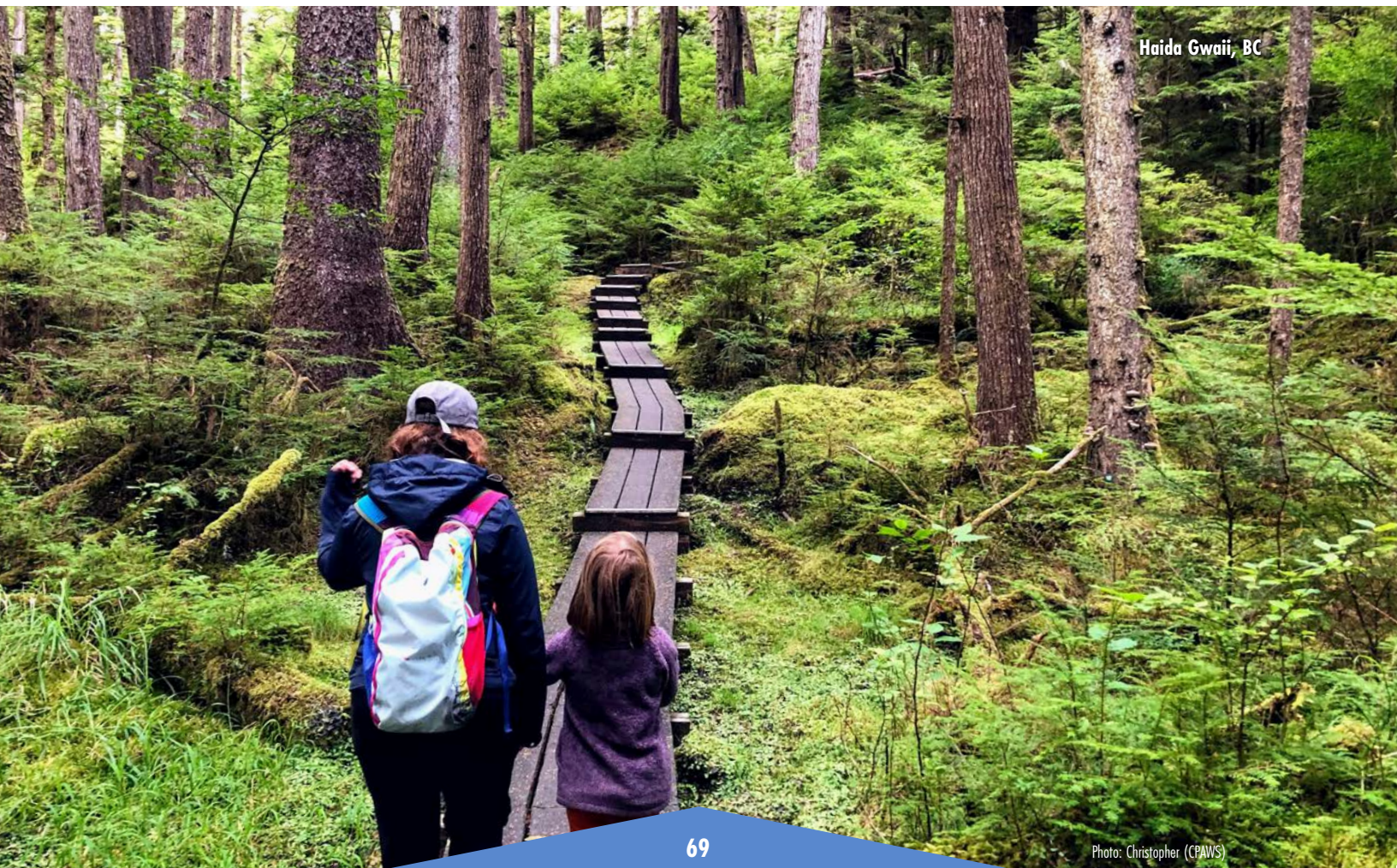
The social capital embedded within Canada's protected and conserved areas should warrant equal attention alongside ecological capital in the development of conservation policies and management programs. Health and well-being considerations should be integrated within all levels of government (i.e., municipal, provincial, federal, Indigenous), and mainstreamed throughout the relevant ministries and departments, including those not traditionally involved in the establishment, development and management of protected areas.

7



Expanding and diversifying the network of, and access to, protected and conserved areas is essential for advancing social and health equity among all Canadians. Prioritizing equitable access for under-served populations, including but not limited to low-income communities, minority groups, and those in rural or remote regions, ensures that the physical, mental, and cultural benefits of nature are shared equally across society.

Canada has an immense opportunity to reinvigorate its economy through the creation of protected and conserved areas enroute to our goal of 30% by 2030 – and action on this would also mitigate the far-reaching impacts of climate change. Prioritizing conservation is an investment for all Canadians.



Haida Gwaii, BC

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Appendix A – Methodology

ECONOMIC MODELLING

This section details the methods behind the calculation of the economic impacts of protected and conserved areas nationally and by province/territory. This involved compiling all expenditures on protected and conserved areas and modelling their impacts through an Input-Output model.

Expenditures on protected and conserved areas

Expenditures were broadly classified as either government, non-profit, or visitor spending.

For both government and non-profit expenditures, an on-line search was done to compile expenditure data related to protected and conserved areas in the 2023-2024 fiscal year. Detailed operational expenditure data was also provided by Parks Canada and Ducks Unlimited Canada. For expenditures that were multi-year grants, funding was assumed to be uniform across each year (i.e. total funding amount divided by number of years).

In certain cases, federal government expenditures were identified at the national level for which breakdowns by province/territory were unavailable for certain spending programs. To estimate the breakdown by province and territory, we used data from the Public Accounts of Canada to identify federal departments' expenditures on transfer payments in 2023-2024 for programs directly related to protected and conserved areas, by province and territory. These transfer payment totals were used to calculate each province and territory's share, and the above federal government expenditures were allocated in these proportions to each subnational jurisdiction (Public Services and Procurement, 2023). Transfers between various levels of government and to certain non-governmental organizations were tracked and accounted for to avoid double-counting expenditures.

Non-profit expenditures excluded amounts for purchases of land and conservation easement payments, amortization,

and gifts to qualified donees as these expenses likely do not stimulate actual economic activity within protected and conserved areas.

For visitor expenditures, spending was considered for national and provincial/territorial parks. Estimates of amounts spent at national parks by industry were provided by Parks Canada, who used business intelligence and visitation figures to produce estimates of visitor spending for vehicle/vessel operation, food and beverages at restaurants, accommodations, and other expenditures (such as outdoor clothing, hardware, and tents). These estimates include expenditures within national parks and national marine conservation areas, as well as nearby towns.

Visitor expenditures at provincial/territorial parks were not readily available and were estimated based on the number of visitors to provincial parks multiplied by a modeled average spend per visit for travel by Canadian residents. The number of visitors at provincial/territorial parks was taken from published figures from relevant park agencies. The average spend per visit for provincial/territorial parks was calculated by taking the mean expenditures per visit across the second quarter of 2023 to the first quarter of 2024 for same-day visits by Canadian residents traveling in Canada for holidays, leisure, and recreation (Statistics Canada, 2025e). The derived average spend per visitor is likely an underestimate, as it does not include overnight expenditures or expenditures by foreign visitors to Canada, both of which have higher values than those of same-day visits by Canadian residents. Results may also be affected by the varying data quality, including only one valid data point (to be used with caution) for all three Territories. The allocation of estimated spending at provincial/territorial parks by industry (e.g. vehicle/vessel operation, food and beverages at restaurants, etc.) followed those of spending at national parks.

Input-Output Model

To produce estimates of the economic impact of protected and conserved areas, CPAWS engaged Inference Economics to create a custom Input-Output (IO) model. Due to the specificity of sectors that were taken to represent protected and conserved areas and the different ways in which they interact (e.g. patterns of economic activity in parks are likely to differ from those in protected areas that are not parks), a custom IO model was developed. This model is a blend of an IO model created by Statistics Canada for Parks Canada (used in this study for all expenditures related to provincial and national parks), and an independent IO model for all other expenditures. In both cases, the models were based on Supply Use Tables (SUT) for 2019 produced by Statistics Canada as these were the most recent data available at time of writing that were not impacted by the COVID-19 pandemic (spanning approximately 2020 – 2022).

The Parks Canada IO model was used to model the impacts of spending in national and provincial/territorial parks. This model included custom multipliers produced by Statistics Canada for Parks Canada which are based on administrative data that are not publicly available, resulting in more accurate modelling of the economic impacts. While previous modelling by Parks Canada produced figures on the economic impacts of national parks, this study also utilizes the Parks Canada IO model to estimate

the impacts of provincial and territorial parks. As a result, figures may not match or be compatible with figures in the public domain from Parks Canada due to modifications made by CPAWS for the purposes of this study.

The independent IO model was used to model the impacts of government and non-profit spending. These expenditures were allocated to the “Performing arts, spectator sports and related industries, and heritage institutions” sector as this was the classification deemed most closely aligned with conserved areas, for which SUT data was publicly available. In other words, spending in protected and conserved areas was assumed to interact with other sectors of the economy the same as how spending in the “Performing arts, spectator sports and related industries, and heritage institutions” sector influences other sectors.

The IO models used in this study calculated impacts on jobs through the use of labour productivity data for 2023 from Statistics Canada (2025d). Based on this data source’s values for number of jobs, hours worked, and labour productivity, we calculated the number of jobs per dollar of output for each industry in each province/territory. This value was then multiplied by the IO model’s estimates for output for each and aggregated to province/territory to determine the job impact of protected and conserved areas.

CARBON MAPPING

To estimate the carbon stocks of protected and conserved areas in Canada, CPAWS combined publicly available national carbon datasets and calculated statistics for areas designated as PAs or OECMs in CPCAD. Data sources for terrestrial carbon consisted of Sothe et al. (Sothe et al., 2022) work on the concentration of soil carbon and the concentration of carbon in plants in forested areas. Datasets for marine carbon were acquired from Epstein et al (Epstein et al., 2024b) publication on the concentration of organic carbon in seabed sediments. The geographic extent of protected areas and conserved areas was taken from (ECCC, 2024a).

Preprocessing carbon rasters

To calculate the carbon stock (measured in kg), the carbon concentration values for each cell in the carbon datasets were multiplied by the cell area or volume (as appropriate) using raster calculator. For each of the carbon datasets the exact area of each cell was calculated based on latitude / longitude distance calculations. The following formulas were used for each of the carbon datasets:

$$\text{Soil carbon} = \text{Value kg C/m}^2 * \text{Cell area}$$

$$\text{Forested carbon} = \text{Value kg C/m}^2 * \text{Cell area}$$

$$\text{Seabed sediment carbon} = \text{Value kg C/m}^3 * \text{Cell area} * 0.3m$$

APPENDIX

For the seabed sediment carbon raster, a layer representing the estimated distribution of bedrock was used to identify where no seabed sediment carbon is expected, thereby improving the accuracy of the marine carbon estimates.

Preprocessing protected areas

From CPCAD, only polygons that had a PA/OECM definition not equal to 5 (i.e. a value other than “Not applicable”) were kept.

For the purposes of estimating soil and forest carbon, all biomes (both Marine and Terrestrial) were permitted to include vegetated carbon pools in coastal areas. The forest carbon raster includes non-treed vegetation and dead plant material carbon pools, and Marine biomes include coastal areas.

For the purposes of estimating the amount of seabed sediment carbon stored in marine protected and conserved areas, the carbon raster was aggregated to bioregions as defined by Fisheries and Oceans Canada (DFO). To align protected and conserved polygons from CPCAD to DFO

bioregions, we performed a Union of both layers and then extracted the Protected Areas from this unionized dataset using Select by Attributes.

One limitation of this approach is that the publicly available DFO bioregion spatial data is generalized and has a relatively less precise boundary edge compared to CPCAD polygons. As a result, the DFO bioregion dataset omits certain nearshore and coastal areas.

Calculate total carbon stocks by zone

The Zonal Statistics as Table tool was used with the protected and conserved area polygons as the zones and the corresponding carbon stock dataset as the value raster. Counts of carbon for each province, territory, and DFO bioregion by carbon pool (soil, vegetation, and seabed sediments) were produced and summed to calculate the total carbon stock.



ABOUT CPAWS

The Canadian Parks and Wilderness Society is Canada's only charity dedicated to the protection of public land, freshwater and ocean with a strong national and regional presence across the country. We are Canada's leader in conservation with 60 years of success based on our expertise, public education and advocacy, relationships and local knowledge. We are a credible, trusted, knowledge-based, nationally coordinated, collaborative organization, focused on conserving nature to respond to the dual crises of accelerated biodiversity loss and climate change. Our vision is that at least half of land, freshwater and ocean in Canada is permanently protected to sustain nature and people for current and future generations.

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