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The Peatlands Protection Society respectfully acknowledges that we live and work in a region that overlaps with the unceded traditional and ancestral lands of the Kwantlen, Katzie,

Musqueam and Tsawwassen First Nations.





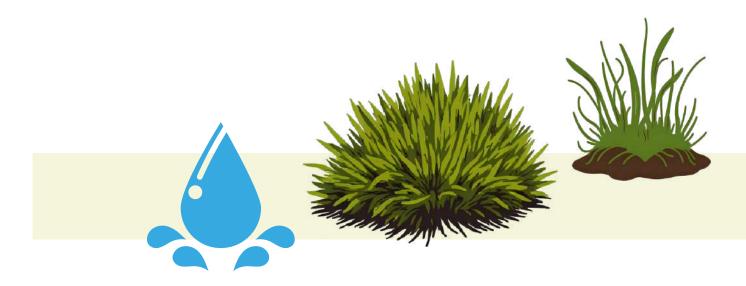
INTRODUCTION

Canada's vast peatlands, comprising the world's second-largest carbon sink, are facing increasing degradation due to fragmented provincial governance and ongoing commercial extraction.

This unsustainable approach contributes significantly to climate change, biodiversity loss, and compromised water resources. Emissions from peatland mining in Canada more than doubled from 0.9 megatonnes (Mt) in 1990 to 2.1 Mt in 2021, exacerbating global warming (Pratt et al., 2023).

Currently, only 15% of Canada's peatlands receive formal protection (WCS Canada, 2024), a stark contrast to their ecological importance. International precedents from Ireland and the United Kingdom demonstrate successful national strategies for phasing out peat extraction.

This brief recommends a cohesive national strategy for Canada, including an immediate moratorium on new peat mines, a phased ban on sales and exports, robust incentives for peat alternatives, the establishment of a comprehensive Just Transition Fund for affected communities, and a significant expansion of protected peatland areas, particularly through Indigenous-led conservation initiatives. Such a strategy is critical to safeguard these vital ecosystems for future generations and to meet Canada's climate and biodiversity commitments.



THE URGENT NEED TO PROTECT CANADA'S PEATLANDS

Canada is home to an immense and globally significant natural asset: its peatlands. Covering approximately 1.1 million square kilometres, or 12% of the nation's total landmass (Southee, 2020), Canada's peatlands represent the second-largest peatland area on Earth.

These unique wetland ecosystems are defined by their waterlogged conditions, which prevent plant material from fully decomposing, leading to the accumulation of peat (Peat, 2014). This process allows peatlands to store 150 billion tonnes of carbon, making them a larger carbon sink than all of Canada's forests combined (University of Waterloo Climate Institute, 2022).

Beyond their unparalleled carbon storage capacity, peatlands are critical biodiversity hotspots, supporting a wide array of unique flora and fauna, and play a vital role in regulating water systems, storing 10% of the planet's unfrozen freshwater (Power of Peatlands, 2025).

Despite their immense ecological value and crucial role in climate regulation, Canada's peatlands are increasingly under threat. Decades of fragmented provincial governance and the continued practice of commercial peat extraction has led to significant degradation across the country.

This degradation not only releases vast amounts of stored carbon into the atmosphere, directly contributing to climate change, but also threatens the delicate balance of these ecosystems, leading to biodiversity loss and compromised water quality.

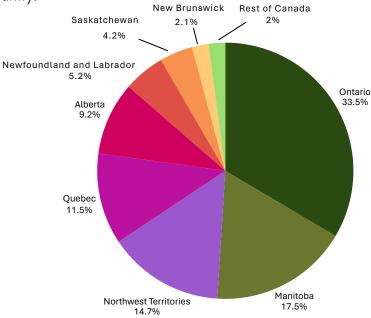


Figure 1: Canada's peatland coverage by province and territory | Data: Bloodnick, 2017

PEAT MINING IN CANADA

Peat mining, involves the commercial extraction of peat for various uses, primarily in horticulture. The dominant method employed in Canada is dry milling, a process that necessitates extensive site preparation (Maynard, 1988). This includes deforesting the peatland, draining it to allow the peat to dry, and then grading the land. During the summer months, the peat is left to dry in open fields before being mechanically gathered, stored, and processed for sale.

The history of peat exploitation in Canada spans over 150 years, marked by shifts in scale and consumer demand. Early operations in the late 1800s, such as the first commercial mine near Victoriaville, Quebec in 1864, focused on peat as a fuel source (Warner & Buteau, 2000).

With the rise of natural gas and oil, the industry transitioned to horticultural uses. By 1945, British Columbia emerged as the largest producer, accounting for 59% of national peat output, largely driven by exports to the United States. However, due to resource depletion and growing environmental concerns, all peat mining operations in British Columbia ceased by 1984 (Whitlaw, 2024). Ontario also saw its share decline, with no commercial operations today (McLean et al., 2005), partly due to advocacy from environmental groups and Indigenous communities concerned about wetland degradation (Archived - Wetland conservation strategy, n.d.).

Currently, Canada produces approximately 1.3 million metric tons of peat annually (IUCN UK Peatland Programme, 2025), with an estimated export value of \$353 million (Natural Resources Canada, 2025). The vast majority (90%) of Canadian peat production is sold to the United States, fulfilling 96% of U.S. peat imports (Canadian Sphagnum Peat Moss Association, 2025).

The Canadian Sphagnum
Peat Moss Association
estimates that, as of
2023, the total industry
footprint—encompassing
all areas opened for
extraction since 1929—
reached 36,032 hectares.
Of this, 60% (21,619
hectares) is actively
mined, while the remaining
40% is in various stages of
remediation (Canadian
Sphagnum Peat Moss
Association, 2024).

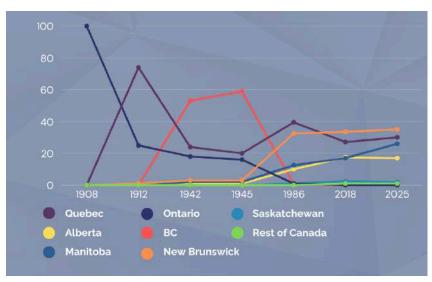
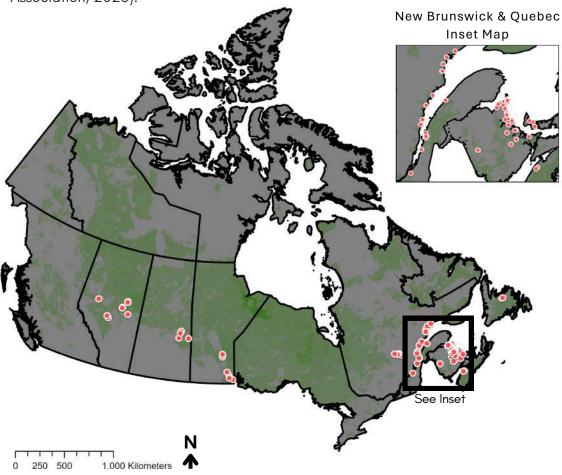


Figure 2: Percentage of Canada's total peat extraction by province 1908 to 2025 | Data: View of the Early Peat Industry in Canada, 1864–1945 | Geoscience Canada, n.d.; Department of Natural Resources and Energy Development, 2023)

Peat extraction is not evenly distributed across the nation. New Brunswick and Quebec are the leading producers, contributing 30–35% and 25–33% of national production, respectively (Department of Natural Resources and Energy Development, 2023).

In New Brunswick, the peat industry contributed over \$190 million to the provincial economy in 2023 and employed 768 full-time and 714 part-time individuals. Quebec's peat mining industry directly employed 628 people and indirectly 372 in 2023 (De La Statistique Du Québec, 2020).

While these figures represent significant regional economic contributions, the peat extraction industry is not a major national employer, accounting for less than one percent of Canada's total workforce with only 2,300 full-time positions and an additional 2,200 indirect and 1,900 induced jobs (Canadian Sphagnum Peat Moss Association, 2025).



Map 1: Location of active peat mines in Canada as of 2025 – note this map is an estimate and may not include every active peat extraction project in the country. | Data via Legend, 2024.; Satellite aerial observations; Google Maps; Esri. 2024; Government of New Brunswick, 2024; Xu et al., 2017 PEATMAP: Refining estimates of global peatland distribution based on meta-analysis. University of Leeds. [Dataset] - License Creative Commons 4.0)

IMPACTS OF PEAT MINING

When peatlands are deforested and drained for extraction, the stored organic matter, which has accumulated over thousands of years, becomes exposed to oxygen. This exposure leads to decomposition, releasing vast quantities of carbon dioxide (CO2) into the atmosphere. An acre of drained peatland, for instance, can release up to 12 tons of CO2 annually (Charles, 2024).

The impact of peat mining on Canada's climate goals is particularly alarming. The National Inventory Report on Greenhouse Gas Sources and Sinks in Canada (NIPGS) estimates that emissions from peatland mining more than doubled between 1990 and 2021, increasing from 0.9 Mt to 2.1 Mt —a 133% rise (Pratt et al., 2023).

This significant increase directly correlates with the industry's expansion of production from 13,000 hectares in 1990 to 18,000 hectares in 2013. Such trends are in direct opposition to Canada's national emission reduction targets.

Furthermore, while peatlands can be restored post-extraction, the process of returning their carbon sink functions is slow, often taking 10 to 20 years (Wilt, 2024). During this regeneration period, the mined areas are not actively sequestering carbon, thereby increasing the overall net emissions attributable to peat mining (Clark et al., 2023).

Phasing out Canada's current peatland mining (2.1 Mt) would be equivalent to removing nearly 650,887 gasoline-powered vehicles from the road or converting 413,416 single-family homes from natural gas heating to electric heat pumps (Toronto, 2025).

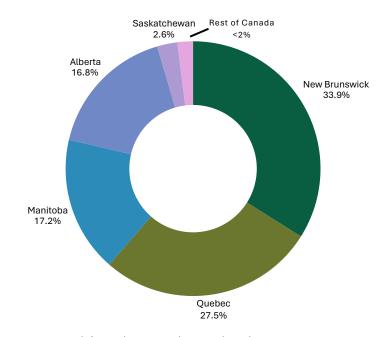


Figure 3: Canada's total peat production share by province in 2018. Data: Department of Natural Resources and Energy Development, 2023

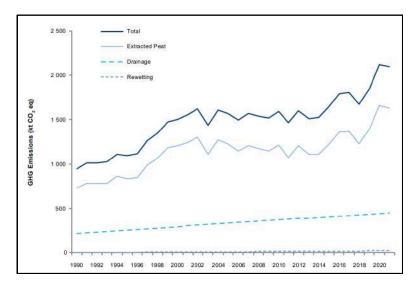


Figure 4: Emissions from Peatlands Converted and Managed for Peat Extracted from 1990 to 2020 | Graph: 2024 National Inventory Report on Greenhouse Gas Sources and Sinks in Canada | Page 210

ECOLOGICAL COST

Peatlands are crucial habitats for a diverse range of wildlife, including endangered and threatened species like the Woodland Caribou, which relies on wooded bogs for food and protection from predators (Nature Canada, 2022). Unique rodent species such as the Northern Bog Lemming and Southern Bog Lemming prefer these specialized habitats (Seitz, 2022).

Peatlands also support unique carnivorous plants with several of these species found exclusively in these ecosystems (Carnivorous Plants of Canada, n.d.). Amphibians, including Wood Frogs, Boreal Chorus Frogs, and American Toads, depend on the consistent moisture and specific conditions of peatlands for breeding, foraging, and overwintering (Parks Canada Agency, 2024).

The continued exploitation of peatlands for commercial uses places pressure on these sensitive and often endangered species, highlighting the urgent need for more protection measures.



Figure 6: Sarracenia purpurea | Photo: Nichole Ouellette, Wikimedia Commons, 2012



Figure 5: Boreal Woodland Caribou Calf | Photo: Alain Caron, Wikimedia Commons, 2020)



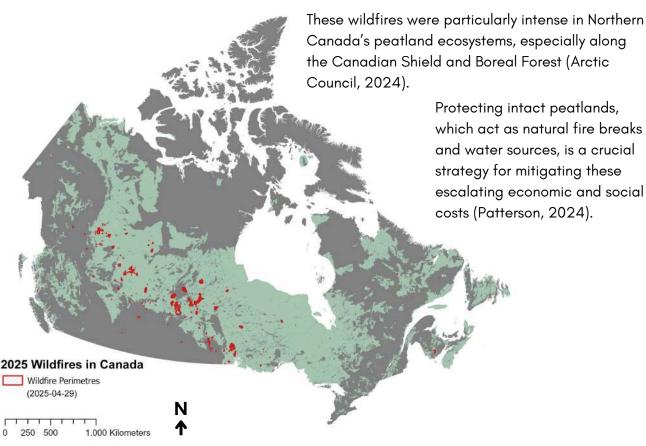
Figure 7: Peat extraction operation | Picture: Elisabeth Tonglet, Wikimedia Commons, 2008

COST OF CLIMATE CHANGE

The economic costs of climate change in Canada are escalating, with peatland degradation contributing to this burden. Droughts, exacerbated by rising global temperatures, impact crop production (ClimateData.ca, 2021) and increase wildfire risks (Natural Resources Canada, 2025). Unpredictable and violent storm events damage critical infrastructure (Canadian Climate Institute, 2025), while increasingly destructive wildfires tear through communities, destroying homes and businesses (Bernhardt, 2025).

Insured damages alone only account for a fraction of these costs; factoring in fire suppression, health impacts from wildfire smoke, and the long-term climate contributions of CO2 emissions, the annual cost of natural disasters rises to several billion dollars (Sawyer et al., 2023).

In 2023, more than 6,000 fires burned over 16.5 million hectares of land across the country, which heavily affected several communities, causing loss of homes and businesses (Government of Canada, Statistics Canada, 2025).



Map 2: Canada's Peatlands impacted by wildfires in 2025 | Data: Canadian Wildland Fire Information System; Esri. 2024; Xu et al., 2017 PEATMAP: Refining estimates of global peatland distribution based on meta-analysis. University of Leeds. [Dataset] - License Creative Commons 4.0)

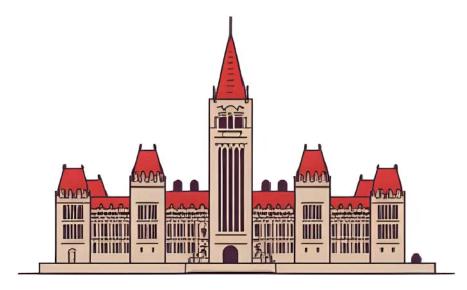
GOVERNANCE OF PEATLANDS

The management of Canada's peatlands is characterized by a fragmented governance structure, with primary authority often resting at the provincial and territorial levels. Provinces typically view peat as a quarriable substance or mineral, regulating its extraction under various acts, such as Alberta's 2016 peatland operations policy under the Environmental Protection and Enhancement Act (Government of Alberta, 2016), Saskatchewan's Natural Resources Act (Government of Saskatchewan, 2013), and New Brunswick's Quarriable Substances Act (Department of Natural Resources and Energy Development, 2023).

This provincial control, particularly over Crown lands where most peat extraction occurs (Boudreau, 2020), grants them significant autonomy over whether to further exploit these ecosystems for profit. This decentralized approach has led to varied regulations and enforcement, with some provinces actively encouraging peat mining with insufficient attention to its negative environmental impacts (Goodday et al., 2024).

The federal government has levers to intervene in the approval process of new peatland mines under legislation designed to safeguard critical wildlife and plant habitat, such as the Migratory Birds Convention Act, Fisheries Act, Canadian Environmental Protection Act, and the Species at Risk Act (Canadian Sphagnum Peat Moss Association, 2024).

Despite these federal tools, the vast majority of peat extraction projects fall under provincial jurisdiction, leading to a patchwork of regulations that may not adequately protect these globally significant ecosystems. This limited formal protection is evident in the fact that only 13% of Canada's peatlands currently fall under conventional parks and wilderness areas (WCS Canada, 2024), a substantially lower proportion than other high-value ecosystems globally (Staff, 2025).



INDIGENOUS RELATIONSHIP

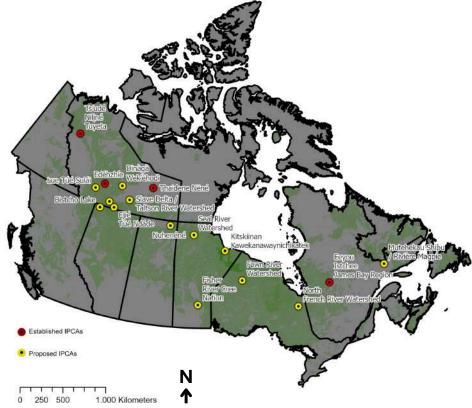
Indigenous Peoples in Canada have a profound and long-standing relationship with peatlands, utilizing them for traditional purposes such as food, medicine, hunting, and as sources of construction materials (Speller & Forbes, 2022). Peatlands were integral to their way of life, often referred to as 'Yehewin Aski' (breathing lands) by the Cree (Nature Canada, 2022).

The relationship Indigenous people have with peatlands is increasingly complex due to the impacts of colonization, settlement, agriculture, and natural resource extraction on their traditional territories. In recent years, many Indigenous Nations have become vocal advocates for peatland protection, actively opposing peatland and other forms of mining exploitation.

Their concerns often revolve around the impacts on water quality, increased wildfire risks, and the overall ecological integrity of their traditional lands (Schalk, 2025). Notable examples include the Lac La Ronge Indian Band's opposition to a peat moss mining project in Saskatchewan (Bramadat-Willcock, 2021) and the Fisher River Cree Nation's successful efforts, supported by federal funding, to purchase peat harvesting licenses to prevent further mining on their traditional lands in Manitoba (Fisher River Cree Nation, 2024; Rutgers, 2024).

In pursuit of reconciliation,
First Nations and Inuit
across Canada are
working to establish
Indigenous Protected and
Conserved Areas
(Conservation through
Reconciliation Partnership,
2023).

These conservation initiatives aim to protect land from development and represent a crucial pathway to significantly increase Canada's protected peatland coverage, and ensuring the preservation of these ecosystems for future generations (Service Canada, 2024).



Map 3: Proposed and established Indigenous Protected and Conserved Areas | Data: Esri. 2024; Xu et al., 2017 PEATMAP: Refining estimates of global peatland distribution based on meta-analysis. University of Leeds. [Dataset] - License Creative Commons 4.0)

INTERNATIONAL CASE STUDIES

A growing number of countries worldwide are recognizing the severe environmental consequences of peatland mining and are actively implementing or considering measures to phase out peat extraction, sale, and export. These international experiences offer valuable lessons for Canada as it seeks to develop a more cohesive and protective national peatland strategy.

Ireland

Ireland stands as a global leader in transitioning away from peat mining. Driven by pressing environmental concerns and ambitious climate targets, the nation has systematically phased out peat extraction over three decades (Restoring Ireland's Peatlands, 2024). By 2023, Ireland officially banned the sale of peat for burning and largely for horticulture, with only limited exemptions remaining (Kilcoyne & Humphries, 2025).

A crucial component of Ireland's successful transition has been the establishment of a comprehensive Just Transition Fund (AskAboutIreland.ie, n.d.). This fund specifically targeted regions and communities heavily reliant on peat extraction, such as the Midlands, providing financial support for retraining and reskilling workers, assisting local businesses in economic diversification, and funding site remediation efforts (Broughton et al., 2020). This proactive approach helped mitigate the socio-economic impacts of the industry's phase-out.

United Kingdom

The United Kingdom provides another important case study, particularly given its sub-national jurisdictions with varying priorities. The UK adopted a phased approach, beginning with voluntary peat reduction targets for the horticultural industry in the 1990s (40% reduction by 2005, 90% by 2010) (Doar & The Wildlife Trusts, 2022).

A significant step was a de facto moratorium on new peat mines implemented in 2011 through changes in planning policy. Recently, Wales became the first country within the UK to ban the retail sale of peat for horticultural uses (The Scottish Government, 2023). England aims to introduce a similar retail ban for amateur gardeners, with a full ban on all uses of peat, including for professional growers (with some exemptions), by 2030 (IUCN UK Peatland Programme, 2025).

While these efforts have significantly reduced domestic extraction, the continued import of peat highlights the need for comprehensive demand-side measures and international collaboration to truly eliminate peat use.

INTERNATIONAL CASE STUDIES

Chile

Chile has emerged as a notable example in South America, making international news for its proactive stance on peatland conservation. In 2020, Chile officially recognized the importance of its peatlands by including them in its updated Nationally Determined Contributions (NDCs) under the Paris Climate Accords (Government of Chile, 2020).

This commitment included pledges to conduct a national inventory of wetlands and peatlands by 2025, develop indicators to evaluate their climate adaptation and mitigation capacities by 2030, and implement actions to enhance their benefits in protected areas.

The Chilean government also attempted to legislate a nationwide ban on peat extraction in 2022 (Wetlander, 2022) and is currently working on implementing an environmental protection law specifically for peatlands (Padin-Dujon, 2025), demonstrating a strong legislative push to safeguard these unique ecosystems.

European Union

The European Union does not have a single, overarching ban on peat extraction or sale across all its member states, its regulations primarily focus on environmental impact assessments and restoration.

Key directives like the Environmental Impact Assessment, Nature Restoration Law, Habitats Directive, Natura 2000, and the Common Agricultural Policy all play a role in ensuring that extraction projects adhere to environmental standards and include rehabilitation plans (European Commission, 2021).

Several EU member states, including Germany and Finland, are taking individual action to reduce or phase out peat mining, often through national action plans for transitioning to peat-free substrates in commercial horticulture. These collective efforts within the EU demonstrate a growing regional commitment to peatland protection.



Figure 8: Bog Train ships peat at Edenderry, Ireland | Picture: Peter Mooney, Wikimedia Commons, 2014

POLICY RECOMMENDATIONS

To address the escalating degradation of its peatlands and align with global efforts, Canada must adopt a comprehensive federal-provincial strategy to phase out peat mining and enhance peatland protection. This strategy should be built upon the following key recommendations:

Implement a Federal-Provincial Phase-Out Strategy

Moratorium on New Peat Mines: The federal government, in close collaboration with provincial and territorial governments, should implement an immediate ban on issuing new permits for commercial peat mines across Canada. This would halt further expansion of the industry.

Sunsetting Existing Leases: Establish a clear, time-bound schedule for phasing out existing peat extraction permits and leases. This process should involve negotiations with current operators to ensure a predictable transition, similar to the multi-decade approaches seen in Ireland and the UK.

Phased Ban on Peat Sales and Exports: Introduce a national, phased ban on the sale and export of peat, mirroring international best practices:

- Phase 1 (e.g., by 2030): Ban the retail sale of peat-based products for amateur gardening and domestic use. Alternatives are widely available, making this a feasible first step.
- Phase 2 (e.g., by 2035): Extend the ban to professional horticulture and other commercial uses within Canada, allowing the industry time to adapt and invest in alternatives.
- Phase 3 (e.g., by 2040): End all export of peat abroad, ensuring Canada's peat resources are conserved for their ecological value rather than commercial export.

Peat-Free Government Procurement: Mandate peat-free purchasing policies for all federal and provincial government operations, including national parks, military bases, historic sites, and public landscaping projects. This would create a strong market signal for peat alternatives and demonstrate government leadership.

POLICY RECOMMENDATIONS

Incentivize Alternatives and Innovation

Increased R&D Investment: Significantly increase government investment in research and development for sustainable peat alternatives, such as coir, wood fibre, biochar, and other innovative growing media. This support should foster domestic production and innovation.

Financial Incentives for Transition: Offer targeted financial incentives, including grants, tax credits, and low-interest loans, to businesses currently reliant on peat (e.g., horticultural growers, nurseries) to facilitate their transition to peat-free growing media and practices.

Foster Trade Networks: Work with international partners and developing nations to build efficient trade networks for sustainable alternative mediums, ensuring a reliable supply chain for Canadian businesses.

Establish a Just Transition Fund

Worker Support: Create a dedicated federal-provincial Just Transition Fund, similar to Ireland's model, to provide financial support for retraining and reskilling workers in communities heavily reliant on peat mining. This would help individuals transition to new, sustainable employment opportunities.

Economic Diversification: Offer grants and support programs to peat-dependent communities (e.g., Gloucester and Northumberland Counties in New Brunswick, Côte-Nord in Quebec) to explore and develop alternative industries, tourism opportunities, and other forms of economic diversification that are not reliant on peat extraction.

Site Remediation Funding: Allocate dedicated funding and incentives for the responsible closure and ecological restoration of former peat mining sites. This would ensure that environmental damage is addressed, and impacted areas are not converted to other unsustainable uses, but rather returned to their natural state as much as possible.

POLICY RECOMMENDATIONS

Expand Protected Areas and Indigenous-Led Conservation

Increased Protected Peatland Coverage: Collaborate with Indigenous communities and provinces to significantly increase the formal protection of Canada's unprotected peatland ecosystems. Given that only 13% of Canada's peatlands are currently protected, there is a substantial opportunity to expand this.

Support Indigenous Protected and Conserved Areas: Prioritize and adequately fund Indigenous-led conservation initiatives, including the establishment and management of IPCAs. These areas, such as those proposed in the Seal River Watershed and Bistcho Lake regions, are crucial for achieving conservation goals and advancing reconciliation.

Expand Conventional Protected Areas: Identify and designate more Provincial Protected Areas and National Parks that encompass significant peatland ecosystems, ensuring their long-term preservation.

CONCLUSION

Canada's peatlands are an irreplaceable natural treasure, essential for climate stability, biodiversity, and water security. The current fragmented approach to their management, coupled with ongoing commercial extraction, poses a threat to these vital ecosystems and undermines Canada's commitments to a sustainable future.

By adopting a cohesive national strategy that phases out peat mining, incentivizes sustainable alternatives, supports a just transition for affected communities, and dramatically expands protected areas, Canada can move "beyond extraction."

Learning from the successful models implemented by countries like Ireland and the United Kingdom, and critically, by prioritizing and empowering Indigenous-led conservation efforts, Canada has a unique opportunity to lead on the global stage in peatland protection.

While challenging, the long-term ecological, climate, and economic benefits of safeguarding these "breathing lands" far outweigh the short-term gains from their exploitation. The time for decisive action to protect Canada's peatlands for future generations is now.

Archived - Wetland conservation strategy. (n.d.). ontario.ca.

https://www.ontario.ca/page/wetland-conservation-

 $\underline{strategy\#: \tilde{\ }: text=Current\%20 status\%20 and \%20 threats, \underline{change\%20 also\%20 pose\%20 serious\%2}} \\ 0 threats.$

AskAboutIreland.ie. (n.d.). National Conservation Efforts. https://www.askaboutireland.ie/enfo/irelands-environment/peatlands/uses-and-threats/national-conservation-eff/

Bernhardt, D. (2025, May 15). Wildfire deaths in Manitoba turn 'an emergency into a tragedy': Premier Wab Kinew. CBC. https://www.cbc.ca/news/canada/manitoba/wildfire-update-manitoba-premier-1.7535513

Boudreau, S. (2020, December 8). ACCESSING CANADIAN PEATLAND RESOURCES: THE ROAD FOLLOWED.

 $\label{lem:apthq$

Bramadat-Willcock, M. (2021, April 22). Lac La Ronge Indian Band says no to peat moss mining on traditional territory. Prince Albert Daily Herald. https://paherald.sk.ca/lac-la-ronge-indian-band-says-no-to-peat-moss-mining-on-traditional-territory/

Broughton, A., Dowling, P., Midlands Regional Transition Team, START team, & Initiative for coal regions in transition. (2020). Future employment and skills in the Irish Midlands. https://energy.ec.europa.eu/system/files/2020-08/future employment and skills in the irish midlands 0.pdf

Canadian Sphagnum Peat Moss Association. (2025). Statistics. Peat Moss. https://web.archive.org/web/20250420071447/https://peatmoss.com/statistics/#tab-1629496632769-2-81629496793316

Canadian Sphagnum Peat Moss Association. (2024, October 9). La récolte canadienne de tourbe horticole pour 2024 en date du 31 août, avec une mise à jour du rapport sur la gestion des tourbières par l'industrie. Tourbe Horticole.

https://web.archive.org/web/20250420115905/https://tourbehorticole.com/2024/10/09/la_recolte-canadienne-de-tourbe-horticole-pour-2024-en-date-du-31-aout-avec-une-mise-a-jour-du-rapport-sur-la-gestion-des-tourbieres-par-lindustrie/

Carnivorous plants of Canada. (2025). The Canadian Encyclopedia. https://www.thecanadianencyclopedia.ca/en/article/carnivorous-plants

Charles, D. (2024, November 17). This soil is slowly burning, releasing CO2. The solution? Let water reclaim it. NPR. https://www.npr.org/2024/11/17/nx-s1-5061513/carbon-dioxide-emissions-peatlands-water-germany

Clark, L., Strachan, I. B., Strack, M., Roulet, N. T., Knorr, K., & Teickner, H. (2023). Duration of extraction determines CO2 and CH4 emissions from an actively extracted peatland in eastern Quebec, Canada. Biogeosciences, 20(3), 737–751. https://doi.org/10.5194/bg-20-737-2023

ClimateData.ca. (2021, September 2). Drought and agriculture. ClimateData.ca. https://climatedata.ca/case-study/drought-and-agriculture/

Conservation through Reconciliation Partnership. (2023). About IPCAs. CRP Website. https://conservation-reconciliation.ca/about-ipcas

De La Statistique Du Québec, I. (2020). Key mining industry statistics for peat, Québec - Annual data (in French only). Institut De La Statistique Du Québec. https://statistique.quebec.ca/en/document/principales-statistiques-industries-extraction-miniere-tourbe-quebec

Department of Natural Resources and Energy Development. (2023). Crown Peat Industry Review. https://www2.gnb.ca/content/dam/gnb/Departments/en/pdf/Minerals-Minerales/peat/peat-industry-review-e.pdf

Doar, N. & The Wildlife Trusts. (2022). Analysis of the failure of voluntary measures to halt peat use in UK horticulture between 1990 and 2020.

https://www.wildlifetrusts.org/sites/default/files/2022-

 $\underline{02/Peat\%20use\%20summary\%201990-2020\%20The\%20Wildlife\%20Trusts.pdf}$

Environment and Climate Change Canada. (2024b, February 16). Canadian National Wetlands inventory. Canada.ca. https://www.canada.ca/en/environment-climate-change/services/wildlife-habitat/canadian-national-wetland-inventory.html

Fisher River Cree Nation. (2024, July 18). Fisher River Receives 5.1 Million to focus on Preventing Land Conversion and loss of Carbon from Peat Harvesting.

https://fisherriver.ca/2024/07/fisher-river-receives-5-1-million-to-focus-on-preventing-land-conversion-and-loss-of-carbon-from-peat-harvesting/

Goodday, V., Harris, L., Tanguay, L., & The National Peatland Policy Project. (2024). Assessing Peatland law and policy across Canada: Is Canada fulfilling its critical stewardship role? In Wildlife Conservation Society Canada, Wildlife Conservation Society Canada (pp. 2-5). https://wcscanada.org/site/assets/files/5091/nppp policy brief-1-1-1.pdf

Government of Alberta. (2016). Allocation and sustainable management of peat resources on public land. In AEP Public Land Management (No. 9; pp. 1-14). https://open.alberta.ca/dataset/a3866d2b-d28c-40fb-ac84-eec270e936d0/resource/0b5dclec-3572-4e3c-97ae-578771369b4f/download/peatallocationpublicland-dec16-2016.pdf

Government of Canada, Statistics Canada. (2018, March 23). Display definitions - NAICS 2017 Version 2.0 - 212397 - Peat extraction. Canadian Industry. https://www23.statcan.gc.ca/imdb/p3VD.pl?
Function=getVD&TVD=380372&CVD=380377&CPV=212397&CST=01012017&CIV=4&MIV=5&D=0

Government of Chile. (2020). Chile's Nationally Determined Contribution (NDC) Update 2020. Government of Canada. (2025, January 10).

Government of Saskatchewan. Ministry of Energy and Resources. (2013). Peat and Peatlands: Resource Management Strategy. https://pubsaskdev.blob.core.windows.net/pubsask-prod/110996/P31-1r3.pdf

IPCA at Bistcho Lake - Dene tha' first nation. (2024, August 15). Dene Tha' First Nation. https://bistcholake.ca/

<u>I</u>UCN UK Peatland Programme. (2025). Peat extraction & horticulture. IUCN Peatland Programme. https://www.iucn-uk-peatlandprogramme.org/about-peatlands/peatlanddamage/peat-extraction-horticulture

Kilcoyne, C., & Humphries, C. (2025, June 5). On Ireland's peat bogs, climate action clashes with tradition. REUTERS. https://www.reuters.com/investigates/special-report/ireland-energy-peatlands/

Maynard, E. & British Columbia. Ministry of Energy, Mines and Geological Survey Branch. (1989). PEATLAND INVENTORY OF BRITISH COLUMBIA. In A Contribution to the Canada/British Columbia Mineral Development Agreement, 1985 – 1990 (Report OPEN FILE 1988–33). MINERAL RESOURCES DIVISION Geological Survey Branch.

McLean, D., Legislative Assembly, Province of Ontario, Environmental Commissioner of Ontario, & Miller, G. (2005). A Message from the Environmental Commissioner of Ontario. https://www.auditor.on.ca/en/content/reporttopics/envreports/env05/2004-05-AR.pdf

Natural Resources Canada. (2025, March 5). Peatland fires and carbon emissions. Natural Resources Canada. https://natural-resources.canada.ca/forest-forestry/wildland-fires/peatland-fires-carbon-emissions

Nature Canada. (2022, February 3). 'Yehewin Aski': Protecting Canada from Climate Breakdown. Nature Canada. https://naturecanada.ca/news/blog/yehewin-aski-protecting-canada-from-climate-breakdown/

Padin-Dujon, A. (2025, March 12). Chile seeks public input to draft peatland protection regulations. Carbon Pulse. https://carbon-pulse.com/377171/

Parks Canada Agency, Government of Canada. (2024a, February 27). Amphibians. Wapusk National Park. https://parks.canada.ca/pn-np/mb/wapusk/nature/faune-animals/amphi

Patterson, L. (2024, January 8). Keeping water on the land. Ducks Unlimited Canada. https://www.ducks.ca/stories/conservator/wetlands-wildfire/

Peat. (2014). The Canadian Encyclopedia.

 $\frac{\text{https://www.thecanadianencyclopedia.ca/en/article/peat#:} \tilde{\text{:text=Peat}\%20 is \%20 formed \%2}{0 slowly \%20 in, about \%20 10 \%20 000 \%20 years \%20 ago}.$

Pratt, L., Abou-Chaker, T., Angel, S., Au, A., Baker, W., Bishop, N., Blain, D., Blondel, A., Czerwinski, A., Flemming, C., Greenlaw, B., Kay, J., Laurin, E., Leblanc-Power, G., Lee, C., Liang, C., MacDonald, D., & Vanderpol, M. (2023). NATIONAL INVENTORY REPORT 1990 – 2021: GREENHOUSE GAS SOURCES AND SINKS IN CANADA. In CANADA'S SUBMISSION TO THE UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE. https://canada.ca/ghg-inventory

Protecting Our Precious Peat. (2021, May 12). European Climate, Infrastructure and Environment Executive Agency. https://cinea.ec.europa.eu/news-events/news/protecting-our-precious-peat-2021-05-12 en

Restoring Ireland's Peatlands | RPS. (2024). RPS. https://www.rpsgroup.com/insights/consulting-uki/the-lungs-of-ireland-a-natural-solution-to-achieving-net-zero-carbon/

Rutgers, J. (2024, November 29). Public comment on Sugar Creek peat mine closing soon. The Narwhal. <a href="https://thenarwhal.ca/manitoba-peat-mine-opposition/#:~:text=First%20Nation%20acts%20to%20limit%20peat%20harvesting&text=Fisher%20River%20Cree%20Nation%2C%20which,harvest%20the%20peat%20moss%20there.%E2%80%9D

Sawyer, D., Stiebert, S., & Welburn, C. (2023, June 26). With the Forest Ablaze, the Health Costs Hit Home. Canadian Climate Institute. https://climateinstitute.ca/with-the-forest-ablaze-the-health-costs-hit-home/

Seitz, G. (2022, March 6). Creature feature: Rare lemmings in Northwoods bogs. Quetico Superior Wilderness News. https://queticosuperior.org/creature-feature-rare-lemmings-in-northwoods-bogs/

Service Canada. (2022, June 22). Canada's 2030 Emissions Reduction Plan. Canada.ca. https://www.canada.ca/en/services/environment/weather/climatechange/climate-plan-overview/emissions-reduction-2030/plan.html

Service Canada. (2024, June 7). Wetlands. Canada.ca. https://www.canada.ca/en/services/environment/our-environment/nature-based-climate-solutions/wetlands.html

Seal River Watershed. (n.d.). Seal River Watershed. https://www.sealriverwatershed.ca/

Southee, D. (2020). Canada's Peatlands: Towards a national assessment. Global Peatlands Initiative. https://globalpeatlands.org/canadas-peatlands-towards-a-national-assessment

Speller, J., & Forbes, V. (2022). On the role of peat bogs as components of Indigenous cultural landscapes in Northern North America. Arctic Antarctic and Alpine Research, 54(1), 96–110. https://doi.org/10.1080/15230430.2022.2049957

Staff, C. B. (2025, February 13). Just 17% of world's peatlands are protected, new study warns. Carbon Brief. https://www.carbonbrief.org/just-17-of-worlds-peatlands-are-protected-new-study-

warns/#:~:text=Furthermore%2C%20one%2Dthird%20of%20the,high%20human%20pressure% E2%80%9D%2C%20the%20paper

The Canadian Encyclopedia. (2025). Carnivorous plants of Canada. https://www.thecanadianencyclopedia.ca/en/article/carnivorous-plants

The Canadian Climate Institute. (2025, January 13). 2024 shatters record for costliest year for severe weather-related losses in Canadian history at \$8.5 billion. https://www.ibc.ca/news-insights/news/2024-shatters-record-for-costliest-year-for-severe-weather-related-losses-incanadian-history-at-8-5-billion

The Power of Peatlands. (2025). The Nature Conservancy. https://www.nature.org/en-us/what-we-do/our-priorities/tackle-climate-change/climate-change-stories/peatlands-natural-climate-solutions/

The Scottish Government. (2023, March 16). Ending the sale of peat: consultation. https://www.gov.scot/publications/ending-sale-peat-scotland-consultation/pages/6/

Toronto, C. O. (2025, June 6). Sector-Based emissions inventory. City of Toronto. https://www.toronto.ca/services-payments/water-environment/environmentally-friendly-city-initiatives/transformto/sector-based-emissions-inventory/

UK Government Confirms Ban on All Peat-based Gardening Products Will Not Be Implemented Until 2030. (2023, May 22). Horticulture Week.

University of Waterloo Climate Institute. (2022). Can-Peat: Canada's peatlands as nature-based solutions for climate. https://uwaterloo.ca/climate-institute/projects/can-peat-canadas-peatlands-nature-based-solutions-climate

Warner, B. G., & Buteau, P. (2000). The Early Peat Industry in Canada, 1864–1945. Geoscience Canada, 27(2). https://journals.lib.unb.ca/index.php/GC/article/view/4039

WCS Canada. (2024, November 11). Canadian policy failures putting globally important carbon-rich peatland ecosystems at risk, says new report. WCS Canada. https://wcscanada.org/newsroom/news/canadian-policy-failures-putting-globally-important-carbon-rich-peatland-ecosystems-at-risk-says-new-report/

Wetlander. (2022, January 17). Reflections concerning the approval of the "Environmental Protection Law of Peatlands" in Chile and the proposed changes to the legal text in the next legislative step (After the fiesta comes the hangover). Turberas de Chile. https://www.miresofchile.cl/en/ref

Whitlaw, J. (2024). Burns Bog: A history of the Delta bog and its conservation.

Wilt, J. (2024, June 27). Inside Canada's fight to save its peatlands. The Weather Network. https://www.theweathernetwork.com/en/news/climate/solutions/inside-canadas-fight-to-save-its-peatlands

About the Peatlands Protection Society: The Peatlands Protection Society is a non-profit organization dedicated to advocating for the conservation, restoration, and sustainable management of Canada's peatland ecosystems. Through research, education, and policy recommendations, the Society works to raise awareness about the critical role peatlands play in climate regulation, biodiversity, and water management.



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