



# **Legal and Policy Options to Ban or Limit the Use of Horticultural Peat Moss in British Columbia**

An ELC Clinic submission prepared for:  
Peatlands Protection Society

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NOVEMBER 2022  
(Revised October 2023)

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Cover image: Lulu Island, BC (Holly Pattison)

Copyediting and layout: Holly Pattison, Environmental Law Centre

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# Introduction

*Climate change is real. It is caused by greenhouse gas emissions resulting from human activities, and it poses a grave threat to humanity's future. The only way to address the threat of climate change is to reduce greenhouse gas emissions.*

—Supreme Court of Canada, *Reference re Greenhouse Gas Pollution Pricing Act*<sup>1</sup>

There is no longer any doubt that climate change is an existential threat to the human race. The United Nations Secretary General has stated that the 2021 Intergovernmental Panel on Climate Change report on the state of global climate was a “...code red for humanity. The alarm bells are deafening, and the evidence is irrefutable.”<sup>2</sup> Among other things, the World Health Organization has declared climate change the “biggest health threat facing humanity.”<sup>3</sup>

In 2019, the Government of Canada joined hundreds of Canadian municipalities, the European Union and many other countries in formally declaring a national climate emergency – acknowledging that “climate change is a real and urgent crisis” and that people are experiencing the effects of climate change today, including “flooding, wildfires, heat waves and other extreme weather events,” which are only forecast to worsen.<sup>4</sup>

The effects on Canadians are multifarious and profound. We now find ourselves in a frightening new era of heat domes, atmospheric rivers, bomb cyclones, catastrophic wildfires, hurricanes, melting glaciers, multibillion dollar insurance losses and destruction of highway systems and other infrastructure. BC wildfires have burned an area far larger than Vancouver Island since 2016 and levelled the town of Lytton.<sup>5</sup> Flooding from British Columbia’s 2021 atmospheric river cost the

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<sup>1</sup> *Reference re Greenhouse Gas Pollution Pricing Act*, 2021 SCC 11 at para 2.

<sup>2</sup> United Nations News, “IPCC report: ‘code red’ for human driven global heating, warns UN chief” (9 August 2021), online: <[news.un.org/en/story/2021/08/1097362](https://news.un.org/en/story/2021/08/1097362)> [perma.cc/UT8Z-T6AZ].

<sup>3</sup> World Health Organization, “Climate change and health” (30 October 2021), online: <[www.who.int/news-room/fact-sheets/detail/climate-change-and-health](https://www.who.int/news-room/fact-sheets/detail/climate-change-and-health)> [perma.cc/3AHY-3BFM].

<sup>4</sup> House of Commons, *Journals*, 42-1, No 435 (17 June 2019), online: <[www.ourcommons.ca/DocumentViewer/en/42-1/house/sitting-435/journals](https://www.ourcommons.ca/DocumentViewer/en/42-1/house/sitting-435/journals)> [perma.cc/F2ZW-A9Y8]; Climate Emergency Declaration, “Climate emergency declarations in 2,320 jurisdictions and local governments cover 1 billion citizens” (22 March 2023), online: <[climateemergencydeclaration.org/climate-emergency-declarations-cover-15-million-citizens/](https://climateemergencydeclaration.org/climate-emergency-declarations-cover-15-million-citizens/)> [perma.cc/4K33-MBC3]; In addition, over 600 Canadian municipalities have declared a state of climate emergency (see Random Acts of Green, “648 Municipalities have declared a climate emergency in Canada” (18 January 2022), online: <[raog.ca/climate-emergency-declarations-canada/](https://raog.ca/climate-emergency-declarations-canada/)> [perma.cc/8P3U-WLZ2]).

<sup>5</sup> British Columbia, BC Wildfire Service, “Wildfire Averages” (last visited 7 March 2023), online: <[www2.gov.bc.ca/gov/content/safety/wildfire-status/about-bcws/wildfire-statistics/wildfire-averages](https://www2.gov.bc.ca/gov/content/safety/wildfire-status/about-bcws/wildfire-statistics/wildfire-averages)> [perma.cc/T2E6-Q77T]; British Columbia, BC Wildfire Service, “Wildfire Season Summary” (last visited 7 March 2023), online: <[www2.gov.bc.ca/gov/content/safety/wildfire-status/about-bcws/wildfire-history/wildfire-season-summary](https://www2.gov.bc.ca/gov/content/safety/wildfire-status/about-bcws/wildfire-history/wildfire-season-summary)> [perma.cc/45YK-7BD2]; Canada, Statistics Canada, “Table 15.2 Selected major sea islands, by region” (last updated 7 October 2016), online: <[www150.statcan.gc.ca/n1/pub/11-402-x/2010000/chap/geo/tbl/tbl02-eng.htm](https://www150.statcan.gc.ca/n1/pub/11-402-x/2010000/chap/geo/tbl/tbl02-eng.htm)> [perma.cc/Q3VV-9C7A]. These figures do not even include the record 2023 wildfire season.



province almost \$9 billion, demolishing highway connections between Vancouver and the rest of Canada.<sup>6</sup>

The Canadian Security Intelligence Service warns that climate change poses a profound long-term threat to national security and prosperity, food and water supplies, loss of infrastructure and coastal communities – and the risk of rising domestic and international conflict.<sup>7</sup> Health Canada and others report that climate change will have serious negative effects on Canadians' health, including through worsening air quality, infectious diseases, increasing temperatures, and mental health.<sup>8</sup> Climate change poses a potentially catastrophic threat to numerous Canadian industries and to the Canadian economy, and is poised to eventually cripple GDP.<sup>9</sup>

In this context, it is incumbent upon us to do everything possible to reduce greenhouse gas emissions – to move society as quickly as possible to net zero greenhouse gas emissions and to safeguard important carbon sinks. It is widely recognized that this will require a comprehensive

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<sup>6</sup> Justine Hunter, "Cost of rebuilding B.C. after flooding nears \$9-billion," *The Globe and Mail* (19 February 2022), online: <<https://www.theglobeandmail.com/canada/british-columbia/article-cost-of-rebuilding-bc-after-november-storms-nears-9-billion/>> [https://perma.cc/FV7B-HCEK].

<sup>7</sup> According to *The Globe and Mail*. See Jim Bronskill, "CSIS warns climate change threatens Canadian security, prosperity," *The Globe and Mail* (5 March 2023), online: <[www.theglobeandmail.com/canada/article-csis-warns-climate-change-threatens-canadian-security-prosperity/](https://www.theglobeandmail.com/canada/article-csis-warns-climate-change-threatens-canadian-security-prosperity/)> [perma.cc/2SYS-CCTZ].

<sup>8</sup> Canada, Health Canada, *Health of Canadians in a Changing Climate: Advancing our Knowledge for Action*, edited by Peter Berry & Rebekka Schnitter (Ottawa: HC, 2022) at 19-26, 114-613, online (pdf): <[changingclimate.ca/site/assets/uploads/sites/5/2022/02/CCHA-REPORT-EN.pdf](https://changingclimate.ca/site/assets/uploads/sites/5/2022/02/CCHA-REPORT-EN.pdf)> [perma.cc/47ZK-E76E]; Canada, Health Canada, "Risks to health from climate change" (last updated 7 November 2022), online: <[www.canada.ca/en/health-canada/services/climate-change-health/risks-to-health.html](https://www.canada.ca/en/health-canada/services/climate-change-health/risks-to-health.html)> [perma.cc/2LGF-UPDH]; Council of Canadian Academies, "Canada's Top Climate Change Risks: The Expert Panel on Climate Change Risks and Adaptation Potential" (Ottawa: CCA, 2019) at ix, 11, 14-16, 21-23, online (pdf): <[cca-reports.ca/wp-content/uploads/2019/07/Report-Canada-top-climate-change-risks.pdf](https://cca-reports.ca/wp-content/uploads/2019/07/Report-Canada-top-climate-change-risks.pdf)> [perma.cc/DF4G-RWVZ]; Canadian Institute for Climate Choices, *The Health Costs of Climate Change: How Canada Can Adapt, Prepare, and Save Lives* (June 2021) at vii-viii, 5, 16-19, online (pdf): <[climatechoices.ca/wp-content/uploads/2021/06/ClimateChoices\\_Health-report\\_Final\\_June2021.pdf](https://climatechoices.ca/wp-content/uploads/2021/06/ClimateChoices_Health-report_Final_June2021.pdf)> [perma.cc/C5N9-8ZNV]; Global Climate and Health Alliance, "The Limits of Livability: The emerging threat of smoke impacts on health from forest fires and climate change – Country Brief: Canada" (2021), online (pdf): <[climateandhealthalliance.org/wp-content/uploads/2021/06/limits\\_liability\\_country-report\\_bushfires-canada\\_EN\\_final.pdf](https://climateandhealthalliance.org/wp-content/uploads/2021/06/limits_liability_country-report_bushfires-canada_EN_final.pdf)> [perma.cc/6S97-MRQ8]; Frances MacGuire & Milena Sargeeva, "The Limits of Livability: The emerging threat of smoke impacts on health from forest fires and climate change" (Global Climate and Health Alliance, 2021), online (pdf): <[https://climateandhealthalliance.org/wp-content/uploads/2021/06/016062021\\_GCHA\\_bushfire\\_report\\_limits\\_livability\\_health.pdf](https://climateandhealthalliance.org/wp-content/uploads/2021/06/016062021_GCHA_bushfire_report_limits_livability_health.pdf)> [https://perma.cc/VDS7-94ER].

<sup>9</sup> Canada, Office of the Parliamentary Budget Officer, *Global greenhouse gas emissions and Canadian GDP* (Ottawa: OPBO, 8 November 2022) at 4-6, 12-13, online (pdf): <[distribution-a617274656661637473.pbo-dpb.ca/bbc2846795c541eddc656e484a15e7ecd91bd0aff45196f231523d8c5c9aafe4](https://distribution-a617274656661637473.pbo-dpb.ca/bbc2846795c541eddc656e484a15e7ecd91bd0aff45196f231523d8c5c9aafe4)> [perma.cc/KL5J-3LJX]; Royal Bank of Canada, *The \$2 Trillion Transition: Canada's road To Net Zero* (last visited 8 March 2023) at 6, online (pdf): <[thoughtleadership.rbc.com/wp-content/uploads/Net-Zero-ES.pdf](https://thoughtleadership.rbc.com/wp-content/uploads/Net-Zero-ES.pdf)> [perma.cc/W8Q4-468M]; Canadian Institute for Climate Choices, *Damage Control: Reducing the Costs of Climate Impacts in Canada* (September 2022) at 47, online (pdf): <[climateinstitute.ca/wp-content/uploads/2022/09/Damage-Control\\_-EN\\_0927.pdf](https://climateinstitute.ca/wp-content/uploads/2022/09/Damage-Control_-EN_0927.pdf)> [perma.cc/42R8-TRNE]; Queen's University researchers forecast \$5.5 trillion in cumulative GDP losses, including annual GDP losses of up to \$20 billion by 2025 and \$168 billion by 2100 (see Sean Clearly & Neal Willcott, *The Physical Costs of Climate Change: A Canadian Perspective* (Kingston, ON: Institute for Sustainable Finance, Smith School of Business, Queen's University, April 2022) at 7, online (pdf): <[smith.queensu.ca/centres/isf/pdfs/ISF-Report-PhysicalCostsOfClimateChange.pdf](https://smith.queensu.ca/centres/isf/pdfs/ISF-Report-PhysicalCostsOfClimateChange.pdf)> [perma.cc/NS2Z-8SDC]); Neal Willcott & Sean Clearly, "Canada faces huge physical costs from climate change, making net zero a great investment" (18 May 2022), online: *Queen's Gazette* <[www.queensu.ca/gazette/stories/canada-faces-huge-physical-costs-climate-change-making-net-zero-great-investment](https://www.queensu.ca/gazette/stories/canada-faces-huge-physical-costs-climate-change-making-net-zero-great-investment)> [perma.cc/CT8X-FREV].

whole-of-government approach – and careful selection of a broad spectrum of policies, from a vast number of options available. One option that merits serious consideration is the action taken recently in the United Kingdom to ban the sale of peat compost to amateur gardeners.

Globally, peat bogs have acted as natural carbon sinks for millennia. One-third of the world’s organic soil carbon – which plays a vital role mitigating climate change and stabilizing the carbon cycle – is held in peatlands.<sup>10</sup> Although peatlands only cover about 3-4 % of the world’s land surface, peatlands store as much as one third of all land-based carbon. This is twice as much as all the world’s forests combined.<sup>11</sup> When peat bogs are disturbed by agriculture, mining, hydropower reservoirs, forestry, and roads – or are removed for use as heating, energy or horticultural compost – the bogs reduce carbon sequestration, release greenhouse gases and contribute to climate change.<sup>12</sup> Therefore, it is vital that they be properly stewarded to protect climate and meet greenhouse gas emissions goals – such as the long-term goal of “net zero” greenhouse gas emissions.

In 2022, faced with a very serious depletion of its own peatlands and motivated to contribute to the achievement of “net zero,” the UK Government announced a ban on the retail sale of peat to amateur gardeners, effective in 2024.<sup>13</sup>

England and Wales have acted to ban such horticultural peat sales as part of their plan to reduce greenhouse gas emissions. While Canada has not historically faced such severe depletion of its own peatlands, we advocate that this UK precedent should be seriously considered in Canada as well. Whether bought in England or in Canada, when a gardener uses horticultural peat, they are contributing to the global climate change problem.

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<sup>10</sup> Jeremy Hance, “Ultimate bogs: how saving peatlands could help save the planet,” *The Guardian* (28 July 2017), online: <<https://www.theguardian.com/environment/2017/jul/28/ultimate-bogs-how-saving-peatlands-could-help-save-the-planet#:~:text=In%20addition%2C%20at%20least%20one,carbon%20cycle%2C%20is%20in%20peatlands>> [https://perma.cc/W5H9-NY2J].

<sup>11</sup> United Nations Environment Programme, *Global Peatlands Assessment – The State of the World’s Peatlands: Evidence for Action Toward the Conservation, Restoration, and Sustainable Management of Peatlands* (Nairobi, Kenya: UNEP, 2022), online (pdf): <[https://wedocs.unep.org/bitstream/handle/20.500.11822/41222/peatland\\_assessment.pdf?sequence=1&isAllowed=>](https://wedocs.unep.org/bitstream/handle/20.500.11822/41222/peatland_assessment.pdf?sequence=1&isAllowed=>) [https://perma.cc/C48Y-MA3V] [UNEP, *Global Peatlands Assessment*]; William Booth, “Serious about climate change? Get serious about peat,” *Washington Post* (10 November 2021), online: <<https://www.washingtonpost.com/world/2021/11/10/cop26-peat-carbon/>>; John Crump (Ed.), *Smoke on Water – Countering Global Threats from Peatland Loss and Degradation* (Nairobi, Kenya: UNEP, 2017; Arendal, Norway: GRID-Arendal) at 4 [UNEP, *Smoke on Water*], online: <<https://wedocs.unep.org/handle/20.500.11822/22919>> [https://perma.cc/D3WJ-BQQD].

<sup>12</sup> UNEP, *Global Peatlands Assessment*, *supra* note 11, s 7.4.1.

<sup>13</sup> UK Government, “Press Release: Sale of horticultural peat to be banned in move to protect England’s precious peatlands” (27 August 2022), online: <<https://www.gov.uk/government/news/sale-of-horticultural-peat-to-be-banned-in-move-to-protect-englands-precious-peatlands#:~:text=Press%20release-Sale%20of%20horticultural%20peat%20to%20be%20banned%20in%20move%20to,peatlands%20and%20the%20natural%20environment.&text=Rewetting%20Risley%20Moss%2C%20a%20peat,%3A%20Paul%20Thomas%2C%20Natural%20England>> (Government stated the move had a dual purpose, to “contribute to efforts to achieve our ambitious target of restoring 35,000 hectares of peatlands by 2025 and wider efforts to achieve net zero.”); See also National Committee United Kingdom, Peatland Program, “Peatland addition to the UK GHG inventory adds 3.5% to national emissions” (4 February 2021), online: <<https://www.iucn-uk-peatlandprogramme.org/news/peatland-addition-uk-ghg-inventory-adds-35-national-emissions>> [https://perma.cc/8W5B-3NU].

This report acknowledges that in Canada, peat extraction for horticultural purposes accounts for a small percentage of overall peatland disturbances. Some sources indicate that the Canadian Peat industry has disturbed about .03% of Canada's peatlands,<sup>14</sup> while the United Nations Environment Programme has estimated that horticultural peat extraction represents about 1% of the peatland area disturbed by anthropic activities. Most peat disturbance comes from other industries including agriculture (63% of disturbance), mining (18%), hydropower reservoirs (12%), and forestry (3%).<sup>15</sup> Nevertheless, extraction for horticultural purposes is still substantial, extracting about 1.65 million tonnes annually.<sup>16</sup> The product of this extraction is used by the horticulture industry and home gardeners – who buy both peat and products containing peat from the horticulture industry.

The *UNEP Global Peatlands Assessment* reports that horticultural peat extraction in Canada has disturbed 24,964 hectares of peatland, of which 8,182 have been restored and 2,168 reclaimed.<sup>17</sup> The fact that the industry in Canada takes active steps to restore harvested peatland is commendable and this should be acknowledged and encouraged. However, Professor Maria Strack, the Canada Research Chair in Ecosystems and Climate at the University of Waterloo, has stated that properly restored peatland can restore carbon uptake after 20 years – but “it will take much longer to recapture the carbon that is released when peat is used as a growing medium – probably 100s to 1000s of years.”<sup>18</sup>

It is important to remember that peatlands not only provide a critical carbon sink, but other ecosystem services, such as mitigating flooding, relieving drought, purifying water, and providing habitat for rare species. Many of these functions are lost or diminished when peat is extracted.<sup>19</sup> Such losses are arguably unnecessary, given that alternatives to peat for gardening exist, such as natural compost, bark, wood fibre, coir, and worm castings.<sup>20</sup>

It is time for a larger conversation about the critical peatland resource, its value when left in the ground, and the ways in which peatland ecosystems can be better managed. That conversation will have to address the massive peat disturbance created by a number of other industries, such as agriculture, mining, hydropower reservoirs and forestry. However, in calling for consideration of

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<sup>14</sup> D.J. Charman, “Peat and Peatlands,” (2009) *Encyclopedia of Inland Waters* 541, online: <<https://doi.org/10.1016/B978-012370626-3.00061-2>> [Charman, “Peat and Peatlands”].

<sup>15</sup> UNEP, *Global Peatlands Assessment*, *supra* note 11, s 7.4.1.

<sup>16</sup> Canada, Natural Resources Canada, “Annual Statistics of Mineral Production” (14 March 2022), online: <<https://mmsd.nrcan-rncan.gc.ca/prod-prod/ann-ann-eng.aspx?FileT=2020&Lang=en>> [https://perma.cc/MN5R-MX6E] [NRCAN, “Annual Statistics of Mineral Production”].

<sup>17</sup> UNEP, *Global Peatlands Assessment*, *supra* note 11, s 7.4.1.

<sup>18</sup> Personal communication with Professor Maria Strack, September 1, 2023, later elaborated [on file with author].

<sup>19</sup> V. Glooschenko, “Effect of Peatland on Water Quality, Fish and Wildlife Habitat in Canada, a Review” in D.F. Whigham et al, eds, *Wetland Ecology and Management: Case Studies: Tasks for Vegetation Science*, vol 25 (Dordrecht, Germany: Springer, 1990), online: <[https://doi.org/10.1007/978-94-009-2115-3\\_10](https://doi.org/10.1007/978-94-009-2115-3_10)> [https://perma.cc/L2S9-8HSF]; Marjorie Winkler & Calvin DeWitt, *Environmental Impacts of Peat Mining in the United States: Documentation for Wetland Conservation* (Cambridge University Press, 2009), online: <<https://www.cambridge.org/core/journals/environmental-conservation/article/environmental-impacts-of-peat-mining-in-the-united-states-documentation-for-wetland-conservation/AFEC694EDE8C836C90BF617465933790>> [https://perma.cc/A742-HA73]; Charman, “Peat and Peatlands,” *supra* note 14.

<sup>20</sup> See the discussion of “Alternatives,” below.

emulating the new UK rules on retail sale of horticultural peat, this report is intended as a first step in that essential larger conversation about generally protecting peatlands in Canada.

That conversation will involve horticultural peat producers, ably represented by an advocacy group, the Canadian Sphagnum Peat Moss Association, who cite the proportionately small percentage of peatland disruption owing to horticultural uses as compared to industrial disruption; and remind us that alternatives to horticultural peat have their own environmental impacts.



# What is Peat?

Officially, there is no set definition for peat or peatlands. The definition of peat and peatland differs between countries and is variable, based on the quantity of organic material in the peat or the thickness of the peat layer required for a peatland classification.<sup>21</sup> This lack of consistency has led to issues in both identification of peatlands and data collection of these areas over time.<sup>22</sup>

However, in general terms, peat can be described as a soft, porous or compressed, material formed by the accumulation of partially decayed organic matter that builds over long periods of times and in conditions of oxygen and nutrient deficiency, waterlogging, and high acidity.<sup>23</sup>

Peatlands form where conditions such as climate, landscape and time create areas with permanent water saturation.<sup>24</sup> They form either directly on top of mineral soils or over layers of lake sediments in lower water tables.<sup>25</sup> These formations can often be categorized as one of the two major forms of peatlands: bogs, which are fed by only rain and tend to be nutrient poor; and fens, which are fed by water from mineral soil or bedrock and are typically richer in nutrients.<sup>26</sup>

It is important to stress that peat grows very slowly. Many peat deposits have been accumulating since the last ice-age glacial retreat over 8,000 years ago.<sup>27</sup> In tropical peatlands, it is estimated that peat grows as a rate of 0.5-2 mm per year.<sup>28</sup> In temperate, boreal, and sub-arctic conditions, such as Canada, the rate of decomposition is even less.<sup>29</sup> The time it takes to replenish these sources is enormous.

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<sup>21</sup> Intergovernmental Panel on Climate Change, “2013 Supplement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories: Wetlands,” at 1.7, online (pdf): [https://www.ipcc.ch/site/assets/uploads/2018/03/Wetlands\\_Supplement\\_Entire\\_Report.pdf](https://www.ipcc.ch/site/assets/uploads/2018/03/Wetlands_Supplement_Entire_Report.pdf) [https://perma.cc/86JP-2CXB].

<sup>22</sup> UNEP, *Smoke on Water*, *supra* note 11 at 10.

<sup>23</sup> International Peatland Society, “What is Peat,” online: <https://peatlands.org/peat/peat/> [https://perma.cc/3QLH-53R2] [International Peatland Society, “What is Peat”].

<sup>24</sup> UNEP, *Smoke on Water*, *supra* note 11 at 21.

<sup>25</sup> *Ibid.*

<sup>26</sup> *Ibid.*

<sup>27</sup> Eggleston et al (eds), *2006 IPCC Guidelines for National Greenhouse Gas Inventories* (Intergovernmental Panel on Climate Change, 2006), vol 4, c 7, s 7.8, online: <https://www.ipcc-nggip.iges.or.jp/public/2006gl/index.html> [https://perma.cc/FMU8-B8K8].

<sup>28</sup> UNEP, *Smoke on Water*, *supra* note 11 at 22.

<sup>29</sup> International Peatland Society, “What is Peat,” *supra* note 23.

# Why Should We Care About Peat?

Peatlands are an inherently valuable ecosystem and “can be viewed as a repository of largely un-priced public goods of international value.”<sup>30</sup> They are found around the world and, to date, they have been identified in 180 countries in both the northern and southern hemispheres.<sup>31</sup> Current estimates are that peatlands cover 2.8% of the total surface of the Earth, but, despite their relatively small coverage, they are responsible for storing twice as much carbon as all the world’s forests.<sup>32</sup> When they are left undisturbed, peatlands are invaluable carbon sinks.

To better illustrate the carbon sequestration value of undisturbed peatlands, consider the world’s biggest tropical peatland in Cuvette Centrale in the Congo Basin. In 2016, an international team of scientists mapped the area and discovered that the peatland covered over 145,000 square kilometres of land – an area larger than England.<sup>33</sup> These researchers further discovered that this peatland contains approximately 30 gigatons of carbon – or as much carbon as the entire United States economy emits over a period of 15 years.<sup>34</sup>

Despite their value, peatlands continue to be lost to land use changes. It is estimated that more than 50% of the global wetlands, including peatlands, have been lost since 1700 CE.<sup>35</sup> Globally, the most significant impacts on peatlands have come from land use changes such as peat extraction/mining, agriculture, grazing and forestry.<sup>36</sup> Historically, peat has been extracted for use as an energy/heating source in many places, and that use continues. In more recent times, a number of countries, including Canada, have mined quantities of peat for use in the horticultural sector. Peat can regrow following harvest, in proper conditions; however, the volume of global peatlands has steadily decreased at a rate of 0.05% each year due to the impacts of harvesting and land development.<sup>37</sup>

Unfortunately, when peatlands are converted or harvested, they are typically drained. When they are drained, peat comes into contact with air, organic matter oxidizes, and it starts to release the accumulated carbon and nitrogen.<sup>38</sup> This process causes peatlands to change from long-term carbon sinks into significant sources of greenhouse gas emissions. A 2015 study notes that while

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<sup>30</sup> UNEP, *Smoke on Water*, *supra* note 11 at 46.

<sup>31</sup> UNEP, *Smoke on Water*, *supra* note 11 at 6.

<sup>32</sup> Jiren Xu et al, “PEATMAP: Refining estimates of global peatland distribution based on a meta-analysis” (2017) 160 CATENA 134 at 2, online: <<https://www.sciencedirect.com/science/article/pii/S0341816217303004>> [https://perma.cc/5NSL-6SGH].

<sup>33</sup> UNEP, *Smoke on Water*, *supra* note 11 at 26.

<sup>34</sup> UNEP, *Smoke on Water*, *supra* note 11 at 4.

<sup>35</sup> Kelly Nugent et al, “Prompt active restoration of peatlands substantially reduces climate impact” (2019) 14:12 Environ Res Lett at 1, online: <<https://iopscience.iop.org/article/10.1088/1748-9326/ab56e6#:~:text=Immediate%20active%20restoration%20achieved%20a,a%20climate%20change%20mitigation%20strategy>> [https://perma.cc/4JN3-NRUV].

<sup>36</sup> UNEP, *Smoke on Water*, *supra* note 11 at 29.

<sup>37</sup> Amanda Brioché, “Peat” (January 2021), online: *US Geological Survey* <<https://pubs.usgs.gov/periodicals/mcs2021/mcs2021-peat.pdf>> [https://perma.cc/3BG4-884P] [Brioché, “Peat”].

<sup>38</sup> UNEP, *Smoke on Water*, *supra* note 11 at 31.

only 15% of the world's peatlands have been drained, they account for "five percent of all global anthropogenic greenhouse gas emissions."<sup>39</sup> Clearly, the carbon sink of undisturbed peatlands is significant – as is the potential for carbon release when disturbed.

In addition to their carbon value, undrained peatlands provide critical habitat for many species (including rare species), aid in water purification, and assist in flood and drought management. Peatlands can slow down the flow of water, releasing it gradually overtime, aiding in the prevention of flooding.<sup>40</sup> They are also known to have a cooling effect of local climates during hot period through cloud formation and evaporation.<sup>41</sup> Peatlands also serve as a cultural landscape and a source of livelihood. In boreal peatlands, berries, mushrooms, and medicinal plants are harvested for health and wellbeing.<sup>42</sup> While the carbon sink properties of peatlands often take center stage, the values of peatlands are plentiful.

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<sup>39</sup> UNEP, *Smoke on Water*, *supra* note 11 at 11.

<sup>40</sup> UNEP, *Smoke on Water*, *supra* note 11 at 24.

<sup>41</sup> *Ibid.*

<sup>42</sup> *Ibid.*

# Peatlands in Canada

Peatlands are a common ecological feature in Canada. So common in fact, that Canada is home to some of the largest peatlands globally – second only to Russia.<sup>43</sup> To better place this into perspective, Canadian peatlands cover approximately 113.6 million hectares, or roughly 13% of the country’s surface area.<sup>44</sup> While peatlands are present in all provinces, peat is not commercially harvested from coast-to-coast. At present, commercial peat harvest largely occurs in: Alberta, Saskatchewan, Manitoba, Ontario, Quebec, and New Brunswick.<sup>45</sup> In 2016, it was estimated that Quebec accounted for approximately 25% of all Canadian production. New Brunswick is responsible for a significant percentage of peat harvest as well.<sup>46</sup>

With respect to production, Natural Resources Canada collects data on the quantity of peat produced annually. Between 2014-2018, Canada harvested an average of 1.34 million tonnes of peat.<sup>47</sup> While peat production numbers dipped slightly below this average in 2019, production rose to 1.68 million tonnes in 2020 and 1.65 million tonnes in 2021.<sup>48</sup> In terms of impact by land, roughly 30,900 hectares of peatlands have been, or are currently being, harvested; however, this represents a disturbance to 0.03% of total peatland coverage in Canada.<sup>49</sup>

The Canadian Sphagnum Peat Moss Association (CSPMA) is the national industry association of horticultural peat producers. They represent 14 producers across the country, which means their membership accounts for over 90% of the industry.<sup>50</sup> Their membership includes producers Premier Tech Horticulture, Lambert Peat Moss, and Berger Peat Moss – to name a few.

The role of the CSPMA is to provide advocacy and support for their members which includes helping drive responsible production of peatlands. The industry has worked closely with wetland researchers over the past several decades with particular focus on rehabilitation following harvest. Asha Hingorani, the president of the CSPMA, further estimates that about 80% of the industry is currently VeriFlora certified.<sup>51</sup> VeriFlora is a voluntary and independent agricultural sustainability certification that was expanded to include peat producers in 2011.<sup>52</sup> The certification framework includes many components including ecosystem management and protection, restoration and

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<sup>43</sup> UNEP, *Smoke on Water*, *supra* note 11 at 10.

<sup>44</sup> Canadian Sphagnum Peat Moss Association, “Industry Statistics” (2020), online: *Canadian Horticultural Peat* <<https://peatmoss.com/statistics/>> [https://perma.cc/XK2Y-94VX] [CSPMA 2020].

<sup>45</sup> *Ibid*; Dave Lefebure, “Mining = Opportunity for Indigenous Communities in Saskatchewan” (April 2021), online (pdf): *Council for the Advancement of Native Development Officers* <<https://www.edo.ca/downloads/saskatchewan-mining-presentation-april-2021.pdf>> [https://perma.cc/7Y7B-W7C7].

<sup>46</sup> CSPMA 2020, *supra* note 44.

<sup>47</sup> NRCAN, “Annual Statistics of Mineral Production,” *supra* note 16.

<sup>48</sup> *Ibid*.

<sup>49</sup> Charman, “Peat and Peatlands,” *supra* note 14.

<sup>50</sup> Personal communication with Asha Hingorani, Canadian Sphagnum Peat Moss Association, 25 February 2022.

<sup>51</sup> *Ibid*.

<sup>52</sup> Greenhouse Product News, “Veriflora Certification Expands to Include Peat Moss” (10 June 2011), online: <<https://gpnmag.com/news/veriflora-certification-expands-include-peat-moss/>> [https://perma.cc/MJD7-YQEG] [Greenhouse Product News 2011].

rehabilitation, and water quality management.<sup>53</sup> Companies are subject to annual audits and must apply to recertify every three years.<sup>54</sup> Premier Tech Horticulture and Berger Peat Moss were among some of the first companies to receive this certification.<sup>55</sup> It is also of note that the management and mining of peatlands is regulated provincially. This has led to a patchwork approach to regulation.

Finally, it is important to note that much of the peat harvested in Canada is not used in this country. Approximately 87% of Canadian peat is exported to the United States.<sup>56</sup> Uses for this peat in the US include: golf course construction, mixed fertilizers, mushroom culture, seed inoculants, a filtration medium for waterborne contaminants, and oil absorbent.<sup>57</sup> Indeed, the United States is deeply reliant on Canada peat. Although peat is also harvested and processed in United States, Canadian peat accounts for 70% of their domestic consumption.<sup>58</sup> Canadian peat made up 96% of their import sources between 2016-2019.<sup>59</sup> Thus, when considering the impact of peat harvesting in Canada, it is critical to reflect on where the peat goes and what protection measures will ultimately be most effective.

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<sup>53</sup> See SCS Global Services, “Responsibly Managed Peatlands – A Veriflora Standard for Responsible Horticulture Peat Moss Production,” online (pdf):

<[https://cdn.scsglobalservices.com/files/program\\_documents/scs\\_stn\\_responsiblymanagedpeatlands\\_v1-0\\_080217\\_new.pdf](https://cdn.scsglobalservices.com/files/program_documents/scs_stn_responsiblymanagedpeatlands_v1-0_080217_new.pdf)> [https://perma.cc/SB69-R25H].

<sup>54</sup> SCS Global Services, “Responsibly Managed Peatlands: What is the Responsibly Managed Peatlands Program?” online: <<https://www.scsglobalservices.com/services/responsibly-managed-peatlands>> [https://perma.cc/DY2P-6WS8].

<sup>55</sup> Greenhouse Product News 2011, *supra* note 52.

<sup>56</sup> Charman, “Peat and Peatlands,” *supra* note 14.

<sup>57</sup> Brioché, “Peat,” *supra* note 37.

<sup>58</sup> *Ibid.*

<sup>59</sup> *Ibid.*



# Jurisdictions Calling for a Ban on Horticultural Peat

## UNITED KINGDOM

The United Kingdom has taken significant steps to protect peat. The jurisdiction of England and Wales is aiming to ban the sale horticultural peat to hobby gardeners by 2024 and the professional sector by 2028.<sup>60</sup> This move follows an effort to implement voluntary targets, set in 2011, that were aimed at ending the sale of peat by 2020.<sup>61</sup> These voluntary targets saw some initial success, with peat use falling by 25% between 2011-2019 -- but ultimately fell short, with peat sales increasing by almost 10% in 2020, as pandemic lockdown led to more people picking up hobby gardening.<sup>62</sup>

Currently England and Wales is the only jurisdiction with a comprehensive plan to legally ban the sale of horticultural peat moss. This effort is being spearheaded by the UK Department for Environment, Food, and Rural Affairs (DEFRA). Following the release of their proposal to ban sale of horticultural peat, DEFRA held a public consultation period which ended in March 2022. Preliminary results indicate that, of the 5,000+ responses they received, approximately 97% of respondents were in favour of a ban.<sup>63</sup> Given the amount of public support, it is likely that this will take effect on the stated timelines.

In their proposal, DEFRA considered several alternatives to a complete ban. For example, DEFRA suggested that point of sale measures could potentially be implemented as an alternative. Such measures could include a two-pronged approach of increasing the price of peat products (to close the price gap between peat and peat-free products) combined with labels on peat products warning of environmental impacts.<sup>64</sup> Another proposal considered was the implementation of mandatory reporting of volumes sold by all vendors of peat and peat-based products.<sup>65</sup> Of course, should the ban come into effect, as anticipated, these measures will not be necessary.

While the proposed ban will have widespread impacts, it is necessary to note that it will not be a complete and absolute ban. The proposal indicates that DEFRA does not intend to end the retail

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<sup>60</sup> Damien Carrington, "Peat sales to gardeners in England and Wales to be banned by 2024," *The Guardian* (18 December 2021), online: <<https://www.theguardian.com/environment/2021/dec/18/peat-sales-to-gardeners-in-england-and-wales-to-be-banned-by-2024>> [https://perma.cc/4QT3-FGK7].

<sup>61</sup> UK, Department for Environment, Food & Rural Affairs, *Ending the retail sale of peat in horticulture in England and Wales* (London: DEFRA, December 2021) at 8, online (pdf): *Department for Environment, Food & Rural Affairs* <[https://consult.defra.gov.uk/soils-and-peatlands/endingtheretailsaleofpeatinhorticulture/supporting\\_documents/Consultation%20Ending%20the%20retail%20sale%20of%20peat%20in%20horticulture%20in%20England%20and%20Wales.pdf](https://consult.defra.gov.uk/soils-and-peatlands/endingtheretailsaleofpeatinhorticulture/supporting_documents/Consultation%20Ending%20the%20retail%20sale%20of%20peat%20in%20horticulture%20in%20England%20and%20Wales.pdf)> [https://perma.cc/6RRX-AZB3] [DEFRA 2021, *Ending the retail sale of peat*].

<sup>62</sup> *Ibid.*

<sup>63</sup> Personal communication with the Department for Environment, Food, and Rural Affairs (DEFRA) (21 March 2022).

<sup>64</sup> DEFRA 2021, *Ending the retail sale of peat*, *supra* note 61 at 10.

<sup>65</sup> *Ibid.*

sale of peat-containing products such as ornamental nursery stock.<sup>66</sup> There will also be potential exemptions considered for scientific purposes or certain products, currently undetermined, up to a maximum amount of peat.<sup>67</sup> Furthermore, note that this ban will not directly impact current licenses for peat extraction in the United Kingdom. (However, all peat extraction licenses are currently set to expire by 2042 at the latest and no new licences are to be granted following that time.<sup>68</sup>)

## IRELAND

Ireland is also dealing with a peat ban; however, it is a ban on extraction rather than on horticultural sales. In 2019, their high court struck down regulations that exempted peat harvesting from the need for planning permission and brought all large-scale extraction solely under a new environmental protection licensing system.<sup>69</sup> At the time of writing, no peat companies in Ireland have both the planning permission and licenses required to legally extract peat. This ban is not one that has been legislated but is perhaps better described as an example of legal limbo. In late 2021, two senators introduced The Horticultural Peat (Temporary Measures) Bill 2021 in the hopes of removing the requirement for planning permission so that peat could be domestically extracted for use in the horticultural sector.<sup>70</sup> While their peat extraction processes remain in limbo, Ireland has been importing peat from the Baltics to meet their needs.<sup>71</sup>

While an imminent state sponsored ban may be unlikely in Ireland, the state-backed peat harvester Bord na Móna has taken a step back from the industry. Following the high court decision in 2019, they formally ended all their peat harvesting activities. Their last full harvest took place in 2018, followed by a partial harvest in 2019, and a complete suspension of operations in 2020.<sup>72</sup> Up until that point, Bord Na Móna held roughly 80% of the market in Ireland.<sup>73</sup> That said, it should be

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<sup>66</sup> DEFRA 2021, *Ending the retail sale of peat*, *supra* note 61; Ornamental plants are plants that are grown for display purposes rather than function and nursery stock refers to plants that are grown in a controlled environment where they are propagated and grown to a desired size.

<sup>67</sup> DEFRA 2021, *Ending the retail sale of peat*, *supra* note 61.

<sup>68</sup> UK, Department for Environment, Food & Rural Affairs, *Consultation Impact Assessment – Ending the Retail Sale of Peat in Horticulture in England and Wales* (London: DEFRA, 14 February 2022) at 7, online (pdf):

[https://consult.defra.gov.uk/soils-and-peatlands/endingtheretailsaleofpeatinhorticulture/supporting\\_documents/Consultation%20Impact%20Assessment%20Ending%20the%20Retail%20Sale%20of%20Peat%20in%20Horticulture%20in%20England%20and%20Wales.pdf](https://consult.defra.gov.uk/soils-and-peatlands/endingtheretailsaleofpeatinhorticulture/supporting_documents/Consultation%20Impact%20Assessment%20Ending%20the%20Retail%20Sale%20of%20Peat%20in%20Horticulture%20in%20England%20and%20Wales.pdf) [https://perma.cc/4S8X-MVH2] [DEFRA 2022, *Consultation Impact Assessment*].

<sup>69</sup> Niall Sargent, “New peat legislation slammed as ‘incompatible’ with climate targets and EU law,” *Noteworthy* (29 November 2021), online: <https://www.noteworthy.ie/peats-sake-pt2-peat-bill-5611539-Nov2021/> [https://perma.cc/9446-YELH].

<sup>70</sup> *Ibid.*

<sup>71</sup> Mark Hilliard, “Ireland starts importing peat following wind-up of domestic production,” *The Irish Times* (21 September 2021), online: <https://www.irishtimes.com/news/environment/ireland-starts-importing-peat-following-wind-up-of-domestic-production-1.4679135> [https://perma.cc/89NA-4UFG].

<sup>72</sup> Raidió Teilifís Éireann, “Bord na Móna formally ends peat harvesting operations” (15 January 2021), online: <https://www.rte.ie/news/business/2021/0115/1189899-bord-na-mona-peat-operations/#:~:text=Bord%20na%20M%C3%B3na%20has%20today,of%20harvesting%20operations%20last%20year> [https://perma.cc/XQ52-AZFF].

<sup>73</sup> Personal communication with Dr. David Wilson, Earthy Matters Environmental Consultants (24 February 2022).

noted that a large part of their harvest was used in the energy sector with a lesser amount being used for horticulture. Today, Bord na Móna has rebranded itself as a climate solution company with the goal of helping Ireland reach zero greenhouse gas emissions by 2050.<sup>74</sup> While Ireland does not offer an example of a legislated ban, the above provides an interesting example of positive industry action.

## OTHER JURISDICTIONS MAY ACT SOON

It appears that Scotland and Germany may soon follow the example of England and Wales and move to ban the sale of horticultural peat. The Scottish Government published a commitment to phase out the use of horticultural peat in 2019-2020.<sup>75</sup> In doing so, they recognized that peatland restoration and conservation will be critical to adapting to climate change and loss of biodiversity.<sup>76</sup> They have further recognized that peat conservation will be key in transitioning to net zero by 2045.<sup>77</sup>

In addition, the German Federal Government's Climate Action Plan 2050 has the goal of reducing peat in the horticultural sector.<sup>78</sup> DEFRA has further indicated that they have been in high level conversations about the prospect of a horticultural peat ban so it remains something to monitor in the near future.

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<sup>74</sup> Bord na Móna, "Climate solutions for a cleaner, brighter future," online: <<https://www.bordnamona.ie/climate-solutions/overview/>> [https://perma.cc/C6NT-QHS4].

<sup>75</sup> DEFRA 2022, *Consultation Impact Assessment*, *supra* note 68 at 12.

<sup>76</sup> DEFRA 2021, *Ending the retail sale of peat*, *supra* note 61 at 9.

<sup>77</sup> *Ibid.*

<sup>78</sup> Germany, Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety, "Climate Action Plan 2050: Principles and goals of the German government's climate policy" (Berlin, Germany: FMENCBNS, 2016) at 71, online (pdf): <[https://ec.europa.eu/clima/sites/its/its\\_de\\_en.pdf](https://ec.europa.eu/clima/sites/its/its_de_en.pdf)> [https://perma.cc/GK45-BB4T].

## Alternatives

Peat moss has long been a preferred material for hobby gardeners and professionals alike. Many growers opt for peat as a component of their chosen growing media because it can retain moisture and oxygen without becoming heavy or oversaturated.<sup>79</sup> In fact, peat can retain up to 20 times its weight in water.<sup>80</sup> Peat is also generally sterile, which makes it appealing to those who wish to suppress fungal diseases from impacting seedlings in early stages of growth.<sup>81</sup> Peat aids in improving the drainage of soils, thereby allowing better opportunity for new growth to breathe and absorb nutrients.<sup>82</sup> (Note that while peat provides many benefits to the growing process, it is virtually devoid of nutrients and, as a result, is commonly mixed with other media such as perlite, vermiculite or lime.<sup>83</sup>)

Professional gardeners have long used peat; however, many have started to call for the use of alternatives and a ban of peat use in gardens. The Royal Horticultural Society, a UK based gardening organization which is the largest of its kind in the world, has reduced their peat use by 98% and have pledged to become peat-free by 2025.<sup>84</sup> Monty Don, a famed British horticulturalist and long-time BBC presenter, has also been vocal in advocating for a move away from peat-based products. Even though the UK will ban the sale of peat-based media starting in 2024, he has been actively calling on gardeners to be proactive and curb their use immediately.<sup>85</sup> He has used strong language in support of his position by stating that the use of peat “is an act of eco vandalism.”<sup>86</sup>

In addition to climate concerns, there are two important reasons why professional growers are moving away from peat. First, despite its helpful properties, some professionals have noted that peat is often misused by consumers. Instead of using peat as a medium for propagation, consumers will frequently use peat as a soil improver.<sup>87</sup> Given its low nutrient value, this is an improper use of a resource that takes significant periods of time to regrow. Second, more peat-free materials are coming available. Due to the alternate options available, and the known

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<sup>79</sup> Adrian Higgins, “Is this popular gardening material bad for the planet?” *The Washington Post* (11 May 2017), online: <[https://www.washingtonpost.com/lifestyle/home/should-sustainable-gardeners-use-peat-moss/2017/05/09/1fc746f0-3118-11e7-9534-00e4656c22aa\\_story.html](https://www.washingtonpost.com/lifestyle/home/should-sustainable-gardeners-use-peat-moss/2017/05/09/1fc746f0-3118-11e7-9534-00e4656c22aa_story.html)> [https://perma.cc/4WLC-BGGG] [Higgins, “Is this popular gardening material bad for the planet?”].

<sup>80</sup> International Peatland Society, “Peat for horticulture,” online: <<https://peatlands.org/peat/peat-for-horticulture/>> [https://perma.cc/8CWF-256M] [International Peatland Society, “Peat for horticulture”].

<sup>81</sup> Higgins, “Is this popular gardening material bad for the planet?” *supra* note 79.

<sup>82</sup> International Peatland Society, “Peat for horticulture,” *supra* note 80.

<sup>83</sup> Higgins, “Is this popular gardening material bad for the planet?” *supra* note 79.

<sup>84</sup> Royal Horticultural Society, “Peat-free gardening,” online: <<https://www.rhs.org.uk/advice/peat>> [https://perma.cc/L6J5-K7N4].

<sup>85</sup> Anna Cottrell, “Monty Don urges gardeners to stop using peat now” (18 October 2021), online: *Gardening ETC* <<https://www.gardeningetc.com/us/news/monty-don-warning-stop-using-peat-now>> [https://perma.cc/7LRA-GBG6].

<sup>86</sup> *Ibid.*

<sup>87</sup> Margaret Roach, “Why gardeners should stop using peat, and what to use instead,” *The New York Times* (2022), online: <<https://www.nytimes.com/2022/02/02/realestate/gardening-peat.html>> [https://perma.cc/9DZV-TP25] [Roach, “Why gardeners should stop using peat”].

environmental impacts of using peat, a shift away from peat has become an increasingly easy decision to make.

However, it is important to note that no product is without an environmental footprint — whether from its production, transport to market, or both. For example, coconut coir (also known as coir) is a favourite peat substitute. The product itself consists of the shorter fibres from coconut husks left as a by-product of coconut processing. Coir shares many positive traits with peat, as it is very porous and retains water well.<sup>88</sup> Unfortunately, coir is predominately sourced from South Asia and long-distant transport itself creates significant environmental impacts. In addition, coir requires a large amount of fresh water to wash and prepare the husk — due to high levels of sodium and potassium that typically accumulates on the fibres.<sup>89</sup> The environmental impact of replacing peat with coir would not be insignificant.

However, there are many other alternative media available that are readily found, and produced, in Canada. Wood fibre and bark material are viable alternatives. While this media tends to make soil more acidic, the pH levels can be adjusted, or the material can instead be used for plants that thrive in more alkaline environments.<sup>90</sup> It should also be noted that not all wood-based media are byproducts but can come from trees specifically harvested for horticultural purposes. Some of these materials may also be chemically processed.<sup>91</sup> For these reasons, the preferred alternative would be byproducts from locally sourced wood, when possible. Other readily available alternatives include leaf mold, pine needles, manure, and compost.

It is important to note that the impending UK ban has prompted several large UK retailers to seriously advance peat alternatives. Dobbies, the UK's leading garden center store, made a commitment to be 90% peat-free by 2020 and 100% peat-free by this year.<sup>92</sup> They were able to meet their peat-free target ahead of target in late 2021 due, in part, to the success of their own brand of peat-free compost.<sup>93</sup> B&Q is a large home improvement store that has also made a commitment to be peat-free in their growing media by 2023.<sup>94</sup> B&Q has sold peat-free products since as early as 1991 and stopped selling 100% peat based products in 2008.<sup>95</sup> Since 2018, B&Q

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<sup>88</sup> Trees.com, "What is peat moss? What is it used for?" (3 March 2022), online: <<https://www.trees.com/gardening-and-landscaping/peat-moss>> [https://perma.cc/5KZG-ANHR].

<sup>89</sup> Roach, "Why gardeners should stop using peat," *supra* note 87.

<sup>90</sup> Mary Dyer, "Peat Moss Alternatives: What to Use Instead of Peat Moss" (22 March 2022), online: *Gardening Know How* <<https://www.gardeningknowhow.com/garden-how-to/soil-fertilizers/peat-moss-alternatives.htm#:~:text=Coconut%20coir%2C%20also%20known%20as,%2C%20upholstery%20stuffing%2C%20and%20rope>> [https://perma.cc/L78T-G2FU].

<sup>91</sup> *Ibid.*

<sup>92</sup> Dobbies Garden Centre, "Media Release: Dobbies welcomes peat-free deadlines," online (pdf): <<https://files-eu-prod.cms.commerce.dynamics.com/cms/api/rsbnfrmlpw/binary/MD3oP8>> [https://perma.cc/VH4J-BFVP].

<sup>93</sup> Dobbies Garden Centre, "Media Release: Dobbies brings forward peat free target to 2021," online (pdf): <<https://localgardener.org/blog/dobbies-brings-forward-peat-free-target-to-2021-2/#:~:text=Dobbies%2C%20the%20UK's%20largest%20garden,the%20original%20target%20of%202022>> [https://perma.cc/LH3Z-3E7W].

<sup>94</sup> B&Q Media Centre, "Media Release: B&Q to be 100% peat-free across its bagged growing media range in 2023" (15 June 2021), online: *B&Q Media Center* <<https://www.diy.com/corporate/media-centre>> [https://perma.cc/UB7D-H4CJ] [B&Q, "B&Q to be 100% peat-free"].

<sup>95</sup> *Ibid.*



has been working with developers to create their own brand of 100% peat-free compost. It officially launched in 2020, using a mix of coir and other media, and at a competitive price so cost would not be a barrier for consumers.<sup>96</sup> It may be that a change in regulation will only serve to hasten innovation here too.

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<sup>96</sup> B&Q, “B&Q to be 100% peat-free, *supra* note 94.

# Conclusion

Peatlands have been drained, harvested, and converted to alternate land uses for centuries – often with little regard to the long-term impacts. This must stop. Peat products can be a valuable resource, but it is clear that in this Age of the Climate Emergency peatlands are of paramount value when left in the ground. Fortunately, there are viable alternatives to using the “climate bomb” of peat for horticultural purposes. Peat need not be extracted and used in this way.

Experts, governments, and individual gardeners alike are starting to understand the paramount ecological value of peatlands and are seeking options that allow for their preservation and protection. Based on what we now know, the following recommendation may be helpful in charting a course forward within the province of British Columbia.

## **RECOMMENDATION #1. THE PROVINCE OF BRITISH COLUMBIA SHOULD MOVE TO BAN THE SALE OF HORTICULTURAL PEAT MOSS.**

The Province of British Columbia could easily model a ban off the approach taken by England and Wales in the UK. That said, there are some important contextual factors that distinguish the Canadian context. In 2020, the UK found that 70% of peat sold was bagged growing media for hobby gardeners – whereas the professional sector accounted for only 30% of sales.<sup>97</sup> A phased approach that targets the hobby sector first has the potential to be highly impactful within the UK. We were unable to obtain statistics on the breakdown of horticultural peat use between the hobby and professional sector in BC by the time of writing.

Note there are differences between the UK and Canada regarding both the source and end-use of their peat. The UK is a major importer of peat, while Canada is a major exporter.<sup>98</sup> Only 2% of UK peat sales go to export, whereas *most* Canadian peat is exported to the United States.<sup>99</sup> Thus, a ban on retail sales in the UK will have more direct impact on protecting domestic peatlands than a Canadian ban – because most Canadian peat is not retailed in Canada in the first place. Given the small size of the UK export market, a ban on the sale of peat has a far more significant impact in protecting UK domestic peatlands, than a BC ban would have on domestic peatlands.

In addition, note that peat has been commercially harvested in the UK, at a large scale, for far longer. Nearly 95% of peatlands in the UK have been harvested at some point and only 13% of

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<sup>97</sup> DEFRA 2022, *Consultation Impact Assessment*, *supra* note 68 at 9.

<sup>98</sup> In recent years only 39% of peat sold in the UK was extracted domestically, with the remaining 61% of peat used imported from other countries, such as Germany, Netherlands and, prior to 2021, Ireland (see DEFRA 2022, *Consultation Impact Assessment*, *supra* note 68 at 8-9).

<sup>99</sup> DEFRA 2022, *Consultation Impact Assessment*, *supra* note 68 at 8-9.

England's peatlands remain in a near natural state.<sup>100</sup> The impact on UK peatlands is at this point clearer, therefore seeking public support for their preservation is made easier.

A ban is still a feasible option within the province of British Columbia. And a BC retail ban could have an educational effect on peat users and use far beyond the borders of BC. However, it is important to have an awareness of the ecological, social, and cultural factors that distinguish this jurisdiction from the UK example.

Should a complete ban on the sale of horticultural peat not be feasible at this point, the following five recommendations provide an opportunity to educate the public on the importance of peatlands and facilitate public discourse about their value. The recommendations below may aid in building up to an eventual ban on the sale of horticultural peat moss.

**RECOMMENDATION #2. THE PROVINCE OF BRITISH COLUMBIA SHOULD CREATE GOVERNMENT PROCUREMENT POLICIES THAT ENSURE PEAT-BASED PRODUCTS ARE NOT PROCURED FOR HORTICULTURAL AND PARK SERVICES.**

A demand that the province change its procurement policies to stop government purchasing of horticultural peat could be educational for the public. There is precedent for just such a government procurement policy. Since 2015, the United Kingdom's Department of Environment, Food and Rural Affairs has had procurement policies in place that explicitly state that growing media procured by the government must not contain peat.<sup>101</sup> There are limited exceptions permitted based on the certification of the product; however, it ultimately seeks to strictly limit the use of peat in government funded facilities and areas. To better understand what the province's current policies are, it may be advisable to submit a freedom of information (FOI) request seeking further details. Given time constraints, we were unable to obtain this information before time of writing.

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<sup>100</sup> DEFRA 2022, *Consultation Impact Assessment*, *supra* note 68 at 10.

<sup>101</sup> Department for Environment, Food & Rural Affairs, *Government Buying Standard for horticultural and park services* (2015), online (pdf): [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/482146/gbs-horticultural-2015.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/482146/gbs-horticultural-2015.pdf) [https://perma.cc/B5SP-SP53] at 1.

### **RECOMMENDATION #3. MUNICIPAL GOVERNMENTS SHOULD SET LOCAL REGULATORY INITIATIVES TO BAN THE USE OF PEAT-BASED PRODUCTS WITHIN THEIR JURISDICTIONS.**

Many municipalities across the province, including Vancouver<sup>102</sup> and Victoria,<sup>103</sup> have recently introduced local bylaws aimed at regulating and restricting the use of single-use plastic bags. These bylaws require businesses to eliminate the distribution of plastic checkout bags and provide alternatives that meet certain specifications (i.e. paper or reusable bags). The purpose of these bylaws is to reduce the creation of waste but also to broadly protect the natural environment.<sup>104</sup> An analogous argument could easily be made for restricting the sale of peat and providing viable alternatives instead.

While these bans on issuing plastic bags are now in place and have taken hold in at least dozens of other municipalities across the province, it was not a linear process. It must be noted that Victoria's initial attempt to ban plastic bags was found invalid by the BC Court of Appeal in 2019.<sup>105</sup> Surfrider Foundation had initially lobbied for this bylaw to "eliminate single-use plastic bags, which pollute and obstruct local waterways."<sup>106</sup> There is overlapping authority between municipalities and the Province with respect to the protection of the natural environment but under the *Community Charter*, it was found that Ministerial Approval was required to validate the bylaw – something that had not been obtained.<sup>107</sup>

The *Community Charter* provides the statutory framework for all municipalities in BC – except for the City of Vancouver.<sup>108</sup> In addition to providing guidance on spheres of concurrent authority, it sets out the core areas of authority for municipalities which include broad powers over municipal services and public health regulations as well as bylaw enforcement and property taxation. More specifically, it notes that council may regulate, prohibit, or impose requirements related to public places, trees, protection of the natural environment, and the removal of soil and the deposit of soil or other material.<sup>109</sup> Given the use of peat as a growing media for seedlings, in public parks, and its integration into soil mixtures, it is conceivable that these are areas of municipal authority that a ban around of the sale of peat-based products could be contemplated.

That said, this must be considered in the context of the case mentioned above and the rest of the *Community Charter*. At its core, any proposed ban on the sale of peat-based products is related to

<sup>102</sup> City of Vancouver, "Single-Use Item Reduction Strategy," online: <<https://vancouver.ca/green-vancouver/single-use-items.aspx>> [https://perma.cc/7LU8-HGYX].

<sup>103</sup> City of Victoria, by-law No 20-025, *Checkout Bag Regulation Bylaw* (2020).

<sup>104</sup> *Ibid.*

<sup>105</sup> *Canadian Plastic Bag Association v Victoria (City)*, 2019 BCCA 254 [CPBA v Victoria].

<sup>106</sup> CPBA v Victoria, *supra* note 105 para 2.

<sup>107</sup> CPBA v Victoria, *supra* note 105 at paras 58-59.

<sup>108</sup> British Columbia, "Local Government Legislative Framework," online: <<https://www2.gov.bc.ca/gov/content/governments/local-governments/facts-framework/legislative-framework#:~:text=The%20Community%20Charter%20provides%20the,Property%20taxation>>.

<sup>109</sup> *Community Charter*, SBC 2003, c 26, ss 8(3)(b)(c)(j)(m) [Community Charter].

the protection of the peatlands – or the natural environment. The “protection of the natural environment,” and “the removal of soil and the deposit of soil or other material” are both areas of concurrent jurisdiction.<sup>110</sup> Any proposal to ban the sale of peat-based products municipally would require Ministerial Approval, adoption pursuant to a regulation, or enactment under an agreement with the province to take full force and effect. The plastic bags bylaw case mentioned above shows that courts may be wary of upholding a bylaw in an area of concurrent jurisdiction without provincial Ministerial Approval.<sup>111</sup> This is further complicated by the fact that peat products implicate agricultural practices. This does not make the task impossible but will require some level of buy-in from the province.

However, local government championing the movement against peat garden use could easily take different, creative forms. For example, the Swindon Borough Council, a local government in the UK, launched a 2021 climate change campaign strongly *encouraging* residents to stop their use of peat-based products ahead of the 2024 ban.<sup>112</sup> This initiative could be considered as an alternative or staged approach to a municipal ban, should an outright ban prove to be untimely or challenging. A campaign of this kind could also be used in tandem with a future municipal ban to encourage motivated citizens to adopt peat-free products, help spread awareness about the value of peat, and aid in building popular support.

**RECOMMENDATION #4. THE VANCOUVER BOARD OF PARKS AND RECREATION SHOULD BAN THE USE OF PEAT-BASED PRODUCTS IN CITY PARKS AND STREET TREES.**

The Vancouver Parks Board advanced pesticide reduction strategies throughout British Columbia by pioneering a progressive Integrated Pest Management Policy in the 1980s and 1990s. Similarly, the Board could play an important educational role by establishing a progressive policy banning the use of horticultural peat throughout the Vancouver Park system. Just as Vancouver Parks Board policy helped convince homeowners and gardeners to move away from heavy pesticide use, the highly respected Park system could play a pivotal role in convincing private gardeners to move away from peat use.

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<sup>110</sup> *Community Charter*, *supra* note 109, ss 9(1)(b)(e), 9(3)(4)(5).

<sup>111</sup> See *CPBA v Victoria*, *supra* note 105.

<sup>112</sup> Swindon Borough Council, “Swindon retailers urged to Be the change and end the sale of peat compost” (8 September 2021), online: [https://www.swindon.gov.uk/news/article/691/swindon\\_retailers\\_urged\\_to\\_be\\_the\\_change\\_and\\_end\\_the\\_sale\\_of\\_peat\\_compost](https://www.swindon.gov.uk/news/article/691/swindon_retailers_urged_to_be_the_change_and_end_the_sale_of_peat_compost) [https://perma.cc/5REC-UBEY].



**RECOMMENDATION #5. THE PROVINCE OF BRITISH COLUMBIA SHOULD SUPPORT POINT OF SALE MEASURES TO DISCOURAGE CONSUMERS FROM PURCHASING HORTICULTURAL PEAT.**

Similar to what was once proposed in the UK as an alternative to a complete ban, the province could seek to support an increased cost for peat-based products along with mandatory labelling of peat-based products with information on their environmental impact. This recommendation, if implemented, would aid in educating customers about the impact of their choices while creating/driving conversation about the viability of alternatives.

**RECOMMENDATION #6. THE PEATLAND PROTECTION SOCIETY COULD SEEK TO CREATE A VOLUNTARY CERTIFICATION PROGRAM FOR GARDEN RETAILERS.**

This recommendation could be modeled on the Clean Marine BC Certification. This is an eco-certification program that recognizes marinas, boatyards, and other marine facilities for their implementation of best environmental practices.<sup>113</sup> The certification is given to participants who pass an assessment conducted by an independent auditor. All aspects of operations are considered from fueling procedures to toxic paints and maintenance products. Some of the certification requirements include requirements to not use specific products, such as use a hard anti-fouling or “non-fouling” paints,<sup>114</sup> or take specific actions, such as mixing fuel and oil.<sup>115</sup>

The Clean Marine certification program could be used as a template for a new peat certification program. Such a certification program could include an independent audit process and a requirement to not use or sell peat-based products within the institution. The benefit of a company opting into the certification program could include promotion by the Peatlands Protection Society as a peat-free facility, access to educational resources, and access to a contact list of other like-minded businesses. This would all be in addition to the company’s ability to use the certification status in promotional materials.

*Note: The Canadian Sphagnum Peat Moss Association has a different perspective. The Association’s contact information and website is as follows: <https://peatmoss.com/>.*

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<sup>113</sup> Georgia Straight Alliance, “Clean Marine BC Certification,” online: <https://georgiastrait.org/work/cleanmarinebc/marinas/certification/> [https://perma.cc/T5J6-63GX].

<sup>114</sup> Georgia Straight Alliance, “Alternatives to toxic paints and boat maintenance products,” online: <https://georgiastrait.org/work/cleanmarinebc/boatingissues/toxicboatproducts/> [https://perma.cc/Z6YL-9LZ2].

<sup>115</sup> Georgia Straight Alliance, “Fuel and oil spills and emissions,” online: <https://georgiastrait.org/work/cleanmarinebc/boatingissues/smallsills/> [https://perma.cc/Y79Y-RKB5].