

ENVIRONMENTAL JUSTICE IN POLLUTION
HOTSPOTS AND SECTIONS 7 & 15 OF THE *CHARTER*:
THE CASE OF THE AAMJIWNAANG COMMUNITY IN
“CHEMICAL VALLEY”

BY
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“Chemical Valley” in Sarnia, Ontario, the site of almost half of Canada’s chemical industry, is one of the most polluted areas in the country. It is also home to the Aamjiwnaang First Nation, whose community members, as a result of their proximity to this cluster of polluting facilities, experience much higher risk and actual harm to their health than other Canadians. The lack of cumulative impact assessments for major industrial projects under Ontario’s environmental laws has created and perpetuated a “sacrifice zone” in Chemical Valley, where the residents experience environmental injustices. As the understanding of environmental injustices experienced by the Aamjiwnaang First Nation has evolved, the Constitution has become a focal point for advancing environmental justice in “Chemical Valley” and in similarly situated communities. Inspired by the Charter claims in the Lockridge v. Ontario lawsuit brought by Aamjiwnaang residents against the Ontario Ministry of Environment and Climate Change, this Note examines the potential for sections 7 and 15 of the Canadian Charter of Rights and Freedoms to address and remedy the environmental injustices impacting the Aamjiwnaang First Nation due to the cumulative impacts of long-term exposure to air pollution from multiple facilities.

To better understand how the Charter can serve as a tool to combat environmental injustices in “Chemical Valley” and other pollution hotspots, this Note applies sections 7 and 15 to environmental justice claimants in pollution hotspot cases, drawing upon the experiences of the Aamjiwnaang First Nation in “Chemical Valley.” It argues that sections 7 and 15 of the Charter can help address the kinds of environmental injustices experienced by the

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residents of “Chemical Valley” as a result of the Ontario government’s issuance of permits to major industrial projects without requiring a cumulative impact assessment.

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I. INTRODUCTION

Although Canada’s air quality has been ranked among the cleanest in the world several times in the last decade,¹ not all Canadians have been able to enjoy the benefit of clean air.² There is increasing evidence of environmental injustice—that environmental hazards and adverse health impacts resulting from air pollution are not borne equally among individuals or communities.³ Socially and economically disadvantaged groups, including low-income populations, people of color, and Indigenous communities—referred to in literature as “environmental justice

¹ See IQAIR, 2019 WORLD AIR QUALITY REPORT: REGION & CITY PM 2.5 RANKING 8, 23 (2019), <https://perma.cc/7UXW-VLZG> (ranking Canada as 90th for average for PM2.5 concentration, making it one of the top countries for air quality).

² Tor H. Oiamo, Issac N. Luginaah, Dominic O. Atari, & Kevin M. Gorey, *Air Pollution and General Practitioner Access and Utilization: A Population Based Study in Sarnia, ‘Chemical Valley,’ Ontario*, 10 J. ENV’T HEALTH, Aug. 2011, at 9; Michael Buzzelli & Michael Jerrett, *Racial Gradients of Ambient Air Pollution Exposure in Hamilton, Canada*, 36 ENV’T & PLAN. 1855, 1870–71 (2004) (discussing how Black and Latin-American Canadian residents have higher exposure to air pollution).

³ Amanda Giang & Kaitlin Castellani, *Cumulative Air Pollution Indicators Highlight Unique Patterns of Injustice in Urban Canada*, 15 ENV’T RSCH. LETTERS, Dec. 2020, at 1, 7; SARAH MARIE WIEBE, EVERYDAY EXPOSURE: INDIGENOUS MOBILIZATION & ENVIRONMENTAL JUSTICE IN CANADA’S CHEMICAL VALLEY 1, 12–13 (2016); Michael Buzzelli, Michael Jerrett, Richard Burnett, & Norm Finklestein, *Spatiotemporal Perspectives on Air Pollution & Environmental Justice in Hamilton, Canada, 1985–1996*, 93 ANNALS ASS’N AM. GEOGRAPHERS 557, 557, 568 (2003).

communities,”⁴ “fenceline communities,”⁵ and “sacrifice zones”⁶—are disproportionately affected by and exposed to ambient air pollution in countries including Canada and the United States.⁷ More specifically, significant disparities persist in the cumulative impacts of exposure to environmental hazards (such as lack of clean air) and social stressors.⁸

The Canadian Charter of Rights and Freedoms (*Charter*)⁹ is intended to safeguard the rights of all Canadians. It is an important means of protecting the rights of vulnerable individuals and communities. Despite long-standing constitutional protections in the *Charter*, Canadian courts have not sufficiently interpreted these provisions to prevent or remedy disproportionate environmental and health effects. This Note builds on the work of scholars like Chalifour, Collins, and Boyd, who argue that environmental rights can and should be incorporated into the *Charter* through judicial interpretation.¹⁰ Adding express language to the *Charter*

⁴ “Environmental justice communities” are also referred to as “overburdened communities.” See *EJ 2020 Glossary*, U.S. Env’t Prot. Agency (Aug. 18, 2022), <https://perma.cc/VSL8-FZZJ> (defining “overburdened community” as “[m]inority, low-income, tribal, or indigenous populations or geographic locations in the United States that potentially experience disproportionate environmental harms and risks. This disproportionality can be as a result of greater vulnerability to environmental hazards, lack of opportunity for public participation, or other factors. Increased vulnerability may be attributable to an accumulation of negative or lack of positive environmental, health, economic, or social conditions within these populations or places. The term describes situations where multiple factors, including both environmental and socio-economic stressors, may act cumulatively to affect health and the environment and contribute to persistent environmental health disparities.”).

⁵ Ciprian N. Radavoi, *Fenceline Communities and Environmentally Damaging Projects: An Asymptotically Evolving Right to Veto*, 29 TUL. ENV’T. L. J. 1, 21 (2015) (defining “fenceline community” as a “group living within a distance from an industrial project short enough to perceive the associated pollution”).

⁶ STEVE LERNER, SACRIFICE ZONES: THE FRONT LINES OF TOXIC CHEMICAL EXPOSURE IN THE UNITED STATES, 6, 9 (2010) (stating that “sacrifice zones” are “the result of many deeply rooted inequalities . . . tak[ing] the form of unwise (or biased) land use decisions dictated by local or state officials intent on attracting big industries”); see also Dayna Nadine Scott & Adrian A. Smith, “Sacrifice Zones” in the Green Energy Economy: Toward an Environmental Justice Framework, 62 MCGILL L. J. 861, 871 (2017) (arguing that sacrifice zones exist in the context of green energy based on empirical research in southwestern Ontario in 2015 of local resistance to renewable energy projects and distinguishing those concerns of health effects of certain renewable energy projects from “Not In My Back Yard” claims).

⁷ Giang & Castellani, *supra* note 3, at 1–2.

⁸ Oiamo et al., *supra* note 2, at 1.

⁹ Canadian Charter of Rights and Freedoms, Part I of the Constitution Act, 1982, Schedule B to the Canada Act 1982 [hereinafter *Charter*].

¹⁰ See, e.g., Nathalie J. Chalifour, *Environmental Justice and the Charter: Do Environmental Injustices Infringe Sections 7 and 15 of the Charter?*, 28 J. ENV’T. L. & PRAC. 89, 91–92, 103, 105–06 (2015) [hereinafter Chalifour: *Environmental Justice*]; David W.-L. Wu, *Embedding Environmental Rights in Section 7 of the Canadian Charter: Resolving the Tension Between the Need for Precaution and the Need For Harm*, 33 NAT’L J. CONST. L. 191, 192–93 (2014); see generally DAVID R. BOYD, *THE RIGHT TO A HEALTHY ENVIRONMENT, REVITALIZING CANADA’S CONSTITUTION* (David R. Boyd ed., 2012) (advocating for the full incorporation of a constitutional right to a healthy environment in order to better hold the government accountable for their actions); Lynda M. Collins, *An Ecologically Literate*

would ideally achieve stronger protections for environmental justice claimants in Canada. However, a constitutional law approach to analyzing situations such as the one confronting the Aamjiwnaang community would more likely resolve environmental justice problems.¹¹ A broader interpretation of sections 7 and 15 of the *Charter* by Canadian courts will help ameliorate the conditions of the Aamjiwnaang residents in Sarnia and similarly situated communities. This Note will assess how sections 7 and 15 of the *Charter* can be used to address and remedy environmental injustices to vulnerable populations. It will focus specifically on harms to health resulting from exposure to the cumulative impacts of multiple air pollutants. This Note will use the Aamjiwnaang community, near “Chemical Valley” in Sarnia, Ontario, as a case study because it is a paradigmatic example of environmental injustice in Canada and is widely reported to be one of the most polluted areas in the country.¹²

Canada’s record of inadequate environmental protection has resulted in substantial disparities in the cumulative impacts of exposure to ambient air pollution and in adverse health outcomes between individuals and groups. Notably, the Aamjiwnaang community, made up of approximately 900 Anishinabek people living on a First Nation reserve near Sarnia, Ontario, known as “Chemical Valley,” is overly burdened by air pollution from one of Canada’s largest concentrations of industry.¹³ The area is home to sixty-two large petrochemical, polymer, and chemical industrial facilities within twenty-five kilometers of the reserve, which emitted 5.7 million kilograms of toxic air pollutants on the Canadian side of the border alone in 2005.¹⁴ A study in that same year confirmed that the community’s sex ratio (the number of baby boys compared to the number of baby girls) was dramatically declining, and posited that chronic exposure to toxic chemical pollution was responsible.¹⁵ Moreover,

Reading of the Canadian Charter of Rights and Freedoms, 26 WINDSOR REV. LEG. & SOC. ISSUES 7, 8, 17 (2009) [hereinafter Collins: *Ecologically Literate Reading*].

¹¹ Kaitlyn Mitchell & Zachary D’Onofrio, *Environmental Injustice and Racism in Canada: The First Step is Admitting We Have a Problem*, 29 J. ENV’T L. & PRAC. 305, 334–35 (2016); Catherine Jean Archibald, *What Kind of Life? Why the Canadian Charter’s Guarantees of Life and Security of the Person Should Include the Right to a Healthy Environment*, 2 TUL. J. INT’L. & COMP. L. 1, 11 (2013).

¹² Keith Matheny, *Across the River, Canada’s Chemical Valley adds to Lake St. Clair’s Environmental Issues*, DETROIT FREE PRESS (Sept. 30, 2017), <https://perma.cc/Y66H-5PME>; Sarah Wiebe, *Environmental Justice in Canada’s Chemical Valley*, ENV’T HEALTH NEWS (Oct. 10, 2016), <https://perma.cc/PP3L-SKZ7> (excerpting Wiebe’s book EVERYDAY EXPOSURE: INDIGENOUS MOBILIZATION & ENVIRONMENTAL JUSTICE IN CANADA’S CHEMICAL VALLEY (2016)).

¹³ *About Us*, AAMJIWNAANG FIRST NATION, <https://perma.cc/QBM8-2TLN> (last visited Apr. 19, 2023); Constanze A. Mackenzie, Ada Lockridge, & Margaret Keith, *Declining Sex Ratio in a First Nation Community*, 113 ENV’T HEALTH PERSP. 1295, 1295 (2005) (noting that Chemical Valley has “one of Canada’s largest concentrations of industry.”).

¹⁴ Mackenzie et al., *supra* note 13, at 1295; ELAINE MACDONALD & SARAH RANG, EXPOSING CANADA’S CHEMICAL VALLEY: AN INVESTIGATION OF CUMULATIVE AIR POLLUTION EMISSIONS IN THE SARNIA, ONTARIO AREA 5 (2007), <https://perma.cc/AC4K-HUZ8>.

¹⁵ Mackenzie et al., *supra* note 13, at 1295.

the community experiences “increased risks of death from cardiovascular and respiratory diseases, lung cancer, diabetes, and heart attacks.”¹⁶ For instance, the asthma rate in Aamjiwnaang children living near Chemical Valley is more than double the national average rate.¹⁷ Defined by “the experience of concentrated levels of environmental risks or harms in a particular geographical space[,]” Chemical Valley is an example of a “pollution hotspot.”¹⁸ The existence of the hotspot and the consequent environmental degradation and health impacts in the Aamjiwnaang community illustrate the inadequacy of current approaches to environmental protection and equity in Canada.

The adverse health impacts in Chemical Valley are a product of environmental inequality and highlight the need for Canada—and particularly, Ontario—to take action to achieve environmental justice. In an effort to prompt such action, Aamjiwnaang residents Ada Lockridge and Ron Plain filed a lawsuit against the Ontario Ministry of Environment and Climate Change (MOECC or Ministry) in 2011, alleging that the province’s failure to account for the cumulative effects of pollution from the industrial activity around the community was a violation of their rights under sections 7 and 15 of the *Charter*.¹⁹ They discontinued the lawsuit when the Ontario government began to address the issues the claimants raised.²⁰ However, in 2017, MOECC’s proposed emissions policy fell short of adequately measuring the cumulative impacts of air pollution and “essentially amount[ed] to business as usual.”²¹ Though the *Lockridge v. Ontario*²² lawsuit was discontinued, its use of *Charter*-based claims may still be employed as a tool to achieve environmental justice in similar pollution hotspot cases.

Two important tenets of environmental justice are the “fair treatment” and “meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.”²³ “Fair treatment” means that environmental harms and

¹⁶ Archibald, *supra* note 11, at 6; Lauren Wortsman, “Greening” the Charter: Section 7 and the Right to A Healthy Environment, 28 DAL. J. LEG. STUD. 245, 247 (2019) (internal citation omitted).

¹⁷ Wortsman, *supra* note 16, at 247.

¹⁸ Chalifour: *Environmental Justice*, *supra* note 10, at 98, 99; Worstman, *supra* note 16, at 247; Dayna Nadine Scott, *Confronting Chronic Pollution: A Socio-Legal Analysis of Risk and Precaution*, 46 OSGOODE HALL L. J. 293, 330 (2008) [hereinafter Scott: *Chronic Pollution*] (defining a pollution hot spot as “industrial airsheds with significant background concentrations from pollutants from multiple facilities.”) (internal citation omitted).

¹⁹ *Lockridge v. Ont. Director of Ministry of Env’t*, 2012 O.N.S.C. 2316, paras. 7, 19 (Can. Ont. Sup. Ct. J.).

²⁰ *Defending the Rights of Chemical Valley Residents – Charter Challenge*, ECOJUSTICE (Oct. 30, 2014), <https://perma.cc/8V9D-MLAN>.

²¹ *After Eight and a Half Year Delay, Ontario Delivers Disappointing Cumulative Effects Policy*, ECOJUSTICE (Nov. 9, 2017), <https://perma.cc/9W5E-K3R6> (quoting Ecojustice lawyer, Kaitlyn Mitchell).

²² *Lockridge* (2012), 316 O.A.C. 1.

²³ *Environmental Justice*, U.S. ENV’T PROT. AGENCY (Mar. 29, 2023), <https://perma.cc/5A93-8L8C> [hereinafter *US EPA*]; Dayna Nadine Scott, *The Networked*

benefits “should be equitably distributed without discrimination on the basis of socio-economic status, race,” ethnicity—or, in the Canadian context, members of First Nations living on reserves.²⁴ “Meaningful involvement” is the need for affected communities to have an adequate opportunity to participate in “environmental policy development and decision-making, including in identifying concerns and in developing” solutions to address disproportionate environmental burdens, and the ability to take actions to produce environmental justice for themselves.²⁵

Alice Kaswan, an environmental justice scholar, distinguishes two forms of justice raised by the environmental justice movement: (1) justice in the existing distribution of environmental benefits and burdens (distributional justice); and (2) justice in the decision-making processes that determine the distribution of environmental benefits and burdens (political justice).²⁶ Political justice can be understood to consist of: (1) procedural justice—meaning “fair access to process;” (2) recognition justice—meaning “acknowledgment of and respect for all peoples;” and (3) restorative justice—meaning addressing “issues of past harms.”²⁷

Several provisions in the Constitution, which embeds the *Charter*, could be used to address and remedy environmental injustices. For instance, section 35, protecting fundamental rights of Indigenous peoples in the country, or section 36, requiring federal and provincial governments to provide “essential public services of reasonable quality to all Canadians,” are both potential avenues.²⁸ This Note looks only at sections 7 and 15, because section 7 is the most probable vehicle for a “right to a healthy environment” to protect environmental rights under the *Charter*, and because section 15 embodies the principles of equal protection and nondiscrimination, which are essential to environmental

Infrastructure of Fossil Capitalism: Implications of the New Pipeline Debates for Environmental Justice in Canada, 43 REV. GÉNÉRALE DE DROIT 11, 40 (2013).

²⁴ US EPA, *supra* note 23; Mitchell & D’Onofrio, *supra* note 11, at 308.

²⁵ US EPA, *supra* note 23; Mitchell & D’Onofrio, *supra* note 11, at 308; UNITED CHURCH OF CHRIST, TOXIC WASTES AND RACE AT TWENTY 1987–2007: A REPORT PREPARED FOR THE UNITED CHURCH OF CHRIST JUSTICE & WITNESS MINISTRIES 2 (2007), <https://perma.cc/DC2R-XYLH>; NAT’L ENV’T JUST. ADVISORY COUNCIL, ENV’T JUSTICE, URBAN REVITALIZATION & BROWNFIELDS: THE SEARCH FOR AUTHENTIC SIGNS OF HOPE es-iii, 7 (1996) [hereinafter NEJAC], <https://perma.cc/K8ZV-CMDW>; see also *What is Environmental Justice?*, U.S. DEP’T OF ENERGY, <https://perma.cc/W3D9-C534> (last visited Apr. 19, 2023) (defining “meaningful involvement” as “effective access to decision makers for all, and the ability in all communities to make informed decisions and take positive actions to produce environmental justice for themselves.”).

²⁶ Alice Kaswan, *Environmental Justice: Bridging the Gap Between Environmental Laws and “Justice”*, 47 AM. U. L. REV. 221, 230 (1997).

²⁷ SHALANDA H. BAKER, REVOLUTIONARY POWER: AN ACTIVIST’S GUIDE TO THE ENERGY TRANSITION 31 (1st ed. 2021).

²⁸ Rights of the Aboriginal Peoples of Canada, Part II of the Constitution Act, 1982, *being* Schedule B to the Canada Act, 1982, c 11 (U.K.); Equalization and Regional Disparities, Part III of the Constitution Act, 1982, *being* Schedule B to the Canada Act, 1982, c 11 (U.K.); Chalifour: *Environmental Justice*, *supra* note 10, at 92 n.6 (arguing that section 2 of the *Charter*, which protects freedom of expression and freedom of association as fundamental freedoms could also potentially serve to safeguard the rights of specific groups to “lobby and organize around an environmental injustice.”).

justice.²⁹ Though tensions exist between environmental laws and justice,³⁰ dignity rights such as the “right to a healthy environment” can serve an important constitutional role and provide an opportunity to bridge the gap between traditional, risk-based environmental regulations and environmental justice.³¹

This Note examines the potential for the *Charter*’s sections 7 and 15 to address and remedy the environmental health injustices impacting the Aamjiwnaang community due to the cumulative impacts of social stressors and exposure to air pollution from multiple facilities over time. Part II first examines the environmental justice concerns raised by Canadian pollution control laws and then focuses on those specifically raised by Ontario’s air pollution laws. In its analysis of environmental justice issues in Ontario, this Note (1) provides an overview of Ontario’s regulatory framework for air pollution, and (2) analyzes how that framework’s failure to account for cumulative impacts of exposure to multiple sources of air pollution has contributed to the “slow poisoning”³² of the Aamjiwnaang community. Given the wide scope of environmental justice claims, this Note will only provide a limited discussion, but that is still sufficient to allow a reasonable examination of the *Charter*’s potential for addressing environmental injustices in pollution hotspots. Part III discusses the applicability of sections 7 and 15 of the *Charter* to environmental justice in the context of pollution hotspot cases, drawing

²⁹ Archibald, *supra* note 11, at 3. (arguing that section 7 can be used to establish the right to a health environment); BOYD, *supra* note 10, at 177 (discussing the potential for section 7 to establish a right to a healthy environment because, of the possible *Charter* sections, “the section 7 arguments appear to be the strongest”); Collins: *Ecologically Literate Reading*, *supra* note 10, at 32–33 (noting that the Canadian Supreme Court has “specifically left open the possibility” that section 7 might create positive environmental obligations “in an appropriate case.”); Wortsman, *supra* note 16, at 248 (“Arguably, the most obvious ‘home’ for the right to a healthy environment is section 7 of the *Charter*, which protects the right to life, liberty, and security of the person.”); Wu, *supra* note 10, at 192–93 (noting that scholars generally agree that section 7 offers the best chance of establishing a right to a healthy environment); Larissa Parker, *Not In Anyone’s Backyard: Exploring Environmental Inequality Under Section 15 of the Charter and Flexibility After Fraser v Canada*, 27 APPEAL 19, 30 (2022) (“[E]nvironmental equality rights claims can be fashioned with existing tools in the section 15 toolbox.”); Chalifour: *Environmental Justice*, *supra* note 10, at 92 (looking at both section 7 and section 15 as means of protecting environmental rights); Jennifer Koshan, *Redressing The Harms of Government (In) Action: A Section 7 Versus Section 15 Charter Showdown*, 22 CONST. F. 31, 31 (2013) (weighing the relative pros and cons of bringing claims under section 7 versus section 15 to promote equality) [hereinafter Koshan: *Redressing*].

³⁰ Kaswan, *supra* note 26, at 223, 237–38 (identifying the existence of tension and then highlighting, as an example, how discretionary use of environmental laws by federal, state, and local governments can exacerbate injustices).

³¹ Erin Daly & James R. May, *Exploring Environmental Justice Through the Lens of Human Dignity*, 25 WIDENER REV. 177, 184 (2019); Archibald, *supra* note 11, at 9–10.

³² Scott: *Chronic Pollution*, *supra* note 18, at 305–06, 314 (defining “slow poisoning” as environmental health harms from pollution as a product of day-to-day, chronic contamination of the bodies and territory of a community as a result of legally-sanctioned emission of low doses of pollutants, as opposed to viewing those harms as results of pollution “incidents” or accidents, “in the sense of random, unexpected, unpredictable events, without any culpable cause.”).

upon the contextual subject matter presented in Part II. Part III focuses on: (1) the types of government actions leading to environmental injustices as a result of cumulative impacts in pollution hotspots which might be covered under sections 7 and 15; (2) section 7's causation standard in the environmental context and the section's two-part analysis as applied to environmental justice claimants in pollution hotspot cases; and (3) section 15's two-part framework as applied to such claimants with attention to the section's causation standard and evidentiary burden.

II. CUMULATIVE IMPACTS OF EXPOSURE TO CHRONIC AIR POLLUTION AND ENVIRONMENTAL JUSTICE

This Part discusses the environmental justice concerns raised by Canadian pollution control laws, and particularly Ontario's air pollution permitting laws, that rely on "risk" assessments that fail to evaluate the cumulative impacts of exposure to air pollution. First, this Part of the Note focuses on the environmental injustices in pollution hotspots under risk-based environmental regulations in Canada that do not require cumulative impacts assessments before approving major industrial projects. Second, it provides a brief overview of the air pollution permitting scheme in Ontario in order to understand the environmental justice concerns raised by those laws. Finally, this Part analyzes the environmental justice issues in pollution hotspots in Ontario due to failure of the province's air pollution laws to account for the cumulative impacts of exposure to air pollution.

A. Environmental Justice Concerns Raised by Risk-Based Canadian Pollution Controls Laws

The failure of Canadian risk-based environmental regulations to address or manage the cumulative impacts of exposure in pollution hotspots on low-income, minority communities is a form of environmental injustice. First, the conception of "risk," found at the root of environmental regulations such as Ontario's Environmental Protection Act (*OEPA*)³³ and Air Pollution — Local Air Quality regulation (O. Reg. 419/05),³⁴ does not capture cumulative impacts of exposure to pollution. Further, "risk" as embodied in those provincial laws distorts the pollution hazards that environmental justice communities actually bear, resulting in a regulatory system that fails to adequately prevent and remedy environmental harms. Second, those gaps in environmental laws result in two main forms of environmental injustice to low-income and minority communities: (1) distributive injustice due to the "disproportionate burden of environmental hazards or undesirable land uses" they are

³³ [Ontario] Environmental Protection Act, R.S.O. 1990, c. E.19 (Can.) (granting the "Director" the right to issue orders attempting to prevent or reduce risk, for example).

³⁴ Air Pollution — Local Air Quality, O. Reg. 419/05, s. 30 (Can.) (creating an upper risk threshold).

subjected to; and (2) political injustice, including procedural and recognition injustices, due to the discriminatory manner in which decisions with environmental consequences are made.³⁵

Risk-based environmental regulations are inadequate to prevent and redress environmental damage because they rely on cost-benefit analyses that fail to account for cumulative impacts of exposure to pollution in assessing major industrial projects. In those analyses, environmental harms, which are usually latent and difficult to measure with certainty, “are weighed against economic gains which are [often immediate], tangible, and more easily quantified.”³⁶ By failing to account for cumulative impacts of exposure to pollution in that balance, cost-benefit analyses distort the actual risk of pollution to environmental justice communities.³⁷ Moreover, by failing to require cumulative impact assessments, regulations allow “a cost-benefit analysis that suggests overall benefit from a permitted facility or pollution source” while obscuring the reality that “benefits accrue to some while others suffer devastating losses to land, culture, and physical and psychological health.”³⁸ That risk distortion promotes a narrative that construes environmental harms as merely incidental to industry’s contribution to the well-being of neighboring communities affected by industrial pollution (“fenceline communities”).³⁹ As a result, environmental regulations that rely on these analyses maintain the legitimacy of risk “off-loading”—the idea that industry may “take risks for the sake of [potential] benefits” while others, particularly fenceline communities, are forced to bear “the dangerous consequences of such risk-taking.”⁴⁰

For fenceline communities, environmental health harms, including the cumulative impacts of exposure to pollution, are a central and foreseeable consequence of industry’s risk taking.⁴¹ Rather than the traditional cost-benefit analysis on a pollutant-by-pollutant or source-by-source basis, this account of cumulative impacts of exposure to pollution as foreseeable consequences of risk-taking calls for the management of

³⁵ Kaswan, *supra* note 26, at 230; BAKER, *supra* note 27, at 30–31.

³⁶ Mitchell & D’Onofrio, *supra* note 11, at 331 (internal citation omitted).

³⁷ *Id.*; Scott: *Chronic Pollution*, *supra* note 18, at 308–09.

³⁸ Mitchell & D’Onofrio, *supra* note 11, at 343 (internal citation omitted).

³⁹ *See id.* at 331 (“Environmental harms, which are often long term and difficult to measure with precision, are weighed against economic gains which are short-term, tangible, and more easily quantified.”) (internal citation omitted); *see also* BAKER, *supra* note 27, at 22 (explaining how that narrative can become self-reinforcing in that community members may remain silent because they “feared biting the hand that fed their communities[]” despite believing or knowing that the plants were making them sick).

⁴⁰ Scott: *Chronic Pollution*, *supra* note 18, at 326–27 (citing PIET STRYDOM, RISK, ENVIRONMENT AND SOCIETY: ONGOING DEBATES, CURRENT ISSUES AND FUTURE PROSPECTS 76 (2002)); Mitchell & D’Onofrio, *supra* note 11, at 331; *see also* BAKER, *supra* note 27, at 27–28 (providing an example of risk off-loading by a utility company, Pacific Gas & Energy, when it decided not to repair or replace equipment that the company admitted likely led to California’s deadliest fire in 2018 in order to save money).

⁴¹ Scott: *Chronic Pollution*, *supra* note 18, at 318, 318 n.113.

those impacts in environmental regulations.⁴² Those cumulative impacts can be broken down into four key concepts.⁴³

- (1) “[H]ealth disparities between different racial . . . or socioeconomic” groups are linked to “social and environmental factors for many diseases.”⁴⁴
- (2) “[I]nequalities in exposures to environmental hazards are also significant.”⁴⁵
- (3) “[I]ntrinsic biological and physiological factors,” such as age or genetics, “can modify the effects of environmental factors.”⁴⁶
- (4) “[E]xtrinsic social . . . factors”—such as race, gender, and socioeconomic status—“may amplify the . . . effects of environmental hazards and . . . contribute to health disparities.”⁴⁷

With these concepts in mind, the release of large amounts of air pollutants is a clear, existing burden on the health of fenceline

⁴² John D. Prochaska, Alexandra B. Nolen, Hilton Kelley, Ken Sexton, Stephen H. Linder, & John Sullivan, *Social Determinants of Health in Environmental Justice Communities: Examining Cumulative Risk in Terms of Environmental Exposures and Social Determinants of Health*, 20 HUM. & ECOLOGICAL RISK ASSESSMENT 980, 981 (2014); see also Wanda Baxter, William A. Ross, & Harry Spaling, *Improving the Practice of Cumulative Effects Assessment in Canada*, 19 IMPACT ASSESSMENT & PROJECT APPRAISAL 253, 255–56 (2001) (reviewing twelve Canadian cumulative effects analyses and finding that often “the strategy for identifying and analysing [sic] cumulative effects is indistinct from the approach for analysing project effects.”); Peter N. Duinker & Lorne A. Greig, *The Impotence of Cumulative Effects Assessment in Canada: Ailments and Ideas for Redeployment*, 37 ENV’T MGMT. 153, 156–57 (2006) (explaining that it is incorrect to assume that a project’s cumulative effects equal the sum of all of its individual effects analyzed separately); NEJAC, *supra* note 25, at 6–9, 42.

⁴³ Rachel Morello-Frosch, Miriam Zuk, Michael Jerrett, Bhavna Shamasunder, & Amy D. Kyle, *Understanding the Cumulative Impacts of Inequalities in Environmental Health: Implications for Policy.*, 30 HEALTH AFF. 879, 880 (2011); Gina M. Solomon, Rachel Morello-Frosch, Lauren Zeise, & John B. Faust, *Cumulative Environmental Impacts: Science and Policy to Protect Communities*, 37 ANNU. REV. PUBLIC HEALTH 83, 84 (2016); see also Marie S. O’Neill, Michael Jerrett, Ichiro Kawachi, Jonathan I. Levy, Aaron J. Cohen, Nelson Gouveia, Paul Wilkinson, Tony Fletcher, Luis Cifuentes, & Joel Schwartz, *Health, Wealth and Air Pollution: Advancing Theory and Methods*, 111 ENV’T HEALTH PERSP. 1861, 1861–82 (2003) (describing air pollution-specific effects).

⁴⁴ Morello-Frosch et al., *supra* note 43, at 880; Solomon et al., *supra* note 43, at 84.

⁴⁵ Morello-Frosch et al., *supra* note 43, at 880; Solomon et al., *supra* note 43, at 84.

⁴⁶ Morello-Frosch et al., *supra* note 43, at 880; Solomon et al., *supra* note 43, at 84; see, e.g., Evanthai Diamanti-Kandarakis, Jean-Pierre Bourguignon, Linda C. Giudice, Russ Hauser, Gail S. Prins, Ana M. Soto, R. Thomas Zoeller, & Andrea C. Gore, *Endocrine-Disrupting Chemicals: An Endocrine Society Scientific Statement*, 30 ENDOCRINE REV. 293, 293–95, 301–02, 308 (2009) (describing how differences in genetics can lead to higher risks of developing certain illnesses using the example of exposure to endocrine-disrupting chemicals, a broad class of molecules including industrial chemicals, plastics, plasticizers, fuels, etc., and how exposure can occur by breathing contaminated air and such exposure has adverse health effects ranging from polycystic ovarian syndrome and increased risks of breast cancer to testicular germ cell cancer).

⁴⁷ Morello-Frosch et al., *supra* note 43, at 880; Solomon et al., *supra* note 43, at 84.

communities. That health burden exacerbates, and is exacerbated by, their existing vulnerability, and therefore, is not merely a “risk” of air pollution.

By “off-loading” that burden to communities located near industry, risk-based regulations result in distributive and political injustices. First, pollution control laws have resulted in distributive injustices because they generally set limits for individual pollutants in air sources and in doing so, fail to account for multiple contaminants from several sources or to capture the interaction of environmental and social stressors that affect minority and low-income communities.⁴⁸ In effect, by failing to account for the cumulative impacts of exposure borne by fence-line communities, those laws create and perpetuate sacrifice zones: “low-income and racialized communities shouldering more than their fair share of environmental harms related to pollution.”⁴⁹

In addition to the distributive injustices in sacrifice zones, environmental laws also result in political injustice—including procedural and recognition injustices—due to the “discriminatory manner in which decisions with environmental consequences are made.”⁵⁰ Namely, the broad discretion in permitting and standard-setting compounds the harm to environmental justice communities by preventing or limiting their influence in the decisions to issue permits for major industrial projects.⁵¹ More specifically, the government’s ability to issue a number of permits in specific locations—individually each satisfying regulatory standards but cumulatively resulting in levels of pollution dangerous to human health, particularly to communities living on industry fence lines—raises procedural and recognition justice concerns.⁵²

B. Ontario’s Air Pollution Permitting Scheme

Since most polluting facilities in Canada are permitted by provincial or territorial governments, the lack of cumulative impacts assessments in provincial pollution-permitting schemes raises significant environmental justice concerns. A brief overview of Ontario’s air pollution permitting scheme is necessary to understand the distributive and political injustices in the Aamjiwnaang First Nation in Chemical Valley. The province’s air permitting scheme consists primarily of *OEPA* and *O. Reg. 419/05*, the main laws governing air quality in the province.

⁴⁸ Madeleine Kangsen Scammell, Peter Montague, & Carolyn Raffensperger, *Tools for Addressing Cumulative Impacts on Human Health and the Environment*, 7 ENV’T JUST. 102, 102–03 (2014); Wortsman, *supra* note 16, at 247; Solomon et al., *supra* note 43, at 84.

⁴⁹ Scott & Smith, *supra* note 6, at 863, 871–73; LERNER, *supra* note 6, at 2–3.

⁵⁰ Kaswan, *supra* note 26, at 230 (internal citation omitted).

⁵¹ Scott: *Chronic Pollution*, *supra* note 18, at 325.

⁵² Wortsman, *supra* note 16, at 247; NAT’L ENV’T JUST. ADVISORY COUNCIL, ENSURING RISK REDUCTION IN COMMUNITIES WITH MULTIPLE STRESSORS: ENVIRONMENTAL JUSTICE AND CUMULATIVE RISKS/IMPACTS 7 (2004), <https://perma.cc/P4KU-9VVF> (describing the human health effects of air pollution in the U.S. context).

Designed based on the risk-oriented approach of other pollution control laws, Ontario's air permitting laws have failed to prevent and redress cumulative impacts of exposure to air pollution. Moreover, they have created and perpetuated sacrifice zones such as the Aamjiwnaang First Nation in Chemical Valley.

According to the Office of the Auditor General, *OEPA* does not effectively manage the environmental and human health risks from polluting activities in large part due to the Ministry's failure to require project owners to consider cumulative effects in environmental assessments.⁵³ That failure by the Ministry has resulted in distributive injustice (due to inadequate compliance by industry and failure to incorporate analysis of social stressors in risk assessments) and political injustice (resulting from barriers to access to justice and broad discretion in standard-setting and permit issuance) in the Aamjiwnaang community.

1. Brief Overview of *OEPA*'s Regulatory Scheme

Like most pollution control laws, *OEPA* combines a general discharge prohibition on "contaminants" with the issuance of Environmental Compliance Approvals (ECAs), that is, legally binding licenses that set out the conditions under which a facility can operate, including maximum permissible contaminant emissions levels.⁵⁴ To set individual ECA limits, the MOECC relies on Ambient Air Quality Criteria (AAQC) and "Point-of-Impingement" (POI) standards.⁵⁵ The Ministry sets the AAQC—the upper limits on the average contaminant concentrations permissible during designated time periods—"based on protection against adverse effects on health or the environment."⁵⁶ The MOECC can consider various effects in setting the criteria but most AAQCs are health-based.⁵⁷ Although the AAQCs are not themselves

⁵³ See OFF. OF THE AUDITOR GEN. OF ONT., *Ministry of Environment and Climate Change: Environmental Assessments*, in ANNUAL REPORT 338, 362–63 (2016) <https://perma.cc/KX4N-FQH5> ("The Ministry encourages, but does not require, project owners to assess the cumulative effects of a particular project. Failure to assess cumulative effects can result in projects being approved without consideration of all the risks involved.").

⁵⁴ *OEPA*, R.S.O. 1990, c. E.19, ss. 6(1), 9(1), 20.6(1) (Can.).

⁵⁵ CHILDREN'S HEALTH PROJECT, ENVIRONMENTAL STANDARD SETTING & CHILDREN'S HEALTH 175–76 (2000), <https://perma.cc/6J2H-2DBV>.

⁵⁶ ONT. MINISTRY OF THE ENV'T & CLIMATE CHANGE, ONTARIO'S AMBIENT AIR QUALITY CRITERIA 2 (2012), <https://perma.cc/QLH6-7CC9>; ONT. MINISTRY OF THE ENV'T, CONSERVATION & PARKS, AMBIENT AIR QUALITY CRITERIA 3 (2020), <https://perma.cc/YAA9-DEJZ> [hereinafter *MOECP AAQC 2020*]. Note in 2018, the Ministry quietly changed its name to Ministry of the Environment, Conservation, and Parks as part of the government's attempt to remove references to climate change. For more information, see Fatima Syed, *Ontario Environment Watchdogs Say Doug Ford Just Gutted a Law That Protects Your Rights*, CANADA'S NAT'L OBSERVER (Jan. 4, 2019), <https://perma.cc/Q9D3-DV45>. This Note will use the name on each document.

⁵⁷ Effects that may be considered include health, odor, vegetation, soiling, visibility, corrosion, etc. See *MOECP AAQC 2020*, *supra* note 56, at 3, 5. Health-based AAQCs are

standards, “they may become indirectly enforceable when included in a particular [ECA] issued to a particular applicant for a specific facility or source.”⁵⁸

In setting individual ECA limits, the Ministry requires a facility’s compliance with the legally-binding POI standards.⁵⁹ The POI standards are used to limit the contamination content of emissions produced by individual facilities.⁶⁰ In practice, the POI is the location at which a contaminant first exits the ‘property’ of the source emitter.⁶¹ The maximum average contaminant concentrations (over a half-hour period) at the POI may not be exceeded unless the source is explicitly exempted by regulation.⁶² However, concentrations at the POI are not measured and are instead calculated using formulae set out by regulation.⁶³ To determine compliance, the facility calculates its POI concentrations using these formulae and compares its highest POI contaminant concentration with the standard.⁶⁴ Since “Ontario regulates each facility’s air emissions as if it were the only emitter[,]”⁶⁵ the formulae do not account for cumulative impacts of emissions from multiple sources.

2. *Environmental Injustices in Pollution Hotspots under OEPA*

In failing to account for the cumulative impacts of exposure to air pollution, combined with the high level of discretion of the Ministry to modify and lower standards for facilities, *OEPA*’s regulatory scheme creates and perpetuates environmental justice issues—distributive and political—such as those in the Aamjiwnaang community in Chemical Valley.

aimed at protecting against “[a]dverse health effects that could occur from short-term or long-term exposure to the contaminant in air.” *Id.* at 5.

⁵⁸ CHILDREN’S HEALTH PROJECT, *supra* note 55, at 175.

⁵⁹ *Id.* at 176.

⁶⁰ See O. Reg. 419/05, s. 19(1), 3(1)–(2) (Can.) (“A person shall not . . . discharge or cause or permit the discharge of a contaminant listed in Schedule 2 into the air if the discharge results in the concentration of the contaminant at a point of impingement exceeding the half hour standard set out for the contaminant.” Additionally, multiple persons discharging or causing a discharge “on the same property” are deemed to be a single discharge).

⁶¹ *Id.* s. 2(1), stating that “a point of impingement with respect to the discharge of a contaminant does not include any point that is located on the same property as the source of contaminant.” However, there is an exception for if there may be a sensitive receptor located on the source’s property, such as a childcare facility, a senior citizens’ residence, or a school. *Id.* s. 2(2).

⁶² *Id.* s. 2–3.

⁶³ *Id.* s. 1(2).

⁶⁴ *Id.* s. 1(2), 19.

⁶⁵ ENV’T COMM’R OF ONT., GOOD CHOICES, BAD CHOICES: ENVIRONMENTAL RIGHTS AND ENVIRONMENTAL PROTECTION IN ONTARIO 130 (2017) [hereinafter *ECO*], <https://perma.cc/8XLZ-64XC>.

a. Distributive Injustice

OEPA's risk assessment approach raises distributive justice concerns by failing to require industry to assess the cumulative impacts of exposure to air pollution that disproportionately burden the Aamjiwnaang community because (1) it does not ensure that industry will comply with air standards, and (2) it does not adequately measure community impacts and distorts the actual burdens borne by the community.

First, the law fails to guarantee compliance from industry with the applicable standards because it does not account for the background contaminant levels in the ambient air and does not capture the synergistic effects of several toxins. *OEPA* only requires contaminant levels to be “less than the POI concentration” when they cross into neighboring areas, meaning levels do not have to be at zero at the POI.⁶⁶ However, it nonetheless takes the background levels of contaminants in the ambient air to be zero when setting the POI standards.⁶⁷ Thus, while the framework might work for an individual source, it does nothing to account for emissions produced by other facilities.⁶⁸ Furthermore, as Johnson and Cushing explain, in reality, neighboring communities are exposed to complex mixtures of chemicals, not isolated chemicals as the regulatory approach assumes.⁶⁹ Since chemicals work in concert with each other, even if every facility that affects a community has a legally adequate permit, the cumulative burden of these facilities nonetheless may create harm.⁷⁰ As a result, the air pollution laws do not guarantee that compliance by all polluting sources with the POI limits would also satisfy the AAQC for total atmospheric contaminant levels.⁷¹

Second, *OEPA's* approach does not adequately measure community impacts and distorts the burdens borne by the Aamjiwnaang residents because it does not require industry to account for non-chemical, social, and health stressors in risk assessments. Even though the MOECC's stated policy is to set its standards to be “protective against adverse health effects[,]” the agency determines “adverse effects” on a pollutant-

⁶⁶ Scott: *Chronic Pollution*, *supra* note 18, at 323–24.

⁶⁷ *Id.* at 323.

⁶⁸ CHILDREN'S HEALTH PROJECT, *supra* note 55, at 176.

⁶⁹ Jill Johnston & Lara Cushing, *Chemical Exposures, Health, and Environmental Justice in Communities Living on the Fenceline of Industry*, 7 CURR. ENV'T HEALTH REP. 48, 53 (2020).

⁷⁰ See Holly D. Gordon & Keith I. Harley, *Environmental Justice and the Legal System*, in POWER, JUSTICE, & THE ENVIRONMENT: A CRITICAL APPRAISAL OF THE ENVIRONMENTAL JUSTICE MOVEMENT 153, 160 (David Naquib Pellow & Robert J. Brulle, eds., 2005) (stating defects in the permitting regime and the need for the EPA “to develop a consistent method to identify omissions in permitting process, extrinsic evidence of harmful effects that permits are not designed to remedy, and the cumulative” effects of newly permitted and existing sources).

⁷¹ See generally ONT. MINISTRY OF THE ENV'T & CLIMATE CHANGE, CUMULATIVE EFFECTS ASSESSMENT (CEA) IN AIR APPROVALS (2018), <https://perma.cc/98E4-C2K5> (discussing the air quality framework and breaking down the requirements).

by-pollutant basis, thus failing to consider the cumulative impacts of multiple chemicals and non-chemical stressors.⁷² Moreover, the Ministry's "Framework to Manage Risks under the Regulation" assesses exposures to a contaminant based on non-legally binding "upper risk thresholds" (URTs) without accounting for social stressors or health disparities that affect community health.⁷³ URTs are generally set based on the nature of the contaminant (whether it is carcinogenic or not) without consideration of cumulative impacts of exposure or stressors particular to the human 'receptors' exposed to that contaminant.⁷⁴

Under that approach, the heightened cumulative health risks and impacts across environmental justice communities that result from cumulative exposures to air pollutants combined with their existing vulnerabilities are not captured.⁷⁵ For the Aamjiwnaang residents in Chemical Valley, due to their exposure to various endocrine-disrupting chemicals,⁷⁶ determinants such as social and economic disadvantage, racism, and unsafe or insecure employment especially impact their health risks and outcomes. Those determinants create stressful conditions that "disrupt the body's endocrine and defense mechanisms, thereby increasing [vulnerability] to illness and premature mortality."⁷⁷ Therefore, *OEPA's* failure to require industry to perform cumulative impacts risk assessments disproportionately burdens the Aamjiwnaang community and is a form of distributive injustice.

b. Political Injustice: Procedural and Recognition Justice Concerns

OEPA's risk assessment approach also raises procedural and recognition justice concerns because it does not provide Aamjiwnaang community members with fair access to process and fails to treat them with the "equal concern and respect" that has been provided to other groups.⁷⁸ First, standard-setting and monitoring under *OEPA* are highly political processes that are often inaccessible to environmental justice communities. Second, the broad discretion accorded to the Director of the Ministry in environmental decision-making prevents the community

⁷² ONT. MINISTRY OF THE ENV'T & CLIMATE CHANGE, GUIDELINE FOR THE IMPLEMENTATION OF AIR STANDARDS IN ONTARIO (GIASO) [GUIDELINE A-12] 5, 10 (2017) [hereinafter *GIASO*], <https://perma.cc/6UBZ-GZ2T> ("In setting air standards, the ministry considers the available toxicological . . . [and] other relevant information to determine the potential adverse effects of exposure to a contaminant.") (emphasis added).

⁷³ *Id.* at 6.

⁷⁴ *Id.*

⁷⁵ Solomon et al., *supra* note 43, at 84; Baxter et al., *supra* note 42, at 256; Duinker & Greig, *supra* note 42, at 156–57; NEJAC, *supra* note 25, at 35 ("For example, communities oversaturated with environmental hazards pose environmental risks to residents which is multiple, cumulative and synergistic in nature.").

⁷⁶ Mackenzie et al., *supra* note 13, at 1295.

⁷⁷ Prochaska, et al., *supra* note 42, at 981.

⁷⁸ Kaswan, *supra* note 26, at 233; BAKER, *supra* note 27, at 31. For the components of energy justice, see Raphael J. Heffron & Darren McCauley, *The Concept of Energy Justice Across the Disciplines*, 105 ENERGY POL'Y 658, 660 (2017).

from accessing and influencing those decisions, resulting in inadequate enforcement of air standards.

Standard-setting and monitoring under *OEPA* result in procedural and recognition injustices because they are shaped by political compromises that require significant economic and political resources to exert influence that environmental justice communities usually do not have. While the government uses scientific evidence to set the AAQCs and account for area-specific factors that influence pollution concentration to set air standards, standard-setting remains a “political process that involves compromises” from which environmental justice communities usually are not able to participate in, much less benefit from.⁷⁹ To be sure, there are public notice, comment, and appeal processes available in Ontario. The Ontario Environmental Bill of Rights outlines those requirements and establishes an electronic “Environmental Registry” to provide notice to the public when considering proposals for new environmental statutes, regulations, policies and instruments.⁸⁰ In practice, despite the robust protections of procedural rights in public participation processes, environmental justice communities have difficulty exerting influence in standard-setting because they often face challenges mobilizing and retaining scientific experts, and their perspectives are granted little weight relative to the economic interests at stake.⁸¹

As for monitoring, the “location, range, and focus of ambient air monitors are determined through an inherently political process” that affected communities generally cannot influence.⁸² In Sarnia, there were no ambient air quality monitors belonging to the MOECC located downwind of Chemical Valley until September 2008.⁸³ The Ministry’s decision to establish the first air monitoring station on the Aamjiwnaang reserve resulted from the “publication of test results from . . . air samples captured by the Aamjiwnaang bucket brigade”—a group of residents collecting evidence of air pollution through samples of ambient air from the reserve.⁸⁴ Although the bucket brigade’s work illustrated the ways in which residents have agency in addressing these issues, the political nature of emissions monitoring has resulted in years of inadequate monitoring in Sarnia.

Furthermore, the Director’s broad discretion in granting permits and setting terms under *OEPA* has led to procedural and recognition

⁷⁹ Scott: *Chronic Pollution*, *supra* note 18, at 324 (internal citation omitted).

⁸⁰ Environmental Bill of Rights, R.S.O. 1993, c. 28 par. 3, 6 (Can.).

⁸¹ Scott: *Chronic Pollution*, *supra* note 18, at 325; Kernaghan Webb, *Pollution Control in Canada: The Regulatory Approach in the 1980s*, in ADMIN. L. SERIES OF L. REFORM COMM’N OF CAN. 15, 50 (2007) (discussing the struggles environmental communities face both in the legislative and judicial process); Mitchell & D’Onofrio, *supra* note 11, at 331.

⁸² Dara O’Rourke & Gregg P. Macey, *Community Environmental Policing: Assessing New Strategies of Public Participation in Environmental Regulation*, 22 J. POL’Y ANAL. MGMT. 383, 384 (2003).

⁸³ *Air Monitoring Reports*, AAMIJWNAANG FIRST NATION, <https://perma.cc/2WY3-ETYR> (last visited Apr. 19, 2023).

⁸⁴ Scott: *Chronic Pollution*, *supra* note 18, at 337.

injustices to the Aamjiwnaang community because it results in lax enforcement of air standards. Since the Ministry has the discretion to modify an air standard if a proponent identifies that it cannot be met, it can, and does, exempt facilities on a case-by-case basis from meeting the required standard.⁸⁵ For instance, when several facilities in Ontario were not able to meet the new and more stringent air standard for benzene, a known carcinogen, the Ministry exempted those facilities and developed technical standards that they could comply with instead.⁸⁶

In Sarnia, that system of broad discretion combined with the lack of cumulative impact assessments has resulted in more exemptions from regulations, rather than stricter enforcement.⁸⁷ The granting of industry demands by the Ministry illustrates how the current regulatory process involves the “invisible application of discretion” in the issuance of ECAs and crafting of their terms, and how discretion plays “a crucial role in the . . . distribution of risk to [specific] communities.”⁸⁸ Ultimately, Ontario’s air pollution regime results in political injustices because it does not provide the Aamjiwnaang residents with fair access to process and fails to treat the community with the “same concern and respect” as other groups.⁸⁹

⁸⁵ See O. Reg. 419/05, s. 32 (Can.) (allowing requests for site-specific contaminant concentration standards); see also *ECO*, *supra* note 65, at 128–29 (showing examples of the Ministry lowered standards and exempted industry from various air standards).

⁸⁶ *ECO*, *supra* note 65, at 128–29.

⁸⁷ Scott: *Chronic Pollution*, *supra* note 18, at 325–26; see also *Royal Polymers Limited*, ENV’T REGISTRY ONT. (Aug. 18, 2016), <https://perma.cc/92JJ-7CZ3> (showing the approval for Royal Polymers, a company producing PVC in Chemical Valley near the Aamjiwnaang reserve, asking for an exemption from the air standards after being repeatedly found in non-compliance).

⁸⁸ Scott: *Chronic Pollution*, *supra* note 18, at 326; Lynda Collins & Lorne Sossin, *In Search of an Ecological Approach to Constitutional Principles and Environmental Discretion in Canada*, 52 UNIV. B.C. L. REV. 293, 297–99 (2019) (discussing *OEPA*’s sources of discretion and the *MOECC*’s exercise of that discretion in Sarnia).

⁸⁹ Even when regulations allow for discretionary decision-making that could strengthen permit terms to meet air standards, in practice, that discretion rarely results in more stringent enforcement. For instance, two prohibitions may inform the Director of the Ministry when issuing permits or when crafting their conditions to fill any gaps in existing regulations. The first is a prohibition in section 14 of *OEPA* against causing “adverse effects” and the second, in Ontario’s *Local Air Quality Regulation*, is a prohibition against causing discomfort to individuals, regardless of compliance with standards. However, the “adverse effects” in *OEPA* are unlikely to be attributable to a specific polluter and will not capture the cumulative effects of multiple ECAs granted to industry that fenceline communities are concerned with. Therefore, even with both prohibitions, if a permit or ECA meets the requirements to protect human health and the environment, it cannot be said to have an “adverse effect.” Subsequently, if there is no “adverse effect,” then there is no harm, and thus, there can be no “disproportionate burden.” See Scott: *Chronic Pollution*, *supra* note 18, at 325.

III. HOW SECTIONS 7 AND 15 OF THE *CHARTER* MAY BE USED TO PROMOTE ENVIRONMENTAL JUSTICE IN POLLUTION HOTSPOT CASES IN CANADA

This Part discusses the applicability of sections 7 and 15 of the *Charter* to environmental justice issues in pollution hotspot cases, drawing upon the experiences of the Aamjiwnaang community in Sarnia, Ontario. First, this Part of the Note focuses on the types of government actions that lead to environmental health injustices as a result of cumulative impacts of chronic exposure to air pollution in pollution “hotspots” that might be covered under sections 7 and 15. Second, it analyzes section 7’s causation standard in the environmental context and applies its two-part analysis to environmental justice claimants in pollution hotspot cases. Finally, this Part applies section 15’s two-part framework to such claimants, focusing on the section’s causation standard and evidentiary burden in the environmental context.

A. Pollution Hotspots and State Responsibility under the Charter

By virtue of section 32 of the *Charter*, an applicant must show that the challenged conduct constitutes government action when seeking protection of a *Charter* provision. The Canadian Supreme Court has interpreted the *Charter*’s application broadly to include not only laws and regulations but also government policies, programs, practices, activities, and conduct executed pursuant to statutory authority, and agency actions conducted under government authority.⁹⁰ In the environmental context, governments may create actual or imminent harm that infringes on the claimant’s rights under section 7 or causes discrimination under section 15 in three main ways.⁹¹

First, government-run industrial services, such as “sewage treatment plans, coal-fired electricity stations and nuclear reactors, . . . may discharge harmful contaminants into the environment” and thus trigger *Charter* protection.⁹² Second, although the *Charter* limits claimants seeking remedies for environmental injuries directly from the private sector, state actions that affirmatively allow “private conduct that causes environmental harm” can infringe *Charter* rights.⁹³ Many environmental harms created by private entities are subject to government regulations, “such as specific permitting of polluting activities[.]” and those regulations are subject to the *Charter*’s

⁹⁰ See *McKinney v. University of Guelph*, [1990] 3 S.C.R. 229, 277 (Can.) (“[A]ll acts taken pursuant to powers granted by law will fall within s. 52 [of the *Charter*].”) (internal citation omitted). Cf. *Hunter v. Southam Inc.*, [1984] 2 S.C.R. 145, 154 (Can.) (applying *Charter* to legislation authorizing searches and seizures only).

⁹¹ See Andrew Gage, *Public Health Hazards and Section 7 of the Charter*, 13 J. ENV’T L. & PRAC. 1, 20–26 (2003) (discussing government action, permitting, and regulation under the *Charter*); Collins: *Ecologically Literate Reading*, *supra* note 10, at 17–18.

⁹² Collins: *Ecologically Literate Reading*, *supra* note 10, at 17 (internal citation omitted).

⁹³ *Id.* at 12, 18.

protections.⁹⁴ “Where a government agency issues a license, permit or [ECA]” allowing environmentally damaging emissions, discharge or course of action, “the [section] 32 requirement is met.”⁹⁵ Third, where a government sets “statutory and regulatory [requirements] that allow for [discharge] of harmful levels of environmental” toxins, a government may create environmental harm that can ground a *Charter* claim.⁹⁶ This usually occurs when regulatory standards are out-of-date or where a regulation allows an unlimited number of emissions permits to be issued without accounting for the total or cumulative amount of contaminants discharged in a specific area.⁹⁷

In the context of Chemical Valley, the state actions in question—as identified by the plaintiffs in the *Lockridge* case—were the powers of the Director, under *OEPA* and O. Reg 419/05, to regulate air pollution in the Sarnia District.⁹⁸ More precisely, the Director’s issuance of permits and ECAs that allowed additional polluting emissions in the area adjacent to the community likely meets the section 32 standard, given the courts’ broad interpretation of the *Charter*’s application to include decisions to issue permits. Furthermore, the Director’s failure to consider the cumulative impacts of authorizing multiple pollution emissions in both permit issuances and in standard-setting also likely constitutes a “state action” under section 32.

B. Section 7 of the Charter and (Air) Pollution Hotspots

Section 7 of the *Charter* provides that “[e]veryone has the right to life, liberty and security of the person and the right not to be deprived thereof except in accordance with the principles of fundamental justice.”⁹⁹ First, this sub-Part analyzes Canadian jurisprudence on section 7 in the environmental context. That analysis shows that courts are open to applying section 7 to environmental harms but remain concerned with claimants meeting the causation standard. Then, this sub-Part applies section 7’s analysis to the Aamjiwnaang community in Chemical Valley and identifies the evidentiary burden in the context of a pollution hotspot case to prove a section 7 violation. That application demonstrates that band members in Chemical Valley are limited by section 7’s causation standard and corresponding evidentiary burden but may nonetheless have a viable section 7 claim.

⁹⁴ *Id.* at 18.

⁹⁵ *Id.* at 17.

⁹⁶ *Id.* at 17–18; Chalifour: *Environmental Justice*, *supra* note 10, at 110.

⁹⁷ Collins: *Ecologically Literate Reading*, *supra* note 10, at 18; Scott: *Chronic Pollution*, *supra* note 18, at 295.

⁹⁸ *Lockridge*, 2012 O.N.S.C. 2316, paras. 7, 17–19 (Can. Ont. Sup. Ct. J.); *see also* ECOJUSTICE, *supra* note 20 (providing information on why the case was brought and consequently dismissed).

⁹⁹ *Charter*, Part I of the Constitution Act, 1982, Schedule B to the Canada Act 1982, c. 7 (U.K.).

1. Section 7: Proving a Sufficient Causal Connection

The purpose of section 7 is to protect the core of human dignity and autonomy.¹⁰⁰ Proving a *prima facie* violation of section 7 involves a two-step analysis with a threshold causation requirement.¹⁰¹ First, a claimant must provide sufficient evidence to establish that a government action interferes with, or deprives them of, life, liberty, or security.¹⁰² To do so, the claimant must prove a “sufficient causal connection” between the law or state action, and the risks they face.¹⁰³ Finally, the claimant must show that such deprivation was not in accordance with the principles of fundamental justice.¹⁰⁴

2. The Government Action Must Interfere with or Deprive the Claimant of Their Life, Liberty, and Security of the Person

a. “Sufficient Causal Connection” Test in Environmental Cases

Although the few Canadian cases that have considered environmental claims under section 7 provide a strong basis for challenging government-sanctioned activities that create risks to public health,¹⁰⁵ section 7’s threshold causation requirement remains the greatest obstacle for environmental claimants.¹⁰⁶ In *Canada v. Bedford*,¹⁰⁷ the Supreme Court of Canada confirmed that the rights to life, liberty or security of the person can be infringed when there is a risk of harm to unidentified individuals and adopted the standard of “sufficient causal connection” between the law or state action and the risks faced by claimants.¹⁰⁸ That standard involves a fact-specific inquiry that considers

¹⁰⁰ See, e.g., *Clay v. Att’y Gen. of Ont.*, [2003] 3 S.C.R. 735, para. 31 (Can.) (citing *Godbout v. Longueuil (City)*, [1997] 3 S.C.R. 844, para. 66, 69 (Can.) (showing two cases that recognize the thrust of section 7 is protecting personal autonomy and liberty).

¹⁰¹ *Charterpedia: Section 7 – Life, Liberty and Security of the Person*, GOV. OF CAN. (Apr. 14, 2022), <https://perma.cc/4CH7-R8Y3>; *Att’y Gen. of Can. v. Bedford (Bedford)*, [2013] 3 R.C.S. 1101, para. 32 (Can.).

¹⁰² GOV. OF CAN., *supra* note 101; *Bedford*, [2013] 3 R.C.S. at para. 58.

¹⁰³ *Id.* para. 75.

¹⁰⁴ GOV. OF CAN., *supra* note 101; see Collins: *Ecologically Literate Reading*, *supra* note 10, at 25–31 (noting that other principles of fundamental justice exist but arbitrariness, disproportionality, and overbreadth are the most common in the section 7 analysis).

¹⁰⁵ Avnish Nanda, *Heavy Oil Processing in Peace River, Alberta: A Case Study on the Scope of Section 7 of the Charter in the Environmental Realm*, 27 J. ENV’T L. & PRAC. 109, 110 (2015) (“The bulk of lawsuits related to the oil sands . . . have been grounded in environmental statutes, treaties, and common law causes of action. To date . . . plaintiffs have not looked to substantive rights in constitutional laws—specifically s. 7 of the [Charter]”).

¹⁰⁶ *Id.*; Archibald, *supra* note 11, at 19; Collins: *Ecologically Literate Reading*, *supra* note 10, at 42; Nickie Vlavianos, *Public Participation and the Disposition of Oil and Gas Rights in Alberta*, 17 J. ENV’T L. & PRAC. 205, 223, 228–29 (2007).

¹⁰⁷ [2013] 3 R.C.S. 1101 (Can.).

¹⁰⁸ *Id.* para. 75.

the circumstances of each case.¹⁰⁹ Moreover, it does not require that the challenged “government action or law be the only or the dominant cause of the prejudice suffered by the claimant, and is satisfied by a reasonable inference, drawn on a balance of probabilities.”¹¹⁰

Even though the state action is not required to be the “but-for” cause of environmental harm, all environmental claims brought under section 7 have failed to meet the “sufficient causal connection” test.¹¹¹ In *Operation Dismantle v. The Queen*,¹¹² the Canadian Supreme Court did not find a sufficient causal connection between the state action allowing cruise missile testing and the possibility that testing would prompt foreign nations to retaliate, risking the life and security of the person.¹¹³ Similarly, in *Energy Probe v. Canada*,¹¹⁴ the court found that the plaintiffs had not proven a sufficient causal connection between a law that limited financial liability for a nuclear plant operator in case of a nuclear accident and the alleged risk to security of the person.¹¹⁵

Proving a “sufficient causal connection” is particularly difficult in environmental claims alleging a section 7 violation for three main reasons. First, the causation standard and corresponding evidentiary burden can be problematic barriers for section 7 litigants alleging environmental harm because of the “invisibility and disconnection between cause and effect, both spatially and temporally.”¹¹⁶ This is especially true in cases concerning the cumulative, latent effects of exposure to pollution from multiple sources where the spatial causal connection is even more difficult to prove. Moreover, the epidemiological and expert reports that claimants tend to rely on are costly and can often only demonstrate a correlation between pollution and the alleged harm.¹¹⁷

¹⁰⁹ *Id.* (“A sufficient causal connection is sensitive to the context of the particular case and insists on a real, as opposed to a speculative, link.”).

¹¹⁰ *Id.* para. 76 (citing *Canada (Prime Minister) v. Khadr*, [2010] S.C.C. 3, para. 21 (Can.)).

¹¹¹ *Id.*; Archibald, *supra* note 11, at 19; Collins: *Ecologically Literate Reading*, *supra* note 10, at 42; Vlavianos, *supra* note 106, at 223, 228–29; Chalifour: *Environmental Justice*, *supra* note 10, at 114–15, 119.

¹¹² [1985] 1 S.C.R. 441 (Can.).

¹¹³ *Id.* at 450, 452 (finding a causal link between the Canadian government’s decision to permit testing of nuclear cruise missile and appellant’s allegation that such a decision threatens Canadian lives by increasing risk of nuclear conflict could not be proven).

¹¹⁴ *Energy Probe v. Att’y Gen. of Can.*, [1989] O.J. No. 537 (Can. Ont. C.A.).

¹¹⁵ *Id.* at 541, 543–45 (finding that the Nuclear Liability Act caps the maximum financial liability for which an operator of a nuclear facility is responsible).

¹¹⁶ Wu, *supra* note 10, at 199 (internal citation omitted); *see also* *Millership v. Kamloops (City)*, [2003] B.C.S.C. 82, paras. 109–12 (Can.); *Locke v. Calgary (City)*, [1993] 147 A.R. 364, paras. 1, 27–28, 32 (Can. Alta. Q.B.). In both cases, claims that the fluoridation of public water without prior consent violated citizens’ section 7 rights to security of the person and liberty failed on the scientific evidence before the courts because the preponderance of evidence indicated that the concentrations of fluoride in municipal drinking water were safe. Thus, the respective courts found that any intrusion into the applicants’ liberty or security of the person was minimal or non-existent. The outcomes of these cases illustrate the difficulty of proving causation in cases of latent effects.

¹¹⁷ Wu, *supra* note 10, at 200.

That link may fall short of meeting the causal threshold essential for a section 7 claim.¹¹⁸

Second, the relationship between pollution and human health is complex and linking a state action as one of the causes of environmental harms is difficult given the feedback loops between pre-existing vulnerability and the cumulative effects of exposure to pollutants for fenceline communities.¹¹⁹ In the case of Chemical Valley, the potential consequences of the Director granting a license to a petrochemical facility for a project that will result in a given amount of pollution go beyond the release of contaminants in the air that nearby communities breathe. Consequences also include heightened stress levels and mental health issues from the slow poisoning by air pollution.¹²⁰ In this respect, requiring proof of causation, even while eschewing a stricter, but-for causation standard, remains an obstacle for environmental cases.

Finally, courts' deference to the factual findings of regulators increases environmental claimants' burden of proving a sufficient causal connection. In *Kelly v. Alberta*¹²¹ and *Domke v. Alberta*,¹²² landowners objected to the issuance of permits to drill sour oil wells near their homes as a violation of section 7 because of serious health risks from the potential release of toxic gasses. In *Kelly*, the Energy and Utilities Board (EUB) found that there was a substantial risk to some landowners and the court granted plaintiffs leave to bring the application, finding that their section 7 argument raised a "serious arguable point" of law.¹²³ By contrast, in *Domke*, the EUB concluded that any risk to nearby residents was minimal, and therefore, there was no infringement of life, liberty, and security of the person.¹²⁴ The court deferred to the regulator's findings and denied leave on the ground that the EUB had correctly applied the law to the facts.¹²⁵ Thus, the different response by the court in each case suggests that the viability of environmental claims under section 7 may depend on the regulator's factual findings and court's level of deference to those findings.

However, the sufficient causal connection threshold may be met in cases where a government action results in the discharge of scientifically proven noxious substances that are widely known to cause harm to

¹¹⁸ *Id.*

¹¹⁹ Prochaska, et al., *supra* note 42, at 981.

¹²⁰ *Id.* (finding that stressful living conditions in environmental justice communities result in increased susceptibility to illness brought on by environmental pollution).

¹²¹ [2008] A.B.C.A. 52 (Can. Alt. C.A.).

¹²² [2008] A.B.C.A. 232, paras. 24–28 (Can. Alt. C.A.).

¹²³ *Kelly*, [2008] A.B.C.A. at paras. 1–2, 15. *But see*, Nanda, *supra* note 105, at 126–27 (explaining that after leave was granted, the respondent withdrew its application for the wells and the case was dismissed as moot).

¹²⁴ *Domke*, [2008] A.B.C.A. paras. 2, 4

¹²⁵ *Id.* paras 13, 27–28.

human health.¹²⁶ In *Manicom v. Oxford County*,¹²⁷ the court considered whether a state decision to allow a private landfill in the plaintiffs' neighborhood, which would reduce their property values, violated their section 7 interests.¹²⁸ The court rejected the claim seemingly on the grounds that property interests are not protected under section 7. However, the court noted that if plaintiffs had claimed damage to their health, that claim may have succeeded: "while the plaintiffs' nuisance claim was a proprietary claim which was not so protected by the *Charter*, their claim under the *Charter* was based on their personal health concerns which was so protected."¹²⁹ In the case of Chemical Valley, there is ample scientific evidence that fine particulate matter and other air toxins cause harm to human health.¹³⁰ Thus, allegations that the Director's granting of permits combined with a lack of cumulative effects assessment contribute to increased emissions of pollutants for which the effects are scientifically known could meet the causal threshold of a section 7 analysis.¹³¹

b. Liberty, Security, and Life of the Person

If a claimant meets the threshold causation requirement under section 7, courts then look at whether any of the three distinct interests protected by section 7—the rights of liberty, security, and life of the person—have been violated.¹³²

The liberty interest, in addition to freedom from physical limits imposed by the state, includes an individual's right to make decisions free from state interference¹³³ on "matters that . . . implicate basic choices going to the core of what it means to enjoy individual dignity and independence."¹³⁴ Following *Godbout v. Longueuil (Ville)*,¹³⁵ the liberty

¹²⁶ Chalifour: *Environmental Justice*, *supra* note 10, at 118 (referencing *Chaoulli c. Québec (Procureur général)*, [2005] S.C.C. 35 (Can. S.C.C.), which held that proving serious harm would not be difficult where the government discharged mercury, a known noxious substance, into a river).

¹²⁷ [1985] 52 O.R. 2d 137 (Can. Ont. S.C.).

¹²⁸ *Id.* at 10.

¹²⁹ *Id.* at 3 (Saunders, J., concurring) ("Moreover, while the plaintiffs' nuisance claim was a proprietary claim, which was not protected by the Charter, their claim under the Charter was based on their personal health concerns which was protected.")

¹³⁰ Mackenzie et al., *supra* note 14, at 1295; Anne Tomczak, Anthony B. Miller, Scott A. Weichenthal, Teresa To, Claus Wall, Aaron van Donkler, Randall V. Martin, Dan Lawson Crouse, & Paul J. Villeneuve, *Long-term Exposure to Fine Particulate Matter Air Pollution and the Risk of Lung Cancer Among Participants of the Canadian National Breast Screening Study*, 139 INT'L J. CANCER 1958, 1958–59 (2016).

¹³¹ Chalifour: *Environmental Justice*, *supra* note 10, at 112 n.93.

¹³² See, e.g., *Re B.C. Motor Vehicle Act*, [1985] 2 S.C.R. 486, 523–24 (Can. B.C. C.A.) (stating that "an absolute liability offense [under section 1]" does not automatically create a section 7 claim).

¹³³ *Blencoe v. British Columbia (Human Rights Commission)*, [2000] 2 S.C.R. 307, 309–10 (Can.).

¹³⁴ *Godbout*, [1997] 3 S.C.R. 844, 847 (Can.).

¹³⁵ *Id.*

interest arguably encompasses the right to choose the environment in which one lives free from state-imposed sanction.¹³⁶ Although the case did not involve environmental harm, the Supreme Court of Canada's finding that "the ability to determine the environment in which to live one's private life . . . is inextricably bound up in the notion of personal autonomy" protected by section 7 is highly relevant to pollution hotspot cases.¹³⁷ In pollution hotspots, the state permits a concentration of polluting activities in one specific area to the point that residents of that area face an unreasonable risk of illness or death.¹³⁸ Thus, that kind of "state-permitted environmental contamination that results in . . . harmful substances [entering] an individual's body without consent" likely violates the liberty interest.¹³⁹

Security of the person protects the right of a person as to their (1) personal autonomy, meaning the right to make decisions about one's own body, (2) bodily integrity, and (3) psychological integrity.¹⁴⁰ With respect to the physical aspect of security of the person, state action that results in a damage to health, including a clear increased risk of death, may violate a person's bodily integrity.¹⁴¹ Thus, "state-sponsored environmental harm that increases an individual or community's risk of serious illness or death is likely a . . . violation of section 7."¹⁴² Based on the evidence of serious health impacts in the Aamjiwnaang community in Sarnia, a *prima facie* section 7 claim based on interference with physical security of the person should be successful.

An intrusion of any of the three aspects of security of the person can suffice to cause a violation of that interest, including a finding of psychological harm.¹⁴³ For section 7 to apply to state interference with an individual's psychological integrity, the psychological harm must result from state action and the harm must be serious.¹⁴⁴ A serious psychological effect must be "greater than ordinary stress or anxiety" but "need not rise to the level of nervous shock or psychiatric illness."¹⁴⁵ In Sarnia, the Aamjiwnaang residents "routinely experience anxiety and fear related to the frequent industrial . . . 'incidents' that are part of everyday life in Chemical Valley"¹⁴⁶ and "building anger and lingering sadness upon

¹³⁶ Collins: *Ecologically Literate Reading*, *supra* note 10, at 22–23.

¹³⁷ *Id.* at 894.

¹³⁸ Scott: *Chronic Pollution*, *supra* note 18, at 332.

¹³⁹ Collins: *Ecologically Literate Reading*, *supra* note 10, at 23–24; Gage, *supra* note 91, at 3–4.

¹⁴⁰ *Rodriguez v. B.C. Att'y Gen.*, [1993] 3 S.C.R. 519, 587–88 (Can.).

¹⁴¹ *Chaoulli v. Att'y Gen. Que.*, [2005] 1 S.C.R. 791, 850 (Can.).

¹⁴² Collins: *Ecologically Literate Reading*, *supra* note 10, at 24.

¹⁴³ See *N.B. Minister of Health & Cmty. Servs. v. J.G.*, [1999] 3 S.C.R. 46, 49 (Can.) (finding a violation of the right to security of the person where psychological harm, but not physical harm or personal autonomy, was implicated).

¹⁴⁴ *Blencoe v. British Columbia (Human Rights Commission)*, [2000] 2 S.C.R. 307, para. 57 (Can.).

¹⁴⁵ *J.G.*, [1999] 3 S.C.R. at para. 60.

¹⁴⁶ Dayna Nadine Scott, *Situating Sarnia: "Unimagined Communities" in the New National Energy Debate*, 25 J. ENV'T L. & PRAC. 81, 98 (2013).

learning the extent of their health problems and mounting evidence linking those problems to the actions of their industrial neighbours.”¹⁴⁷ As Collins argues, given well-established evidence that individuals exposed to known environmental risks often experience substantial psychological effects,¹⁴⁸ if that evidence is established, then a “*prima facie* security of the person claim [could] be successful based on the psychological dimension” in the Chemical Valley case.¹⁴⁹

Moreover, section 7 applies even to state action that only indirectly causes the deprivation of life or security of the person.¹⁵⁰ In cases “where Canada’s participation is a necessary precondition for the deprivation and where the deprivation is an entirely foreseeable consequence of Canada’s participation, the government” is liable under section 7.¹⁵¹ Thus, in pollution hotspot cases like Chemical Valley, where the state issues permits that allow the release of contaminants into the environment that results in a section 7 deprivation to life or security of the person, the government should be found liable. As Archibald explains, this is because harm to life and health is “an entirely foreseeable consequence of giving permission to release a harmful contaminant into the environment.”¹⁵² In environmental cases, the very purpose of regulations that require permits for projects that emit pollutants is to prevent this type of harm.¹⁵³

3. The Deprivation of a Person’s Right to Life, Liberty, or Security Must Not Be in Accordance with Principles of Fundamental Justice to Prevail

Section 7 allows the deprivation of a person’s right to life, liberty, or security of the person under the *Charter* if done in accordance with the principles of fundamental justice. In deciding whether these principles will justify an infringement of section 7, a court will look at whether the principle is a “basic tenet[] of our legal system.”¹⁵⁴ For example, the Supreme Court of Canada has found that the principle of the sanctity of life is a basic tenet of the Canadian legal system.¹⁵⁵ In *Rodriguez v. British Columbia*,¹⁵⁶ a law forbidding assisted suicide was held to be consistent with the principles of fundamental justice because it protects life and vulnerable individuals “who might be induced in moments of

¹⁴⁷ Scott: *Chronic Pollution*, *supra* note 18, at 306 (internal citation omitted).

¹⁴⁸ See Elizabeth M. Wheelan, *Chemicals and Cancerphobia*, SOC’Y, March 1981, at 5–6 (detailing Americans’ health-based fears over a perceived increase in environmental chemicals); see also Andrew R. Klein, *Fear of Disease and the Puzzle of Future Cases in Tort*, 35 U.C. DAVIS L. REV. 965, 966, 668–70 (2002) (analyzing emotional distress tort claims based on fear of disease caused by exposure to environmental toxins).

¹⁴⁹ Collins: *Ecologically Literate Reading*, *supra* note 10, at 25.

¹⁵⁰ *Suresh v. Minister of Citizenship & Immigr. Can.*, [2002] 1 S.C.R. 3, 35–36 (Can.).

¹⁵¹ *Id.*

¹⁵² Archibald, *supra* note 11, at 13.

¹⁵³ *Id.*

¹⁵⁴ *Re BC Motor Vehicle Act*, [1985] 2 S.C.R. 489, 503 (Can.).

¹⁵⁵ *Rodriguez v. B.C. Att’y Gen.*, [1993] 3 S.C.R. 519, 605 (Can.).

¹⁵⁶ [1993] 3 S.C.R. 519 (Can.).

weakness to commit suicide.”¹⁵⁷ Accordingly, the Supreme Court of Canada upheld the ban on assisted suicide even though it prevented certain individuals—such as terminally ill patients—from choosing when to die and in so doing, infringed their security of the person interests in autonomy over their body.¹⁵⁸

In that case, a section 7 right was justifiably infringed upon to protect the life and health of other individuals.¹⁵⁹ By contrast, environmental harm, such as chronic exposure to multiple sources of air pollution in hotspot cases, cannot be argued to be necessary to protect the life or health of any individual. In fact, as Archibald argues, the contrary is the case because “[r]emoving . . . environmental harm will protect life or health of a human being,”¹⁶⁰ which has been recognized by the Supreme Court of Canada as a principle of fundamental justice.¹⁶¹ The key to overcoming this limitation in environmental cases lies in providing sufficient evidence that environmental harm is serious enough that the decision was “arbitrary” and did not involve an appropriate “balanc[ing] between individual and social interests.”¹⁶² Therefore, in a pollution hotspot case like Chemical Valley, it may be easier for claimants to surmount the principles of fundamental justice limit on section 7 because of the well-known damaging health effects of exposure to pollution and the established scientific evidence to prove that harm.

4. Section 15 of the Charter and Pollution Hotspots

Section 15 of the *Charter* provides that “[e]very individual is equal before and under the law and has the right to the equal protection and equal benefit of the law without discrimination . . . based on race, national or ethnic origin, colour, religion, sex, age or mental or physical disability.”¹⁶³ This sub-Part applies section 15’s framework to the Aamjiwnaang community in Chemical Valley and identifies the section’s causation standard and the evidentiary burden for claimants in pollution hotspot cases. That application demonstrates that community members in Chemical Valley can likely meet section 15’s lower causation standard as compared to section 7’s and carry the corresponding evidentiary burden, thus establishing a viable section 15 claim for disproportionate environmental harms.

¹⁵⁷ *Id.* at 520, 595.

¹⁵⁸ *Id.* at 520–21, 588–89.

¹⁵⁹ *Id.* at 521, 584, 608.

¹⁶⁰ Archibald, *supra* note 11, at 17.

¹⁶¹ *See, e.g.,* Children & Aid Soc’y of Metro. Toronto v. Att’y Gen. of Can., [1995] 1 S.C.R. 315, 319, 370–71, 374, 428 (Can.) (recognizing childcare and a child’s “right to life and to health” as basic tenants of the legal system); *Rodriguez*, [1993] 3 S.C.R. 519, 589, 595, 605, 608 (Can.).

¹⁶² *Millership v. British Columbia*, [2003] B.C.S.C. 82, para. 114 (Can. B.C. S.C.).

¹⁶³ *Charter*, Part I of the Constitution Act, 1982, Schedule B to the Canada Act 1982, c. 15 (U.K.).

The purpose of section 15(1) is to achieve substantive equality¹⁶⁴ and to protect against discrimination.¹⁶⁵ Substantive equality strives to ensure that “laws or policies do not impose subordinating treatment on groups already suffering social, political or economic disadvantage in Canadian society and recognizes that some groups may need to be treated differently to achieve equality of results.”¹⁶⁶ Under section 15, discrimination exists when facially neutral state action “frequently produce[s] serious inequality.”¹⁶⁷ That type of indirect or “adverse effects” discrimination occurs when a neutral rule, which is applied equally to all, has a “disproportionate and negative impact on members of a group identified by a prohibited ground of discrimination.”¹⁶⁸

C. Section 15: Proving a Discriminatory Distinction

Under section 15, a claimant must show, on a balance of probabilities, that they experienced discrimination. Based on the current test enunciated in *Fraser v. Canada*,¹⁶⁹ to establish a *prima facie* violation of section 15(1), the claimant must demonstrate that (1) a law, program or activity created a distinction on its face or in its impact “based on [an] enumerated or analogous ground;” and that (2) this distinction “imposes burdens or denies a benefit in a manner that has the effect of reinforcing, perpetuating, or exacerbating disadvantage.”¹⁷⁰

1. A Distinction Must Be Drawn Based on an Enumerated or Analogous Ground

The first inquiry into whether a law creates a distinction based on a ground can be conceptualized as a threshold requirement. In order to prevail, the claimant has the burden to demonstrate that a state law or action withholds a benefit that is provided to others or imposes a burden that is not imposed on others, based on an enumerated or analogous ground.¹⁷¹

¹⁶⁴ See, e.g., *Withler v. Att’y Gen. Can.*, [2011] 1 S.C.R. 396, 397 (Can.) (holding that an analysis of equality under section 15(1) must take into account the full context of a claimant’s situation in a substantive way).

¹⁶⁵ *L. Soc’y of B.C. v. Andrews*, [1989] 1 S.C.R. 143, 179–80, 182 (Can.).

¹⁶⁶ Jonnette Watson Hamilton & Jennifer Koshan, *Adverse Impact: The Supreme Court’s Approach to Adverse Effects Discrimination under Section 15 of the Charter*, 19 REV. CON. STUDIES 191, 194–95 (2015) (internal citation omitted).

¹⁶⁷ *Andrews*, [1989] 1 S.C.R. at 164.

¹⁶⁸ Hamilton & Koshan, *supra* note 166, at 196.

¹⁶⁹ *Fraser v. Att’y Gen. of Can.*, [2020] S.C.C. 28 (Can.).

¹⁷⁰ *Id.* para 27; *Quebec (Attorney General) v. Alliance du personnel professionnel et technique de la santé et des services sociaux*, [2018] 1 S.C.R. 464, para. 25 (Can.).

¹⁷¹ *Reference re Same-Sex Marriage*, [2004] 3 S.C.R. 698, para. 45 (Can.); *Auton (Guardian ad litem of) v. Att’y Gen. B.C.*, [2004] 3 S.C.R. 657, 670 (Can.).

a. Section 15 Protections Cover Aamjiwnaang Community Members

To fall under the protection of section 15, a claimant must belong to either a protected, enumerated group in the provision, or one that is analogous. In addition to the enumerated grounds in the provision,¹⁷² in *Corbiere v. Canada*,¹⁷³ the Supreme Court of Canada deemed “Aboriginality-residence” to be an analogous ground under section 15, finding that choosing to live on a reserve is connected to First Nations peoples’ cultural identity and cannot be changed without great costs to band members.¹⁷⁴ Claimants from the Aamjiwnaang community would only need to choose on which grounds to plead and would likely meet this requirement.

b. Comparator Groups are No Longer Required to Draw a Distinction

Prior to the Supreme Court of Canada’s decision in *Withler v. Canada*,¹⁷⁵ identifying a “mirror comparator group[]” was required to proceed under section 15.¹⁷⁶ When alleging a section 15 violation, a claimant first needs to identify a relevant comparator to sufficiently highlight the differential treatment the claimant experienced.¹⁷⁷ Though the comparison is no longer required, Justice Abella stated in *Fraser* that courts may need to use more than one comparator in order to align with section 15’s mandate to promote substantive equality.¹⁷⁸ The use of multiple comparators is especially relevant for claimants alleging adverse effects discrimination because where the challenged law is facially neutral, more comparisons increase the likelihood that discrimination will be recognized.¹⁷⁹ For the purposes of our analysis, relevant comparator groups could include other non-reserve communities living near the Aamjiwnaang community in Southern Ontario. Additionally, residents may offer examples of situations in which regulators “limited the issuance of permits in other [areas] because pollution levels were getting too high.”¹⁸⁰ This evidence may be difficult to gather; another option for claimants would be to compare rates of ambient air pollution

¹⁷² *Charter*, Part I of the Constitution Act, 1982, Schedule B to the Canada Act 1982, c. 15(1) (U.K.).

¹⁷³ [1999] 2 S.C.R. 203 (Can.).

¹⁷⁴ *Id.* at 220.

¹⁷⁵ [2011] S.C.C. 12, 1 S.C.R. 396 (Can.).

¹⁷⁶ *Id.* at 416–17; *Law v. Can. Minister of Human Res. Dev.*, [1999] 1 S.C.R. 497, 517 (Can.).

¹⁷⁷ *Id.*

¹⁷⁸ *Fraser*, [2020] S.C.C. 28, paras. 185–88 (Can.) (explaining how multiple comparators are relevant to a section 15 analysis of a job-sharing program that had negative pension consequences for members of the Royal Canadian Mounted Police).

¹⁷⁹ Jonnette Watson Hamilton, *Cautious Optimism: Fraser v Canada* (Attorney General), 30 CONST. F., 2021, at 1, 7.

¹⁸⁰ Chalifour: *Environmental Justice*, *supra* note 10, at 122.

in Sarnia to other comparable areas to establish the evidentiary basis for a case.¹⁸¹

c. Drawing a Distinction Created by Law: OEPA and O Reg. 419/05

A difficult step in the section 15 framework for environmental justice claimants is proving a distinction created by a “law” that denies a benefit in a manner that has the effect of perpetuating disadvantage. Given the systemic and historical nature of environmental inequality¹⁸² and the added difficulty of linking cumulative effects of exposure to pollution to a particular state action, it is unlikely that such claimants could prove that a particular legal regime itself “was responsible for creating the background social or physical barriers which made a particular rule, requirement or criterion disadvantageous for the claimant group.”¹⁸³ Rather, they could prove that there is a system of discretionary-based permitting decisions embedded in air pollution regulations that denies clean air to the Aamjiwnaang community in Sarnia, while simultaneously providing that benefit to everyone else in the province.

The Supreme Court of Canada has construed “law” broadly to align with section 15’s goal of promoting substantive equality.¹⁸⁴ Chalifour argues that the *Charter*’s equality guarantee would likely encompass “the full range of government action (and inaction) regardless of whether the action stems from one law, regulation or policy, or a set of laws that, acting together, creates discrimination.”¹⁸⁵ In the context of the Aamjiwnaang residents in Sarnia, a section 15 claim could challenge the permitting regime under *OEPA* by challenging specific sections, “including sections 18, 157, 157.1, 157.2 and 196.”¹⁸⁶ These sections allow industry actors to “operate [beyond] minimum standards and do not require” cumulative impacts assessments from regulators in issuing permits.¹⁸⁷ A claim could also challenge the standards in O. Reg. 419/05, which sets minimum pollution standards but ultimately falls short of achieving those standards as explained in Part II.¹⁸⁸ Thus, the Aamjiwnaang residents in Chemical Valley can likely meet the threshold requirement of the section 15 test.

¹⁸¹ *Id.*

¹⁸² Randolph Haluza-Delay, *Environmental Justice in Canada*, 12 LOCAL ENV’T 557, 559–62 (2007) (describing histories and pathways of inequality in the Canadian context); see also Morello-Frosch et al., *supra* note 43, at 880 (providing an example in the US context).

¹⁸³ *Fraser*, [2020] S.C.C. 28, para. 71 (Can.).

¹⁸⁴ Nathalie J. Chalifour, *Environmental Discrimination and the Charter’s Equality Guarantee: The Case of Drinking Water for First Nations Living on Reserves*, REV. GEN., Special Issue 2013, at 183, 188, 196 [hereinafter Chalifour: *Environmental Discrimination*].

¹⁸⁵ *Id.* at 188.

¹⁸⁶ Parker, *supra* note 29, at 31.

¹⁸⁷ *Id.*

¹⁸⁸ See discussion *supra*, Part II.B.b.1.

2. *The Distinction Must Be Discriminatory in Its Impact*

The second step of the section 15 framework focuses on whether the distinction's impact on the individual or group reinforces, perpetuates, or exacerbates disadvantage.¹⁸⁹ Under *Fraser*, the current equality analysis consists of a highly-contextual and fact-specific inquiry where there is no "rigid template" of factors to be applied.¹⁹⁰ The aim of the *Fraser* test "is to examine the impact of the harm" on the protected group, in light of systemic or historic disadvantages that the group has faced.¹⁹¹ The scope of harm is broad and includes "economic exclusion or disadvantage, social exclusion, psychological harms, physical harms, [and] political exclusion."¹⁹² Whether these harms amount to discrimination depends largely on whether they relate to systemic or historical disadvantages faced by the claimant group.¹⁹³

This part of the test has undergone significant change since the Supreme Court of Canada first considered it in *Andrews v. Law Society of British Columbia*.¹⁹⁴ Due to the many iterations of this test, courts continue to draw from concepts in past cases in their section 15 equality analyses,¹⁹⁵ such as the four-factor test in *Law v. Canada (Minister of Employment and Immigration)*.¹⁹⁶ To account for courts' reliance on previous caselaw in their section 15 analyses, this sub-Part examines (1) the current causation standard under *Fraser* as applied to pollution hotspot cases, as well as (2) the application of *Law*'s most relevant factors to those cases.

a. *The Current Section 15 Causation Standard under Fraser*

To prove causation, showing that a rule "contributes to or worsens a group's disadvantaged position, . . . should be [enough] to establish the necessary connection between the rule and the disadvantage."¹⁹⁷ For pollution hotspot cases like Chemical Valley, claimants could use data on pollution levels in Sarnia and the significant human health effects to community members in that area, along with data on the number of permits awarded, to prove causation under section 15.¹⁹⁸ They could also introduce epidemiological evidence "showing higher incidences of illness

¹⁸⁹ *Fraser*, [2020] S.C.C. 28, para. 27 (Can.).

¹⁹⁰ *Id.* para. 76 (citing *Att'y Gen. of Que. v. Att'y Gen. of N.B. (A.G. v. A.G.)*, [2013] 1 S.C.R. 61, 219 (Can.) and quoting *Withler*, [2011] 1 S.C.R. 396, 423 (Can.)).

¹⁹¹ *Id.*

¹⁹² *Id.*

¹⁹³ *Id.* paras. 76–77.

¹⁹⁴ *Andrews*, [1989] 1 S.C.R. 143, 145 (Can.).

¹⁹⁵ For instance, courts may look at the concepts of "perpetuation of disadvantage and stereotyping" as the main indicators of discrimination, which used to be the focus of the inquiry under *Kapp v. The Queen*, [2008] 2 S.C.R. 483, 505–06 (Can.).

¹⁹⁶ [1999] 1 S.C.R. 497, 534 (Can.).

¹⁹⁷ *Parker*, *supra* note 29, at 36 (internal citation omitted).

¹⁹⁸ *Id.* at 37.

in [Sarnia] such as ‘cancer clusters.’”¹⁹⁹ Those two types of evidence may be sufficient to establish a causal connection on a balance of probabilities under section 15.²⁰⁰

Furthermore, evidence about the “results of a system” or proof of disparate impact is admissible to prove a section 15 violation.²⁰¹ Since “clear and consistent statistical disparities can show a disproportionate impact on members of protected groups, even if the precise reason for that impact is unknown[,]”²⁰² the temporally and spatially dissociated cause and effects common to environmental claims are less likely to undermine the viability of a section 15 claim. To establish that causal link, community members in Chemical Valley would need to introduce statistics about pollution permitting and quantities of pollution emitted in Sarnia.²⁰³ In combination with data about health impacts, claimants may have a stronger chance of revealing how permitting is at the root of the problem without having to establish the specific causal pathway of environmental harms in a given region.²⁰⁴

b. Application of Law’s Most Relevant Factors to Pollution Hotspot Cases

While *Law*’s four contextual factors are no longer strict requirements for a viable section 15 claim, courts may still consider them in determining whether a distinction on a law’s face or in its impacts is discriminatory.²⁰⁵ In *Law*, the Supreme Court of Canada framed the inquiry by assessing the law’s impact on the claimant’s “essential human dignity” and identified four non-exhaustive, contextual factors to consider making that determination.²⁰⁶ The four factors are: (1) “pre-existing disadvantage, stereotype, or prejudice . . . experienced by the [claimant] group;” (2) the congruity between the differential treatment and the claimant group’s actual lived reality; (3) whether the impugned law serves an ameliorative purpose; and (4) the nature of the affected right.²⁰⁷ The two most relevant factors from *Law* to the case of the Aamjiwnaang

¹⁹⁹ Chalifour: *Environmental Justice*, *supra* note 10, at 122.

²⁰⁰ *But see* Parker, *supra* note 29, at 37 n.115 (explaining that the difference between the claim in *Fraser*, involving a benefit, and adverse effects discrimination in the environmental context, concerning a harm that may arise, makes it more difficult to predict how courts would respond to a pollution hotspot case).

²⁰¹ *Fraser*, [2020] S.C.C. 28, paras. 97, 234 (Can.).

²⁰² *Id.* para 62.

²⁰³ Parker, *supra* note 29, at 37.

²⁰⁴ *Id.* at 38.

²⁰⁵ *Fraser*, [2020] S.C.C. para. 78 (citing *A.G. v. A.G.*, [2013] 1 S.C.R. 61., para. 327 (Can.)).

²⁰⁶ *Law*, [1999] 1 S.C.R. 497, at paras. 9, 48 (Can.).

²⁰⁷ *Id.* para. 9.

residents in Sarnia are pre-existing disadvantage and the nature of the affected right.²⁰⁸

The First Nations people of Canada have indisputably faced historical disadvantage and been subject to stereotypes and prejudices. They were once denied the right to vote²⁰⁹ and were victims of Canada's assimilationist policies and operation of residential schools.²¹⁰ Moreover, they experience worse health outcomes relative to the rest of Canadians for multiple reasons, such as the unavailability of certain treatments on reserves, pre-existing health vulnerabilities, and the high degree of mental health challenges in their communities.²¹¹ There are many other examples of disadvantages and prejudice towards Indigenous people in Canada.²¹² However, for the purpose of a section 15 analysis, these instances likely suffice to establish *Law's* first factor and are relevant evidence "that goes to establishing a claimant's historical position of disadvantage."²¹³

On the nature of the affected right, Chalifour argues that there is a higher likelihood of the Supreme Court of Canada finding discrimination where a person's fundamental interests are impacted.²¹⁴ It is hard to conceptualize a more fundamental right than the ability to breathe clean air. As explained in Part II, breathing in air pollution has long-lasting effects on human health, which in turn affects a person's physical and mental health and can impact and worsen determinants such as social and economic disadvantage.²¹⁵ Moreover, international documents, such as the United Nations Declaration on the Rights of Indigenous Peoples

²⁰⁸ See Madiha Vallani, Sections 7 and 15 of the Canadian Charter of Rights and Freedoms in the Context of the Clean Water Crisis on Reserves: Opportunities and Challenges for First Nations Women, at 29 (Sept. 2018) (L.L.M. Dissertation, University of Western Ontario), <https://perma.cc/4AFP-E3L7> (analyzing *Law's* factors as applied to a hypothetical case of First Nations women living on reserves without access to clean water).

²⁰⁹ David R. Boyd, *No Taps, No Toilets: First Nations and the Constitutional Right to Water in Canada*, 57 MCGILL L. J. 81, 116 (2011).

²¹⁰ *Your Questions Answered About Canada's Residential School System*, CBC NEWS (July 1, 2021), <https://perma.cc/TR6Q-JB7S>; see generally Amy Bombay, Kimberly Matheson, & Hymie Anisman, *The Intergenerational Effects of Indian Residential Schools: Implications for the Concept of Historical Trauma*, 51 TRANSCULTURAL PSYCHIATRY 320 (2014) (exploring the intergenerational effects of the Indian Residential School system in Canada).

²¹¹ CANADIAN HUMAN RIGHTS COMMISSION, REPORT ON EQUALITY RIGHTS OF ABORIGINAL PEOPLE 46, 47, 51 (2013), <https://perma.cc/KYU6-CX69>.

²¹² See *id.* at 3 (finding that First Nations people in Canada are more likely to be: unemployed, subject to physical, emotional, and sexual abuse, victims of violence, live in inadequate housing, earn a significantly lower income, and imprisoned with less chances of parole); see also Lloy Wylie & Stephanie McConkey, *Insiders' Insight: Discrimination Against Indigenous Peoples through the Eyes of Health Care Professionals*, 6 J. RACIAL & ETHNIC HEALTH DISPARITIES 37, 37 (2019) (discussing experiences of discrimination against Indigenous people in the health care system).

²¹³ *Taypotat v. Kahkewistahaw First Nation*, [2015] 2 S.C.R. 548, para. 21 (Can.) (citing *Withler*, [2011] 1 S.C.R. 396, para. 38 (Can.) & *A.G. v. A.G.*, [2013] 1 S.C.R. 61, para. 327 (Can.)).

²¹⁴ Chalifour: *Environmental Discrimination*, *supra* note 184, at 211 (citing ROBERT J SHARPE & KENT ROACH, *THE CHARTER OF RIGHTS AND FREEDOM* 332 (4th ed., 2009)).

²¹⁵ See discussion *supra* Part II.A.

(UNDRIP), recognize Indigenous peoples' right to clean air.²¹⁶ Under Article 29 of UNDRIP, "Indigenous peoples have the right to the conservation and protection of the environment and the productive capacity of their lands or territories and resources."²¹⁷ Moreover, under Article 25, Indigenous peoples have the right to breathable air that is suitable for cultural practices.²¹⁸

The cumulative impacts of exposure to air pollution experienced by the Aamjiwnaang residents in Sarnia deprive them of their rights as recognized by UNDRIP to conserve and protect their environment, to maintain their traditional relationship to the environment, and to pass on their traditions to future generations.²¹⁹ Given the Canadian government's implementation of UNDRIP through the UNDRIP Act in 2021,²²⁰ it is likely that the Supreme Court of Canada would consider the Declaration to interpret the *Charter* despite the fact that the document does not legally bind Ontario.²²¹ Thus, there is a strong argument that the disadvantages experienced by the Aamjiwnaang residents in Chemical Valley fit within the section 15 framework.

IV. CONCLUSION

As the understanding of environmental injustices experienced by the Aamjiwnaang community in Sarnia and other similarly situated populations has evolved, the search for ways to prevent and redress these injustices has as well. The lack of cumulative risk assessments for major industrial projects in Ontario's environmental legal regime has created and perpetuated a sacrifice zone in Chemical Valley where the Aamjiwnaang residents experience distributive, procedural, and recognition injustices. The analysis in this Note demonstrates that sections 7 and 15 of the *Charter* can be used to help address these kinds of environmental injustices.

Section 7 offers a potential avenue for redress because of the wide scope of its protections—which apply to all Canadians—and recent

²¹⁶ G.A. Res. 61/295, United Nations Declaration on the Rights of Indigenous Peoples arts. 25, 29 (Oct. 2, 2007).

²¹⁷ *Id.* art. 29.

²¹⁸ *Id.* art. 25 ("Indigenous peoples have the right to maintain and strengthen their distinctive spiritual relationship with their traditionally owned or otherwise occupied and used lands, territories, waters and coastal seas and *other resources* and to uphold their responsibilities to future generations in this regard.") (emphasis added).

²¹⁹ Chalifour: *Environmental Justice*, *supra* note 10, at 99, 102.

²²⁰ United Nations Declaration on the Rights of Indigenous Peoples Act, A/61/L/6.7 (2021).

²²¹ *Id.* pmb. ("Whereas the Government of Canada acknowledges that provincial, territorial and municipal governments each have the ability to establish their own approaches to contributing to the implementation of the Declaration by taking various measures that fall within their authority"). As of June 2022, Ontario has not established a provincial approach to implementing UNDRIP. See *Adopt & Implement the United Nations Declaration on the Rights of Indigenous Peoples*, CBC NEWS (Jun. 17, 2022), <https://perma.cc/6WP3-Z36U>.

progressive interpretations of the section that provide a basis for the recognition of a “right to a healthy environment.” For the Aamjiwnaang community in Sarnia, a section 7 claim under each interest—life, liberty, and security of the person—would likely be successful given the well-documented damage to the health of community members. Notably, there is ample evidence to prove a violation of the security of the person: that the Aamjiwnaang residents suffer both physically and psychologically as a result of the large emissions of air toxins from their industrial neighbors. Studies show that they experience detrimental health issues through exposure to chronic air pollution and how these experiences negatively impact their mental health.²²² However, an obstacle for environmental claimants under section 7 is the requirement to establish a sufficient causal connection between the harm they have suffered and the state action, given the latency of environmental harms to human health and the several sources of pollution. Nonetheless, in pollution hotspot cases like Chemical Valley, those issues may be overcome due to the amount of evidence of damage to the residents’ health and may be sufficient to overcome the causal threshold.

Section 15 likely provides a more plaintiff-friendly route as compared to section 7 for environmental justice claimants who fall within the section’s protected classes because of its lower causation requirement and decreased evidentiary burden to prove a discriminatory distinction by a law or set of laws. The disproportionate pollution burdens created and perpetuated by Ontario’s environmental protection regulations are an example of “adverse effects” discrimination. Although the goal of these protections is to limit the release of contaminants and to manage the effects of pollution on the environment and human health, the current air pollution control laws in Ontario have the effect of allowing harmful levels of pollution in certain regions like Chemical Valley. In this way, the disparate pollution burden on the Aamjiwnaang residents in Sarnia is a distinction “in its impact” under section 15 of the *Charter*.

The *Charter* seeks to protect the fundamental rights and freedoms of every person in Canada from being violated by government-sponsored activity. The Aamjiwnaang band members living in Sarnia fall under that universal protection. To truly afford them that protection, the air pollution regime in Ontario, and in Canada generally, must change. The *Charter* provides opportunities to prompt such change.

²²² Prochaska, et. al., *supra* note 42, at 981 (finding that stressful living conditions in environmental justice communities result in increased susceptibility to illness brought on by environmental pollution).