

Assessing Gross Disproportionality in Climate Change Litigation: The Case for a Justificatory Approach

Eva Linde

CANADIAN CLIMATE CHANGE litigation is testing the scope of section 7 of the *Charter*. The young claimants in *La Rose v Canada* and *Mathur v Ontario* argue that governments' insufficient efforts to reduce greenhouse gas emissions violate their right to life, liberty, and security of the person.

This article addresses a central challenge in such litigation. Neither international law nor the *Charter* provides clear criteria for quantifying the obligations of individual states to reduce greenhouse gas emissions. Under these circumstances, how can courts assess whether Canada's or Ontario's policies are insufficient and infringe section 7 interests in a grossly disproportionate manner?

The article proposes that courts should not attempt to define absolute mitigation obligations. Rather, the inquiry must be a relative one. Courts should begin by determining the global warming trajectory with which Canada's and Ontario's emissions align and then ask whether the harm to section 7 interests expected at that level of warming is justified in light of the cost of achieving further emissions reductions. Because such an evaluation depends on risk assessment and political priority-setting, courts should afford governments a broad measure of deference while demanding that they clearly articulate and justify their choices.

LES LITIGES CLIMATIQUES au Canada mettent à l'épreuve la portée de l'article 7 de la *Charte*. Les jeunes demandeurs dans *La Rose c Canada* et *Mathur c Ontario* soutiennent que les efforts insuffisants des gouvernements pour réduire les émissions de gaz à effet de serre violent leur droit à la vie, à la liberté et à la sécurité de la personne.

Cet article s'intéresse à un enjeu central dans ce type de litige. Ni le droit international ni la *Charte* n'offrent de critères clairs pour mesurer les obligations des États en matière de réduction des émissions. Dans ces circonstances, comment les tribunaux peuvent-ils déterminer si les politiques du Canada ou de l'Ontario sont insuffisantes et portent atteinte, de façon manifestement disproportionnée, aux droits protégés par l'article 7?

L'article propose que les tribunaux ne cherchent pas à définir des obligations absolues de réduction des émissions. L'analyse devrait plutôt être relative. Les tribunaux devraient d'abord déterminer la trajectoire du réchauffement climatique à laquelle les émissions du Canada et de l'Ontario correspondent, puis se demander si le préjudice prévu aux droits garantis par l'article 7 à ce niveau de réchauffement est justifié au regard du coût des réductions supplémentaires. Comme une telle évaluation repose sur l'analyse des risques et sur la définition des priorités politiques, les tribunaux devraient accorder aux gouvernements une large marge de manœuvre, tout en exigeant qu'ils expliquent et justifient clairement leurs décisions.

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I. INTRODUCTION

Canadian youth-led climate change litigation is making its way through the courts. *La Rose v Canada*,¹ the first national legal case alleging that the federal government's climate policy violates the *Canadian Charter of Rights and Freedoms*,² was initially struck by the Federal Court because it had no reasonable prospect of success.³ The Federal Court of Appeal partially reversed this decision, holding that the section 7 *Charter* claim (regarding the right to life, liberty, and security of the person), while novel, should not be dismissed at such an early stage.⁴ At the provincial level, the Ontario

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1 2020 FC 1008 [*La Rose* FCTD].

2 Part I of the *Constitution Act*, 1982, being Schedule B to the *Canada Act* 1982 (UK), 1982, c 11.

3 A Quebec-based non-profit organization previously attempted to bring a class action lawsuit on behalf of young Quebec residents challenging the federal government's climate policies (see *Environnement Jeunesse c Procureur général du Canada*, 2019 QCCS 2885). The application to authorize a class action was rejected by the Quebec Superior Court, and the Quebec Court of Appeal dismissed the appeal (see *Environnement Jeunesse c Procureur général du Canada*, 2021 QCCA 1871, leave to appeal to SCC refused, 67615 (28 July 2022)).

4 *La Rose v Canada*, 2023 FCA 241 [*La Rose* FCA]. This article will focus only on *La Rose* and not its companion case because its companion case raised additional legal questions irrelevant to the issues discussed (see *Misdzi Yikh v Canada*, 2020 FC 1059).

Superior Court of Justice initially dismissed *Mathur v Ontario*,⁵ a challenge to the province's 2030 greenhouse gas (GHG) reduction target, but the Ontario Court of Appeal reversed the decision and remitted the matter for a new hearing.⁶

Climate change litigation raises a multitude of complex legal questions.⁷ This article discusses claims under section 7 of the *Charter*, with a primary focus on the question of how courts should quantify the appropriate level of GHG emissions reductions that Canada is required to achieve.⁸ This question is extremely relevant to the judicial analysis. It may already arise when assessing whether state conduct deprives plaintiffs of their section 7 rights.⁹ It will certainly arise when determining whether the deprivation is contrary to principles of fundamental justice. Among the long-established principles of fundamental justice that the applicants argue in *Mathur* and *La Rose* is the principle against gross disproportionality.¹⁰ Whether Canada's or Ontario's emissions (or emissions reduction targets) are grossly disproportionate depends on the level of emissions reductions the state should achieve. The issue will arise again when assessing whether the infringement may be justified under section 1 of the *Charter*, if that stage

5 2023 ONSC 2316 [*Mathur* SC 2023]. The dismissal came after the case had initially taken the justiciability hurdle (see *Mathur v Ontario*, 2020 ONSC 6918 [*Mathur* SC 2020]).

6 *Mathur v Ontario*, 2024 ONCA 762 [*Mathur* CA].

7 While each of these issues warrants much more extensive treatment, I can only provide a few selected thoughts in this article. For a discussion of issues that will likely become relevant in the *Mathur* proceedings, see Stepan Wood, "Mathur v Ontario: Grounds for Optimism about the Recognition of a Constitutional Right to a Stable Climate System in Canada?" (2024) 69:1 McGill LJ 3. Other debated issues that are beyond the scope of this article include whether Canada's conduct with regard to climate change infringes the young plaintiffs' equality rights under section 15 of the *Charter*, unwritten constitutional principles, or the public trust doctrine. On section 15, see e.g. Nathalie J Chalifour, Jessica Earle & Laura Macintyre, "Coming of Age in a Warming World: The *Charter*'s Section 15 Equality Guarantee and Youth-Led Climate Litigation" (2021) 17:1 JL & Equality 1; Janis Sarra, "The Climate Change Conundrum—Private Litigation as a Mechanism to Advance Public Interests?" (2023) 74 UNBLJ 1 at 15–17. On the public trust doctrine, see e.g. Hassan M Ahmad, "Boom or Bust: The Public Trust Doctrine in Canadian Climate Change Litigation" (2023) 49:2 Queen's LJ 1.

8 Unless specifically talking about Ontario, I will only refer to "Canada" in this article, but most of the arguments regarding Canada apply in the same way to Ontario.

9 Further discussion of section 7 will be found in Section IV-B, *below*, where I argue that the question of what level of emissions reductions Canada is required to achieve should not be decisive for determining whether a deprivation occurred, although a different view on this is conceivable.

10 See e.g. *Canada (Attorney General) v Bedford*, 2013 SCC 72 at para 97 [*Bedford*]; *Carter v Canada (Attorney General)*, 2015 SCC 5 at para 72 [*Carter*].

is ever reached. Finally, it is relevant at the remedial stage: the *Mathur* applicants have asked the court to order Ontario “to set a science-based target for the allowable levels of GHG,” among other things, while the *La Rose* plaintiffs similarly ask for an order requiring Canada to develop and implement a climate plan based on best available sciences and in accordance with Canada’s share of global emissions reductions.¹¹ Since quantifying the appropriate level of reductions is thus central to the claim, courts may even find that this aspect renders the whole case non-justiciable for lack of a sufficient legal component that would allow courts to make such a determination.¹²

Current attempts to quantify a state’s GHG emissions reduction obligations are all problematic in one way or another. Some academics, as well as courts in other jurisdictions, have approached this matter by asking whether a state is in compliance with its obligations under international environmental law, in particular the 2015 *Paris Agreement* (PA).¹³ However, in contrast to the 1997 *Kyoto Protocol*,¹⁴ the PA does not impose quantifiable mitigation obligations on individual states. Article 2(1)(a) defines holding global warming to well below 2°C and pursuing efforts to limit warming to 1.5°C as mere objectives, without making them binding on parties.¹⁵ Article 4(2) of the PA further requires parties to submit their Nationally Determined Contributions (NDCs), which represent the GHG reductions that a party aims to achieve by a certain year, but does not stipulate how

11 *Mathur* SC 2023, *supra* note 5 at para 2; *La Rose v Canada*, 2020 FC 1008 (Amended Statement of Claim, Plaintiff at para 1) [*La Rose* FCTD (Amended Statement of Claim)].

12 In her reasons, Justice Vermette found that the issue of what constitutes Canada’s and Ontario’s fair shares of the global carbon budget is non-justiciable (see *Mathur* SC 2023, *supra* note 5 at paras 109–10), see the further discussion in Part III, *below*. While this did not render the whole case non-justiciable in Justice Vermette’s view, it is unclear how she would have resolved the claim without deciding on Ontario’s fair share. I suspect that the decision by Justice Manson to strike the case was motivated by a similar concern (see *La Rose* FCTD, *supra* note 1 at paras 26–56, 62–63).

13 *Paris Agreement to the United Nations Framework Convention on Climate Change*, 12 December 2015, 3156 UNTS 54133 (entered into force 4 November 2016) [PA]. See the introduction to Part V, *below*, for more on this topic.

14 *Kyoto Protocol to the United Nations Framework Convention on Climate Change*, 10 December 1997, 2303 UNTS 162 (entered into force 16 February 2005). Whereas the *Kyoto Protocol* included quantified GHG reduction obligations for developed country parties, Canada withdrew from the *Kyoto Protocol* in 2011 when it became clear that its government would not be able to meet its obligation.

15 PA, *supra* note 13, art 2(1)(a).

ambitious these NDCs must be.¹⁶ If states are to derive national GHG reduction targets from these provisions, certain parameters need to be determined first: What is the precise temperature threshold that must not be exceeded? How does this threshold translate into remaining carbon budgets? How should the carbon budget be allocated over time? And what is each country's fair share of the budget? Each of these steps requires risk evaluation and normative-ethical choices that courts may find difficult to make based on legal criteria.

Besides, *Charter* rights may not impose the same obligations on Canada as the PA. It is not obvious that the right to life, liberty, and security of the person is infringed if global warming exceeds 1.5°C or 2°C, rather than a lower or higher threshold.¹⁷ The applicants in *Mathur*, moreover, face an uphill battle in quantifying Ontario's share of Canada's obligations.

The *Mathur* applicants have approached these challenges by arguing that, no matter how one determines the parameters mentioned above, Ontario's target falls short of the provinces' obligations.¹⁸ Even under the most favourable approach for Ontario, the emissions resulting from the province's current target would exceed its remaining carbon budget by 2030.¹⁹ The applicants' likely intention was to relieve the court from having to make any contentious determinations in relation to Ontario's fair share of the global carbon budget. However, this approach can prove problematic in various ways.²⁰

Given the difficulties that arise under current approaches to quantifying a state's GHG emissions reduction obligations, it is a worthwhile endeavour to explore alternative methods for courts to address the issue of gross

16 *Ibid*, art 4(2). Art 4(3) of the PA merely stipulates that the NDCs must constitute a progression beyond past NDCs.

17 The German Federal Constitutional Court, for example, found that limiting global warming to 1.5°C might be advisable to preserve an environmentally, human-, and animal-friendly climate, but that exceeding this threshold would not necessarily endanger human life, health, and property, especially because the state may take additional adaptation measures to protect its citizens from the worst impacts of climate change (see Bundesverfassungsgericht [Federal Constitutional Court], Karlsruhe, 24 March 2021, *Neubauer et al v Germany*, 1 BvR 2656/18, 1 BvR 78/20, 1 BvR 96/20, 1 BvR 288/20 at paras 163–64 (Germany) [*Neubauer*]). Contrarily, one may assert that global warming must be kept far below 1.5°C to prevent severe impacts on human rights. See e.g. Andrea Rodgers, Lauren E Sancken & Jennifer Marlow, "The Injustice of 1.5°C-2°C: The Need for a Scientifically Based Standard of Fundamental Rights Protection in Constitutional Climate Change Cases" (2022) 40 Va Env'tl LJ 102. The *Charter* might thus impose more intense obligations on Canada than the PA.

18 *Mathur* SC 2023, *supra* note 5 at para 30.

19 *Ibid*.

20 Further discussion of this approach will be found in Section V-B, *below*.

disproportionality. This is what I aim to do in this article. I propose that gross disproportionality is always a relative inquiry. The decisive question is not whether absolute mitigation obligations (or even minimal obligations) can be inferred from international law. Rather, any state-authorized emissions must be justified by a sufficiently weighty governmental objective. The focus of the enquiry should thus be on the justification the government can offer for its chosen emissions reduction target.

Based on this rationale, I put forward a three-step method for assessing gross disproportionality. First, courts must determine the severity of the threat Canada's conduct poses to the plaintiffs' section 7 rights. The severity of the threat depends on the temperature threshold Canada's current emissions align with (the global warming trajectory). To establish such a trajectory, plaintiffs and courts must determine the parameters outlined above: the temperature threshold that must not be exceeded, how this threshold translates into remaining carbon budgets, and how the remaining carbon budget should be allocated over time and globally. Considering that courts might be reluctant to make such risk assessments and normative choices autonomously, I argue that they should approach this task through the justificatory lens provided by the gross disproportionality framing. Courts should defer to the government in undertaking contested scientific evaluations and normative choices *if the government can justify its position*. Thus far, Canada and Ontario have failed to articulate and substantiate what they believe to be the correct approach to applying the parameters, and hence what their global warming trajectory amounts to. This article proposes that, where plaintiffs make detailed arguments, supported by expert evidence, to quantify Canada's and Ontario's share of the emissions reduction burden, courts should call on respondents to substantively counter these claims and explain their assumptions, methodologies, and political choices underlying their decisions.²¹ Second, courts can then balance the rights infringement against the objective of the law or state action. Third, if the court concludes that a law or state action has a grossly disproportionate impact on the plaintiffs, the government may nonetheless show that the infringement is justified under section 1 of the *Charter*.

21 This can be achieved through a slight modification of the burden of proof under section 7 of the *Charter*, which draws on the Supreme Court's jurisprudence concerning the evaluation of evidence that is not susceptible to proof in the traditional sense under section 1 of the *Charter*. See e.g. *R v Sharpe*, 2001 SCC 2 at para 89 [*Sharpe*]; *Sauvé v Canada (Chief Electoral Officer)*, 2002 SCC 68 at para 18 [*Sauvé*]; *Harper v Canada (Attorney General)*, 2004 SCC 33 at paras 77, 79 [*Harper*]; *R v Bryan*, 2007 SCC 12 at para 16 [*Bryan*]. Further discussion of this proposal will be found in Section V-C, *below*.

This article proceeds as follows. Part II provides background on the climate problem and Canada's response so far. Part III reviews the *La Rose* and *Mathur* decisions. Part IV briefly discusses some key hurdles for plaintiffs in establishing an infringement of section 7 of the *Charter*. The core of the article, Part V, discusses how to determine whether Canada's or Ontario's actions are grossly disproportionate. Section V-A details the challenge of deriving quantifiable mitigation obligations from the PA. Section V-B discusses the "lower limits" approach advanced by the *Mathur* applicants. In Section V-C, I develop an alternative approach to assessing gross disproportionality in climate change litigation that, rather than attempting to infer absolute or minimal mitigation obligations from international law, focuses on the justification provided by the government for its chosen emissions reduction target. Part VI provides a brief conclusion.

II. THE CLIMATE PROBLEM AND CANADA'S RESPONSE

In 1992, the state parties to the United Nations Framework Convention on Climate Change (UNFCCC) jointly acknowledged climate change as a "common concern of humankind" and called for the "stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system."²² Thirty-three years later, we are far from achieving this objective. Not only have historic emissions accumulated in the atmosphere and will contribute to global warming in the decades to come,²³ but the decade of 2010–2019 also saw higher emissions than any time before.²⁴ Although many developed countries have succeeded in reducing their emissions, this effort was more than offset by increased emissions in developing countries.²⁵

22 *United Nations Framework Convention on Climate Change*, 9 May 1992, 1771 UNTS 107 at Preamble, para 1, art 2 (entered into force 21 March 1994) [UNFCCC].

23 Between 2011–2020, the global surface temperature increased by 1.09 [0.95 to 1.20]°C from the 1850–1900 temperature (see Paola A Arias et al, "Technical Summary" in Intergovernmental Panel on Climate Change, *Climate Change 2021: The Physical Science Basis*, Contribution of Working Group I to the Sixth Assessment Report of the IPCC, Valérie Masson-Delmotte et al, eds (Cambridge, UK, New York: Cambridge University Press, 2021) 35 at 41).

24 Minal Pathak et al, "Technical Summary" in Intergovernmental Panel on Climate Change, *Climate Change 2022: Mitigation of Climate Change*, Contribution of Working Group III to the Sixth Assessment Report of the IPCC, Priyadarshi R Shukla et al, eds (Cambridge, UK, New York: Cambridge University Press, 2022) 51 at 59.

25 *Ibid* at 57.

Canada was not among those developed countries that reduced their emissions during the 2010–2019 period. Rather, Canada’s emissions rose from 728 MtCO₂eq in 2010 to 747 MtCO₂eq in 2019.²⁶ In 2023, Canada was the tenth largest emitter, accounting for 1.41 percent of global emissions, while only being home to 0.49 percent of the global population.²⁷

The PA introduced a fundamental change from the earlier “top-down” approach, which was characterized by binding emissions reduction obligations for developed states, to a “bottom-up” approach.²⁸ Pursuant to Article 4(2) of the PA, each party must communicate the GHG reductions it aims to achieve by a certain year in the form of its NDC.²⁹ However, the PA does not stipulate how ambitious these NDCs must be, other than that they must constitute a progression beyond past NDCs.³⁰ While the PA recognizes that developed states will need to take the lead on climate action, as captured in the principle of *common but differentiated responsibilities*, the PA does not clarify how the burden is to be shared.

On a global scale, current efforts to mitigate climate change are lacking in multiple ways. One, there is a gap between communicated NDCs and what would be necessary to keep global warming below 1.5°C or even 2°C.³¹ Two, the PA temperature targets are the result of a political compromise, but this does not mean that limiting global warming to 1.5°C or 2°C can be considered “safe”.³² Rather, and to the contrary, we are already experiencing extreme weather events and other fundamental changes to our natural environment at current levels of warming, resulting in deaths, severe impacts on physical and mental health, and loss of homeland and property alongside the extinction of species and irreversible loss or alteration

26 Environment and Climate Change Canada, *Canadian Environmental Sustainability Indicators: Greenhouse Gas Emissions* (Gatineau: ECCC, 2025) at 20, online (pdf): <canada.ca/content/dam/eccc/documents/pdf/cesindicators/ghg-emissions/2025/greenhouse-gas-emissions-en.pdf>.

27 M Crippa et al, *GHG Emissions of All World Countries* (Luxembourg: Publications Office of the European Union, 2024) at 7; Worldometer, “Canada Population (Live)” (last visited 11 February 2025), online: <worldometers.info/world-population/canada-population>.

28 See e.g. Christina Voigt & Felipe Ferreira, “Differentiation in the *Paris Agreement*” (2016) 6 *Climate L* 58 at 60–65; Lavanya Rajamani, “Ambition and Differentiation in the 2015 *Paris Agreement*: Interpretative Possibilities and Underlying Politics” (2016) 65:2 *Intl & CLQ* 493 at 495.

29 PA, *supra* note 13, art 4(2).

30 *Ibid*, art 4(3).

31 Pathak et al, *supra* note 24 at 69.

32 David I Armstrong McKay et al, “Exceeding 1.5°C Global Warming Could Trigger Multiple Climate Tipping Points” (2022) 377:6611 *Science* 1 at 7–8; Rodgers, Sancken & Marlow, *supra* note 17 at 104–105.

of ecosystems.³³ Scientific evidence shows that such impacts will worsen with advancing global warming, on top of the increasing risk of reaching tipping points that will accelerate climate change even more.³⁴ Three, many states are on track to fail in even meeting their communicated NDCs.³⁵ If countries only implement and extrapolate from the policies adopted by the end of 2020, models predict a median global warming of 2.2–3.5°C by 2100.³⁶ This increase does not account for states' failure to implement the adopted policies.

After ratifying the PA, Canada initially submitted an NDC of 30 percent reductions in GHG emissions by 2030, relative to 2005 levels.³⁷ In 2021, Canada revised its NDC to 40–45 percent reductions by 2030 and also passed the *Canadian Net-Zero Emissions Accountability Act*, which sets a target of net-zero emissions by 2050.³⁸ Canada's 2030 Emissions Reduction Plan furthermore establishes an interim target of 20 percent reductions by 2026.³⁹ In its 2023 Progress Report, the government stated that Canada was currently on track to exceed its interim target and achieve 36 percent reductions by 2030; however, additional efforts are required to achieve the

33 See e.g. Richard P Allan et al, "Summary for Policymakers" in Intergovernmental Panel on Climate Change, *Climate Change 2021: The Physical Science Basis*, Contribution of Working Group I to the Sixth Assessment Report of the IPCC, Valérie Masson-Delmotte et al, eds (Cambridge, UK, New York: Cambridge University Press, 2021) 3 at 8–11; Rodgers, Sancken & Marlow, *supra* note 17 at 119–24.

34 Allan et al, *ibid*; Armstrong McKay et al, *supra* note 32.

35 Pathak et al, *supra* note 24 at 69.

36 Despite this median prediction, "warming up to 5°C cannot be excluded" as a possibility (see Keywan Riahi et al, "Mitigation Pathways Compatible with Long-Term Goals" in Intergovernmental Panel on Climate Change, *Climate Change 2022: Mitigation of Climate Change*, Contribution of Working Group III to the Sixth Assessment Report of the IPCC, Priyadarshi R Shukla et al, eds (Cambridge, UK, New York: Cambridge University Press, 2022) 295 at 316, 351).

37 Government of Canada, "Canada's 2017 Nationally Determined Contribution Submission to the United Nations Framework Convention on Climate Change" (last modified 2017), online (pdf): <unfccc.int/sites/default/files/NDC/2022-06/Canada%20First%20NDC-Revised%20submission%202017-05-11.pdf> [Government of Canada, "Canada's 2017 NDC"].

38 Government of Canada, "Canada's 2021 Nationally Determined Contribution Under the Paris Agreement" (last modified 2021), online (pdf): <unfccc.int/sites/default/files/NDC/2022-06/Canada%27s%20Enhanced%20NDC%20Submission1_FINAL%20EN.pdf> [Government of Canada, "Canada's 2021 NDC"]; SC 2021, c 22 [Net-Zero Act].

39 Environment and Climate Change Canada, *2030 Emissions Reduction Plan: Canada's Next Steps to Clean Air and a Strong Economy* (Public Inquiries Centre: Gatineau, 2022) at 82, online (pdf): <publications.gc.ca/collections/collection_2022/eccc/En4-460-2022-eng.pdf> [ECCC, *2030 Emissions Reduction Plan*].

40–45 percent target.⁴⁰ In December 2024, Canada adopted its next target of 45–50 percent emissions reductions by 2035, relative to 2005 levels.⁴¹ The target falls well short of the recommendation by the Net-Zero Advisory Body to adopt a target of 50–55 percent emissions reductions.⁴²

III. THE *LA ROSE* AND *MATHUR* DECISIONS

La Rose and *Mathur* are part of a global wave of climate change litigation in the past decade.⁴³ In *The State of the Netherlands (Ministry of Economic Affairs and Climate Policy) v Stichting Urgenda*, the Dutch Supreme Court ordered the government to reduce the country's GHG emissions by 25 percent below its 1990 levels by the end of 2020.⁴⁴ In *Neubauer et al v Germany*, the German Federal Constitutional Court invalidated the German *Climate Change Act* because it delayed substantial parts of the inevitable mitigation burden and thus disproportionately impacted young generations.⁴⁵ The European Court of Human Rights (ECtHR) found Switzerland's climate policies to be an insufficient contribution to limiting global warming.⁴⁶ However, other courts, particularly in the United States, have dismissed similar cases as non-justiciable, holding either that they posed political questions unsuitable for judicial determination or that the judiciary has

- 40 Environment and Climate Change Canada, *2023 Progress Report on the 2030 Emissions Reduction Plan* (Gatineau: ECCC, 2023) at 25, online (pdf): <www.canada.ca/content/dam/eccc/documents/pdf/climate-change/climate-plan/erp-pr/2023%20Progress%20Report%20-%20FINAL%20-%20EN.pdf> [ECCC, 2023 Progress Report].
- 41 Environment and Climate Change Canada, “What You Need to Know About Canada’s 2035 Emissions Reduction Target” (12 December 2024), online: <www.canada.ca/en/environment-climate-change/news/2024/12/canadas-2035-target.html> [ECCC, “2035 Emissions Reduction Target”].
- 42 Net-Zero Advisory Body, *Climate’s Bottom Line: Carbon Budgeting and Canada’s 2035 Target*, vol 2 (Gatineau: Environment and Climate Change Canada, 2024) at 3, online (pdf): <cdn.prod.website-files.com/64ef3fd141170da059cb6d80/678a777711203d084f7fb693_Volume%202%20-%20Climate%27s%20Bottom%20Line%20-%20ACC.pdf>.
- 43 The scope of this article does not permit an extensive discussion on global climate change litigation broadly. For an overview and discussion of global climate change litigation, see e.g. United Nations Environment Programme, *Global Climate Litigation Report: 2023 Status Review* (Nairobi: UNEP, 2023), online (pdf): <wedocs.unep.org/bitstream/handle/20.500.11822/43008/global_climate_litigation_report_2023.pdf?sequence=3>.
- 44 Hoge Raad [Supreme Court], Den Haag, 20 December 2019, *The State of the Netherlands (Ministry of Economic Affairs and Climate Policy) v Stichting Urgenda* [2020], No 19/00135 (Netherlands) [*Urgenda*].
- 45 *Neubauer*, *supra* note 17.
- 46 *Verein Klimasenioren Schweiz and Others v Switzerland* [GC], No 53600/20 (9 April 2024) [*Verein Klimasenioren*].

no effective remedy at its disposal.⁴⁷ Notable exceptions to this trend are the Hawai'i Circuit Court's refusal to dismiss the claim in *Navahine F et al v Department of Transportation*,⁴⁸ as well as the District Court's decision in *Held et al v State of Montana*,⁴⁹ although the latter case involved a narrower claim than those advanced in the other cases mentioned and is thus not directly comparable.

The *La Rose* plaintiffs filed the claim in Federal Court in 2019, well before the enactment of the *Net-Zero Act*. The plaintiffs, fifteen youths from across Canada, alleged that Canada's conduct, which consists of various actions and inaction, caused and allowed GHG emissions incompatible with a stable climate system and violated their rights under sections 7 and 15 of the *Charter*, as well as the government's public trust obligations.⁵⁰ Initially, *La Rose* seemed to face a similar fate as the unsuccessful claims in the US courts. Justice Manson granted a motion to strike the claim, finding that the section 7 and section 15 challenges were not justiciable and had no reasonable prospect of success due to their failure to challenge a particular law.⁵¹ The "undue breadth and diffuse nature of the [challenged conduct]

47 See e.g. *Sagoonick v State*, 503 P (3d) 777 (Alaska Sup Ct 2022); *Reynolds v State*, 316 So (3d) 813 (Fla Dist Ct App 2021); *Juliana v United States*, 947 F (3d) 1159 at 5 (9th Cir 2020) [*Juliana*].

48 *Navahine F et al v Department of Transportation*, Not Reported, (Hawaii Cir Ct 2023). The case concluded in a historic settlement agreement, which recognized the constitutional right of Hawai'i's youth to a life-sustaining climate and required the Department of Transportation to take action towards achieving zero emissions in the transportation sector (see Office of the Governor of Hawai'i, News Release, "Historic Agreement Settles Navahine Climate Litigation" (20 June 2024), online: <governor.hawaii.gov/newsroom/office-of-the-governor-news-release-historic-agreement-settles-navahine-climate-litigation>).

49 *Held et al v State of Montana*, Not Reported CDV-2020-307 (Mont Dist Ct 2023), aff'd 560 P.3d 1235 (Mont 2024) [*Held*]. The decision concerned provisions under the *Montana State Energy Policy Act* and the *Montana Environmental Policy Act*, which explicitly prevented state agencies from considering climate change impacts in their environmental assessments. The court was thus not asked to decide what the state's obligations to reduce GHG emissions amounted to, but only that preventing agencies from considering emissions amounted to a constitutional violation.

50 *La Rose* FCTD, *supra* note 1 at paras 6–7. Examples include setting fuel and emission standards for automobiles; regulating emissions from coal-fired and gas-fired electricity generation, Arctic, offshore and territorial mining of fossil fuels; approving and regulating interprovincial and international pipelines and infrastructure; and establishing standards for carbon pricing (see *La Rose v Canada*, 2020 FC 1008 (Statement of Claim, Plaintiff at paras 45–47) [*La Rose* FCTD (Statement of Claim)]). Canada further directly or indirectly contributes to emissions of GHG through subsidies to the fossil fuel industry and state-owned enterprises such as the Trans Mountain Expansion Project (see *La Rose* FCTD, *supra* note 1 at paras 49–50).

51 *La Rose* FCTD, *supra* note 1 at paras 26, 38, 40–46, 62–63.

cannot sustain a section 7 *Charter* analysis.”⁵² As for the public trust claim, Justice Manson found that such a concept was unknown to Canadian law.⁵³

On appeal, the FCA upheld the dismissal by Justice Manson of the public trust claim and the plaintiffs’ section 15 challenge but reversed regarding section 7. Justice Rennie noted that courts must not employ the doctrine of justiciability to avoid the responsibility of deciding complex and controversial matters.⁵⁴ A question Justice Rennie discussed in depth was whether to characterize the section 7 challenge as a positive or negative rights claim.⁵⁵ Canadian courts have thus far refrained from acknowledging positive rights under section 7 because, while the *Charter* protects against deprivation of life, liberty, and security of the person, it does not compel the state to engage in affirmative action to maximize the enjoyment of the protected interests.⁵⁶ However, Justice Rennie emphasized that all rights depend to some degree on positive state action for their enforcement.⁵⁷ The plaintiffs’ claim had an element of deprivation because it challenged Canada’s failure to fulfil its obligations under the PA.⁵⁸ But, even if it were a positive claim, Justice Rennie found that it was not doomed to fail. Courts have been careful not to close the door, and special circumstances could warrant the acceptance of such a claim.⁵⁹ Justice Rennie found that if climate change does not amount to such special circumstances, it was “hard to conceive that any such circumstances could ever exist.”⁶⁰

It is noteworthy that, throughout the decision, Justice Rennie repeatedly emphasized the need to allow the law to “evolve to respond to the challenges of modern society.”⁶¹ Otherwise, “justice falls behind and loses its relevancy.”⁶² The problem with the youth plaintiffs’ claim, Justice Rennie ultimately concluded, was not its nature but rather the “fail[ure] to zero

⁵² *Ibid* at para 62.

⁵³ *Ibid* at para 93.

⁵⁴ *La Rose FCA*, *supra* note 4 at para 29, citing *Chaoulli v Quebec (Attorney General)*, 2005 SCC 35 at para 107 [*Chaoulli*].

⁵⁵ *La Rose FCA*, *supra* note 4 at paras 92–118. In simplified terms, a negative rights claim alleges that the state actively interferes with a person’s enjoyment of their rights, whereas a positive rights claim asserts that the state should create the conditions necessary for exercising the rights.

⁵⁶ *Ibid* at para 92.

⁵⁷ *Ibid* at para 103.

⁵⁸ *Ibid* at para 106.

⁵⁹ *Ibid* at paras 96–99, 115, citing *Gosselin v Québec (Attorney General)*, 2002 SCC 84 at para 83.

⁶⁰ *La Rose FCA*, *supra* note 4 at para 116.

⁶¹ *Ibid* at para 120.

⁶² *Ibid* at para 119.

in on the specific provision or provisions which constitute a deprivation”, thus “effectively put[ting] the entirety of Canada’s response to climate change up for scrutiny.”⁶³ The FCA, therefore, granted leave to amend the claim to narrow down on the challenged state action.⁶⁴

In *Mathur*, the applicants challenged Ontario’s GHG reduction target of 30 percent below 2005 levels by 2030 (the “target”).⁶⁵ This target was set by the government pursuant to Ontario’s 2018 *Cap and Trade Cancellation Act*.⁶⁶ The case had previously survived a motion to strike, with the judge distinguishing the issue from *La Rose* on the basis that the *Mathur* applicants challenged a specific law and thus found it to address a justiciable question.⁶⁷ In her decision on the merits, Justice Vermette added an important qualification, holding that the claim was generally justiciable, except for the question of what constituted Canada’s and Ontario’s fair share of future global emissions and thus of the global mitigation burden.⁶⁸ “This Court,” Justice Vermette held, “does not have the institutional capacity and legitimacy to determine Canada’s share compared to other states and Ontario’s share compared to other provinces.”⁶⁹

Ultimately, the matter of fair shares was not decisive because Justice Vermette dismissed the claim on other grounds. While accepting that the applicants were experiencing an increased risk to their section 7 rights as a result of climate change, Justice Vermette found that this risk was not attributable to Ontario’s target.⁷⁰ Rather than causing the harm in question, the target constituted an attempt—albeit arguably insufficient—to reduce the harm. Hence, Justice Vermette found the claim to be a freestanding positive rights claim, alleging that the government was under an obligation to adopt (more ambitious) measures to protect the applicants from risks associated with climate change.⁷¹ While acknowledging that the applicants

63 *Ibid* at para 128.

64 *Ibid* at para 135.

65 *Mathur* SC 2023, *supra* note 5 at para 1.

66 SO 2018, c 13 [CTCA]. The CTCA repealed a previous Ontario GHG reduction law, which had set a more ambitious target of 37 percent below 1990 levels by 2030 (see *Climate Change Mitigation and Low-carbon Economy Act*, 2016, SO 2016, c 7).

67 *Mathur* SC 2020, *supra* note 5 at para 132.

68 *Mathur* SC 2023, *supra* note 5 at para 109.

69 *Ibid*.

70 *Ibid* at para 120.

71 *Ibid* at paras 125–36. Because the applicants had made the strategic choice to challenge only the target, rather than Ontario’s various actions contributing to GHG emissions, they were not able to argue that it was Ontario’s active conduct that deprived them of their section 7 rights.

had made a compelling case for recognizing positive state obligations in relation to climate change, Justice Vermette found that they had not shown that Ontario's target was contrary to principles of fundamental justice.⁷² The target was neither arbitrary, because it was rationally connected to the purpose of fighting climate change,⁷³ nor were its effects grossly disproportionate to the purpose of the authorizing statute, the *CTCA*. The principle of gross disproportionality, as Justice Vermette noted, cannot have any application in a positive rights case where the applicants do not claim that the governmental measure negatively impacts them, but rather that it does not go far enough.⁷⁴ Throughout the decision, Justice Vermette repeatedly emphasized that the principles of fundamental justice usually applied by courts are ill-suited for positive rights claims.⁷⁵ Meanwhile, Justice Vermette refused to recognize a novel principle of fundamental justice in the form of "societal preservation", as proposed by the applicants.⁷⁶

The *Mathur* applicants appealed, and the ONCA unanimously reversed the dismissal, albeit in a rather short decision that leaves many of the crucial questions of climate change litigation unaddressed. The ONCA found that Justice Vermette was mistaken in holding the claim was one of positive rights.⁷⁷ The applicants do not seek to impose free-standing positive obligations on Ontario. Rather, by enacting the *CTCA*, Ontario voluntarily assumed an "obligation to combat climate change and to produce the Plan and the Target for that purpose."⁷⁸ The question thus must be whether the government has executed its obligation under the *CTCA* in a way that violates the applicants' *Charter* rights.⁷⁹ While noting that Justice Vermette's "incorrect framing of the application as a positive rights case coloured her analysis", the ONCA did not provide further guidance on how to approach the deprivation requirement and the principles of fundamental justice in this specific case.⁸⁰ The Supreme Court rejected Ontario's application for leave to appeal.⁸¹

⁷² *Ibid* at para 138.

⁷³ *Ibid* at paras 153–60.

⁷⁴ *Ibid* at paras 161–62.

⁷⁵ *Ibid* at paras 139, 160, 162.

⁷⁶ *Ibid* at paras 163–70.

⁷⁷ *Mathur CA*, *supra* note 6 at para 5.

⁷⁸ *Ibid*.

⁷⁹ *Ibid* at paras 32, 37.

⁸⁰ *Ibid* at para 49.

⁸¹ *His Majesty the King in Right of Ontario v Mathur (Litigation guardian of)*, 2025 CanLII 38373 (SCC).

IV. CRITICAL HURDLES FOR SECTION 7 CLIMATE CHANGE LITIGATION

To establish a violation of section 7, plaintiffs must show that state conduct deprives them of their right to life, liberty, or security of the person in a manner that is contrary to principles of fundamental justice. Climate change litigation gives rise to numerous contentious questions, including whether it is the state, rather than natural forces or the actions of third parties, that impacts the plaintiffs' rights and whether there is a causal connection to the harm experienced by plaintiffs, given that Canada's contribution to global warming constitutes only a small fraction of worldwide emissions, and Ontario's an even smaller one. Furthermore, the outcome of climate change litigation may hinge on whether plaintiffs frame their case as a negative challenge to existing state action or as a positive rights claim and, in the latter event, whether courts can understand section 7 of the *Charter* to impose positive obligations on the state. All of these questions have received a good deal of attention not only in the courts but also in the academic literature.⁸² It is far beyond the scope of this paper to deal with all of them exhaustively, but I will at least briefly discuss those that appear central to a section 7 claim.

A. Justiciability

The first hurdle in a section 7 claim is whether the claim presents justiciable questions. While both *La Rose* and *Mathur* survived initial motions to dismiss the claims based on justiciability concerns, this does not mean that courts will ultimately consider every issue raised by plaintiffs. In fact, Justice Vermette held that the question of what constitutes Canada's and Ontario's fair share of the carbon budget did not have a sufficient legal component to be decided by courts of law.⁸³ Stepan Wood has legitimately

82 See e.g. Wood, *supra* note 7; Chalifour, Earle & Macintyre, *supra* note 7; Sarra, *supra* note 7; Nathalie J Chalifour & Jessica Earle, "Feeling the Heat: Climate Change Litigation Under the Canadian *Charter's* Right to Life, Liberty and Security of the Person" (2018) 42:4 Vermont L Rev 690; Camille Cameron & Riley Weyman, "Recent Youth-Led and Rights-Based Climate Change Litigation in Canada: Reconciling Justiciability, *Charter* Claims and Procedural Choices" (2022) 34:1 J Envtl L 195; Camille Cameron, Riley Weyman & Claire Nicholson, "Legal Hurdles and Pathways: The Evolution (Progress?) of Climate Change Adjudication in Canada" (2024) 47:2 Dal LJ 439; Benoit Mayer, *International Law Obligations on Climate Change Mitigation* (Oxford: Oxford University Press, 2022) [Mayer, *International Law Obligations*].

83 *Mathur* SC 2023, *supra* note 5 at para 109.

questioned, though, whether a court can separate an issue of such central importance to the claim from the justiciability of the question of whether Ontario's target violates the *Charter*.⁸⁴ I suspect that the finding of non-justiciability by Justice Vermette was motivated by uncertainty about how to deal with the question of fair shares on the merits. The approach to this question, which I propose in Section V-C, is hence equally important to the justiciability issue.

B. The Deprivation Aspect and the Negative/Positive Rights Distinction

Plaintiffs further need to demonstrate that the challenged state action, rather than any natural forces or conduct of third parties, deprives them of their rights. This issue is closely linked to the distinction between negative and positive rights claims. In *Mathur*, Justice Vermette essentially found that, if viewed as a negative rights case, the applicants' claim did not fulfil this deprivation requirement. The target, she noted, set an objective to reduce GHG emissions, but it did "not authorize or incentivize GHG."⁸⁵ The real intention of the applicants, Justice Vermette asserted, was for Ontario to increase its efforts to fight climate change.⁸⁶ Hence, she classified the claim as a positive rights case.⁸⁷

It would have been helpful if the ONCA in *Mathur* had given more explicit directions on the question of whether and how the target satisfied the deprivation requirement under section 7. While the Court did not do so, it made a statement in relation to section 15 of the *Charter* that appeared to reject the approach of Justice Vermette. "The argument," the ONCA noted here, "is that the Target permits emissions beyond what the scientific community deems acceptable".⁸⁸ This statement seems to indicate that, in contrast to Justice Vermette, the ONCA would accept that the target not only aims to reduce emissions but at the same time authorizes them.

The *La Rose* claim has a much broader focus than *Mathur*, challenging both governmental action and inaction. Justice Rennie thus found that

⁸⁴ Wood, *supra* note 7 at 27.

⁸⁵ *Mathur* SC 2023, *supra* note 5 at para 122.

⁸⁶ *Ibid.*

⁸⁷ For an endorsement of a positive rights approach in climate change litigation, see generally Eva Linde, "Who's Afraid of Positive Rights? – Towards a Methodology for Assessing Positive Rights Claims under Section 7 of the *Charter* in Climate Change Litigation" 59:1 UBC L Rev [forthcoming in 2026].

⁸⁸ *Mathur* CA, *supra* note 6 at para 58.

it can be taken to include both negative and positive elements.⁸⁹ Yet, the plaintiffs face a different challenge, as the FCA mandated them to narrow down their “overly broad” target.⁹⁰ In their amended statement of claim, the plaintiffs specifically mention the price on carbon under the *Greenhouse Gas Pollution Pricing Act*⁹¹ and the *Net-Zero Act*, but also continue to maintain that Canada authorizes and supports emitting projects.⁹² If the plaintiffs intend to argue that Canada’s targets are insufficient to address climate change and hence deprive them of their section 7 interests, they will have to convince the court that the targets not only reduce but also incidentally authorize GHG emissions. The 2024 *Mathur* decision paved the way to recognizing such an understanding of the dual nature of GHG reduction targets.⁹³

I would further point out that, in my view, establishing deprivation does not require quantifying Canada’s mitigation obligations. There is no question that climate change has already caused and, if unabated, threatens to cause increasingly serious harm.⁹⁴ This harm is vividly described by the *La Rose* plaintiffs, each of whom already experienced individualized harm.⁹⁵ The severity of rights infringements will increase continuously and

89 *La Rose* FCA, *supra* note 4 at para 117.

90 *Ibid* at paras 128, 133–35. This challenge has been aptly described as the “Catch-22” that climate litigants currently face (see Wood, *supra* note 7 at 29–30). See also the discussion in Cameron, Weyman & Nicholson, *supra* note 82 at 444–47.

91 SC 2018, c 12, s 186.

92 *La Rose* FCTD (Amended Statement of Claim), *supra* note 11 at para 6.

93 *Mathur* CA, *supra* note 6 at para 58. Although there is value in devoting additional attention to a possible positive rights framing, such an exploration is beyond the scope of this article.

94 According to the IPCC, “climate change is already affecting many weather and climate extremes in every region across the globe,” including heatwaves, heavy precipitation, droughts, fires, and flooding and furthermore caused ice loss and sea level rise (see Allan et al, *supra* note 32 at 8–9). In a 2023 report, Environment and Climate Change Canada described the effects of these extremes on Canadians: “In 2023 alone, Canada experienced the hottest summer ever, the largest wildfires in history, drought in the Prairies, and floods in British Columbia and Nova Scotia. Homes were destroyed, lives lost, thousands of people had to evacuate their homes, communities and businesses were impacted, smoke from wildfires blanketed the country, and biodiversity was put at risk. In addition to personal and emotional impacts, these climate impacts have economic consequences that affect families and communities, and send ripples through the Canadian economy” (see ECCC, “2023 Progress Report”, *supra* note 40 at 16). See also Rodgers, Sancken & Marlow, *supra* note 17 at 119–24.

95 *La Rose* FCTD (Statement of Claim), *supra* note 50 at paras 94–221.

in line with the level of global warming.⁹⁶ Plaintiffs can thus argue that any decision to authorize additional GHG emissions deprives them of their rights. Whether these emissions are avoidable or justified is not a question of deprivation but of whether the deprivation is contrary to principles of fundamental justice and, possibly, of section 1 if that stage is reached.⁹⁷ But even if courts disagree and instead find that deprivation only occurs if Canada fails to act in line with its adequate share of emissions reductions, this is not fatal for the argument in this article. Rather, the question of what Canada's obligations amount to, which I address as part of the gross disproportionality analysis, would then have to be tackled there.

C. Causation

The next hurdle lies in proving a causal connection between the deprivation and the harm suffered by the plaintiffs. Courts have thus far been willing to accept that plaintiffs can demonstrate this connection, despite Canada's emissions contributing only a small fraction—1.41 percent in 2023—to global warming, and Ontario's even less.⁹⁸

In establishing a *Charter* claim, it is sufficient for plaintiffs to show a “causal link between the state action and the violation of the relevant right or freedom”.⁹⁹ It is not necessary “that the impugned government action or law be the only or the dominant cause of the prejudice suffered by the claimant”.¹⁰⁰ In *References re Greenhouse Gas Pollution Pricing Act*,¹⁰¹ the Supreme Court approvingly quoted a passage from the New South Wales Land and Environment Court, noting that “climate change is caused by cumulative emissions from a myriad of individual sources, each

96 Allan et al, *supra* note 32 at 15–19, 24–25. For an overview of the increased risks of global warming at 2°C compared to 1.5°C, see Ove Hoegh-Guldberg et al, “The Human Imperative of Stabilizing Global Climate Change at 1.5°C” (2019) 365:6459 *Science* 1.

97 The plaintiffs in *Carvalho and Others v Parliament and Council* made a similar argument in their application to challenge the European Union's 40 percent emissions reduction target, asserting that “fundamental rights may only be encroached upon if emissions of GHG are reduced to the extent of what the EU is technically and economically capable of achieving” (see *Carvalho and Others v Parliament and Council*, T-330/18, [2019] ECR II-1, ECLI:EU:T:2019:324 (Application for Annulment and Damages (resubmitted 2 July 2018), Applicants at para 152)).

98 See e.g. *La Rose FCA*, *supra* note 4 at paras 113–14; *Mathur SC* 2023, *supra* note 5 at paras 143–51.

99 *Canadian Council for Refugees v Canada (Citizenship and Immigration)*, 2023 SCC 17 at para 60 [*Canadian Council*].

100 *Bedford*, *supra* note 10 at para 76; see also *Canadian Council*, *ibid.*

101 2021 SCC 11 [*Greenhouse Gas Reference*].

proportionally small relative to the global total of GHG emissions, and will be solved by abatement of the GHG emissions from these myriad of individual sources”.¹⁰² Accordingly, Justice Vermette found in *Mathur* that Ontario’s and Canada’s emissions, while “numerically small,” nonetheless constitute a “real, measurable and not speculative” risk to the applicants’ section 7 interests.¹⁰³ This finding was approvingly referred to by Justice Rennie in *La Rose* and aligns with the approach that many courts around the world have taken to causation.¹⁰⁴

D. Principles of Fundamental Justice

Next, section 7 requires a deprivation contrary to the principles of fundamental justice. There is still a fair chance that courts may recognize a yet unarticulated principle of fundamental justice in relation to the catastrophic threats presented by climate change. The *Mathur* applicants have argued in favour of a principle of “societal preservation”, asserting that this principle prevents the government from “engag[ing] in conduct that will, or could reasonably be expected to, result in the future harm, suffering, or death of a significant number of its own citizens”.¹⁰⁵ While Justice Vermette refused to recognize such a novel principle, this may not be the final word on the matter.¹⁰⁶

That said, lower courts especially may feel more comfortable operating with the principles of fundamental justice that have long been recognized in the Supreme Court’s jurisprudence, particularly those addressing arbitrariness and gross disproportionality. I argue that these principles provide a sufficient basis for assessing Canada’s and Ontario’s conduct with regard to climate change. Recognizing a novel principle of fundamental justice is, therefore, crucial to neither the *La Rose* nor the *Mathur* claim.

In a traditional negative rights case, the arbitrariness and gross disproportionality tests both ask whether the infringement is justified because it furthers the purpose of the challenged law.¹⁰⁷ Arbitrariness is defined as

102 *Ibid* at para 189, citing *Gloucester Resources Limited v Minister for Planning*, [2019] NSWLEC 7 (Austl) at para 516.

103 *Mathur* SC 2023, *supra* note 5 at para 148. See also *La Rose* FCA, *supra* note 4 at para 113.

104 *La Rose* FCA, *supra* note 4 at para 113; *Neubauer*, *supra* note 17 at paras 202–04; *Urgenda*, *supra* note 44 at paras 5.7–5.8; *Verein Klimasenioreninnen*, *supra* note 46 at paras 424–44; *Juliana*, *supra* note 47 at 19–21; *Held*, *supra* note 49 at 87–88.

105 *Mathur* SC 2023, *supra* note 5 at para 163.

106 *Ibid* at paras 165–70.

107 *Bedford*, *supra* note 10 at paras 111, 120; *R v Sharma*, 2022 SCC 39 at paras 86–87.

the lack of a rational connection between the objective of state action and the infringement of section 7 interests.¹⁰⁸ In other words, arbitrary state action unnecessarily deprives plaintiffs of their rights without furthering the public good.¹⁰⁹ Gross disproportionality describes a situation where the impacts on the section 7 interests are so extreme that they cannot be justified by the public interest pursued.¹¹⁰ It “balances the negative effect on the individual against the purpose of the law”.¹¹¹

Thus, where plaintiffs challenge specific state action causing or authorizing GHG emissions, such as permits or subsidies, they have to demonstrate that either the resulting level of emissions is arbitrary because the emissions are unnecessary to achieve the objective, or the harm associated with such emissions is grossly disproportionate to the objective. Chalifour and Earle have argued that many governmental actions pursue objectives that lack rational defensibility.¹¹² Subsidies for carbon-intensive industries, for example, increase profits for investors while encouraging activities harmful to the environment.¹¹³ Other policies support industrial practices that will clearly become unsustainable in the near future, thereby creating stranded assets and delaying the necessary transition to a greener economy at a high societal cost.¹¹⁴ Other decisions that directly or indirectly permit the emission of GHG have the objective of authorizing fossil fuel extraction and other industrial activities.¹¹⁵ They thus protect the economic and property rights of corporations at severe costs to the plaintiffs.¹¹⁶ The

108 *Bedford*, *supra* note 10 at para 111. For a discussion of different scenarios in which arbitrariness can become relevant, see Wayne Renke, “*Bedford*, Substantive Rationality, and Participatory Democracy” (2015) 20:1 *Rev Const Stud* 30 at 60–64.

109 *Bedford*, *supra* note 10 at para 108; *R v Sharma*, *supra* note 107 at para 86. An example is the *Insite* case in which the Supreme Court found that the minister’s decision to deny an exemption from the prohibition of possession of illegal substances to a safe injection site was arbitrary because it did not further the goals of the *Controlled Drugs and Substances Act*, which were the protection of health and public safety. The available evidence showed that during the operation of Insite, crime rates and public drug use were reduced, and overdose deaths were prevented (see *Canada (Attorney General) v PHS Community Services Society*, 2011 SCC 44 at paras 131–32 [*Insite*]).

110 See e.g. *Insite*, *supra* note 109 at para 133; *Bedford*, *supra* note 10 at para 120.

111 *Bedford*, *supra* note 10 at paras 121, 148–59 (where the Supreme Court restored the application judge’s conclusion that the harms that a prohibition on communicating in public for the purposes of prostitution caused sex workers were “grossly disproportionate to the provision’s object of removing the nuisance of prostitution from the streets”).

112 Chalifour & Earle, *supra* note 82 at 761–63.

113 *Ibid.*

114 *Ibid* at 761.

115 *Ibid.*

116 *Ibid* at 763.

catastrophic consequences of climate change, its largely irreversible nature, and the urgent timeline to take action speak in favour of awarding considerable weight to avoiding emissions wherever possible.¹¹⁷

Where plaintiffs challenge the overall level of emissions authorized by Canada's or Ontario's targets, arbitrariness and gross disproportionality must be assessed against the objective of the authorizing legislation. The *Net-Zero Act* states that its purpose is "to require the setting of national targets for the reduction of greenhouse gas emissions based on the best scientific information available...in support of achieving net-zero emissions in Canada by 2050 and Canada's international commitments in respect of mitigating climate change."¹¹⁸ Plaintiffs could thus argue that setting a target that is not based on the best scientific information neither supports achieving net-zero by 2050, nor aligns with Canada's international commitments, and therefore cannot fulfil the purpose of the law. Any emissions incidentally authorized by such a target unnecessarily, and thus arbitrarily, deprive plaintiffs of their rights without furthering the law's objective.

The government might counter, though, that even though the target falls short of achieving the purpose established under the *Net-Zero Act*, it at least furthers the purpose and is thus not arbitrary. The more adequate framing might, therefore, be that the target is grossly disproportionate because it imposes harm on the plaintiffs, which is not required by and is out of sync with the objective of the law. Plaintiffs could argue that by setting a more ambitious, science-based target, the government would, in fact, fulfil the purpose of the *Net-Zero Act* to a greater extent while also imposing less harm on them.

The objective of Ontario's *CTCA* is much less specific, with section 3(1) merely stating that "[t]he Government shall establish targets for the reduction of greenhouse gas emissions in Ontario [...]".¹¹⁹ One could thus argue, somewhat in line with the reasoning of Justice Vermette, that the target is not arbitrary because it indeed furthers the purpose of reducing GHG emissions.¹²⁰ However, Ontario could equally fulfil this purpose by setting a more ambitious target based on the best available sciences, which would impact the applicants' rights to a much lesser extent. Applicants can therefore argue that, by setting a target of 30 percent reductions, Ontario imposes harm on them that is unnecessary to further the law's objective.

117 See e.g. *Verein Klimasenioreninnen*, *supra* note 46 at para 542.

118 *Net-Zero Act*, *supra* note 38, s 4.

119 *CTCA*, *supra* note 66, s 3(1).

120 *Mathur SC 2023*, *supra* note 5 at para 160.

Such a framing requires plaintiffs to demonstrate two things. First, Canada's and Ontario's GHG reduction targets fail to align with the best available scientific evidence and Canada's international obligations. Second, to establish gross disproportionality, Canada's and Ontario's targets and the GHG emissions that they incidentally authorize must not only "miss the mark" but rather be completely out of sync with the harm imposed on the plaintiffs. The next section will discuss in detail how this can be established and the challenges plaintiffs and courts face in this regard.

V. QUANTIFYING GHG REDUCTION OBLIGATIONS

According to what has been said above, current approaches to establishing gross disproportionality start with quantifying Canada's and Ontario's GHG reduction obligations. Plaintiffs must show that the respective targets and the associated GHG emissions contribute to a level of global warming that causes harm, which is grossly disproportionate in relation to the objective of the authorizing law. The Supreme Court has thus far offered very little guidance for the practical application of the principle of gross disproportionality. In *Canada (Attorney General) v Bedford*, the Court simply noted that "gross disproportionality only applies in extreme cases where the seriousness of the deprivation is totally out of sync with the objective of the measure."¹²¹ It is thus clear that the threshold is high.¹²² However, the example given by the Court—a law that punishes spitting on the sidewalk with life imprisonment—is so hyperbolic that it fails to provide any methodology for plaintiffs and lower courts.¹²³ To make the principle practically applicable, plaintiffs will need to start by establishing a metric that can serve to compare the rights' infringement to the governmental objective.¹²⁴ Without such a metric, it is impossible to say that the

121 *Bedford*, *supra* note 10 at para 120; see also *Suresh v Canada (Minister of Citizenship and Immigration)*, 2002 SCC 1 at para 47 [*Suresh*]; *R v Malmo-Levine*, 2003 SCC 74 at paras 142–43 [*Malmo-Levine*].

122 For a more detailed discussion on the high threshold, see Hamish Stewart, *Fundamental Justice: Section 7 of the Canadian Charter of Rights and Freedoms*, 2nd ed (Toronto: Irwin Law, 2019) at 149–50; Renke, *supra* note 108 at 65–68.

123 *Bedford*, *supra* note 10 at para 120.

124 Renke, *supra* note 108 at 66. Renke correctly points out that the severity of the impact on the right and the weight of the governmental objective can often not be objectively measured against the same metric. Assessing disproportionality therefore involves value judgment. Courts engage in such value judgment all the same, but it is crucial that they be transparent about how they allocate weight to each side and how they undertake the comparison (*ibid* at 67).

deprivation is somewhat beyond what is necessary to achieve the objective, that it is disproportionate but short of grossly disproportionate or “totally out of sync” with the state objective.

One way to approach this matter is by looking at whether Canada's emissions are clearly incompatible with state obligations under the *UNFCCC*, its implementing protocols, and the *PA* particularly.¹²⁵ However, in contrast to the *Kyoto Protocol*, which determined specific GHG reduction obligations for developed countries, it is challenging to derive such quantifiable obligations from the *PA*.¹²⁶ In Section V-A, I will discuss the parameters that need to be determined when attempting such a quantification. These parameters depend on scientific risk assessment as well as political and normative-ethical choices. Many commentators have, therefore, argued that democratically elected legislatures and governments must set domestic mitigation targets, rather than courts.¹²⁷

The *Mathur* applicants have attempted to circumvent these challenges by arguing that, under any interpretation of these parameters that fulfils at least some fairness criteria, Ontario's target clearly exceeds the province's residual carbon budget.¹²⁸ However, such an approach has some shortcomings, as I will explain in Section V-B. This paper, therefore, pro-

125 This proposal relies on an explicit or implicit assumption that to fulfil its human rights responsibilities, a state needs to comply with its obligations under international environmental law (see *Urgenda*, *supra* note 44 at para 5.4.2; Alan Boyle, “Climate Change, the Paris Agreement and Human Rights” (2018) 67:4 Intl & CLQ 759 at 775–77; Margaretha Wewerinke-Singh & Ashleigh McCoach, “The State of the Netherlands v Urgenda Foundation: Distilling Best Practice and Lessons Learnt for Future Rights-Based Climate Litigation” (2021) 30:2 RECIEL 275 at 278–80; Margaretha Wewerinke-Singh, *State Responsibility, Climate Change and Human Rights Under International Law*, 1st ed (Oxford: Hart Publishing, 2019) at 131–32). This approach is gaining momentum internationally: both the UN Human Rights Council and the UN General Assembly recently adopted path-breaking, although not legally binding, resolutions recognizing a human right to “a clean, healthy and sustainable environment” and affirming “that the promotion of [this right] requires the full implementation of the multilateral environmental agreements under the principles of international environmental law” (see *The Human Right to a Clean, Healthy and Sustainable environment*, UNHRC, 48th Sess, UN Doc A/HRC/RES/48/13 (2021) HRC Res 48/13 at 3; *The Human Right to a Clean, Healthy and Sustainable Environment*, UNGA, 76th Sess, UN Doc A/RES/76/300 (2022) GA Res 76/300 at 3).

126 See the discussion in Section V-A, *below*.

127 See e.g. Bernhard W Wegener, “Urgenda – World Rescue by Court Order? The “Climate Justice”-Movement Tests the Limits of Legal Protection” (2019) 16:2 J for European Envtl & Planning L 125; Lucas Bergkamp & Jaap C Hanekamp, “Climate Change Litigation Against States: The Perils of Court-Made Climate Policies” (2015) 24:5 European Energy & Envtl L Rev 102; Mayer, *International Law Obligations*, *supra* note 82 at 129–79.

128 *Mathur* SC 2023, *supra* note 5 at para 30.

poses an alternative way to approach the matter of gross disproportionality, which I will lay out in Section V-C.

A. The Challenge of Deriving Quantifiable Mitigation Obligations from International Law

One way to establish that Canada's conduct constitutes a grossly disproportionate infringement of plaintiffs' rights is to start from the angle of international environmental law. Under this approach, it is assumed that states must, as a matter of human rights, implement their obligations under international climate treaties.¹²⁹ One of the major challenges with this starting point is that the PA does not stipulate quantifiable mitigation obligations, while also providing little guidance otherwise on how to allocate reduction burdens globally and over time. Another challenge is that even keeping global warming below the lower temperature target under the PA may not provide sufficient protection for the plaintiffs' section 7 rights. Courts should thus at least consider that the *Charter* provides a higher level of protection than international climate law.

1. *The Paris Agreement's Temperature Targets and Their Legal Relevance*

Article 2(1)(a) of the PA stipulates that "[t]his Agreement...aims to strengthen the global response to the threat of climate change" by limiting global warming to well below 2°C and striving for 1.5°C.¹³⁰ The language makes it clear that the temperature goal constitutes an objective that should guide the state parties' actions but does not establish legal obligations in and of itself.¹³¹ Correspondingly, Article 3 provides that "all Parties are to undertake and communicate ambitious efforts...with a view to achieving the purpose of this Agreement as set out in Article 2."¹³² There

129 Scholars have called this the "incorporation theory", as it incorporates a state's international environmental obligations into human rights law (see e.g. Mayer, *International Law Obligations*, *supra* note 82 at 164, 167–70). The concerns about this theory are beyond the scope of this paper.

130 PA, *supra* note 13, art 2.1(a).

131 See e.g. Lavanya Rajamani & Jacob Werksman, "The Legal Character and Operational Relevance of the *Paris Agreement's* Temperature Goal" (2018) 376:2119 *Philosophical Transactions Royal Society A: Mathematical, Physical, & Engineering Sciences* 1 at 3–5; Navraj Singh Ghaleigh, "Article 2 Aims, Objectives and Principles" in Geert van Calster & Leonie Reins, eds, *The Paris Agreement on Climate Change* (Cheltenham: Edward Elgar Publishing, 2021) 73 at 81.

132 PA, *supra* note 13, art 3 [emphasis added].

is furthermore an enormous difference between 2°C and 1.5°C, both in expected harm from global warming and the required mitigation action associated with each of the temperature targets.¹³³

Scientific models can provide us with best estimates of the changes to the natural environment we should expect at certain levels of global warming. However, science cannot tell us which level of global warming and the resulting impact on humans and the non-human environment must be deemed acceptable in light of the cost of reducing emissions.¹³⁴ These are normative decisions that require value judgment and interest balancing.¹³⁵ As such, the temperature targets contained in the *PA* are the result of a political compromise, rather than a scientific statement of what states need to achieve to prevent human rights violations.¹³⁶

In 2021, the parties to the *UNFCCC* adopted the *Glasgow Climate Pact*, which “[r]ecognizes that the impacts of climate change will be much lower at the temperature increase of 1.5°C compared with 2°C and resolves to pursue efforts to limit the temperature increase to 1.5°C.”¹³⁷ While not legally binding, the *Glasgow Climate Pact* reflects political agreement about the urgent need to pursue a 1.5°C target.¹³⁸ Still, even global warming of 1.5°C will cause significant harm and is thus a political goal rather than a threshold courts should deem “safe” from the perspective of *Charter* rights.¹³⁹

133 Benoit Mayer, “Temperature Targets and State Obligations on the Mitigation of Climate Change” (2021) 33:3 *J Envtl L* 585 at 591.

134 *Ibid* at 590.

135 Neubauer, *supra* note 17 at para 160; Benoit Mayer, “The Judicial Assessment of States’ Action on Climate Change Mitigation” (2022) 35:4 *Leiden J Intl L* 801 at 809–10; Daniel Bodansky, Jutta Brunnée & Lavanya Rajamani, *International Climate Change Law* (Oxford: Oxford University Press, 2017) at 125–26.

136 Rajamani & Werksman, *supra* note 131 at 2; Reto Knutti et al, “A Scientific Critique of the Two-Degree Climate Change Target” (2016) 9:1 *Nature Geoscience* 13 at 13; Benoit Mayer, “The Judicial Assessment of States’ Action on Climate Change Mitigation” (2022) 35:4 *Leiden J Intl L* 801 at 810.

137 *Glasgow Climate Pact*, UNFCCC, 26th Sess, UN Doc FCCC/CP/2021/12/Add.1 (2021) FCCC Dec 1/CP.26 at para IV.16 [emphasis in original].

138 The International Court of Justice referred to the *Glasgow Climate Pact* as evidence that “1.5°C has become the scientifically based consensus target under the Paris Agreement” (see *Obligations of States in Respect of Climate Change*, Advisory Opinion, [2025] ICJ Rep 187 at para 224).

139 For further discussion see V-C.2(a), *below*.

2. *Estimating Remaining Carbon Budgets*

We roughly know the amount of GHG emissions that have accumulated in the atmosphere over the past centuries.¹⁴⁰ Scientists can furthermore estimate the level of cumulative emissions at which global warming will reach certain temperature thresholds.¹⁴¹ This enables us to calculate the remaining global carbon budget for each temperature target.¹⁴² Significant uncertainties remain, however, which is why the Intergovernmental Panel on Climate Change (the “IPCC”) operates based on probability levels and estimation ranges.¹⁴³ For example, for a 50 percent chance of limiting global warming to 1.5°C, the median estimated carbon budget from 2020 onwards is 510 GtCO₂eq, with a range from 330 to 710 GtCO₂eq.¹⁴⁴ For a 67 percent chance of limiting global warming to 2°C, the median estimated carbon budget is 890 GtCO₂eq, with estimates ranging from 640 to 1160 GtCO₂eq.¹⁴⁵ Also, these figures may turn out to be wrong if global warming proceeds in a non-linear fashion, e.g. when certain tipping points are reached or due to other natural factors such as major volcanic eruptions.¹⁴⁶

Courts will need to handle these uncertainties somehow when quantifying state obligations. One way to go about this task is to take into account the precautionary principle, which states that “[w]here there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.”¹⁴⁷ Article 3(3) of the *UNFCCC* explicitly incorporates

¹⁴⁰ Allan et al, *supra* note 32 at 29.

¹⁴¹ *Ibid* at 13.

¹⁴² Renée van Diemen et al, “Annex I: Glossary” in Intergovernmental Panel on Climate Change, *Climate Change 2022: Mitigation of Climate Change*, Contribution of Working Group III to the Sixth Assessment Report of the IPCC, Priyadarshi R Shukla et al, eds (Cambridge, UK, New York: Cambridge University Press, 2022) 1793 at 1796.

¹⁴³ Allan et al, *supra* note 32 at 14–15; Arias et al, *supra* note 23 at 52–55.

¹⁴⁴ Pathak et al, *supra* note 24 at 79. CO₂-equivalent, or CO₂eq, is a unit “used to express emissions of different greenhouse gases in a common unit”. Other gases than CO₂ are assessed based on their global warming potential and thus expressed in terms of their equivalent to CO₂ (see Jim Skea et al, “Summary for Policymakers” in Intergovernmental Panel on Climate Change, *Climate Change 2022: Mitigation of Climate Change*, Contribution of Working Group III to the Sixth Assessment Report of the IPCC, Priyadarshi R Shukla et al, eds (Cambridge, UK, New York: Cambridge University Press, 2022) 3 at 6).

¹⁴⁵ Pathak et al, *supra* note 24 at 79.

¹⁴⁶ Allan et al, *supra* note 32 at 24; Armstrong McKay et al, *supra* note 32; H Damon Matthews et al, “Opportunities and Challenges in Using Remaining Carbon Budgets to Guide Climate Policy” (2020) 13:12 *Nature Geoscience* 769.

¹⁴⁷ *Rio Declaration on Environment and Development*, UNCED, 1992, UN DOC A/CONF.151/26/Rev.1 (Vol I) Annex I at 6. The European Court of Human Rights has held that at the

the precautionary principle as a guiding principle.¹⁴⁸ Accordingly, where climate science is still developing, states should err on the side of more, rather than less, stringent mitigation. However, the precautionary principle is only one of many considerations in an assessment that balances risks and costs and, therefore, appears too simplistic for a judicial determination of a precise carbon budget.¹⁴⁹

3. Translating Carbon Budgets into Emissions Reduction Scenarios

Once the remaining global carbon budget has been determined, the next step consists of working out how to remain within that budget. Scientists have modelled numerous possible scenarios that will lead to different levels of global warming.¹⁵⁰ It is also possible to temporarily exceed the carbon budget and subsequently remove excess carbon from the atmosphere.¹⁵¹ The IPCC refers to these as “temporary overshoot” scenarios.¹⁵²

Such scenarios depend on assumptions about the future, such as population growth, gross domestic product, trends in lifestyle and consumption, available technology, etc., and can thus diverge widely in their results.¹⁵³ However, as the IPCC has pointed out, “a diversity of scenarios and modelling approaches can lead to more robust findings.”¹⁵⁴ They provide a “powerful tool for exploring an uncertain future world against the background of alternative choices and development.”¹⁵⁵

For its 6th Assessment Report (AR6), the IPCC assessed 2,266 of such modelled pathways with global scope and categorized them in accordance

European level, the precautionary principle has developed “from a philosophical concept to a legal norm” (see *Tătar c Roumanie*, No 67021/01 (27 January 2009) at 27 [translated by author]). The Supreme Court has at various times resorted to the precautionary principle (see *Reference re Impact Assessment Act*, 2023 SCC 23 at para 145; 114957 *Canada Ltée (Spraytech, Société d'arrosage) v Hudson (Town)*, 2001 SCC 40 at paras 31–32).

148 UNFCCC, *supra* note 22, art 3(3).

149 Cass Sunstein devoted an entire book to such considerations (see Cass R Sunstein, *Averting Catastrophe: Decision Theory for COVID-19, Climate Change, and Potential Disasters of All Kinds* (New York: New York University Press, 2021)).

150 Riahi et al, *supra* note 36 at 304.

151 *Ibid* at 323; van Diemen et al, *supra* note 142 at 1810.

152 Riahi et al, *supra* note 36 at 323; van Diemen et al, *supra* note 142 at 1810.

153 Riahi et al, *supra* note 36 at 303, 313–15.

154 *Ibid* at 303.

155 Michael Grubb et al, “Introduction and Framing” in Intergovernmental Panel on Climate Change, *Climate Change 2022: Mitigation of Climate Change*, Contribution of Working Group III to the Sixth Assessment Report of the IPCC, Priyadarshi R Shukla et al, eds (Cambridge, UK, New York: Cambridge University Press, 2022) 151 at 173.

with their associated temperature target.¹⁵⁶ The IPCC then determined the median emissions reductions, along with the range of reductions, achieved in the years 2030, 2040, and 2050, respectively. Across 97 pathways that are consistent with limiting global warming to 1.5°C without or with limited temporary overshoot, the median figures (relative to 2019 levels) and the corresponding ranges in square brackets are: 43 percent [34–60 percent] by 2030, 69 percent [58–90 percent] by 2040, and 84 percent [73–98 percent] by 2050.¹⁵⁷ The IPCC furthermore notes that all pathways compatible with at least a 67 percent chance of limiting global warming to 2°C or lower achieve a peak in global emissions before 2025, with emissions declining thereafter.¹⁵⁸

It is important to understand two things about these modelled pathways. First, the pathways operating on the lower end of the range in 2030 will require increased emissions reductions by 2040 and 2050 to be compatible with the same level of global warming.¹⁵⁹ A pathway that was consistently within the lower end of the range would not be able to achieve the respective temperature target.¹⁶⁰ Conversely, the pathways within the upper end of the range for 2030 will require less stringent reductions by 2040 and 2050.¹⁶¹ The choice of pathway, therefore, has important implications for questions of intergenerational justice.

Second, these are *global* modelled pathways, and not every country will reduce its emissions in accordance with the indicated figures.¹⁶² Rather, it is assumed that developing countries will, on average, continue to increase

¹⁵⁶ Of the scenarios assessed, 97 were consistent with a goal of limiting global warming to 1.5°C with no or limited overshoot, 133 with limiting warming to 1.5°C following a high overshoot, 311 with a 67 percent chance of limiting global warming to 2°C, and 159 with a 50 percent chance of limiting global warming to 2°C (see Riahi et al, *supra* note 36 at 306–307). The remaining scenarios predicted warming levels exceeding 2°C.

¹⁵⁷ The range represents the 5th–95th percentile, thus excluding outliers in either direction. For comparison the median emission reductions and the corresponding ranges across pathways that are compatible with a 67 percent chance of limiting global warming to 2°C are 21 percent by 2030 [1–42 percent], 46 percent by 2040 [34–63 percent], and 64 percent by 2050 [53–77 percent] (see *ibid* at 329–30).

¹⁵⁸ *Ibid* at 329.

¹⁵⁹ *Ibid* at 349.

¹⁶⁰ *Ibid* at 349–50.

¹⁶¹ *Ibid*.

¹⁶² Frank Lecocq et al, “Mitigation and Development Pathways in the Near- to Mid-Term” in Intergovernmental Panel on Climate Change, *Climate Change 2022: Mitigation of Climate Change*, Contribution of Working Group III to the Sixth Assessment Report of the IPCC, Priyadarshi R Shukla et al, eds (Cambridge, UK, New York: Cambridge University Press, 2022) 409 at 431.

their emissions for some years until reaching a higher level of industrialization and development.¹⁶³ In turn, developed countries need to reduce their emissions earlier and more substantively, reaching net-zero before or by 2050 to bring global emissions in line with the modelled pathways.¹⁶⁴

Again, and to emphasize, these figures are not politically or legally binding mitigation targets that courts could rely upon to quantify a state's obligations. They merely illustrate the levels of emissions reductions that scientific models predict to be realistic for keeping global warming below certain thresholds. The modelled pathways do, however, provide valuable indicators for assessing whether domestic policies align with the temperature target that a government claims to be pursuing. They offer strong evidence that, even if states achieved their communicated NDCs for 2030, it would no longer be possible to limit global warming to 1.5°C.¹⁶⁵ Limiting warming to 2°C remains possible but would require much more drastic reduction measures from 2030 onwards.¹⁶⁶ In light of this evidence, state parties agreed in the 2021 *Glasgow Climate Pact* that limiting global warming to 1.5°C requires global reductions of CO₂ emissions of “45 [percent] by 2030 relative to the 2010 level and to net zero around mid-century”.¹⁶⁷

4. *Temporary Overshoot Scenarios*

While scenarios that temporarily overshoot the 1.5°C target but later use carbon dioxide removal (CDR) to return global warming to 1.5°C are conceivable, these scenarios are associated with high uncertainties and risks.¹⁶⁸ CDR includes methods that have been practiced for decades, such as afforestation and soil carbon sequestration.¹⁶⁹ However, these methods

163 UNFCCC, *supra* note 22, preamble, art 3(1), 3(4); PA, *supra* note 13, art 4(1), 4(4); Riahi et al, *supra* note 36 at 328; ICJ, *supra* note 138 at para 179.

164 Riahi et al, *supra* note 36 at 328. See also Subsection V-A.5, *below*.

165 *Ibid* at 349.

166 *Ibid*.

167 *Glasgow Climate Pact*, *supra* note 137 at IV.17.

168 In fact, almost all modelled pathways for limiting global warming to 1.5°C or 2°C rely on CDR to some degree (see Pathak et al, *supra* note 24 at 113, Box TS.5.7). It is virtually impossible to eliminate all GHG emissions at any time in the future. Reaching net-zero means that any unavoidable emissions, such as from agriculture and certain industries, are counterbalanced by CDR (*ibid* at 114, Box TS.10). The question is not whether such techniques will have to be used in the future, but to what degree.

169 Mustafa Babiker et al, “Cross-Sectoral Perspectives” in Intergovernmental Panel on Climate Change, *Climate Change 2022: Mitigation of Climate Change*, Contribution of Working Group III to the Sixth Assessment Report of the IPCC, Priyadarshi R Shukla et al, eds (Cambridge, UK, New York: Cambridge University Press, 2022) 1245 at 1261, Cross-Chapter Box 8.

have limited availability.¹⁷⁰ Other techniques are still in the early to medium stages of technological development, and it is uncertain whether and how successfully they will work in the future.¹⁷¹ Their large-scale deployment would be costly, and some methods require large amounts of energy, water, or land capacity.¹⁷² CDR can furthermore have adverse impacts on water quality, biodiversity, the marine environment, and human food sources.¹⁷³ Additionally, there is another risk associated with temporary overshoot scenarios. During periods of excess warming, changes may occur to the natural environment, such as the melting of glaciers and permafrost, sea-level rise, and loss of biodiversity, which cannot be reversed even if temperatures subsequently drop again.¹⁷⁴

The precautionary principle, therefore, clearly speaks in favour of pursuing scenarios with no or very limited temporary overshoot.¹⁷⁵ Yet, this is not a determinative legal principle, but one among multiple considerations to take into account as part of a risk assessment.¹⁷⁶ For courts, a more important question to ask is whether certain modelled pathways can form a realistic basis for policy decisions, given their dependence on uncertain future technologies. While limited reliance on CDR is unavoidable in the long run, many experts argue that it cannot serve as a substitute for deep short-term emissions reductions.¹⁷⁷

170 Gert-Jan Nabuurs et al, "Agriculture, Forestry and Other Land Uses (AFOLU)" in Intergovernmental Panel on Climate Change, *Climate Change 2022: Mitigation of Climate Change*, Contribution of Working Group III to the Sixth Assessment Report of the IPCC, Priyadarshi R Shukla et al, eds (Cambridge, UK, New York: Cambridge University Press, 2022) 747 at 775 (finding that "the likely range of global land-based mitigation potential is approximately 8–14 GtCO₂-eq yr⁻¹ between 2020–2050").

171 Babiker et al, *supra* note 169 at 1265.

172 *Ibid* at 1265–77 (where the IPCC provides a detailed discussion of different CDR methods, including development statuses, resource requirements, and potential side effects).

173 *Ibid*.

174 Hans-Otto Pörtner et al, "Summary for Policymakers" in Intergovernmental Panel on Climate Change, *Climate Change 2022: Mitigation of Climate Change*, Contribution of Working Group II to the Sixth Assessment Report of the IPCC, Priyadarshi R Shukla et al, eds (Cambridge, UK, New York: Cambridge University Press, 2022) 1 at 19–20; Climate Analytics, "The Science of Temperature Overshoots" (October 2021), online (pdf): <ca1-clm.edcdn.com/assets/temperature-overshoots_ar6.pdf> at 17–21; Henry Shue, "Climate Dreaming: Negative Emissions, Risk Transfer, and Irreversibility" (2017) 8:2 J Human Rights & Env't 203 at 210–14.

175 Felix Ekardt, Jutta Wieding & Anika Zorn, "Paris Agreement, Precautionary Principle and Human Rights: Zero Emissions in Two Decades?" (2018) 10:8 Sustainability 2812 at 9.

176 Sunstein, *supra* note 149 at 43–60.

177 See e.g. Shue, *supra* note 174; Kevin Anderson & Glen Peters, "The Trouble with Negative Emissions" (2016) 354:6309 Science 182; Duncan McLaren & Nils Markusson, "The

Short-term mitigation action critically influences the need to rely on CDR in the future. The pathways assessed by the IPCC provide a clear indication that overshoots and, thus, reliance on negative emissions increase with higher emission levels in 2030.¹⁷⁸ Such evidence allows courts to narrow down the range of pathways they will accept as a valid basis for evaluating policy decisions.

5. *Fairly Sharing the Global Mitigation Burden*

The modelled pathways described above provide indications as to which emissions reductions must be achieved globally to meet certain temperature targets. They do not determine how states are to allocate those reductions amongst themselves. Such allocations cannot be made through scientific methods but rather must follow normative-ethical and economic choices.

While climate change has long been understood as a global problem that states can only tackle through cooperation, it has been equally clear that some countries contributed much more to the problem than others, and that some have more financial means and technical capability to contribute to its solution than others. Accordingly, Article 4(3) of the *PA* stipulates that each state party's NDC must "reflect its highest possible ambition, reflecting its common but differentiated responsibilities and respective capabilities, in the light of different national circumstances."¹⁷⁹ However, there is no political agreement on what this means in quantitative terms.¹⁸⁰ In the academic literature, scholars have suggested various criteria that are relevant for establishing a fair effort-sharing formula. Academics have

Co-Evolution of Technological Promises, Modelling, Policies and Climate Change Targets" (2020) 10:5 *Nature Climate Change* 392 at 395–96; Klaus Radunsky, "The Politics and Governance of Negative Emissions Technologies" in Fátima Alves, Walter Leal Filho & Ulisses Azeiteiro, eds, *Theory and Practice of Climate Adaptation* (Cham, Switzerland: Springer International AG, 2018) 87. The IPCC has also emphasized that CDR "can be expected to only make a limited contribution to reaching net zero CO₂ as fast as possible," given that deployment at a massive scale would be necessary to achieve measurable cooling effects (see Riahi et al, *supra* note 36 at 355).

178 Riahi et al, *supra* note 36 at 354.

179 *PA*, *supra* note 13, art 4(3). The *PA* also endorses the goal of achieving net zero emissions "in the second half of this century, on the basis of equity, and in the context of sustainable development and efforts to eradicate poverty" (see *ibid*, art 4(1)).

180 In fact, "[t]he Paris Agreement deliberately sidesteps the contentious issue of [allocating] fair shares" of the mitigation burden to individual states (see Lavanya Rajamani et al, "National 'Fair Shares' in Reducing Greenhouse Gas Emissions Within the Principled Framework of International Environmental Law" (2021) 21:8 *Climate Pol'y* 983 at 984).

then undertaken studies that, based on one or a combination of these criteria, allocate a fair share of emissions reductions to each state.¹⁸¹ In 2014, Höhne, den Elzen, and Escalante provided a helpful classification of ethical approaches into categories, which the IPCC replicated in its AR5.¹⁸² While alternative classifications are certainly possible, and scholars have since advanced more approaches, it is useful to resort to Höhne, den Elzen, & Escalante to understand the fundamental normative-ethical ideas.¹⁸³ The first category is responsibility for historic and present emissions. Developed countries have contributed 57 percent to cumulative GHG emissions between 1850 and 2019, whereas developing regions—Africa, Asia and Pacific, and Latin America and the Caribbean—have contributed 28 percent.¹⁸⁴ Least developed countries have historically contributed only 0.4 percent.¹⁸⁵ While developing countries have been catching up more recently, developed countries' per capita emissions in 2019 were still more than double those of the three developing regions in the same year.¹⁸⁶ Proponents of a “responsibility approach” thus propose that countries carry the burden in accordance with their historic emissions.¹⁸⁷ Different starting years have been proposed to account for relevant emissions.¹⁸⁸

181 Some effort-sharing studies allocate emission allowances or mitigation obligations per individual, geographical region, or group of countries (such as the group of G20).

182 Niklas Höhne, Michel Den Elzen & Donovan Escalante, “Regional GHG Reduction Targets Based on Effort Sharing: A Comparison of Studies” (2014) 14:1 *Climate Pol’y* 122; see also Leon Clarke et al, “Assessing Transformation Pathways” in Intergovernmental Panel on Climate Change, *Climate Change 2014: Mitigation of Climate Change*, Contribution of Working Group III to the Fifth Assessment Report of the IPCC, Ottmar Edenhofer et al, eds (Cambridge, UK, New York: Cambridge University Press, 2014) 413 at 457–60.

183 Lecocq et al, *supra* note 162 at 473. For a further classification into sub-categories, see also Xunzhang Pan et al, “Exploring Fair and Ambitious Mitigation Contributions Under the Paris Agreement Goals” (2017) 74 *Envtl Science & Pol’y* 49 at 51 [Pan et al, “Paris Agreement Goals”]. For an interesting analysis of which fairness considerations were highlighted by the different coalitions during the negotiations of the PA, see also Claire Swingle, “Climate Justice After the Paris Agreement: Understanding Equity Through Nationally Determined Contributions” in Paul G Harris, ed, *A Research Agenda for Climate Justice* (Cheltenham, UK: Edward Elgar Publishing, 2019) 143 at 148–51.

184 Pathak et al, *supra* note 24 at 65.

185 *Ibid.*

186 *Ibid.*

187 Marc Fleurbaey et al, “Sustainable Development and Equity” in Intergovernmental Panel on Climate Change, *Climate Change 2014: Mitigation of Climate Change*, Contribution of Working Group III to the Fifth Assessment Report of the IPCC, Ottmar Edenhofer et al, eds (Cambridge, UK, New York: Cambridge University Press, 2014) 283 at 318; Swingle, *supra* note 183 at 151.

188 1850 is commonly referenced as the beginning of industrialization which came with increased use of coal (see e.g. Nicole J van den Berg et al, “Implications of Various

The second category relates to a state's ability to pay for mitigation. The basic idea is that wealthier nations should contribute more to solving the problem, while poorer nations are excused because they need to primarily use their funds to ensure basic needs and the right to development of their populations are met.¹⁸⁹ GDP per capita is typically used as a measure of what a state should contribute. This is often combined with a "development threshold", meaning that people whose income is below a minimum level are exempt from contributing because they need all their funds for survival.¹⁹⁰ Sometimes, a "luxury threshold" is added, where people whose income exceeds the threshold are expected to contribute fully and those below the threshold contribute progressively (similar to progressive income taxation).¹⁹¹

The third category includes approaches based on equal emissions rights per person. States are thus allocated emission allowances according to the size of their population.¹⁹² The fourth category is similarly grounded

Effort-Sharing Approaches for National Carbon Budgets and Emission Pathways" (2020) 162:4 Climatic Change 1805 at 1812). However, people did not, and could not have reasonably foreseen then, that their actions would lead to catastrophic changes in the climatic system. Others therefore propose a starting point in the 1960s or 1970s, when scientists first issued warnings about human-made climate change, or in the 1990s when the first international agreements designed to mitigate emissions were concluded (*ibid*; Fleurbaey et al, *supra* note 187 at 318). The choice of year depends on whether one takes causal or moral responsibility as the determinative factor (see Benito Müller, Niklas Höhne & Christian Ellermann, "Differentiating (Historic) Responsibilities for Climate Change" (2009) 9:6 Climate Pol'y 593 at 595–96). Both approaches are defensible. On the one hand, those living today should not be held accountable for the conduct of those living before them, especially if the latter did not knowingly inflict harm on others. On the other hand, high emissions in the past have helped some countries develop faster, and those living today enjoy the benefits in form of wealth, infrastructure, and other assets. They are therefore more capable of, and can be deemed to have a moral responsibility for, mitigating past wrongs (see generally Fleurbaey et al, *ibid* at 318; Eric Neumayer, "In Defence of Historical Accountability for Greenhouse Gas Emissions" (2000) 33:2 Ecological Econ 185 at 189).

189 Fleurbaey et al, *supra* note 187 at 319.

190 See e.g. Paul Baer et al, "The Greenhouse Development Rights Framework: Drawing Attention to Inequality within Nations in the Global Climate Policy Debate" (2009) 40:6 Development & Change 1121 at 1124–25, who apply a development threshold of US\$ 7,500 per year.

191 Jiahua Pan, "Meeting Human Development Goals with Low Emissions: An Alternative to Emissions Caps for post-Kyoto from a Developing Country Perspective" (2005) 5:1 Intl Envtl Agreements: Politics, L & Econ 89 at 99.

192 Fleurbaey et al, *supra* note 187 at 320. A variation of this approach, sometimes called "Contraction and Convergence", requires countries with higher per capita emissions to gradually decrease those until achieving globally equal per capita emissions by a certain predetermined year (see e.g. Niklas Höhne, Michel den Elzen & Martin Weiss, "Common

in equality but looks at both historic and future emission. While every person is allocated an equal share of the global carbon budget, people in developed countries are deemed to have already used up a large chunk of their allowance, whereas people in developing countries have more left for future emissions.¹⁹³

The fifth category combines principles of responsibility, capability, and need. Baer *et al*, for example, use the average of a responsibility and a capacity metric, which are each complemented by a development threshold.¹⁹⁴ Finally, the sixth category comprises so-called “staged approaches” according to which countries start mitigating at different speeds but are expected to gradually increase their efforts.¹⁹⁵ Thus, developing countries may be allowed to catch up before having to reduce their emissions. Contrarily, some approaches suggest that developed countries have such high levels of emissions that they need to be awarded some time to adjust their trends downward.¹⁹⁶ This so-called “grandfathering” has been strongly criticized, however, for being incompatible with general principles of international law and global justice.¹⁹⁷

Every one of these approaches has advantages and shortcomings. Also, because of methodological variations within each category, they do not lead to consistent outcomes. None of them are based on a legal or political consensus of what constitutes a fair allocation of the burden. Some influential scholars have recently emphasized the need to recognize that effort-sharing studies are not value-neutral, and to be transparent about the underlying ethical choices.¹⁹⁸ It is, therefore, unlikely that courts will

but Differentiated Convergence (CDC): a New Conceptual Approach to Long-Term Climate Policy” (2006) 6:2 Climate Pol’y 181 at 182).

193 See e.g. CASS/DRC Joint Project Team, “Equitable Access to Sustainable Development: Carbon Budget Account Proposal” in Harald Winkler *et al*, *Equitable Access to Sustainable Development: Contribution to the Body of Scientific Knowledge* (Beijing: BASIC Expert Group, 2011) 35 at 35; Xunzhang Pan, Fei Teng & Gehua Wang, “Sharing Emission Space at an Equitable Basis: Allocation Scheme Based on the Equal Cumulative Emission per capita Principle” (2014) 113 Applied Energy 1810. Again, studies vary in what year they choose as the start date for counting historic emissions, as well as in other methodological details (see Fleurbaey *et al*, *supra* note 187 at 320).

194 Baer *et al*, *supra* note 190 at 1124–27.

195 Höhne, den Elzen & Escalante, *supra* note 182 at 131.

196 Fleurbaey *et al*, *supra* note 187 at 320.

197 Kate Dooley *et al*, “Ethical Choices Behind Quantifications of Fair Contributions under the *Paris Agreement*” (2021) 11:4 Nature Climate Change 300 at 301.

198 *Ibid* at 300.

find legal principles mandating a specific application of fair-share criteria, as was highlighted by Justice Vermette in *Mathur*.¹⁹⁹

As a procedural matter, the 2014 Lima decision, and later the *Paris Rulebook*, stipulate that state parties shall explain how their NDC is fair and ambitious.²⁰⁰ This allows for a bottom-up approach, permitting each state to determine which burden-sharing criteria it regards as appropriate.²⁰¹ However, studies found that while most states claimed that their NDC was fair, many failed to substantiate this claim, and those who did relied on insufficiently diverse analysis or on indicators that are not associated with fairness (such as that their emissions were only a small share of total global emissions).²⁰² Notably, Canada's first NDC, submitted in 2016 and updated in 2017, did not include any explanation of the fairness of the pledge.²⁰³ While the 2021 enhanced NDC did address fairness issues, the explanation is of limited value, mainly alleging that Canada's contribution was "a significant progression compared to its NDC submitted at the time of ratifying the Paris Agreement" and in "line with Canada's 2050 net-zero emissions target."²⁰⁴

6. *The Relevance of Climate Financing to Achieve Fair Burden-Sharing*

Burden-sharing studies typically result in very high shares for developed countries. They often exceed those states' plausible domestic mitigation potential even if all efforts were to be taken to reduce emissions.²⁰⁵ As an example, according to ethical criteria applied by the Climate Action Network Canada, Canada would have to limit its emissions to 140 percent

199 *Mathur* SC 2023, *supra* note 5 at para 109.

200 *Lima Call for Climate Action*, UNFCCC, 20th Sess, FCCC/CP/2014/10/Add.1 (2015) Dec 1/CP.20 at para 14. *Further Guidance in Relation to the Mitigation Section of Decision 1/CP.21*, UNFCCC, 1st Sess, FCCC/PA/CMA/2018/3/Add.1 (2019) Dec 4/CMA.1 at para 7 [*Paris Rulebook*]; in conjunction with *Further Guidance in Relation to the Mitigation Section of Decision 1/CP.21*, UNFCCC, 1st Sess, FCCC/PA/CMA/2018/3/Add.1 (2019) Annex I Information to Facilitate Clarity, Transparency and Understanding of Nationally Determined Contributions, Referred to in Decision 1/CP.21, Paragraph 28 at para 6 [Annex I].

201 Harald Winkler et al, "Countries Start to Explain How their Climate Contributions are Fair: More Rigour Needed" (2018) 18:1 Intl Envtl Agreements 99 at 100–101.

202 *Ibid* at 103–106; Rajamani et al, *supra* note 180 at 991.

203 Government of Canada, "Canada's 2017 NDC", *supra* note 37.

204 Government of Canada, "Canada's 2021 NDC", *supra* note 38 at 21–22.

205 See e.g. Xun-Zhang Pan et al, "Understanding Equity-Efficiency Interaction in the Distribution of Global Carbon Budgets" (2023) 14:1 Advances in Climate Change Research 13 at 17–18 [Pan et al, "Understanding Equity-Efficiency"]; Ceecee Holz, Sivan Kartha & Tom Athanasiou, "Fairly Sharing 1.5: National Fair Shares of a 1.5 °C-Compliant Global Mitigation Effort" (2018) 18:1 Intl Envtl Agreements 117 at 128.

below 2005 levels by 2030, which is obviously impossible to do domestically.²⁰⁶ Conversely, for developing countries, fair-share criteria typically lead to very limited obligations while there is much greater technological potential for mitigation.²⁰⁷ However, developing countries often lack the financial, technological, and institutional capacity to implement the necessary measures.

This gap can be bridged through climate financing. Developed nations are not necessarily required to fulfil their fair share domestically.²⁰⁸ It often makes more economic sense to offset part of their emissions by assisting developing countries to realize their mitigation potential.²⁰⁹ Global least-cost pathways indicate where additional emissions reductions can be achieved at the lowest cost, provided that the respective implementing country receives the necessary support to do so.²¹⁰

7. *The Implication of These Uncertainties for Reviewing Courts*

This subsection has provided an overview of the numerous variables involved in quantifying a country's mitigation obligations. If courts were to rely on Canada's obligations under the *PA* to establish gross disproportionality, they would have to start the inquiry with the temperature targets set in the *PA*, irrespective of the fact that these cannot be considered a "safe" threshold for preventing harm to humans. Courts would then have to make choices on all the contentious issues outlined above: how to translate temperature targets into carbon budgets, which of the 2,000-plus modelled mitigation pathways should guide government policy, and which fair

206 Ceecee Holz, "Deriving a Canadian Greenhouse Gas Reduction Target in Line with the *Paris Agreement*'s 1.5°C Goal and the Findings of the IPCC Special Report on 1.5°C" at 4–5, online (pdf): <climateactionnetwork.ca/wp-content/uploads/CAN-Rac-Fair-Share-%E2%80%94Methodology-Background.pdf> [Holz, "Reduction Target"].

207 Holz, Kartha & Athanasiou, *supra* note 205 at 128; Civil Society Review, *Fair Shares: A Civil Society Equity Review of INDCs* (Civil Society Review, 2015) at 3, online (pdf): <oxfamlibrary.openrepository.com/bitstream/handle/10546/579848/ib-civil-society-review-climate-indcs-191015-en.pdf;jsessionid=56A6291D22625F12E6E4C2FF783B5B4F?sequence=1>.

208 See e.g. Article 6 of the *PA*, which provides for voluntary cooperation among state parties, and in particular the international transfer of mitigation outcomes (*PA*, *supra* note 13, art 6(1)–(3)).

209 Pan et al, "Understanding Equity-Efficiency", *supra* note 205 at 17–19; Holz, Kartha & Athanasiou, *supra* note 205 at 128; Yann Robiou Du Pont et al, "National Contributions for Decarbonizing the World Economy in Line with the G7 Agreement" (2016) 11:5 *Env'tl Research Letters* 1 at 2–3.

210 Pan et al, "Understanding Equity-Efficiency", *supra* note 205; Yann Robiou Du Pont et al, "Equitable Mitigation to Achieve the *Paris Agreement* Goals" (2016) 7:1 *Nature Climate Change* 1 at 2–3.

burden-sharing criteria (and which of the numerous variables) should be applied.

Scientific uncertainty is not an insurmountable problem *per se*. Courts are frequently presented with conflicting scientific evidence and use established criteria to explain why they regard certain positions as more persuasive than others. Even the fact that determining domestic “fair shares” of the global carbon budget depends on normative-ethical evaluations does not render the matter incapable of proof. For instance, the BC Supreme Court in *Carter v Canada (Attorney General)*²¹¹ heard ample expert evidence on the question of whether withholding or withdrawing life-sustaining treatment was ethically distinguishable from physician-assisted suicide. While experts advanced different positions, the Court found itself able to conclude that some evidence was more persuasive than others.²¹²

The difference between *Carter* and climate change mitigation is that most experts emphasize that there simply are no agreed upon ethical criteria for fair burden-sharing.²¹³ For a court to accept one approach as more persuasive than another would mean doing something that experts in ethics have found themselves unable to do. The problem is maybe less pronounced regarding the scientific evidence, but even here, science operates with ranges as opposed to specific figures, and these ranges are sometimes very wide. Some of the variables can be narrowed down using legal criteria such as the precautionary principle. Nevertheless, determining the parameters in question inevitably requires choices regarding the degree of risk to be taken and the desirable pathways to be adopted. When phrased this way, it is understandable that judges avoid ruling on the specific issue. The use of doctrines of justiciability to this effect may be driven by a perceived inability to evaluate mitigation targets based on legal criteria.

B. The “Lower Limit” Approach

The *Mathur* applicants have attempted to navigate that challenge by arguing that Ontario’s target would always exceed the province’s residual carbon budget, no matter which temperature target, compliant with the PA, or burden-sharing criteria considered fair in the literature is adopted.²¹⁴ Justice Vermette nonetheless appeared skeptical about this “lower limit”

²¹¹ 2012 BCSC 886 [*Carter* SC].

²¹² *Ibid* at para 335.

²¹³ Dooley et al, *supra* note 197 at 300.

²¹⁴ *Mathur* SC 2023, *supra* note 5 at para 30.

approach. Even though the question was ultimately not decisive, Justice Vermette made a point of declaring the question of what constitutes Canada's and Ontario's fair share of the remaining carbon budget non-justiciable. This does not mean that the applicants will necessarily fail with their argument at the next stage of review. In fact, the Dutch Supreme Court in *Urgenda* relied on a quite similar approach when mandating the state to increase its GHG reduction target. The Court noted that determining the Netherlands' fair share was "in principle, a matter for the government and parliament", although "courts can assess whether the measures taken by the State are too little in view of what is clearly the lower limit".²¹⁵ However, such an approach has some disadvantages.

First, even determining the "lower limit" involves normative-ethical choices in which courts might be unwilling to get involved. For example, the *Mathur* applicants relied on various burden-sharing criteria that fulfil at least some fairness criteria, but excluded others, such as "grandfathering".²¹⁶ Since the PA does not explicitly establish a burden-sharing formula, courts may find that they cannot exclude "unfair" approaches based on legal principles.

Second, while the "lower limit" approach may be successfully used to challenge governmental targets that are clearly too unambitious, it is difficult for courts to go beyond this minimum threshold. In the current situation, this may be a victory for plaintiffs. It was certainly a victory in *Urgenda*, but it must not be forgotten that the Dutch Supreme Court merely ordered the government to reduce its emissions by 25 percent, which is the bottom end of the 25–40 percent range the plaintiffs had asked for.²¹⁷ Commentators have rightly warned that, if every national court were to adopt the "lower limit" approach, the PA temperature targets would be out of reach.²¹⁸ Litigants should strive to push the door open for more stringent methods of assessing a state's constitutional obligations in future litigation, if not now.

Third, by relying on the PA to determine the content of *Charter* rights, plaintiffs deprive themselves of the opportunity to argue that the *Charter*

²¹⁵ *Urgenda*, *supra* note 44 at para 6.3.

²¹⁶ *Mathur* SC 2023, *supra* note 5 at para 27.

²¹⁷ *Urgenda*, *supra* note 44.

²¹⁸ Gerry Liston, "Enhancing the Efficacy of Climate Change Litigation: How to Resolve the 'Fair Share Question' in the Context of International Human Rights Law" (2020) 9:2 Cambridge Intl L J 241 at 248; Yann Robiou du Pont & Malte Meinshausen, "Warming Assessment of the Bottom-Up Paris Agreement Emissions Pledges" (2018) 9:4810 Nature Communications 1 at 2.

imposes duties on the state that go beyond what has been agreed to in international treaties. After all, the 1.5°C-target is the result of a political compromise and does not constitute a threshold that can be deemed “safe” from a human rights perspective.²¹⁹ In fact, any increase in global warming deprives plaintiffs of their section 7 rights. Therefore, as I will now argue, any additional causation or authorization of GHG emissions requires justification.

C. The Justificatory Approach

This Section proposes an alternative approach to determining whether Canada’s conduct affects plaintiffs in a grossly disproportionate manner. This approach emphasizes that gross disproportionality is always a relative inquiry. The decisive question is whether imposing a certain degree of harm on plaintiffs can be justified by a sufficiently important public interest objective. Two implications follow from this relative nature of the task. First, plaintiffs and courts do not need to attempt to derive absolute mitigation obligations from international law. Rather, they must specify the harm to the plaintiffs’ section 7 interests associated with Canada’s emissions. Only then can plaintiffs argue that the harm is “totally out of sync” with the objective of the law. Any judicial method must thus start with a metric for assessing this harm. The parameters discussed in Section V-A are relevant to this task because they serve to establish a trajectory of global warming with which Canada’s emissions align.

Second, courts should award increased weight to the justification offered by the government for its position, but also demand that such justification be articulated. Rather than attempting to autonomously establish the parameters discussed in Section V-A, courts can assess whether plaintiffs and governments have provided a convincing explanation for their respective positions. This can be achieved through an allocation of the burden of proof between plaintiffs and government.

1. *Determining the Harm Attributable to Canada’s Emissions*

For plaintiffs to establish that Canada’s actions have grossly disproportionate impacts on their section 7 interests, they first need to present the court with a trajectory of global warming with which Canada’s emissions align. They can then point to expert evidence to establish the harm to their

219 See Part II, *above* and in particular Rodgers, Sancken & Marlow, *supra* note 17 at 104–105.

section 7 interests that is expected at the resulting levels of global warming. This trajectory needs to account for the same parameters that have been discussed in Section V-A and is thus subject to the same scientific and normative-ethical uncertainties.

While these parameters are not susceptible to proof in the strict sense, courts are able to assess whether the plaintiffs' and governments' assumptions and methodologies are convincing. Thus far, the respondent governments in *La Rose* and *Mathur* have insisted that quantifying Canada's and Ontario's GHG emissions reduction obligations is beyond the courts' institutional capacity.²²⁰ One should assume that the institutional capacity instead lies with the legislator and government. Yet, the respondents have failed to articulate and substantiate what they believe to be the correct approach to applying the parameters, and hence what their global warming trajectory amounts to. I propose that, where plaintiffs have made detailed arguments supported by expert evidence to determine Canada's global warming trajectory, courts should call on respondents to substantively counter these claims and explain the assumptions and political choices underlying their decisions.

My proposal draws on various Supreme Court decisions in which the nature of the question and the type of evidence provided did not allow for scientific proof in the context of section 1. In *R v Sharpe*, the SCC emphasized that "the courts cannot hold Parliament to a higher standard of proof than the subject matter admits of".²²¹ In *R v Butler*, the Court held that, where proving a causal link between certain conduct and resulting harm was impossible, it was sufficient for Parliament to demonstrate a "reasoned apprehension of harm" supported by some evidence.²²² In *Sauvé*, the majority noted:

While some matters can be proved with empirical or mathematical precision, others, involving philosophical, political and social considerations, cannot. In this case, it is enough that the justification be convincing, in the sense that it is sufficient to satisfy the reasonable person looking at all the evidence and relevant considerations, that the state is justified in infringing the right at stake to the degree it has. What is required is "*rational, reasoned defensibility*".²²³

220 *Mathur* SC 2023, *supra* note 5 at para 44; *La Rose v Canada*, 2020 FC 1008 (Statement of Defence, Defendants at para 106) [*La Rose* FCTD (Statement of Defence)].

221 *Sharpe*, *supra* note 21 at para 89.

222 1992 CanLII 124 at 504 (SCC).

223 *Sauvé*, *supra* note 21 at para 18 [emphasis added and citations omitted].

The Supreme Court affirmed this approach in later decisions, and the ONSC applied it in the same manner to a professional body enacting regulations governing professional conduct.²²⁴

A similar standard has thus far not been applied to plaintiffs aiming to demonstrate that an infringement is contrary to principles of fundamental justice by recourse to social science evidence. I think that the rationale articulated in *Sharpe*, that courts cannot demand “a higher standard of proof than the subject matter admits of”, can be made fruitful in climate change litigation cases. Where plaintiffs make detailed submissions and offer expert evidence on the global warming trajectory associated with Canada’s emissions, the government should be required to counter with substantive arguments rather than simply asserting that the matter is unsuitable for judicial determination. At the same time, the Supreme Court’s relaxation of the standard of proof in the context of a section 1 analysis is typically interwoven with elements of deference to legislative evaluations and choices that cannot apply in the same way to plaintiffs.²²⁵ The method thus requires some modifications to be applicable in a gross disproportionality analysis where the burden of proof lies with the plaintiffs.

My proposal to reconcile these considerations and not impose prohibitive requirements on plaintiffs, while at the same time awarding a degree of deference to the legislature and government in interpreting and applying inconclusive evidence, is as follows: to fulfil their burden of proof under section 7, plaintiffs should be required to present a convincing approach, on the standard of “rational, reasoned defensibility” articulated by the Supreme Court in *Sauvé* and based on scientific and normative-ethical evidence, to link Canada’s conduct with a global warming trajectory. Based on this approach, plaintiffs can make a *prima facie* case that the harm resulting from such a level of global warming is grossly disproportionate to the purpose of the laws and actions that cause or enable GHG emissions. The standard of “rational, reasoned defensibility” is adequate in such a scenario because finding that plaintiffs have fulfilled their burden of proof is not yet the last word on the matter. Rather, the burden then shifts to the government which can counter the plaintiffs’ *prima facie* case with its own approach to the scientific and normative-ethical evidence, and

224 *Harper*, *supra* note 21 at paras 77, 79; *Bryan*, *supra* note 21 at para 16; *Yazdanfar v The College of Physicians and Surgeons*, 2013 ONSC 6420 at para 115.

225 This is most clearly articulated in *Thomson Newspapers Co v Canada (Attorney General)*, 1998 CanLII 829 at paras 111–22 (SCC) and *Harper*, *supra* note 21 at paras 76–88.

thus demonstrate that Canada's conduct aligns with lower levels of global warming than claimed by the plaintiffs.

As the evidence on this matter is not amenable to definitive proof, deference should be awarded to the government's methodology, risk-assessment, and political choices if the court finds them to be "convincing" (in the understanding of the term that the Supreme Court articulated in *Sauvé*).²²⁶ It is not sufficient, however, for the government to simply allege that the subject matter cannot be assessed based on legal standards. Rather, the government will have to make explicit and defend the assumptions and choices underlying its trajectory.²²⁷

When broken down in this way, the task for courts becomes more manageable and aligns with the judiciary's institutional capacity and legitimacy, a factor that is, in turn, crucial to establish justiciability.²²⁸ Courts do not engage in free-standing scientific and normative-ethical evaluation to answer the abstract question of what constitutes Canada's permissible level of GHG emissions. Rather, they review precise choices that have been made by the government and translated into laws or executive actions.

This point was similarly emphasized in the Swiss case decided by the ECtHR, where the Court noted: "[w]hile it is not in the Court's remit to determine what exactly should have been done, it can assess whether the authorities approached the matter with due diligence and gave consideration to all competing interests".²²⁹ Applying this standard, the ECtHR found it concerning that the Swiss government did not have any theory on what Switzerland's fair share of the global carbon budget amounts to. While acknowledging the lack of an established methodology and thus suggesting that the state must be afforded a wide margin of appreciation, the Court found that without any attempt to quantify their fair share, the Swiss government was unable to put in place effective regulations.²³⁰

²²⁶ According to *Sauvé*, a justification is convincing if "it is sufficient to satisfy the reasonable person looking at all the evidence and relevant considerations, that the state is justified in infringing the right at stake to the degree it has" (see *Sauvé*, *supra* note 21 at para 18).

²²⁷ This resonates with the Supreme Court's holding in *Chaoulli*, *supra* note 54 at para 92, that "the government cannot argue that the evidence is too complex without explaining why it cannot be presented." The Supreme Court then continued: "If such an explanation is given, the court may show greater deference to the government. Based on the extent of the impairment and the complexity of the evidence considered to be necessary, the court can determine whether the government has discharged its burden of proof." (*ibid* at para 92).

²²⁸ *La Rose FCA*, *supra* note 4 at para 24, citing *Highwood Congregation of Jehovah's Witnesses (Judicial Committee) v Wall*, 2018 SCC 26 at para 34.

²²⁹ *Verein Klimasenioren*, *supra* note 46 at para 538 (citations omitted).

²³⁰ *Ibid* at paras 570–72.

The approach to assessing inconclusive evidence within a section 7 analysis proposed here responds to the emphasis placed by Justice Rennie in *La Rose* on the importance of allowing the law to “evolve to respond to the challenges of modern society.”²³¹ Scholars have similarly made the point that, rather than duck away from novel “wicked” problems such as climate change and rendering the *Charter* an ineffective instrument in the wake of important but complex societal questions, courts should instead embrace such questions to further develop the *Charter* as a living tree.²³² If judges declare that Canada’s obligations with regard to GHG emissions reductions are non-justiciable simply because the matter may not be susceptible to proof in the traditional sense, they deprive people of their opportunity to seek judicial protection in the wake of one of the most severe threats of modern time. Such an all-or-nothing approach is unnecessary. While complex societal questions require a degree of deference to governmental risk assessment and priority-setting, such deference can be awarded as part of the assessment on the merits.

The approach proposed here has the additional benefit of furthering transparency in two ways. For one, governments are required to articulate the temperature target pursued, the path to achieving the target, and the assumptions applied. The Supreme Court has highlighted the centrality of transparency, intelligibility, and justification in reviewing whether an administrative decision falls within a range of acceptable outcomes.²³³ A similar rationale should apply where the *Charter*-conformity of state action hinges on the interpretation of inconclusive evidence. Requiring the government to articulate and explain the assumptions behind its policy choices permits courts to assess whether these assumptions are justifiable and warrant deference.

For another, the approach proposed here allows courts to be transparent about which steps of governmental decision-making they regard as sufficiently explained and justified, based on the available evidence, and which steps they do not believe are sufficiently explained and justified.²³⁴ It thus provides a guide to the government for making future decisions and

²³¹ *La Rose* FCA, *supra* note 4 at para 120.

²³² See e.g. Larissa Parker, “Let Our Living Tree Grow: Beyond Non-Justiciability for the Adjudication of Wicked Problems” (2023) 81:1 UT Fac L Rev 54 at 54–55; Cameron, Weyman & Nicholson, *supra* note 82 at 462–63. See also in relation to section 15 Chalifour, Earle & Macintyre, *supra* note 7 at 52–54.

²³³ *Dunsmuir v New Brunswick*, 2008 SCC 9 at para 47 [*Dunsmuir*].

²³⁴ The value of transparency and intelligibility of judicial decisions was highlighted by the Supreme Court in *R v KRJ*, 2016 SCC 31 at para 79. See also Renke, *supra* note 108 at 67

ensures the predictability of constitutional review should those decisions be challenged again. It also allows the government and the public to understand the rationale behind judicial decisions, thus increasing acceptance of the outcome.

2. *Applying the Method*

This section will illustrate in more detail how the method I propose can be applied to assess the scientific evidence and normative-ethical discourse introduced in Section V-A, above.

(a) Determining the “Correct” Temperature Target

The method proposed here does not start with determining a temperature target that states are required to achieve as a matter of *Charter* rights. Rather, it starts from the premise that any additional global warming will cause harm to plaintiffs and thus requires justification. Temperature targets are the result of the global warming trajectory Canada’s conduct aligns with. As the expected harm increases with higher temperatures, the competing policy objectives that justify imposing such harm on the plaintiffs will have to be of increasing importance.

Notably, neither the *Net-Zero Act* nor Canada’s 2030 Emissions Reduction Plan currently states the temperature target Canada is pursuing.²³⁵ If the government is unable to quantify the target it associates with its policy approach, at least for internal decision-making purposes, it is difficult to see how the government will demonstrate that the harm caused by its actions is outweighed by the objective pursued, or by competing policy considerations.

(b) Estimating Remaining Carbon Budgets

As shown above, for a 50 percent chance of limiting global warming to 1.5°C, the median estimated carbon budget from 2020 onwards is 510 GtCO₂eq, with a range from 330 to 710 GtCO₂eq.²³⁶ Plaintiffs could thus realistically base their trajectory on a median figure of 510 GtCO₂eq. The precautionary principle further demands that states err on the side of underestimating, rather than overestimating, the remaining budget. Thus, it is conceivable that plaintiffs argue in favour of a lower figure within the range provided.

emphasizing the importance of transparency in allocating weight to the competing sides in a proportionality assessment.

²³⁵ *Net-Zero Act*, *supra* note 38; ECCC, 2030 Emissions Reduction Plan, *supra* note 39.

²³⁶ Pathak et al, *supra* note 24 at 79.

The government may counter the plaintiffs' approach and propose a different figure that it needs to support with evidence. The further the proposed carbon budget is above the median figure, the higher the risk of overshooting the associated temperature target. Courts should thus demand more convincing reasons if the government chooses to rely on high estimates, rather than more conservative ones. Currently, neither the *Net-Zero Act* nor Canada's 2030 Emissions Reduction Plan uses a carbon budget.²³⁷ This is a crucial shortcoming because, even assuming Canada was to achieve net-zero emissions by 2050, it is important to know how much will be emitted from now until that time. As GHGs remain in the atmosphere for centuries to come, it is the cumulative emissions up to reaching net-zero that will determine the level of global warming.²³⁸ This was emphasized by both the ECtHR in holding that without any attempt to quantify its fair share, the Swiss state was unable to put in place effective regulations, and the German Bundesverfassungsgericht (BVerfG), which noted that merely setting a net-zero target without a carbon budget would be an unsuitable measure to keep global warming below a certain temperature threshold.²³⁹

(c) Alignment with Modelled Pathways

Modelled pathways illustrate different mitigation scenarios that are consistent with specific temperature targets. Therefore, they provide important indicators of the global emissions reductions that need to be achieved by certain milestone years. Plaintiffs can base their trajectory on a pathway, or a range derived from multiple pathways that is realistic given the uncertainties and risks involved. Pathways with limited or no reliance on CDR clearly indicate that high reductions are necessary by 2030 if the 1.5°C-target is to remain achievable. The pathways assessed by the IPCC for its AR6 foresee median emissions reductions of 43 percent in 2030, relative to 2019 levels, with a range of 34–60 percent.²⁴⁰ Recall that these are global pathways that need to be further broken down into domestic

²³⁷ *Net-Zero Act*, *supra* note 38; ECCC, 2030 Emissions Reduction Plan, *supra* note 39.

²³⁸ Josep G Canadell et al, "Global Carbon and Other Biogeochemical Cycles and Feedbacks" in Intergovernmental Panel on Climate Change, *Climate Change 2021: The Physical Science Basis*, Contribution of Working Group I to the Sixth Assessment Report of the IPCC, Valérie Masson-Delmotte et al, eds (Cambridge, UK, New York: Cambridge University Press, 2021) 673 at 749, 777–78.

²³⁹ Verein Klimaseniorinnen, *supra* note 46 at para 538; Neubauer, *supra* note 17 at para 156.

²⁴⁰ Riahi et al, *supra* note 36 at 330. The range represents the 5th–95th percentile, thus excluding outliers in either direction.

reductions, requiring developed countries to achieve much higher reductions. The Canadian Net-Zero Advisory Body, established under the *Net-Zero Act*, equally advises that “[t]he most likely net-zero pathways prioritize early and deep reductions”.²⁴¹ This applies all the more for a lower temperature target than 1.5°C.

The government can base its trajectory on different pathways than the plaintiffs, as long as it can provide convincing evidence that these realistically align with the temperature target it claims to be pursuing. Thus, if the government were to rely on pathways that heavily depend on CDR, it would have to present evidence that respective technologies will be available, and financially and politically feasible in the near future. In the absence of such evidence, the government would have to explain why taking such risks is justified, given the severe consequences of overshooting the temperature target.

The government might also choose a pathway with moderate immediate reductions and increased efforts in the future. Such a strategy of delay raises important questions of intergenerational justice. This consideration was at the core of the German BVerfG’s decision to invalidate the German *Climate Change Act*.²⁴² If the transition towards a greener economy is not expedited right now by putting pressure on industries and providing clear and foreseeable timelines, the Court found that young people would soon be forced into an “emergency stop” to keep the temperature targets within reach.²⁴³ Such unilateral offloading of a significant portion of the emissions reduction burden onto the future, according to the Court, is incompatible with the principle of proportionality.²⁴⁴ The ECtHR similarly emphasized that “adequate intermediate reduction goals” are required to “avoid a disproportionate burden on future generations”.²⁴⁵ If the Canadian government were to rely on pathways that postpone much of the necessary reductions, it would have to be able to explain why this strategy is more effective, has less adverse impacts on Canadians, or is otherwise preferable over immediate reductions.

²⁴¹ *Net-Zero Act*, *supra* note 38, s 20(1); Net-Zero Advisory Body, *Net-Zero Pathways Initial Observations* (Canada: Net-Zero Advisory Body, 2021) at 16.

²⁴² *Neubauer*, *supra* note 17.

²⁴³ *Ibid* at paras 186, 192.

²⁴⁴ *Ibid* at para 192.

²⁴⁵ *Verein Klimaseniorinnen*, *supra* note 46 at para 549.

(d) Fairly Sharing the Global Mitigation Burden

Determining Canada's fair and ambitious contribution to the global mitigation effort is central to linking Canada's emissions to global warming trajectories. Article 4(3) of the PA stipulates that state parties' NDCs must be ambitious and reflect the principle of common but differentiated responsibilities and respective capabilities.²⁴⁶ This provision is not redundant. It constitutes an indeterminate legal requirement that must be interpreted, not ignored, by states.²⁴⁷ This aligns with the procedural obligation under the *Paris Rulebook* according to which state parties shall explain how their NDC is fair and ambitious.²⁴⁸

Although none of the various academic burden-sharing studies draw on a legal or political consensus, they provide a range of outcomes that may be deemed reasonably defensible. In 2014, Höhne *et al* undertook a comparative assessment of more than 40 individual studies and presented the range of results. Their findings indicate that for a 50–66 percent chance of limiting global warming to 2°C, the Organisation for Economic Co-Operation and Development's member countries would have to reduce their emissions by 37–75 percent by 2030, relative to 2010 levels.²⁴⁹ Subsequent evaluations found that, if viewed in relation to 1.5°C-compatible pathways, most states' communicated NDCs fall short of any of the equity categories assessed.²⁵⁰ According to another recent analysis of 40 different burden-sharing studies by Rajamani *et al*, Canada's fair share of emissions reductions for limiting global warming to well below 2°C ranges from 28.94–82.34 percent below 2010 levels by 2030, while limiting global warming to 1.5°C would require a 66.27 percent reduction below 2010 levels by 2030.²⁵¹

To establish a *prima facie* case under section 7, plaintiffs can, in a first step, rely on this normative discourse to present a convincing range of Canada's fair share. So far, this is similar to the approach taken by the *Mathur* applicants who argue that Ontario's target fails to meet even the lowest

²⁴⁶ PA, *supra* note 13, art 4(3).

²⁴⁷ In its 2025 Advisory Opinion on Climate Change, the ICJ highlighted that states must interpret their obligations under article 4 of the PA “in good faith” and that their NDCs must be “capable of making an adequate contribution to the achievement of the temperature goal.” (see ICJ, *supra* note 138 at paras 238, 242).

²⁴⁸ *Paris Rulebook*, *supra* note 200 at para 7; Annex I, *supra* note 203 at para 6.

²⁴⁹ Höhne, Den Elzen & Escalante, *supra* note 182 at 133, Table 4.

²⁵⁰ Pan *et al*, “Paris Agreement Goals”, *supra* note 183 at 55.

²⁵¹ Rajamani *et al*, *supra* note 180 at 997, Figure 5. See also supplemental material available online.

end of the range.²⁵² The approach proposed in this paper goes beyond this by enabling plaintiffs to propose a rather precise fair share, as opposed to merely a lower limit, which the government can then counter with its own approach. Plaintiffs can argue that, if all states were to pick and choose the burden-sharing criteria most favourable to them individually, the resulting emissions would be far above the temperature target they claim to be pursuing.²⁵³ States must therefore “do much more than their minimum fair share to bridge the gap”.²⁵⁴

One possibility of allocating a mid-range fair share to individual states would be to use the median value over several studies. Rajamani *et al* propose a different approach: “The range of fair shares can be reduced in line with the desired temperature goal by starting from the top end of each state’s fair share range and moving down the fair share range of each state by the same percentage until the aggregate over all states reach the emission level that is consistent with a temperature level.”²⁵⁵ A third method, suggested by Holz, Kartha & Athanasiou is based on deliberative decision-making.²⁵⁶ The authors make use of the Climate Equity Reference Calculator, which is an interactive online tool that allows users to choose among and weigh different equity principles and see how their choices affect the resulting fair-share allocation.²⁵⁷ Holz, Kartha & Athanasiou presented this calculator to a diverse coalition of about 150 civil society organizations, ranging “from large international environmental NGOs to Southern grassroots justice movements, from trade unions to development aid organizations to faith-based organizations.”²⁵⁸ The organizations got to experiment with the tool, “examine the implications of their preferences, debate them in a precise manner, and, ultimately, delineate a well-defined range of such choices they could collectively accept as morally justifiable.”²⁵⁹ They ultimately agreed on “two equity benchmarks [which]

252 Mathur SC 2023, *supra* note 5 at paras 26–27.

253 Robiou du Pont & Meinshausen, *supra* note 218 at 2–3; Rajamani *et al*, *supra* note 180 at 992–93.

254 Rajamani *et al*, *supra* note 180 at 993.

255 *Ibid* at 998.

256 Holz, Kartha & Athanasiou, *supra* note 205.

257 The Climate Equity Reference Project, “Climate Equity Reference Calculator” (last modified 12 Nov 2024), online: <calculator.climateequityreference.org>. For more detailed information on the calculator see Ceecee Holz *et al*, “The Climate Equity Reference Calculator” (2019) 4:35 J Open Source Software 1273.

258 Holz, Kartha & Athanasiou, *supra* note 205 at 124.

259 *Ibid*.

delineated an 'equity band' that marked out the range of choices that coalition deemed to be plausibly defensible as fair."²⁶⁰

Based on these methods, plaintiffs can mount a convincing *prima facie* case for narrowing down the fair-share range. For instance, Climate Action Network Canada applied the deliberative method proposed by Holz, Kartha & Athanasiou to calculate Canada's fair share for not exceeding 1.5°C. This would amount to a 140 percent emissions reduction compared to 2005 levels by 2030.²⁶¹

The government can then counter by presenting its own burden-sharing formula. While some leeway will certainly have to be afforded, it is essential that the government can actually present a coherent theory. As the ECtHR pointed out, it is difficult to conceive of a state putting in place adequate measures to combat climate change without any attempt to quantify its fair share.²⁶² When communicating its 2021 and 2025 NDC, the Canadian government included only a very limited statement on its fairness.²⁶³ Courts should demand a more thorough explanation of how the government's approach aligns with the global normative-ethical discourse.

3. *Demonstrating Gross Disproportionality*

The steps taken so far will result in a trajectory of global warming associated with Canada's current emissions. They also permit a calculation of additional emissions reductions that would be required to bring Canada in line with lower temperature targets. Plaintiffs can then draw on expert evidence to predict the degree of harm to their section 7 interests that is expected once each of these global warming thresholds is reached.

Next, plaintiffs must establish that the harm associated with the challenged laws and actions is grossly disproportionate to their stated objective.²⁶⁴ This depends on the respective act that is being challenged and the way the objective is framed. It is important to recall at this point that the indirect benefits for society (such as tax revenues, employment opportunities, or reduced costs for consumers) are irrelevant to the gross

²⁶⁰ *Ibid.*

²⁶¹ Holz, "Reduction Target", *supra* note 206 at 4.

²⁶² *Verein KlimaseniorenInnen*, *supra* note 46 at paras 570–72.

²⁶³ Government of Canada, "Canada's 2021 NDC", *supra* note 38 at 21–22; Government of Canada, "Canada's 2035 Nationally Determined Contribution" (last modified 2025) at 31–32, online (pdf): < unfccc.int/sites/default/files/2025-02/Canada's 2035 Nationally Determined Contribution_ENc.pdf > [Government of Canada, "Canada's 2025 NDC"].

²⁶⁴ *Bedford*, *supra* note 10 at para 121.

disproportionality analysis.²⁶⁵ The Supreme Court has emphasized that under section 7, it will only balance “the negative effect on the individual against the purpose of the law, *not* against societal benefit that might flow from the law.”²⁶⁶ The latter is reserved for the section 1 analysis.²⁶⁷ One rationale behind this distinction lies in the shift of the burden of proof under section 1 to the government. The Supreme Court has noted that “[un]like individual claimants, the Crown is well placed to call the social science and expert evidence required to justify the law’s impact in terms of society as a whole.”²⁶⁸

For plaintiffs to show that state action deprives them of their section 7 interests in a grossly disproportionate manner, it is thus sufficient to demonstrate that the harm associated with Canada’s current global warming trajectory is out of proportion to the specific objective of the action that is being challenged. The burden then shifts to the government, under section 1, to show that the infringement is nonetheless justified, for example by the indirect benefits for society or as part of a broader scheme of just transition to a greener society. This will be discussed in the next subsection.

As noted above, there are good reasons to question the importance of many governmental objectives which consist of subsidizing unsustainable industries, increasing profits for investors, and delaying the transition to a greener economy.²⁶⁹ If plaintiffs challenge specific permits, subsidies, or other action that benefits certain industries, they can argue that the severe harm to their section 7 interests is out of sync to such short-sighted objectives.

If plaintiffs challenge the GHG reduction target as such, they can argue that the level of GHG emissions incidentally authorized by the target aligns with a level of global warming at which they will face severe harm to their section 7 interests. Neither the *Net-Zero Act* nor the *CTCA* offer a

²⁶⁵ *Ibid* at paras 121, 123.

²⁶⁶ *Ibid* at para 121.

²⁶⁷ *Ibid*. See also *Carter*, *supra* note 10 at para 79; *R v Ndhlovu*, 2022 SCC 38 at para 104 [Ndhlovu]. In *R v Brown*, 2022 SCC 18 at para 70 [Brown] the Court further clarified that section 7 is engaged where state action directly impacts the interests of two or more parties, whereas the question of whether state action is justified by its indirect benefits for third parties should be considered under section 1. The case concerned the constitutionality of a provision of the *Criminal Code*, which prevented defendants from relying on a defence of automatism due to extreme intoxication. The Supreme Court found that the defendant’s section 7 rights were directly impacted by the law, whereas the rights of the victims of crime were only indirectly engaged and should thus be considered under section 1.

²⁶⁸ *Bedford*, *supra* note 10 at para 126.

²⁶⁹ *Chalifour & Earle*, *supra* note 82 at 760–63.

justification for imposing such harm on them, given that their objective could equally or better be fulfilled by setting more ambitious targets. To further establish that the target is completely out of sync with the associated harm, plaintiffs can point to the huge gap between Canada's and Ontario's current commitments and what would be necessary to bring the targets in line with international treaties. They can also point to the failure to make use of technologically and economically feasible mitigation potential.²⁷⁰ For Canada, the Climate Action Tracker estimates that reductions of 54 percent below 2005 levels could be achieved domestically by 2030, whereas Climate Action Network Canada puts this figure at 60 percent.²⁷¹ Research commissioned by seven Canadian environmental organizations confirmed the feasibility of the 60 percent reduction target.²⁷²

These numbers are still likely far below whatever has been determined by the court to constitute Canada's fair share of the reduction burden. Recall that Holz quantified Canada's share as 140 percent reductions below 2005 levels by 2030, based on a 1.5°C target.²⁷³ If we assume this number for illustrative purposes, Canada will have to achieve not only 60 percent in domestic reductions but offset an additional 80 percent through international climate finance. Given that Canada's financial contributions are currently nowhere near this figure, achieving at least its domestic

270 See e.g. Pan et al, "Understanding Equity-Efficiency", *supra* note 205.

271 Climate Action Tracker, "Canada" (26 August 2024), online: <climateactiontracker.org/countries/canada> (For the methodology used to determine these pathways, see Climate Action Tracker, "Modelled domestic pathways", online: <climateactiontracker.org/methodology/cat-rating-methodology/modelled-domestic-pathways>); Climate Action Network Canada, "Getting Real About Canada's Climate Plan" (2019) at 2, online (pdf): <climateactionnetwork.ca/wp-content/uploads/2019/06/CAN-RAC_ClimatePlanExpectations_EN-1.pdf>.

272 EnviroEconomics & Navius, "Towards Canada's Fair Share" (2021), online (pdf): <environmentaldefence.ca/wp-content/uploads/2021/04/Towards-Canadas-Fair-Share-May-2021.pdf>. For comparison, the United States' NDC is a 50-52 percent reduction below 2005 levels by 2030, while the European Union's NDC is a 55 percent reduction below 1990 levels by 2030 (see Government of the United States of America, "The United States of America Nationally Determined Contribution – Reducing Greenhouse Gases in the United States: A 2030 Emissions Target" (last modified 2021) at 1, online (pdf): <unfccc.int/sites/default/files/NDC/2022-06/United%20States%20NDC%20April%2021%202021%20Final.pdf>; European Commission, "The Update of the Nationally Determined Contribution of the European Union and its Member States" (last modified 2023) at 2, online (pdf): <unfccc.int/sites/default/files/NDC/2023-10/ES-2023-10-17%20EU%20submission%20NDC%20update.pdf>).

273 Holz, *supra* note 206 at 4.

mitigation potential is of increasing importance.²⁷⁴ This provides a good basis for plaintiffs to fulfil their burden of proof under section 7, after which the judicial assessment moves to section 1 of the *Charter*.

4. The Section 1 Analysis

To establish that a law or executive action constitutes a reasonable limit on rights under section 1, the government must demonstrate that the objective pursued is “of sufficient importance to warrant overriding a constitutionally protected right or freedom”, that the law or executive action is “rationally connected to the objective”, impairs rights as little as possible, and that the effects on the rights are proportionate to the competing objective.²⁷⁵ Although the Supreme Court has noted that “[i]t is difficult to justify a [section] 7 violation”, the Ontario Court of Appeal has on one occasion upheld legislation under section 1 which the Court deemed to breach section 7.²⁷⁶ Climate litigation appears to present an ideal scenario for the government to make respective submissions. At this stage, the government may attempt to demonstrate that the cost of additional mitigation measures for individuals and businesses and the adverse impacts on the economy, employment, tax revenues, or consumers outweigh the expected climate-related harm. The government might also point out that increased investment in mitigation measures diverts resources from other political priorities (such as improving healthcare or access to housing), or that certain actions, while grossly disproportionate if viewed in isolation, form part of a framework for a just transition leading to a less carbon-intensive society.

With such multifaceted implications flowing from individual decisions, courts will inevitably have to defer to political priority-setting to a certain degree. The Supreme Court has emphasized that, especially where

²⁷⁴ Canada has currently committed to providing \$5.3 billion in climate finance in the period 2021–2026 (see Government of Canada, “Canada’s Climate Finance for Developing Countries” (3 July 2024), online: <international.gc.ca/world-monde/funding-financement/climate-developing-countries-climatique-pays-developpement.aspx?lang=eng>). According to Climate Action Network Canada, this represents 59 percent of Canada’s fair-share contribution to international climate finance. Furthermore, 40 percent of this amount goes to support adaptation measures, whereas 60 percent is allocated to mitigation measures. According to Climate Action Network Canada, Canada’s fair share of the global financial commitment would amount to \$9 billion annually over the period 2021–2026, although it is unclear how the authors arrive at this number (Climate Action Network Canada, “Transforming Canada’s Climate Finance” (2022) at 4, online (pdf): <climateactionnetwork.ca/wp-content/uploads/Transforming-Canadas-Climate-Finance.pdf>).

²⁷⁵ *R v Big M Drug Mart Ltd*, 1985 CanLII 69 at 352 (SCC); *R v Oakes*, 1986 CanLII 46 at 139 (SCC).

²⁷⁶ *Carter*, *supra* note 10 at para 95; *R v Michaud*, 2015 ONCA 585 at paras 83–145.

different societal values are balanced against each other, it is sufficient that the means adopted fall “within a range of reasonable alternatives”.²⁷⁷ Nonetheless, to be reasonable and warrant deference, governmental decisions must be based on a thorough assessment of the available mitigation potential and associated costs and benefits, as well as the implications of not making use of this potential. Otherwise, the government will be unable to demonstrate that its actions impair rights as little as possible and reflect a proportionate balancing of competing objectives. Ultimately, the government must be able to convincingly answer the question of why a reduction of 40–45 percent below 2005 levels by 2030 is achievable, whereas 46 percent would require sacrifices that are disproportionate to the harm that could be avoided.

Having already determined, at the previous steps, all the parameters that go into establishing a global warming trajectory associated with Canada’s emissions, the government is now in a much better position to substantiate such a claim, and courts are in a better position to assess its validity. Assume the government will argue that no more than 40–45 percent domestic reductions are reasonably achievable, along with a 50 percent offset through international financial assistance, and that this aligns with global warming of 3°C, rather than 1.5°C. Canada’s position, when broken down in such a way, comes to this: the cost to achieve an additional 40–45 percent emissions reduction (through increased domestic mitigation or climate finance) and thus an overall share of 140 percent reductions below 2005 levels by 2030, is so high that it is not justified by the harm which can be avoided by limiting global warming to 1.5°C, as compared to 3°C.²⁷⁸ With a threat as severe as climate change, citizens can reasonably expect their government to undertake such an assessment and be able to present the figures required to support its political decision not to pursue increased mitigation efforts.

²⁷⁷ *Harper*, *supra* note 21 at paras 110–11; *RJR-MacDonald Inc v Canada (Attorney General)*, 1995 CanLII 65 at para 160 (SCC). See also *Alberta v Hutterian Brethren of Wilson Colony*, 2009 SCC 37 at paras 53–54; *Health Services and Support - Facilities Subsector Bargaining Assn v British Columbia*, 2007 SCC 27 at para 150.

²⁷⁸ I am again using the quantification by Holz, *supra* note 206 (see item V-C.2(d), *above*) for illustrative purposes. It can be replaced by any figure that courts have determined to constitute Canada’s fair share at the previous steps.

5. *A Possible Objection: Canada's Efforts Have a Negligible Impact on Global Warming*

Before concluding, I want to address a possible objection that might be raised by governments, which is that Canada's share in global emissions is small—1.41 percent in 2023—and so is the impact of Canada's conduct on plaintiffs.²⁷⁹ As previously discussed, this is not a matter of causation or deprivation because any emissions contribute to global warming. Governments might, however, argue that it affects the assessment of gross disproportionality. Additional mitigation measures can be costly. They may impose direct burdens on people or divert resources from other important political objectives. The government could argue that reducing domestic emissions any further will not effectively address the harm experienced by plaintiffs. If other countries continue emitting at current high levels, global warming will reach unsustainable levels irrespective of Canada's actions. The negligible potential for further emissions reductions does not justify imposing any additional burden on Canadians.²⁸⁰

This, however, overlooks the broader impact of Canada's conduct as a participant in the international climate regime. States have long recognized that none of them can stop global warming on their own. As pointed out by the Supreme Court in the *Greenhouse Gas Reference*, "climate change can realistically be addressed only through international efforts."²⁸¹ International cooperation depends on reciprocity, meaning that sovereign states will only enter into agreements and remain party to them if others do the same.²⁸² The PA, as a matter of design, is not self-implementing but depends on state parties submitting their fair and ambitious NDCs and adopting the necessary domestic policies to achieve those NDCs. Such a cooperative system can only be successful if it is sufficiently credible that all parties will do their part. States are typically only willing to commit to ambitious action if others do the same and if they acknowledge

279 This should not diminish the fact that Canada is the tenth largest emitter worldwide and has higher per capita emissions than most countries (Crippa et al, *supra* note 27). The argument, rather, would be that Canada's emissions are small in absolute terms and reducing these emissions would not have a measurable effect on slowing global warming.

280 This concern has prompted at least one commentator to suggest that, from the perspective of human rights, developed countries should refrain from taking any mitigation action at all because the cost for the local population will likely exceed the benefits (see Mayer, *International Law Obligations*, *supra* note 82 at 136–43, 148).

281 *Greenhouse Gas Reference*, *supra* note 101 at para 190.

282 Sonja Klinsky et al, "Why Equity is Fundamental in Climate Change Policy Research" (2017) 44 *Global Env'tl Change* 170 at 171; Winkler et al, *supra* note 201 at 100.

other states' NDCs as fair.²⁸³ While each state on its own has incentives to underperform and free-ride on others' efforts, such conduct will prompt others to defect on their obligations equally. Conversely, if states take on fair contributions, this increases the willingness of others to do the same.²⁸⁴

Viewed from this angle, fairness is not only a requirement of global justice and equity.²⁸⁵ It is also *instrumental* for the effectiveness of international cooperation.²⁸⁶ This was emphasized by the German BVerfG in *Neubauer*: "Germany's contribution in this regard must be determined in a way that promotes mutual trust in the willingness of the Parties to take action, and does not create incentives to undermine it".²⁸⁷ Canada's conduct thus has a broader impact than simply adding 1.41 percent to the level of GHG in the atmosphere. It also influences—for better or worse—the mitigation efforts by other states.²⁸⁸

VI. CONCLUSION

This paper has proposed an alternative method for assessing gross disproportionality under section 7 of the *Charter* in climate change litigation. Rather than determine absolute mitigation obligations, courts should approach this task through a justificatory lens and evaluate the evidence

283 Winkler et al, *supra* note 201 at 100; Swingle, *supra* note 183 at 144–45.

284 Harald Winkler, "Putting Equity into Practice in the Global Stocktake Under the *Paris Agreement*" (2020) 20:1 Climate Pol'y 124 at 125. The Canadian government accepts this argument (see *La Rose* FCTD (Statement of Defence), *supra* note 220 at para 45).

285 Peter Lawrence & Michael Reder, "Equity and the *Paris Agreement*: Legal and Philosophical Perspectives" (2019) 31:3 J Envtl L 511 at 517–22 provide a helpful categorization and discussion of five different criteria for understanding equity.

286 Oran R Young, "Does Fairness Matter in International Environmental Governance? Creating an Effective and Equitable Climate Regime" in Jon Hovi, David M McEvoy & Todd Cherry, eds, *Toward a New Climate Agreement* (Abingdon: Routledge, 2014) 16 at 17; Lawrence & Reder, *supra* note 285 at 511; Caroline Zimm & Nebojsa Nakicenovic, "What Are the Implications of the *Paris Agreement* for Inequality?" (2020) 20:4 Climate Pol'y 458 at 459.

287 *Neubauer*, *supra* note 17 at para 225. The ECtHR similarly noted that Switzerland's obligation under human rights law was to "do its part" in ensuring adequate protection from the threat of climate change (*Verein Klimasenioreninnen*, *supra* note 46 at para 545). See also *Urgenda*, *supra* note 44 at para 5.7.7.

288 A related approach has been proposed by Mayer, *International Law Obligations*, *supra* note 82 at 158, who argues that states have an obligation, as a matter of human rights, to enter into and fulfil their obligations under international agreements designed to mitigate climate change. In my view however, Mayer does not take this proposal far enough. See the discussion by Eva Linde, "Book Review – Benoît Mayer, *International Law Obligations on Climate Change Mitigation* (Oxford, UK: Oxford University Press, 2022)" (2022) 19:2 MJSDL 3 at 16–17.

by adjusting the standard of proof. The initial burden is on the plaintiffs to make a convincing *prima facie* case, based on available scientific and normative-ethical studies, to demonstrate that Canada's policies align with levels of global warming that cause grossly disproportionate harm to them. The government can counter the plaintiffs' approach to the evidence with its own trajectory or show that its choices are not grossly disproportionate to the objective of the law, under section 7, or justified by overriding societal interests under section 1 of the *Charter*.

This approach allows courts to break down the assessment into parts that are manageable by judicial standards. It furthermore increases transparency of both governmental decision-making, which is helpful for forming public opinion about the adequacy of climate policies, and judicial decisions, thus ensuring predictability of outcomes in future cases.²⁸⁹

²⁸⁹ As Simon Donner remarked before the 2019 federal election, the core criticism of political parties' climate proposals is not that they are too weak, but rather, the parties claim that proposals represent Canada's fair share to achieve the 1.5°C target without support (see "Canada's Remaining Carbon Budget: Frequently Asked Questions" (27 November 2019), online: <simondonner.com/2019/11/27/canadas-remaining-carbon-budget-frequently-asked-questions/>). If the government made clear that its policies were in fact in line with a 3°C target, or that pursuing 1.5°C requires a sharp increase in emissions reductions after 2030, or that the calculation was based on fair-share criteria that were hardly acceptable to other states, public opinion on climate policies might indeed change.

