

Urban Justice in a Changing Climate:
Rethinking Equity and Justice Criteria to Assess
Climate Action Planning in Canadian Municipalities

by

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A thesis
presented to the University of Waterloo
in fulfilment of the
thesis requirement for the degree of
Doctor of Philosophy
in
Planning

Waterloo, Ontario, Canada, 2024

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The following served on the Examining Committee for this thesis. The decision of the Examining Committee is by majority vote.

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Author's Declaration

I hereby declare that I am the sole author of this thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners.

I understand that my thesis may be made electronically available to the public.

Abstract

As climate change accelerates, communities around the world are forced to confront the risks and opportunities that arise from climate disruption. Socially and economically marginalized groups are particularly vulnerable, facing the greatest impact and the risk of being further disadvantaged by poorly designed climate change policies that fortify longstanding disparities. Climate action plans are rapidly being developed across governance scales to promote ambitious climate action and progressive social reform, but progress to date has focused more on addressing environmental goals than ensuring social equity. Key challenges include addressing the differential impacts of climate change on vulnerable groups, capturing the needs and priorities of underserved communities in climate change plans, and identifying concrete actions dedicated to advancing the fair distribution of environmental benefits and burdens.

This dissertation considers the nature of equitable climate action planning by exploring the plan content and process conditions that are required to advance socially just planning responses to climate change. The analysis is based on three key contributions: 1) an exploration and comparison of scholarly and equity-deserving perspectives regarding the meaning of social equity and climate justice; 2) an analysis and comparison of equity-related needs and priorities across cities with diverse demographics, policy environments, and social climates; and 3) an evaluation of the equity and justice orientation of a sample of municipal climate action plans.

The dissertation builds an argument that current approaches to climate action planning in Canadian municipalities generally remain unresponsive to the needs and priorities of underserved communities. Key concerns include prioritizing environmental and economic imperatives relative to social equity goals, the tendency to overlook underlying drivers of inequity, the framing of equity as an incidental and ancillary benefit of climate action, and the disconnect between commitments to social justice and planned climate actions.

The dissertation draws on diverse perspectives on environmental equity, climate justice, and community engagement to recommend tangible actions that could be taken by municipal planners and policymakers to strengthen the equity orientation of their climate action planning efforts.

Acknowledgments

My decision to pursue doctoral studies resulted from a great deal of uncertainty following a series of personal and world events that left me wondering what was next. During this time, I was incredibly fortunate to meet Dr. Mark Seasons, an experienced planner and dedicated mentor whose curiosity and enthusiasm about the world of planning is what sparked my own. Mark, thank you for offering me your expertise, strategic advice, and words of encouragement over these four years. You have simultaneously guided my professional development and nurtured my independence as a researcher.

I would also like to thank the other members of my doctoral committee: Dr. Carrie Mitchell, your expertise and authenticity have been an incredible asset in my development as a researcher. Dr. Martine August, your thoughtful consideration of my work has reminded me to maintain a critical eye and to continually question my assumptions. Dr. Dan McCarthy, your pragmatic advice has been invaluable to the betterment of my research, and your optimism and enthusiasm about my work has uplifted me and developed my confidence as a researcher. There are several others in the School of Planning and beyond whose advice and support has been invaluable in the completion of this dissertation – thank you for sharing your time and for making the end of this journey bittersweet.

And finally, to the people who have been by my side on the best and worst days of these last four years and all the ones before – my sisters, Riannon and Janessa, and my parents, Lynn and Kirk – I owe you an abundance of gratitude for your unconditional love and support. To my husband, Kevin, who has been a source of encouragement and motivation, thank you for seeing me through this process. In the end, I would like to dedicate this dissertation to my Mom, Dr. Lynn Swanson, who embodies brilliance and perseverance, and whose guidance and words of wisdom I have always relied on the most.

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Chapter 1: Introduction

1.1. Research Context

The effects of climate change are increasingly being experienced in communities around the world through disruptions to our natural and social systems. Several studies have demonstrated that climate change disproportionately affects low-income and minority communities because these groups receive fewer resources to anticipate and recover from climate change impacts (Kashem et al., 2016; Long & Rice, 2019). Climate disruption can also exacerbate existing gender, racial, and socio-economic inequalities (Anguelovski et al., 2016; Steele et al., 2012). Responses to climate change may also create a ‘triple injustice’ (Bell, 2014) where the double inequality of climate change – that those who are least responsible for causing climate change are positioned to suffer the most from its effects – is compounded by climate action policies that exacerbate social and distributional consequences for groups that are already disadvantaged (Anguelovski et al., 2016; Bulkeley et al., 2013).

As the pace of climate change accelerates, climate action plans (CAPs) are rapidly being developed across a range of geopolitical scales as a comprehensive policy mechanism for reducing carbon emissions and adapting to the risks and opportunities posed by climate change (Reckien et al., 2018). Specifically, CAPs establish policies and programs for reducing local contributions to climate change and identify strategic actions to help communities adapt to the consequences of climate disruption (Boswell et al., 2012). From an equity standpoint, CAPs have the potential to serve as “tools of social and racial justice by tackling longstanding disparities and inequities within cities” (Schrock et al., 2015, p. 282), but the extent to which CAPs currently serve this purpose remains unclear. Moreover, the urgency for the adoption of CAPs means cities often overlook social justice and equity considerations relative to environmental and economic imperatives (Long & Rice, 2019; Russo & Pattison, 2016; Schrock et al., 2015).

Advocates of progressive climate action note that planning is critical for delivering climate adaptive projects on the ground (Rosenzweig et al., 2018), but planning practice has played an ambiguous role in advancing social equity and justice as part of these projects (Chu & Cannon, 2021). Ambiguity surrounding the efficacy of climate action planning for advancing

social justice goals is concerning given research demonstrating that equity and justice are essential components of achieving adequate, fair, and enduring climate action (Klinsky et al., 2017). Accordingly, there is a need for research exploring the conditions for equitable and just climate action planning processes and outcomes.

Given the role of planning in advancing climate action, and the connections between climate change and various forms of urban inequity, we need to understand the consequences of climate action planning for marginalized and equity-deserving populations. Specifically, we need to explore how equity and justice criteria are embedded within municipal climate action plans, and consider whether these criteria reflect and respond to local context and conditions. Accordingly, **the purpose of this research is to explore the following overarching research question: Does municipal climate action planning in Canada adequately consider and address the needs and priorities of equity-deserving groups, both in terms of process and outcomes?**

1.2. Underlying Social Processes Driving Inequity

Throughout this dissertation, I describe the ways that climate change exacerbates existing inequities tied to gender, racial, and socio-economic inequalities. I also refer to the underlying social processes that drive these inequalities, namely capitalism, settler colonialism, racism, and patriarchy. An in-depth discussion of these themes was deemed out of scope for the three central chapters of the dissertation because these chapters focus on research findings. However, it is important to unpack these themes to clarify the role these processes play in creating and perpetuating the forms of inequity that are discussed throughout the dissertation. The purpose of this section is thus to frame and contextualize my work by detailing the forces that generate and reproduce inequity in society, which are critical for planners and policymakers to understand.

Given the expansive discourse about these themes and the broad range of studies to which these social processes relate, I have scoped my review by describing processes of capitalism, racism, settler colonialism, and patriarchy as drivers of inequity in the context of environmental planning and climate change. Readers should note that these processes are entangled and mutually reinforcing; the concepts are discussed separately here for organizational purposes rather than to suggest that these processes occur independently.

Capitalism

Human-induced climate change and its differentiated impacts are often attributed to the unsustainability of capitalism as an economic model. The growth orientation of our current capitalist system and its associated consumption patterns have driven severe environmental damage and wealth disparity (Malm, 2016; Klein, 2014). As such, there is debate among scholars about whether climate justice and capitalism can co-exist. While some scholars argue that societal structures rooted in capitalism will change incrementally under continued pressure for justice (Fainstein, 2010), others maintain that justice cannot be achieved within the confines of a capitalist political economy.

The latter group argues that capitalism fails as a framework for justice because its main tenets obfuscate historical and contemporary forms of oppression that generate and sustain inequity (Brand, 2015; Machado de Oliveira, 2021). Specifically, capitalist development requires the continued displacement of Indigenous and other marginalized peoples who are an impediment to capital accumulation, and the creation of labour systems that rely on the exploitation of disempowered groups (Bonds & Inwood, 2015). Capitalism has thus been linked to dispossession of Indigenous peoples and the oppression of communities of colour through processes of racial capitalism¹ and settler colonialism (Bell, 2014; Kojola & Pellow, 2021; Porter et al., 2020).

Capitalism also advances discourses about the environment that are at odds with environmental and climate justice, namely that environmental concerns should not stand in the way of progress, defined as capital accumulation and growth (Harvey, 1996). Critical scholars argue that environmental and climate justice cannot be realized under a capitalist political economy because capital accumulation requires that environmental concerns are subservient to concerns related to growth and economic efficiency. The key takeaway for readers is that capitalism drives climate change by promoting unsustainable levels of production and consumption, which are sustained by the exploitation of marginalized groups' land and labour.

¹ The concept of racial capitalism asserts that the exploitation of people of marginalized racial identities and capital accumulation are mutually reinforcing.

Racism and Settler Colonialism

Racial bias is inherent in environmental planning and decision-making and is reinforced by social and economic processes that give non-racialized residents an edge in gaining access to a healthy physical environment (Bullard, 1993). Spatial planning has often implicitly and sometimes explicitly supported land use patterns that disproportionately expose minority groups to environmental hazards and confine marginalized and vulnerable members of society to poor housing, precarious work, and insecure landscapes (Steele et al., 2012). The concept of environmental racism asserts that there is a direct connection between the devaluing of communities of colour and the siting of environmental hazards. Racism influences decisions about local land use and the enforcement of environmental regulations such that race has been found to be an independent factor in predicting the distribution of pollution, food insecurity, hazardous sites, and toxic industries (Bullard, 1993; Steele et al., 2012; Wilson, 2010).

Environmental racism is enabled by white supremacy, defined as the presumed superiority of white racial identities in support of the cultural, political, and economic domination of non-white groups (Pulido, 2015). As a central organizing concept for Western society, white supremacy is foundational to the development and maintenance of settler colonial states such as Canada (Bonds & Inwood, 2015).

White supremacy enables settler colonialism and the corresponding dispossession of Indigenous peoples through capitalist exploitation of resources and anti-Indigenous government policies (Whyte, 2016). Because of the permanence of settler societies, settler colonialism is theorized as an enduring structure requiring constant maintenance with the goal of erasing Indigenous populations and cultures (Wolfe, 2006). Settler colonialism necessitates the disappearance of Indigenous people, the capture of Indigenous lands, and the exploitation of marginalized peoples to maintain a capitalist economic order (Bonds & Inwood, 2015).

The environmental justice movement emerged in response to these and other concerns. Specifically, environmental justice focuses on redressing socio-environmental problems that have traditionally been ignored by mainstream environmental organizations, especially racial discrimination in environmental policymaking, the deliberate targeting of Indigenous communities and communities of colour for undesirable land uses, and the exclusion of people

of colour from leadership within the environmental movement (Agyeman et al., 2016; Wilson, 2010). Environmental justice connects the struggle to reduce environmental inequities to struggles to end other forms of social injustice in housing, education, employment, health care, and criminal justice (Bullard, 1993). The movement goes beyond describing and documenting injustice to a thorough analysis of the underlying reasons for disparity, especially the devaluing of communities of colour relative to their white counterparts (Schlosberg, 2013). As an expansion of environmental justice, the climate justice movement highlights the disparate impacts of climate change on populations who have historically experienced environmental injustice.

Wilson (2010) makes the connection between race, the environment, and social power plain by describing two pervasive patterns that are rooted in racial bias. First, communities that are *not* comprised of the dominant racial and social class host social and environmental externalities while the dominant racial and social class benefits from the devaluation of these communities. Second, inequities in resource distribution tied to the disempowerment of marginalized communities allow dominant populations to increase their social and economic capital while non-dominant communities experience destabilization, underdevelopment, and reduced quality of life. Planners and policymakers committed to advancing environmental and climate justice must be aware of these patterns and the racial biases that drive them.

Patriarchy

Patriarchy – defined as a system of social relations in which there is gender-based inequality between socially defined men and women (Nash, 2020) – has implications for the distribution of resources and opportunities among members of society. In a patriarchal society, women experience reduced access to resources, limited participation in decision-making processes, and greater caring responsibilities compared to their male counterparts (MacGregor, 2010). Women tend to possess reduced social and economic power because attributes seen as “feminine” or pertaining to women are undervalued, while attributes regarded as “masculine” or pertaining to men are privileged (Nash, 2020). Accordingly, women are disproportionately affected by climate change because social disempowerment translates to increased vulnerability (i.e., greater physical exposure and sensitivity to risk) and reduced adaptive

capacity (i.e., lesser ability to respond to impacts). It is important for readers to understand that women are not inherently more vulnerable to climate disruption than men; rather, patriarchal systems perpetuate women's roles as primary caregivers which, combined with cultural constraints on their mobility and attainment of assets, makes women more vulnerable to climate change (Agostino & Lizarde, 2012; Wijsman & Feagan, 2019).

Patriarchy also promotes a heteronormative worldview, where the social attitudes and values described above lead to the disempowerment of 2SLGBTQIA+ communities. In a heteropatriarchal society, 2SLGBTQIA+ people experience forms of social exclusion that limit access to economic opportunities, leading to higher rates of poverty (Mann et al., 2024). As such, 2SLGBTQIA+ people are more likely to live in areas with poorer infrastructure and fewer resources, creating more exposure and susceptibility to climate disruption.

In summary, processes of capitalism, racism, settler colonialism, and patriarchy have important implications for studies focused on climate change because these ideologies justify the various types of oppression that contemporary environmental injustices are based upon. Vulnerability to climate change is thus a product of structural conditions rather than an inherent attribute of certain populations.

Readers should note that I understand equity – and correspondingly, justice – as contingent upon the processes operating in society. Harvey (1996) advances three key arguments that I find useful for understanding how underlying processes affect our ability to realize justice. First, social processes are more fundamental than spatial form, meaning invisible forces are as important as the physical environment for determining how the urban landscape is configured. Second, social processes are mediated through the ways of thinking and power relations they produce, sustain, and dissolve, meaning the social attitudes and values described in the preceding sections hold tremendous power in shaping our society. Third, the social relations that are produced through the processes described above are the bases of daily existence. The sections of this dissertation that pertain to equity and justice (both generally and with respect to climate change) assume that identities are forged out of social conditions and embedded in social processes (Harvey, 1996). Therefore, perpetuation of identities depends on perpetuation of the processes that give rise to them.

1.3. Literature Review

The dissertation's literature review comprises two conceptual papers that review key scholarship related to my research and outline the theories that underpin my study. The first paper, titled "Centering equity and justice in participatory climate action planning: Guidance for urban governance actors" was published in *Planning Theory and Practice*. This paper clarifies the main discourses around the concepts of equity and justice – namely distributive, procedural, and recognition justice – and identifies areas of agreement and disagreement within and between these paradigms. The paper then connects these concepts to participation theory by considering the practical implications of justice theory for plan design and implementation.

The second paper, titled "Equity and justice in climate action planning: The challenge of evaluation" was published in *Canadian Planning and Policy*. This paper connects justice, participation, and plan quality literature to identify plan attributes that advance equity and justice in the context of climate change. While the first paper in this section clarifies the meaning of equity and justice, the second paper explores the application of these concepts to plan evaluation theory and practice. Together, the two papers provide a comprehensive review of key areas of scholarship underpinning my study (namely equity, justice, participatory planning, plan quality, and plan evaluation literature) and connect these bodies of knowledge.

Because these papers were published as standalone articles, readers will notice that in addition to reviewing relevant literature, each paper also offers recommendations for planning theory and practice. In this way, the dissertation's literature review differs from a traditional synthesis of relevant literature. Sections 1.3.1 and 1.3.2 should be read as standalone papers that, when considered together, set up the dissertation by mapping the landscape of current knowledge regarding equity, justice, participation, plan quality, and plan evaluation, and clarifying how these areas of scholarship interact.

The two papers appear as published in *Planning Theory and Practice* and *Canadian Planning and Policy* (full citations below). Some minor formatting changes were made to maintain consistency throughout the dissertation. Reference information follows the guidelines specified by each journal and is provided at the end of the dissertation.

- 1) **Swanson, K.** (2023). Centering equity and justice in participatory climate action planning: Guidance for urban governance actors. *Planning Theory and Practice*, 24(2), 207-223. <https://www.tandfonline.com/doi/full/10.1080/14649357.2023.2189288>
- 2) **Swanson, K.** (2023). Equity and justice in climate action planning: The challenge of evaluation. *Canadian Planning and Policy/Aménagement Et Politique Au Canada*, 2023(1), 23-37. <https://ojs.library.queensu.ca/index.php/cpp/article/view/15813>

1.3.1 Centering Equity and Justice in Participatory Climate Action Planning: Guidance for Urban Governance Actors

Advancing equity and justice in climate action planning (CAP) presents a considerable challenge for urban governance actors. This paper provides necessary and practical guidance for developing participatory approaches that help planners avoid perpetuating dominant knowledge systems and corresponding planning interventions that have brought us to the current state of climate change and social inequity. Advancing equity and justice in CAP requires reflexive, participatory practice that centers vulnerable residents and supports communication across differences in social position and systems of meaning. These actions require a fuller accounting of the underlying social processes that drive vulnerability to climate change.

Keywords: climate action planning; equity; justice; participation

Introduction

As climate change increasingly causes disruptions to our natural and societal systems, cities are rapidly developing climate action plans as a comprehensive policy mechanism for reducing carbon emissions and adapting to the risks and opportunities posed by climate change (Boswell et al., 2012). Debates about equity and justice are central to this trend, but clarity is needed about how these concepts are defined and deployed, and whether efforts to integrate equity and justice concerns into local climate action planning lead to better outcomes for marginalized residents.

The current state of municipal climate action planning indicates a discernible trend toward trying to address equity and justice concerns in local government planning systems, but substantive engagement with these concepts in climate action planning is mainly rhetorical (Finn & McCormick, 2011). Local governments recognize that equity and justice are essential for addressing disparate climate vulnerability, but proposed climate actions rarely direct resources to the people or places identified as vulnerable (Zoll, 2022).

At the same time, deliberation on climate change continues to privilege scientific and rational types of knowledge over ways of knowing that tend to be possessed by communities rendered less powerful through colonialism, racism, and structural discrimination (Byskov et al., 2021; Olazabal et al., 2021). Climate justice scholars emphasize the need to prioritize disadvantaged residents in our responses to climate change, but participatory planning

scholarship is much less explicit about the need to prioritize marginalized residents during decision-making processes. Consequently, the voices of people experiencing various forms of marginalization are largely excluded from so-called ‘participatory’ climate action planning processes (Anguelovski et al., 2016; Hughes, 2013).

With the shortcomings of current approaches in mind, this conceptual paper considers how municipal government planning systems might advance equity and justice goals in climate action planning. Specifically, I offer guidance for urban governance actors to develop participatory approaches that avoid perpetuating dominant knowledge systems and corresponding planning interventions that aggravate social inequity in the context of climate change.

I begin by clarifying the main discourses around the concepts of equity and justice, namely distributive, procedural, and recognition justice, and highlight the areas of agreement and disagreement within and between these paradigms. I then consider the practical implications of these dimensions of justice for plan design and implementation, focusing on how we decide who participates, and how, in planning processes. I argue that addressing equity and justice principles in climate action planning requires participatory processes that support communication across differences in social position *and* systems of meaning. I recommend a more reflexive form of participatory practice that centers vulnerable and marginalized residents, and a full accounting of the underlying social processes that drive vulnerability to climate change.

Recommendations are based on a review of urban justice, environmental justice, climate justice, and participation literature from planning and aligned disciplines. Peer-reviewed publications were selected using a snowball approach beginning with an initial Scopus search using variations of the terms justice, equity, climate change, climate action planning, and participation. The search was not time-bound. I then considered the cited references of the most relevant publications to identify additional publications focusing on either the theoretical underpinnings of equity, justice, and participation scholarship, or the practical application of these concepts to climate action planning. My approach was not meant to be exhaustive, but aimed instead to focus on selecting literature that is grounded in urban justice, climate justice,

and participation theory and/or offers insights into the application of these concepts to municipal climate action planning.

The result was a set of peer-reviewed publications focused broadly on principles and best practices for advancing equitable and just planning at the municipal scale, in the context of climate change. The recommendations derived from the literature review contribute to bridging theoretical understandings of justice with practical approaches to climate action planning, and to embedding equity and justice in the collective conscious and practice of planning.

Equity and Justice Discourses

Equity and justice are contested concepts that continue to be negotiated by actors with conflicting views and interests. Following Young (2001), I understand equity and justice as being intertwined in that we evaluate equity and inequity to make judgments about justice and injustice. For there to be justice, there must also be some form of equity, so my reference to the concepts of justice and injustice assumes a corresponding degree of equity or inequity.

Discourses around the concept of justice tend to focus on three overarching debates: *what* goods should be distributed, *how* goods should be distributed, and the *scale* at which justice should be pursued. These debates point to three key areas of focus for justice discourse: normative conceptions of justice based on principles of equity and fairness (distributive justice), the conditions for fair participation and democratic decision-making (procedural justice), and the influence of political, social, and economic forces on the distribution of power and resources (recognition justice). Additional types of justice including substantive, informational, interactional, and structural justice have been proposed to supplement the widely accepted distributive, procedural, and recognition dimensions, but these additional forms of justice are not addressed here (for a more detailed discussion of these concepts, see Swanson, 2023). The central claims and key debates within and between the distributive, procedural, and recognition justice paradigms are explored below.

Distributive Justice

Distributive justice concerns the allocation of benefits and burdens among members of society. Distributive justice discourse tends to be outcome-focused and is fundamentally concerned with who gets what, determined by normative principles of fairness. Distributive justice scholars make a clear connection between justice and the distribution of material resources by defining equity as redistribution (Krumholz, 2003), equating justice with fairness in how goods are distributed (Rawls, 1971), and arguing that redistribution is the only worthwhile criterion for evaluating public policy proposals (Davidoff, 1975).

Distributive approaches are challenged by critical theorists who argue that focusing on the fair allocation of material goods tends to ignore the social structures that determine distributional patterns (Nussbaum, 2000; Sen, 2009; Young, 1990). These scholars view purely distributive theories as insensitive to human diversity and neglectful of the social processes and relationships that affect the conversion of material goods into capabilities and substantive opportunities. Young (1990) notes that focusing on distributive patterns biases our thinking about social justice toward material goods without recourse for extending the concept of distribution to non-material social goods such as power, rights, and opportunities.

The capabilities approach challenges distributive models of justice by suggesting the key question we should be asking is not how many resources a person has, but rather what they can do with those resources (Nussbaum, 2000). Unlike the distributive approach, which reduces social justice to the fair distribution of resources, the capabilities approach proposes a fundamental shift from focusing on the means of living a person has, to their actual opportunities (Sen, 2009).

Although the distributive paradigm tends to overlook underlying social processes that lead to the inequitable distribution of resources and opportunities, distributive scholars generally agree that the most vulnerable members of society deserve special consideration in our redistributive efforts. Rawls' (1971) difference principle draws attention to the predicament of disadvantaged members of society by arguing that social or economic inequalities between residents should only be tolerated if those who are the worst-off will be better off than they might be under an equal distribution. For Davidoff (1975), the question of whether a proposed

action reduces the differences between the haves and the have-nots overrides every other justice consideration, and Krumholz (2003) calls on planners to advocate for social groups who are traditionally marginalized in participatory processes. With agreement that more equitable distribution of material goods is necessary, the question becomes whether redistribution is sufficient to achieve this goal.

Procedural Justice

The procedural justice paradigm shifts the focus of justice discourse to fair, transparent, and inclusive-decision making processes (Davoudi & Brooks, 2014; Meerow et al., 2019). Procedural justice complements distributive justice by focusing on process rather than outcome, taking into account power relations and social processes that affect participation. This shift occurred in response to critiques that outcome-focused distributive theories fail to consider the justice of procedures for making distributional decisions (Hunold & Young, 1998). Scholars advocating procedural justice argue that democratic decision-making processes are a condition of social justice (Shi et al., 2016; Young, 1990), and that participatory processes are necessary to avoid domination of marginalized groups (Bell, 2014).

Like the distributive paradigm, procedural justice approaches have been criticized for neglecting the root causes of inequity (Fainstein, 2010), and for failing to deliver on the promise of ensuring adequate representation of all groups, achieving meaningful forms of participation, preventing powerful interests from defining the agenda, and protecting minority rights (Blue et al., 2019; Hillier, 2003; Tewdwr-Jones & Allmendinger, 1998). The concept of recognition as a critical dimension of justice emerged in response to these concerns.

Recognition Justice

Recognition justice calls for understanding the underlying social processes that determine distributive patterns and lead to oppressive participatory processes. The concept of recognition justice supplements procedural approaches that stress the need to recognize different interests, values, and priorities but do not consider that recognition itself is socially constructed and often contentious (Chu & Michael, 2019). Recognition justice considers how certain populations are made visible or invisible in policy development processes, who is

considered a relevant stakeholder, and whose needs are prioritized during participatory processes (Klinsky & Mavrogianni, 2020).

Theoretically, procedural and recognition justice should be co-constitutive, but practically, procedural justice does not guarantee recognition. The concept of recognition is often conflated with representation (assuming groups are recognized if a 'representative' is present to advocate for group interests during participatory processes), and has been misused as a catch-all phrase for the act of including minority groups in participatory processes (Yiftachel et al., 2009).

Ongoing Debates

There is conceptual consensus on the core concerns of the distributive, procedural, and recognition dimensions of justice, but there is ongoing debate about the relative importance of each dimension in achieving equity and justice goals. Disagreement about the relative importance of distributive, procedural, and recognition justice comes down to the question of whether justice relies more on good processes or good outcomes. For theorists concerned with procedural justice, the principal test of good policy is the inclusion of diverse voices in its development (Innes, 1996). Outcome-focused theorists argue that process-oriented approaches are inadequate because democratic processes do not necessarily produce equitable outcomes (Fainstein, 2010). Instead, these scholars focus on whether the substantive outcomes of planning processes are equitable as a measure of justice. Others recognize that just responses to urban inequity rely on fair processes *and* equitable outcomes; these scholars believe responding to the inequitable distribution of resources and opportunities requires us to think about distributive patterns *and* the underlying social processes that enhance opportunities for some people while constraining them for others (Adger et al., 2006; Meerow et al., 2019).

There is also debate about whether urban justice can be achieved within the confines of a capitalist political economy. Scholars who argue that urban social justice and capitalism can co-exist assume societal structures will change incrementally under continued pressure for justice (Fainstein, 2010). Others maintain that the current political-economic context fails as a framework for justice because its main tenets obfuscate historical and contemporary forms of

oppression and exclusion that create and sustain inequity (Brand, 2015). From this perspective, efforts to achieve justice within the existing capitalist system will only mitigate the worst outcomes of an inherently unjust system (Harvey & Potter, 2009). Instead, the path to justice requires us to confront and fundamentally restructure power relations and social processes that give rise to injustice (Marcuse, 2009; Young, 1990). Scholars who advocate transforming the current socio-economic organization of society acknowledge the need to work within the existing system in the meantime, but argue that not imagining alternatives predestines us to fail (Machado de Oliveira, 2021; Marcuse, 2009).

Davoudi and Bell (2016) offer three areas of focus for justice discourse that are useful for advancing debates about how the concept of justice should be defined and deployed. First, we need to adopt a pluralistic understanding of justice that acknowledges the shortcomings of a purely distributive focus and encourages deeper understanding of the relationships and interconnections among different dimensions of justice. Second, we need to adopt a relational understanding of the city as both a site of injustice, and a producer of injustice. Finally, we need to explore how (in)justice at one spatial scale exacerbates or ameliorates (in)justice at another spatial scale. These areas of focus are key for understanding how different dimensions of justice interact to create more or less equitable outcomes at the city scale and beyond. The practical implications of the discourses and debates discussed above for planning process design are explored below.

Implications of Justice for Participatory Process Design

Distributive, procedural, and recognition justice have practical implications for plan design and implementation, namely engaging diverse voices in the development of equity- and justice-oriented plans. Lake (2016) makes the connection between justice and participatory planning processes clear:

A first step in redirecting planning practice toward justice as its subject involves developing a fuller understanding of the variety of justice claims, the sources from which they spring, the types of justifications forwarded in their support, and how these claims are mobilized and deployed to affect planning outcomes in specific settings. (p. 411)

Building inclusionary planning processes is a considerable challenge for urban governance actors, but these processes are necessary to ensure marginalized groups can participate in decision-making, which is integral to realizing equitable distributive outcomes (Meerow et al., 2019). Developing equitable and just planning interventions requires the active engagement of underrepresented groups in participatory planning processes. Facilitating such processes in settings characterized by multiple worldviews and ways of knowing requires planners to do two things: first, they must accommodate diverse worldviews, and second, they must reconcile differences between groups arising from these worldviews (Umemoto, 2001). To advance both procedural and recognition justice, participatory planning processes must be designed to support communication across differences in social position *and* systems of meaning.

Turnhout et al. (2010) argue that participatory planning processes will always be exclusive in some way because they come with restrictions on the scope of the discussion, assumptions about the issues at stake, and expectations about outcomes. Among the factors that constrain the outcomes of participatory processes, issue framing is critical. Framing not only determines the way an issue is defined and how it should be addressed, but also shapes the publics that form around the issue and the political action that emerges in response (Blue, 2016). Climate action planning, for example, often focuses on the concept of vulnerability, but rarely frames problems and solutions in terms of the underlying causes of vulnerability (Malloy & Ashcraft, 2020). Framings of climate change that lack a substantive connection to the drivers of vulnerability (such as social and economic status) can perpetuate injustice by framing disempowered groups as inherently vulnerable, while obfuscating underlying social processes that determine distributional patterns of vulnerability.

Narrow issue framing can lead to superficial and tokenistic participatory processes that involve choosing between predetermined policy alternatives informed by a narrow definition of the issue being addressed (Arnstein, 2019[1969]; Turnout et al., 2010). These processes create an “illusion of inclusion” that occurs when fundamental decisions about planning interventions have already been made prior to public deliberation (Few et al., 2007, p. 46). Such an approach undermines the purpose and potential benefits of participation by restricting the possible

outcomes of the process to those emerging from the dominant issue frame. Establishing sound participatory processes that challenge rather than endorse the status quo requires planners to consider “how issues are framed and by whom, as well as who participates and how, according to whose terms of reference, and under which structural patterns of advantage and disadvantage” (Blue et al., 2019, p. 372). These questions have important implications for recognition justice—moving beyond reflections on who is represented in decision-making processes (i.e., procedural justice) to approaches that consider who defines the problem, which questions are asked, and what possible solutions and alternatives are up for discussion re-centers decision-making processes around underrepresented groups (Schrock et al., 2022).

Determining the Parameters of Participation

Participatory processes are inevitably selective when it comes to who can participate (Turnhout et al., 2010), and the nature of an agonistic setting means that “some views will almost inevitably be suppressed” (Hillier, 2003, p. 41). Recognizing this reality, the challenge becomes deciding who participates in planning processes, and how, so that these processes are as equitable and just as possible. When it comes to climate action planning, participatory approaches are needed to ensure diverse populations can shape the framing of the climate challenge (Meerow & Woodruff, 2020).

However, there appears to be a discrepancy between who *should* be engaged in climate action planning processes according to procedural and recognition justice ideals, and whose voices are actually heard during these processes. Scholars recognize that achieving social justice requires us to listen more intently to the voices of those who are marginalized or oppressed (Sandercock, 1998); yet, the voices of people experiencing overlapping, concurrent forms of oppression are still largely ignored in climate policy processes (Abimbola, 2021). This exclusion can be partly attributed to power inequalities that allow dominant types of knowledge to be privileged over forms of knowledge that tend to be possessed by less powerful communities (Byskov et al., 2021). Consequently, local knowledge is often devalued and crowded out during participatory processes.

Specifically, so-called expert-driven approaches to public deliberation on climate change—which tend to privilege universal and rational types of knowledge—have marginalized

non-scientific perspectives and alternative frames of reference (Blue, 2016; Olazabal et al., 2021; Wijsman & Feagan, 2019). Dominant frames of climate change have implications for how the issue is approached in public and policy arenas, namely whose worldviews and ways of knowing are recognized and valued, and consequently, who can have their voice heard during planning processes. Blue (2016) argues that climate change discourse has implicitly granted scientific and technical experts the right to adjudicate on public deliberations about climate change, effectively granting power to define matters of widespread concern to a few elites who are disproportionately affluent white males (in other words, *not* those who tend to suffer the most from climate disruption). The types of knowledge favoured by this group of actors become viewed as the norm or standard against which other ways of knowing are compared and evaluated.

A consequence of the crowding out of non-scientific knowledge has been the framing of climate actions in terms of technological fixes that tend to ignore the multi-faceted conditions that give rise to vulnerability, such as social marginalization and exclusion. Accordingly, climate action tends to neglect social justice concerns and instead “present climate change in reductionist technical terms” (Abimbola et al., 2021, p. 14). Privileging scientific approaches over other ways of knowing implicitly defines the *kinds* of participation available to different groups by requiring that people see the world from a certain perspective to enter debates about climate change (Blue, 2016). Socially marginalized groups of actors who are unable to express themselves in scientific terms are thus excluded from participatory processes (Wijsman & Feagan, 2019), or end up having their needs and interests interpreted and communicated by more privileged actors whose worldviews align more closely with the dominant issue frame (Fitzgibbons & Mitchell, 2021).

Keeping these realities in mind, the scope of knowledge – and correspondingly, the scope of actors – we consider during participatory processes should be expanded to include what Olazabal et al. (2021, p. 828) refer to as “subaltern” knowledge. Subaltern knowledge, which encompasses knowledge embedded within the worldviews, social relations, and traditions of different social groups, is vital for generating place-based and socially legitimate climate actions, but is typically excluded from dominant frames of reference and expert-led

practices for addressing climate change. Olazabal et al. (2021) note that some efforts have been made to incorporate subaltern knowledge within scientific assessments of climate change, but these efforts are emerging and disparate.

Where efforts to include subaltern and alternative ways of knowing are made, this knowledge must be translated so it is legible to the dominant frame of reference (Jimmy et al., 2019). Efforts to integrate or incorporate the most familiar or seemingly useful aspects of subaltern knowledge into pre-existing scientific frameworks are extremely problematic, as these efforts generally involve contorting or erasing differences that are essential to the internal integrity of subaltern worldviews.

Rather than replacing dominant and subaltern approaches with some combined version that co-opts the ‘best’ elements of each, co-productive approaches to problem framing are needed. Here, ongoing interactions between different knowledge systems contribute to gradually interweaving formerly disparate worldviews (Olazabal et al., 2021). Co-productive approaches resemble the practice of “braiding” (Jimmy et al., 2019, p. 21), where distinct ways of knowing are interwoven to create a new and contextually relevant approach, without erasing integral elements of either sensibility.

Expanding our conception of knowledge in climate action planning to recognize subaltern ways of knowing is akin to redirecting current participatory processes toward more just approaches (Olazabal et al., 2021). Having demonstrated the contentious nature of the concepts of equity and justice and explored the implications of these concepts for participatory process design, the remainder of this paper considers how local government planning systems can advance equity and justice goals through their planning interventions.

Advancing Equity and Justice in the Local Government Planning System

Municipal governments are well-positioned to implement policies to protect residents against climate disruption because cities are both substantial contributors to climate change, and the sites where impacts are felt most acutely (Boswell et al., 2012; Guyadeen et al., 2019). Scholars suggest that city-scale climate actions should target vulnerable groups (Hughes, 2013; Reckien et al., 2017), and that participatory processes should include special efforts to

encourage participation by those who are normally underrepresented or left out, especially low-income and racialized residents (Finn & McCormick, 2011; Meerow et al., 2019).

Municipal governments have noted that advancing equity and justice in climate action planning requires ensuring equal access to resources and services, prioritizing climate actions in vulnerable communities, reducing disproportionate risks, and focusing efforts on disenfranchised residents (Zoll, 2022). Yet, the current state of municipal climate action planning indicates that local government planning systems struggle to achieve equity and justice goals despite acknowledging their importance.

Current State of Municipal Climate Action Planning

There is a discernible trend toward trying to address distributional and procedural justice goals in the municipal government planning system (Chu & Cannon, 2021; Schrock et al., 2015), but substantive engagement with equity concerns in climate action planning “beyond the level of rhetoric remains rare” (Finn & McCormick, 2011, p. 412). Specifically, there appears to be a disconnect between rhetorical commitments to equity or justice and accompanying actions in local government plans.

A recent study by Zoll (2022) exploring how climate action plans in U.S. cities frame concepts of equity and justice found that while 85% of plans acknowledged the unequal climate risks faced by vulnerable residents, and almost 70% of plans said equity and justice were important for addressing disparate climate vulnerability, less than 10% of proposed actions directed resources to the people or places identified as vulnerable. These findings corroborate previous studies that suggest plans often identify equity as a goal, but rarely carry that attention into proposed climate actions (Peterson, 2022; Sirigotis et al., 2022). Evidently, the inclusion of equity and justice language in local government planning documents is misleading as an indicator of a city’s progress toward delivering just outcomes (Sirigotis et al., 2022).

Progress on addressing the underrepresentation of minority groups who are structurally disadvantaged has also been slow. Scholars have found that despite the notable attention given to equity and justice within most climate action plans, these plans do not fully consider underlying socio-economic structures and drivers of inequalities that make some people and places vulnerable (Chu & Cannon, 2021; Zoll, 2022). This mismatch suggests a “dissonance

between naming vulnerability and the systems that create vulnerability” (Zoll, 2022, p. 14). In other words, cities recognize that vulnerable residents face unequal climate risks, but few unpack the root causes of these disparities. This finding suggests the need for wider recognition of the socio-spatial constraints that work to impede disadvantaged residents (Steele et al., 2012). For climate action planning, this means integrating theories of social vulnerability and neighbourhood change to understand *what* makes people vulnerable and *why* vulnerable people are concentrated in certain areas of the city (Kashem et al., 2016).

Identifying marginalized and vulnerable communities in the city is a critical but insufficient task for climate action planning. Policies explicitly designed to address the needs of these groups are essential, but climate action planning continues to overlook social equity concerns relative to environmental and economic imperatives (Russo & Pattison, 2016; Schrock et al., 2015). The emphasis on growth and efficiency (Steele et al., 2012), and the reorientation of policy priorities toward “strategically important environmental resources and assets and the weakening of the commitment to comprehensive approaches and concerns with social justice and equity” (Hodson & Marvin, 2017, p. 13, as cited in Long & Rice, 2019) means climate change policies have often compounded rather than improved inequity (Long & Rice, 2019; Shi et al., 2016; Russo & Pattison, 2016). Current approaches, which focus on accounting for exposure and physical vulnerability of the built environment, are insufficient; climate action planning also needs to account for underlying drivers of social vulnerability (Kashem et al., 2016). Commonly used tools such as vulnerability assessments are a valuable but partial means to this end. We also need wider recognition of the processes through which social vulnerability is generated, and an understanding of how and why patterns of vulnerability evolve over time.

Finally, in some cases there may be a trade-off between achieving long-term viability of municipal climate action agendas, and achieving equitable and just outcomes in the short term. Chu et al. (2016) found that broad-based participatory planning approaches involving several actors can contribute to more procedurally just and equitable outcomes in the short-term, but lead to equally broad climate action plans that lack guidance on how interventions are to be implemented, financed, and politically sustained in the long-term. Meanwhile, approaches that feature procedural justice considerations less prominently have led to durable climate action

interventions, but denied voice to vulnerable groups and confined decision-making responsibilities to elite community leaders (Chu et al., 2016). This trade-off implies that some local government planning systems may not be equally capable of advancing progressive climate action *and* equity and justice goals. This finding is concerning given the rapid pace of climate change and its close linkages to various forms of inequity. The shortcomings of local government planning systems in advancing equity and justice goals create considerable challenges for planners working in this context.

Role of the Planner in Advancing Equity and Justice

Although planners can facilitate participatory processes and can perhaps make minor redistributive decisions in response, they are constrained by the context in which they work (Brand, 2015) and can never be apolitical or value-neutral (Davidoff, 1975; Forester, 1999; Sandercock, 1998). Still, while planners cannot create social relations, they can help trends take shape (Forester, 1999), especially by influencing the conditions that determine whether people can participate effectively in decision-making processes (Lefebvre, 1968). This includes acknowledging the considerable power planners have in framing an issue by deciding which concerns to focus on and which disparities to draw attention to (Klinsky & Mavrogianni, 2020).

These decisions have important implications for determining which and whose experiences become visible. Our understanding and response to climate change is entangled with the way the issue is framed for public consideration; insofar as planners have control over the framing of issues during participatory processes, they can support recognition of various ways of knowing. Here, planners have an opportunity to engage subaltern voices that can expand the solution space for climate action by making different facets of the problem visible (Olazabal et al., 2021).

Planners do not necessarily have the power to implement policy on their own, but to the extent that planners gather community members' perspectives and present analyses of the costs and benefits of planning decisions, they can shift debate toward a greater concern with equity (Fainstein, 2010). For climate action planners, this step requires understanding the social processes and practices that have contributed to producing urban inequities, and a commitment to not reinforcing or replicating these through planning's responses to climate

change (Porter et al., 2020). Planners also need to reflect on and question the limited subset of social values that inform their work, then recognize and dismantle the biases inherent in these to avoid perpetuating injustice (Machado de Oliveira, 2021). My positionality as a white, educated, middle-class, able-bodied young woman implicitly informs the way I interpret and discuss the concepts of equity and justice, and my experiences of (in)justice associated with my social position shape the values and assumptions that motivate my work.

Lyles et al. (2018) advocate adopting a compassionate orientation that challenges planners to continually reflect on their approach to deciding who they include in their scope of concern, and Wijsman and Feagan (2019) advocate practicing reflexivity regarding how dominant types of knowledge bring certain concepts and realities into focus. At the same time, planners calling for justice need to face the ironies of doing so from a position enabled by the processes that have created and sustained injustice for less advantaged groups (Porter et al., 2020). This type of reflection, done by individual planners, would contribute to embedding equity and justice in the collective conscious of planning. Convincing planners to do this work is an ambitious but worthwhile goal.

Addressing Equity and Justice Principles in Climate Action Planning

Climate change presents a “tension between action that is urgently required, what is feasible given constraints of time and resources, and what may be required and desirable by justice ideals” (Byskov et al., 2021, p. 2). These circumstances make it immensely challenging to devise comprehensive climate actions that are both effective and justice-oriented. Conflicting perspectives on the nature of equity and justice mean “there are no coherent, widely held criteria for ensuring social justice” in climate action planning (Chu & Cannon, 2021, pp. 86-87), leading to confusion about the best approach. Irrespective of these challenges and debates, marginalized residents must be placed at the center of climate action planning.

Several studies have demonstrated that climate change disproportionately affects low-income and minority communities (Hallegatte & Rozenberg, 2017; Reckien et al. 2017), that these groups receive fewer resources to anticipate and recover from climate change impacts (Kashem et al., 2016; Long & Rice, 2019), and that disruptions often exacerbate existing inequities tied to gender, racial, and socio-economic inequalities (Anguelovski et al., 2016;

Steele et al., 2012). Responses to climate change may create a ‘triple injustice’ (Bell, 2014), whereby those who contribute to climate change the least are positioned to suffer the most from its effects, and are disproportionately affected by climate action policies that exacerbate the social, economic, and environmental challenges these groups already face (Anguelovski et al., 2016; Bulkeley et al., 2013). These patterns are evidence that low-income and minority communities disproportionately experience injustice in the context of climate change, justifying the need to place these groups at the center of our responses.

Justice as the Subject of Climate Action Planning

Climate action plans have the potential to serve as “tools of social and racial justice by tackling longstanding disparities and inequities within cities” (Schrock et al., 2015, p. 282). However, there is concern that climate action planning may not benefit all people equally, that plans may be shaped by elite interests in ways the reproduce existing disparities, and that climate actions might shift the dynamics and distribution of inequity (Byskov, 2021; Long & Rice, 2019; Shi et al., 2016). To avoid these regressive outcomes, a key goal of climate action planning should be to intervene in the social processes that reproduce inequities and constrain opportunities for certain people.

Lake (2016) argues that this type of intervention requires us to make justice the *subject* rather than the *object* of climate action planning. Justice as the *object* of planning makes justice a normative end that planning practice should strive to achieve, while justice as the *subject* of planning requires us to center justice considerations throughout the entire planning process (Lake, 2016). Climate action planning that takes justice as its subject is contextual rather than universal, anticipatory rather than retrospective, generative of solutions rather than evaluative of outcomes, and inclusive rather than expert-driven (Lake, 2016). Here, it becomes necessary to move beyond naming vulnerability to a more thorough analysis of the underlying historical and contemporary processes that make some people and places vulnerable (Peterson, 2022; Schlosberg, 2013). Participatory climate action planning processes are an integral part of this transition.

Procedural and Recognition Justice in Climate Action Planning

Scholars generally agree on the symbolic and substantive importance of broad participation in policy responses to climate change (Blue et al., 2019; Boswell et al., 2012; Wijsman & Feagan, 2019), and calls for public participation in the development of climate action plans are prominent in major policy documents that guide urban climate action, notably the United Nations Framework Convention on Climate Change (1994) and the Bali Principles of Climate Justice (2002). Nussbaum (2000) includes the ability to exercise control over one's environment by participating in decision-making processes on her list of essential human capabilities, while Harvey's (2003) conception of the right to the city demands that marginalized residents be included in shaping the conditions that affect their lives.

Scholars arguing for more equitable climate action planning stress the merit of inclusive and participatory processes for recognizing and addressing injustices (Meerow & Woodruff, 2020), influencing resource distribution (Meerow et al., 2019), and achieving equitable outcomes (Blue et al., 2019). Beyond these imperatives, there are knowledge-based reasons for including diverse social groups in climate action planning processes—vulnerable communities possess valuable knowledge about local conditions that informs effective context- and place-specific responses to climate change, and these populations have a right to influence the development of climate action strategies that affect them (Byskov et al., 2021; Chu et al., 2016; Few et al., 2017). Collectively, this evidence suggests that climate actions are more effective if they are designed and implemented with engagement by local actors.

Relative to urban, environmental, and climate justice literature, participatory planning scholarship is much less explicit about the need to prioritize marginalized and vulnerable residents during participatory processes. This is the case despite recognition that minority and low-income populations face barriers to engagement (Boswell et al., 2012; Lawless & Fox, 2001), and that inequalities in economic, social, and political power make some actors more capable of influencing decision-making processes than others (Adger et al., 2006; Byskov et al., 2021). Consequently, climate action planning processes are often devoid of meaningful inclusion or engagement of marginalized groups (Anguelovski et al., 2016; Chu & Michael,

2019), and subsequent plans rarely incorporate a description of steps taken to include marginalized communities in public engagement processes (Guyadeen et al., 2019).

The people we engage during planning processes need to reflect the people we want plan outcomes to target. For climate action planning, this means participatory processes need to make special efforts to engage groups who have been identified as vulnerable. Marginalized groups should be given special consideration during participatory processes for three key reasons: first, the disproportionate impact of climate change on marginalized residents means that what is good for the whole may not be what is good for marginalized groups; second, disempowered and marginalized residents tend to be disproportionately excluded from participatory processes because of barriers that hinder access to traditional public engagement forums (Lawless & Fox, 2001); and third, vulnerable populations are disproportionately exposed to the negative consequences of poorly planned climate action strategies (Byskov et al., 2021), so special efforts should be made to ensure proper recognition of marginalized groups so that such strategies are avoided as much as possible.

Recognition justice requires planners to find mechanisms that enable groups who are normally excluded from participatory processes to exercise power in these forums (Ortiz Escalante & Gutierrez Valdivia, 2015). Specifically, planners should create spaces where the knowledge and experiences of disempowered groups are made visible, and where these groups can speak for themselves during deliberative processes in which planners and community members jointly shape knowledge, frame issues, and develop solutions (Schrock et al., 2015). Such an approach increases the likelihood that local knowledge will contribute to developing effective and contextually-relevant responses to climate change (Thomas et al., 2018).

Toward Equitable and Just Climate Action Planning

Besides being grounded in principles of recognition justice, climate action plans must ensure the capabilities of marginalized or oppressed individuals so they can benefit from the interventions laid out in the plan. This will require specific efforts to redress histories of oppression and exclusion that have constrained opportunities for some groups (Porter et al., 2020). A capabilities-based approach to climate action can support these efforts by directing attention to the social conditions that create and sustain vulnerability to climate change

(Malloy & Ashcraft, 2020). Finally, to achieve the above, intersectionality should be an organizing principle for climate action planning to avoid designing policies that focus on single dimensions of inequity. Climate action plans need to simultaneously account for multiple inequities and associated compounding and overlapping vulnerabilities to avoid interventions that reproduce climate vulnerability in cities (Amorim-Maia et al., 2022).

Conclusions

This paper bridges planning theory and practice by offering guidance for translating urban, environmental, and climate justice discourse into practices that encourage an equity-orientation for climate action planning. Planning theory informs planning practice by framing debate and setting the terms for action (Barry et al., 2018), so advancements in our theoretical understanding of equity and justice – both generally and regarding climate change – should be carried into policies that enact these principles on the ground. Conversely, as urban governance actors continue to navigate the wicked problem of climate change, policy responses should be grounded in a robust theoretical understanding of distributive, procedural, and recognition justice.

Advancing equity and justice in climate action planning presents a considerable challenge for urban governance actors, but there are several ways forward. First, (in)equity and (in)justice are products of social relations that are constantly changing, so our strategies for realizing urban justice must also constantly be tweaked and re-worked. This idea applies to both theory and practice – our theoretical understanding of what justice entails should evolve as social relations do, and our practical strategies for advancing climate justice should be modified accordingly.

Second, planners need to view disagreement as an inescapable part of participatory processes and learn to work effectively in this context by designing collaborative spaces that recognize various ways of knowing. Planners facilitating participatory processes need to prioritize recognition justice by paying more attention to how issues are framed and by whom, and to what forms of knowledge are made visible and privileged within these frames. This kind of reflection can help planners avoid perpetuating the dominant knowledge systems and

corresponding planning interventions that have brought us to the current state of climate change and social inequity.

Third, climate action planning needs to address the current disconnect between the way equity and justice is discussed in plans, and the way solutions are implemented on the ground. Specifically, planners need to take seriously Zoll's (2022) call to address the dissonance between who cities say are vulnerable, their rhetorical commitments to equity and justice, and how they intend to distribute resources.

Overall, these actions require more work to understand and tackle underlying social processes that drive vulnerability to climate change. Planners and other actors must acknowledge that contemporary injustices cannot be overcome without a full accounting of the forces that create and sustain various forms of inequity (Peterson, 2022). Looking forward, climate action planning should be grounded and contextualized in political, social, and economic realities, and framed in a way that explicitly recognizes the underlying causes of vulnerability. This will require planners to be attuned to existing and emerging inequities, and focused on designing interventions that aim to transform unjust social relations (Blue et al., 2019). Here, the concept of intersectionality should be applied to examine overlapping systems of disadvantage and oppression that create new or exacerbate existing vulnerabilities to climate change. Planners need to acknowledge intersecting identities, and recognize that these identities are shaped by social processes that influence access to resources and the ability to participate in decision-making. Operationalizing this type of intersectional thinking in climate action planning would support local government planning systems in devising more integrated climate policies while considering the impacts of specific socio-economic and environmental injustices on various groups in the city (Amorim-Maia et al., 2022).

Admittedly, making space for marginalized voices and reallocating resources within existing institutions does not amount to a radical reform of problematic social processes that drive vulnerability to climate change (Machado de Oliveira, 2021). Still, planners can do better by strengthening their capacity for reflexive practice. The forms of inequity underlying climate injustice are not exogenous to planning processes, but are socially produced by policy decisions and planning interventions that shape the composition and spatial distribution of vulnerable

populations (Kashem et al., 2016). To work toward climate justice, planners need to understand the underlying social processes that simultaneously privilege some groups while disadvantaging others, *and* the ways in which climate action planning tends to perpetuate these processes.

1.3.2 Equity and Justice in Climate Action Planning: The Challenge of Evaluation

Climate action plans help cities respond to climate change, but the efficacy of these plans for advancing social justice remains unclear. There is agreement on the attributes of a quality plan, but our ability to evaluate whether planning outcomes are equitable and just is underdeveloped. This paper reviews urban justice, climate justice, and plan quality literature to consider how communities should decide the meaning and application of the concepts of equity and justice, and how plan evaluation approaches could be modified to better assess the efficacy of plans for advancing social justice. I recommend the use of participatory evaluation methods, and an approach that makes plan efficacy a more prominent feature of plan evaluation.

Keywords: Climate action planning; justice; plan efficacy; plan evaluation; plan quality

Introduction

The effects of climate change are increasingly being experienced in communities around the world through disruptions to our natural and societal systems that directly impact the way we live. As the pace of climate change accelerates, climate action plans are rapidly being developed across a range of geopolitical scales as a comprehensive policy mechanism for reducing carbon emissions and adapting to the risks and opportunities posed by climate change (Araos et al., 2016; Reckien et al., 2018). Climate action plans establish policies and programs for reducing local contributions to climate change and identify strategic actions to lower the risks posed by the consequences of environmental changes (Boswell et al., 2012).

From a justice standpoint, climate action plans have the potential to serve as “tools of social and racial justice by tackling longstanding disparities and inequities within cities” (Schrock et al., 2015, p. 282), but the extent to which climate action plans serve this purpose remains unclear. Ambiguity surrounding the efficacy of climate action planning in advancing social justice goals is concerning given research demonstrating that equity and justice are important for achieving adequate, fair, and enduring climate action (Klinsky et al., 2017). Within this context, there is growing demand for plan evaluation approaches that determine whether efforts to integrate equity and justice concerns into local climate action planning lead to better outcomes for vulnerable residents.

Methods of evaluating the equity and justice of climate action plans are necessary given substantial evidence that climate change disproportionately affects low-income and minority communities (Hallegatte & Rozenberg, 2017; Reckien et al. 2017); that these groups receive fewer resources to anticipate and recover from climate change impacts (Kashem et al., 2016; Long & Rice, 2019); and that disruptions often exacerbate existing inequities tied to gender, racial, and socio-economic inequalities (Anguelovski et al., 2016; Steele et al., 2012). Climate actions may also create a ‘triple injustice’ (Bell, 2014), whereby the double inequality of climate change—that those who are least responsible for causing climate change are positioned to suffer the most from its effects—is compounded by climate action policies that exacerbate social and distributional consequences for groups that are already disadvantaged (Anguelovski et al., 2016; Bulkeley et al., 2013). Seemingly effective climate actions are often accompanied by unintended outcomes that disproportionately affect marginalized residents. Urban greening efforts, for instance, are known to contribute to gentrification processes and thus to new forms of race- and class-based inequity that undermine efforts to advance justice (Anguelovski et al., 2022). These patterns highlight the need for an approach to evaluation that considers the efficacy of climate action planning for advancing social justice goals in communities.

Accordingly, this paper reviews urban justice, climate justice, and plan quality literature to identify plan attributes that advance equity and justice in the context of climate change. The paper then poses two key questions: how should communities decide the meaning and application of the concepts of equity and justice; and how can traditional plan evaluation approaches be modified to better assess the efficacy of climate action plans for advancing equity and justice goals?

There are multiple competing theories about the meaning of justice, how to assess whether it has been achieved, and who should be responsible for deciding these things. I address these debates by clarifying the meaning and varied interpretations of widely accepted dimensions of justice, namely distributive, procedural, and recognition justice, and exploring their application to plan evaluation theory and practice. Here, I review studies that refine widely accepted equity and justice principles to develop criteria-based frameworks for evaluating climate action plans at different scales. Studies that use an equity or justice lens (as

opposed to clearly articulated evaluative criteria) to evaluate a specific type of climate intervention (such as urban greening efforts, for instance) are not included in the review. The studies reviewed evaluate various types of climate change plans (adaptation plans, climate action plans, resilience plans and strategies), which are referred to here as ‘climate action plans’ to capture a range of plans for addressing climate change.

Based on the literature review findings, I argue for the use of context-specific justice principles for deciding the meaning and application of equity and justice in communities, and for an approach to evaluation that makes plan efficacy – the power of a plan to produce equitable and just outcomes – a feature of plan evaluation.

Dimensions of Justice

Justice is a contested concept that continues to be negotiated by actors with conflicting perspectives on how the concept should be defined and deployed. Young (2001) clarifies the relationship between justice and the related concept of equity by suggesting that equity and justice are intertwined insofar as we evaluate equity and inequity to make judgments about justice and injustice. Some degree of equity is a condition of justice, so my reference to the concepts of justice and injustice throughout this paper assumes a corresponding degree of equity or inequity.

Equity and justice have been variably defined by urban justice, environmental justice, and climate justice scholars, highlighting the deeply contested nature of ideas of fairness. Early efforts predominately focused on the fair allocation of benefits and burdens among members of society (Davidoff, 1975; Krumholz, 2003; Rawls, 1971); more recently, scholars have argued that fair and inclusive decision-making and special efforts to ensure representation of marginalized groups are also necessary components of justice (Davoudi & Brooks, 2014; Meerow et al., 2019). Recognizing that socially and economically disadvantaged populations suffer disproportionately from the impacts of climate change, and that inequities exist between individuals in terms of their ability to participate in planning processes, just climate action planning is commonly understood as a trilogy of distributive, procedural, and recognition justice. Although the precise definitions of these terms continue to be negotiated, the core concerns of each dimension are described below.

Distributive Justice

Distributive justice concerns the distribution of benefits and burdens among members of society. This dimension of justice tends to be outcome-focused and is fundamentally concerned with who gets what based on normative principles of fairness. Distributive justice establishes a connection between justice and the fair distribution of material resources (Davidoff, 1975; Rawls, 1971), where fairness in how goods are distributed is considered the most worthwhile criterion for evaluating public policy proposals (Davidoff, 1975).

Distributive approaches have been challenged by scholars who argue that focusing on the fair allocation of material resources leads us to overlook or ignore underlying social structures that determine distributional patterns (Nussbaum, 2000; Sen, 2009; Young, 1990). Advocates of the capabilities approach to justice argue that distributive conceptions of justice tend to neglect the social processes and relationships that influence a person's ability to convert material goods into substantive opportunities. Rather than focusing on how material goods are distributed, the capabilities approach reorients our understanding of social justice toward the distribution of non-material goods such as power, rights, and opportunities. The capabilities approach challenges distributive models of justice by turning our attention from the means of living a person has, to the things they can do with those means (Sen, 2009).

Procedural Justice

The procedural dimension of justice shifts our attention from distributive outcomes to fair, transparent, and inclusive decision-making processes (Davoudi & Brooks, 2014; Meerow et al., 2019). This shift occurred in response to concerns that outcome-focused conceptions of justice overlook the fairness of procedures for making distributional decisions (Hunold & Young, 1998). Procedural justice complements distributive justice by focusing on process rather than outcome, and by considering how social relations and power dynamics can affect participation in deliberative settings.

The procedural dimension of justice assumes that democratic decision-making processes are a condition of social justice (Shi et al., 2016; Young, 1990). Still, these 'democratic' and 'participatory' approaches have been criticized for failing to ensure adequate representation of

diverse groups, to achieve meaningful forms of participation, and to prevent powerful interests from dominating minority groups (Blue et al., 2019; Flyvberg & Richardson, 2002; Hillier, 2003; Tewdwr-Jones & Allmendinger, 1998; Yiftachel, 1998). The recognition dimension of justice emerged in response to these concerns.

Recognition Justice

Recognition justice considers how certain populations are made visible or invisible in policy development contexts. Questions about who is considered a relevant stakeholder and whose needs are prioritized during participatory processes are central to the concept of recognition justice (Klinsky & Mavrogianni, 2020). This dimension of justice emphasizes the need to understand the underlying political, economic, and social processes that determine how resources are distributed among members of society, and how these patterns may lead to oppressive participatory processes.

The concept of recognition justice advances procedural justice discourse by distinguishing between representation and recognition. While representation assumes groups are recognized if they are present during participatory processes, recognition considers how the interests and values of different groups are given voice and prioritized during these processes. Recognition is needed to avoid approaches that give one or more ‘representatives’ the opportunity to advocate group interests in ways that overlook nuances of social diversity by positioning individual group members as homogenous (Yiftachel et al., 2009).

Although the distributive, procedural, and recognition dimensions of justice are not automatically addressed together, they are closely connected – procedures of recognition enable groups to participate more fully in decision-making processes, which is integral to the equitable distribution of material resources (Meerow et al., 2018). To supplement these widely accepted justice dimensions, scholars have proposed additional indicators of justice to guide urban governance actors. Low (2022) advocates the need for ‘informational justice’ to ensure the truthfulness and adequacy of the explanations given about urban governance activities. Kraan et al. (2021) use the concept of ‘interactional justice’ to evaluate the quality of interpersonal and intergroup interactions. Bell (2014) is concerned with the physical environment in which someone lives, and refers to this dimension of justice as ‘substantive

justice’. Lieberknecht and Mueller (2023) emphasize the need to advance ‘structural justice’ by addressing past harms experienced by marginalized groups, and dismantling existing structural systems that disadvantage certain communities. The challenges associated with these varied interpretations of justice and the implications for evaluation are discussed below.

The Challenge of Evaluating Equity and Justice

While there is convergence in perspectives on the core concerns of the distributive, procedural, and recognition dimensions of justice, there is ongoing debate about the relative importance of each dimension in the overall evaluation of whether, and to what extent, justice has been realized. Conflicting perspectives on how the distributive, procedural, and recognition dimensions of justice should be measured and prioritized in our evaluations indicate that “there are no coherent, widely held criteria for ensuring social justice” in urban climate action planning (Chu & Cannon, 2021, pp. 86-87).

Disagreement on this front makes it immensely challenging to adopt a consistent approach to evaluating justice. As such, researchers have adopted variable criteria for assessing the equity and justice of various types of climate action plans at different scales. The criteria guiding previous evaluations have changed and evolved over time. Finn and McCormick (2011), for instance, assess climate action plans in U.S. cities based on the spatial location of environmental harms and geographic proximity to desired land uses (geographic equity), the degree to which the plans incorporate equitable and transparent decision-making processes (procedural equity), and whether the plans target interventions toward the groups that need them most (social equity). Finn and McCormick’s evaluation considers how explicitly the plans reference these dimensions of equity, finding that substantive engagement with equity concerns “beyond the level of rhetoric remains rare” (p. 412).

Hughes (2013) draws on environmental justice scholarship to define justice in urban climate action planning as “just adaptation justly achieved” (art. 48). Hughes (2013) identifies three criteria for meeting this definition: processes (representation of vulnerable groups in planning processes), prioritization (framing and prioritizing issues so that the needs of vulnerable groups are recognized), and impacts (enhancing the freedoms and assets of vulnerable groups). Applying these criteria to evaluate the justice of climate change adaptation

planning in Delhi, Hughes (2013) finds much room for improvement. Taking a different approach, Schrock et al. (2015) assess climate action plans in U.S. cities based on the specificity and prominence of three types of equity: procedural equity (fairness in proceedings and decision-making), geographic equity (equity across neighbourhoods and communities), and social equity (equity across racial, ethnic, and class lines). Their findings indicate that few cities made equity a prominent theme in their climate action plans.

More recently, Meerow et al. (2019) adopt a tripartite framework of social equity that includes distribution, recognition, and procedural equity dimensions to evaluate urban resilience planning in North American cities. According to this evaluative framework, a socially equitable resilience strategy promotes equitable distribution of social and material goods (distributional equity), encourages meaningful participation and engagement in decision-making processes (procedural equity), and acknowledges social, cultural, and political differences (recognition equity). Meerow et al. (2019) found considerable variation in the extent to which resilience plans incorporate social equity, and in the forms of equity these plans consider.

In a study of resilience strategies from global North and South countries, Fitzgibbons and Mitchell (2019) argue that recognition, redistribution, and participation must be present to advance justice in planning processes and outcomes. Fitzgibbons and Mitchell (2019) found wide variation in the degree to which cities prioritize social equity in their resilience plans. Most recently, Chu and Cannon (2021) review key adaptation planning documents from U.S. cities to assess adaptation and resilience-building planning efforts across three dimensions: equity, (the distribution of opportunities, resources, and risks), inclusion (transparency, accountability, and diversity in decision-making processes), and justice (recognition of differential vulnerability and disadvantage). Their findings suggest that cities are variably operationalizing equity, inclusion, and justice criteria. These findings are consistent with recent research that has found variation in how climate action plans intend to measure the implementation of equity goals (Fitzgerald, 2022). Table 1 summarizes the broad range of equity and justice criteria that have guided previous evaluations of climate action planning, demonstrating the varied interpretations of these concepts.

Table 1. Summary of previous evaluation criteria

Scholar(s)	Equity and Justice Criteria
Finn and McCormick (2011)	Procedural equity – equitable processes with special efforts to include those normally left out Geographic equity – spatial location of harms Social equity – accounting for socio-economic factors in decision-making and targeting interventions toward groups that need them most
Hughes (2013)	Inclusiveness – representation of vulnerable groups in planning processes Prioritization – setting and framing priorities to recognize the needs of vulnerable groups Impacts – enhancing the freedoms and assets of vulnerable groups
Schrock et al. (2015)	Procedural equity – fairness in proceedings and decision-making Geographic equity – equity across neighbourhoods and communities Social equity – equity across social identities
Meerow et al. (2019)	Distributional equity – access to goods, amenities, opportunities Recognitional equity – acknowledgement and respect of different groups and social statuses Procedural equity – equitable participation in decision-making processes
Fitzgibbons and Mitchell (2019)	Recognition – recognitional public engagement processes Redistribution – actions to reallocate material wealth and income Participation – inclusive public engagement processes
Chu and Cannon (2021)	Equity – equal and fair distribution of opportunities and resources Inclusion – transparent and accountable decision-making processes that include diverse voices Justice – recognition that minority groups are structurally vulnerable

These studies, which highlight the variation in current approaches to evaluating equity and justice in climate action planning, correspond to three types of challenges for plan evaluation (summarized in Table 2). The first challenge involves deciding *which dimensions of justice* should be considered in our evaluations of climate action planning. This decision determines whether the criteria guiding the evaluation should be grounded in principles of distributive, recognition, or procedural justice. The second challenge involves *defining the various dimensions of justice*. The way the distributive, recognition, and procedural dimensions of justice are understood by evaluators has important implications for the indicators developed to assess the presence or absence of each dimension in climate action planning processes and outcomes. The third challenge relates to *how the various dimensions of justice are measured*. Some evaluations consider how explicitly a plan references certain dimensions of equity, while others base their evaluation on the specificity of the plan regarding how different equity concerns will be addressed in practice. These differences make it challenging to adopt a

consistent approach to measuring the presence or absence of equity and justice considerations in a climate action plan.

Table 2. Summary of challenges facing evaluations of equity and justice

Type of challenge	Implications for evaluation
Which dimensions of justice?	Considerable variation in the dimensions of justice included in evaluations of CAPs to date
Defining dimensions of justice?	Considerable variation in how different dimensions of justice are defined by evaluators
Measuring dimensions of justice?	Inconsistency in the measures used to indicate the presence or absence of justice in CAPs

These challenges highlight two things regarding plan evaluation: first, there are no precise guidelines for developing an equitable approach to urban climate action, nor are there consistent criteria for evaluating the equity and justice of climate action plans (although previous studies commonly allude to elements of distributive, procedural, and recognition justice). Second, while cities are variably operationalizing equity and justice concerns in their plans, there is ambiguity surrounding the efficacy of these plans for advancing social justice goals on the ground. These findings suggest the need for more concrete guidance on how communities should decide the meaning and application of equity and justice, and how they can evaluate their progress on equity- and justice-related goals.

Deciding the Meaning and Application of Equity and Justice

The concept of justice is clearly contested and appears to take on different meanings depending on social, geographical, and historical context (Brand, 2015; Harvey, 1996). Even where there is agreement about the content of justice (for instance, fairness), there is disagreement about its grammar (what exactly fairness means). Different experiences of injustice across different cities and between residents within a city inform how the concept of justice is understood, articulated, and demanded in practice (Schlosberg, 2013). From an intersectional perspective, how an individual relates to and understands climate change depends on their position among context-specific social relations rooted in categories of social difference such as gender, race, and class (Kaijser & Kronsell, 2014). Deciding the meaning and

application of justice in diverse communities, and devising corresponding evaluative criteria, is thus considerably challenging.

Scholars predominately agree that the question of justice – what it entails and how it can best be achieved – can never be settled once and for all (Fischer, 2009; Lake, 2016). Brand (2015) has demonstrated that equity and justice are not universal concepts, but are actively constructed by different social groups to support their own interests. Harvey (1996) similarly suggests “there can be no universal conception of justice to which we can appeal as a normative concept to evaluate some event...there are only particular, competing, fragmented and heterogenous conceptions of...justice which arise out of the particular situations of those involved” (p. 342). Besides being difficult to distill, Huxley and Yiftachel (2000) argue that universalized planning principles pertaining to equity and justice contribute to perpetuating unequal power relations by privileging Western, Anglo-American context and tradition. Lake (2016) also cautions that universal justice principles “risk imposing culturally and historically specific norms on disparate situations” (p. 1212).

If universally grounded equity and justice principles are unrealistic – and arguably, undesirable – deciding the meaning and application of equity and justice is a context-specific undertaking for communities. This means communities need to be able to reach useful conclusions about what should be done without reducing multiple and potentially conflicting justice and equity ideals to a single set of evaluative criteria. Guiding questions about the presence or absence of various dimensions of justice are a starting point to more fully account for the multiple ways injustice occurs in the city. However, these elements should not be considered comprehensive or universally applicable (Davoudi & Brooks, 2014). Rather, climate action planning and its evaluation is a place-based endeavour that must be locally responsive and contextual (Porter et al., 2020). The following section provides guidance on how traditional plan evaluation approaches might be modified to better assess the efficacy of climate action plans for advancing equity and justice. Here, I emphasize the importance of participatory processes for deciding the appropriate and contextually-relevant meaning and application of these concepts, and for devising meaningful evaluative criteria.

Evaluating Equity and Justice in Climate Action Planning

Achieving equity and justice goals in climate action planning – or at least knowing whether communities are moving in this direction – requires plan evaluation. Planners and residents need criteria for determining what equitable and just planning processes and outcomes look like, and indicators to help communities decide when these processes and outcomes have been achieved. As a subfield of plan evaluation, plan quality evaluation is a specific type of evaluation that connects the content of a plan to normative criteria of what constitutes a ‘better’ plan (Lyles & Stevens, 2014).

Although the plan quality evaluation literature does not offer a clear definition of ‘quality’, there seems to be conceptual consensus on worthwhile plan attributes, which inform evaluations of both the substantive content of key components of a plan, and its scope and coverage (Baer, 1997; Berke & Godschalk, 2009; Guyadeen et al., 2019; Lyles & Stevens, 2014). Specifically, plan quality evaluations consider eight commonly referenced characteristics that focus on the content and communicative aspects of plans: the fact base informing plan goals and policies, goals and ambition statements about desired future conditions, policies to guide decision-making, implementation of plan policies, the framework for monitoring and evaluating activities, coordination among organizations and agencies, participation, and plan organization and presentation (Baer, 1997; Guyadeen et al., 2019).

Plan quality – including the aggregated set of characteristics above – has been discussed in theory for decades, but our practical ability to evaluate whether planning outcomes are equitable and just has not kept pace with advances in theory (Seasons, 2021). While there is consensus on the core principles of plan quality and the specific attributes of a high-quality plan, there is less clarity about how these principles should be operationalized in content analysis studies, and there is no clear procedure for developing plan quality coding items as part of an evaluation (Lyles & Stevens, 2014).

This gap between theory and practice has led to ambiguity about how communities should decide what an equitable or just outcome looks like, and how to determine when such an outcome has been achieved. Moreover, the generally accepted characteristics of a quality plan do not explicitly refer to equity and justice, although the plan quality literature does not

toward procedural justice by identifying participation as a baseline characteristic of high quality plans (Baer, 1997; Guyadeen et al., 2019; Seasons, 2021). Meerow and Woodruff (2020) have developed a set of principles for strong climate action planning derived from the plan quality literature that includes engaging the public and fostering justice in all planning processes, highlighting the importance of procedural justice in the design and implementation of quality plans for addressing climate change.

Plan evaluation theory recognizes that a plan meeting the accepted plan quality criteria could nevertheless have little effect in the real world (Baer, 1997), and in practice, plan evaluation has not established a clear connection between plan quality and good outcomes. Few studies have focused on linking plan quality to planning outcomes to determine whether quality plans tend to be associated with better outcomes (Guyadeen & Seasons, 2016; Lyles & Stevens, 2014). At the same time, mismatches between local needs and the policies and actions recommended in climate action plans, and between the goals outlined in these plans and the outcomes of recommended actions, have led some scholars to question the causal impacts of plans (Sirigotis et al., 2022).

In other words, the relationship between plan quality and plan efficacy – the power of a plan to produce the desired result or effect – is not fully addressed in plan quality evaluation theory or practice (Connell & Daoust-Filiatrault, 2017). Plan evaluation tends to focus on how efficiently a plan was developed, or how effectively it was implemented, while overlooking the written content of the plan itself. This oversight could be addressed through an approach to plan quality evaluation that focuses on a plan *as it is written* as the object of evaluation, evaluated against the desired result—in this case, context-specific equity and justice criteria (Connell & Daoust-Filiatrault, 2017).

Such an approach is promising but challenging given a lack of clarity about where plan quality evaluation fits among the stages of the planning process. While typical *ex ante* evaluations (performed before plan implementation to assess forecasted impacts of solution options), formative evaluations (performed during plan implementation to assess early performance), and *ex post* evaluations (performed after plan implementation to assess effectiveness) are done in relation to the various stages of the planning process, the plan-as-

object evaluation approach described above does not align with the commonly used stages of evaluation (Connell & Daoust-Filiatrault, 2017).

At the same time, plan quality research tends to value the eight characteristics of a quality plan described previously equally, even when one (such as participation) may be more important than another (such as plan format) in evaluations focused on equity and justice. This tendency could lead to the undervaluing of justice-related characteristics and the overvaluing of others (Guyadeen et al., 2019). Evaluations focused on the efficacy of climate action plans for advancing social justice must therefore pay greater attention to those plan characteristics that are clearly concerned with elements of distributive, procedural, and recognition justice. These efforts could then be taken one step further by also considering how equity and justice concerns might be related to plan characteristics in ways that are not immediately evident. For instance, a justice-oriented approach to plan evaluation might consider how inter-organizational coordination contributes to mainstreaming equity and justice concerns throughout the plan.

Clarifying how and when plan efficacy evaluations should be carried out should be a priority for plan evaluation theory and practice. As efforts to integrate equity and justice concerns into climate action plans become more widespread, evaluations of plan efficacy are needed to establish whether communities have actually become more equitable and just (Drevno, 2022).

The Value of Participatory Evaluation

The contested nature of equity and justice means that we need to be able to evaluate climate action plans without fully established and widely accepted ideals to guide us. Established plan quality criteria are meant to serve as possible considerations for planners who should also be able to devise variations and additional criteria that are relevant to their specific plan (Baer, 1997). Planners concerned with equity and justice thus have an opportunity to design context-specific criteria for evaluating climate action planning, but this is not a straightforward process.

Lake (2016) argues that evaluating already-achieved planning outcomes against already-established principles of justice – which are developed outside and anterior to the

planning process – as evaluative criteria is retrospective and makes justice a possible consequence rather than a core element of planning. Rather than devising evaluative criteria based on universal principles of justice, and using these to evaluate planning outcomes retrospectively, Lake (2016, p. 1212) advocates a more forward-looking and continual approach that asks: “what do we mean by justice here?”, “what does justice look like under these circumstances”, and “what is the just thing to do in this situation?”.

Asking these questions makes efficacy a feature of plan quality evaluation by shifting the focus of evaluation from plan development (process) or implementation (outcomes) to the plan itself. Lake (2016) also clarifies *when* plan efficacy evaluations should be carried out by recommending that an explicit consideration of justice should be made a central element of the entire planning process. This approach differs from typical approaches to evaluation that align with a specific stage of the planning process, and assess the outcomes of a plan against some a priori standard of equity or justice.

The value of evaluation as a tool for decision-making depends on the extent to which the assumptions underlying the measures used are accepted as consistent with public perceptions and understandings of urban processes (Meyer, 1995). This point not only reiterates the problem with universal equity and justice principles as evaluation criteria, but also highlights the need for participatory evaluation processes where community members contribute to creating and selecting indicators that are rooted in their own perceptions and lived experiences (Seasons, 2021). Participatory evaluation represents one way of responding to calls for more equitable climate action planning from scholars who stress the merit of participatory processes for addressing injustice (Meerow & Woodruff, 2020), influencing resource distribution (Meerow et al., 2019), and achieving equitable outcomes (Blue et al., 2019). The current state of practice regarding participatory evaluation as a means to achieve more equitable climate action planning is discussed below.

Participatory Evaluation in Practice

Fitzgerald (2022) recently reviewed the climate action plans for five U.S. cities that have updated their plans to focus on equity: Austin (TX), Baltimore (MD), Cleveland (OH), Portland (OR), and Providence (RI). The goal of the study was to identify strategies that planners and

policymakers are using to make climate action planning processes more inclusive of marginalized groups and to incorporate equity into the plan's goals. Fitzgerald (2022) found that comprehensive efforts to include underrepresented groups in the planning process, and taking measures to ensure that participants are valued, are essential for achieving authentic participation.

These findings make it clear that procedural justice is a trust-building process. The strategies being implemented in the case study cities also reflect best practices for building community-based resilience, including championing community members' right to exercise power in planning and decision-making processes that impact their well-being (Leventhal Center for Advanced Urbanism, 2023). Specifically, each of these cities put considerable effort into creating an authentic participation process and delivered on their promises of shared decision-making and inclusive and collaborative goal setting. Despite the attention these case study cities paid to equity and justice in the development of their climate action plans, there is room for improvement in terms of participatory evaluation.

Fitzgerald (2022) found that all plans included some form of guidance for evaluating whether the plan is being implemented in a way that is equitable, but the plans do not necessarily specify whether community members will be involved in the development of the indicators used to measure progress on this front. In other words, while the plans include guidance for equitable implementation, processes for evaluating the achievement of equity goals appears to remain expert-led. The commendable progress these cities have made toward addressing equity in their climate action planning processes should be extended to their methods of evaluation. Just as the development of equity-oriented climate action plans requires authentic participation during the development and implementation stages, effective evaluation of these plans requires a considerable upfront effort to include community members in the design of evaluation methods. Taking this additional step should be a goal for practitioners.

There are also knowledge-based reasons for including community members in evaluation processes – residents possess valuable knowledge about local conditions that informs context-specific responses to climate change, and this knowledge should be considered

when evaluating a city's progress on equity and justice goals in the context of climate change (Byskov et al., 2021). Extending legitimacy to local perspectives contributes to forming the type of 'extended peer community' (Funtowicz & Ravetz, 1993) that is needed to ensure evaluation processes serve local communities effectively.

Participatory evaluation also increases the likelihood that indicators will identify trends and patterns associated with the specific equity and justice concerns that are most important to community members, thereby providing "a more robust means by which to weigh whether specific climate actions will promote more equitable outcomes" (Peterson, 2022, p. 52). This approach comes with challenges typical of participatory processes for addressing contentious issues – even if there was agreement on which impacts to consider in evaluation, these impacts are unlikely to be equally valued by all residents (Meyer, 1995).

Conclusions and Recommendations

This paper has explored two key questions regarding equity, justice, and plan evaluation: how should communities decide the meaning and application of the concepts of equity and justice; and how can traditional plan evaluation approaches be modified to better assess the efficacy of climate action plans for advancing equity and justice goals?

Deciding the meaning and application of the concepts of equity and justice poses a considerable challenge for communities given the various ways these concepts are defined, and competing perspectives on how the distributive, procedural, and recognition dimensions of justice should be prioritized and measured when evaluating climate action plans. Ongoing debates about the nature of equity and justice indicate that community members' perceptions and understandings of these concepts in the context of climate change depend on several factors including social, geographical, and historical context (Brand, 2015), personal experiences of injustice (Schlosberg, 2013), and one's position among intersectional social relations and categories of difference (Kaijser & Kronsell, 2014).

These factors inform how justice is understood and demanded in practice (Schlosberg, 2013), and have important implications for deciding the meaning and application of equity and justice in communities. Community members' perceptions of justice will continue to evolve as their needs and priorities change; with this reality in mind, climate actions should continually be

evaluated based on context-specific criteria rooted in the perceptions and lived experiences of community members. Rather than reducing conflicting distributive, procedural, and recognition justice ideals to a single set of evaluative criteria and widely applying these criteria to disparate situations, approaches to evaluation should be place-based and community-negotiated.

Specifically, indicators should be informed by universal ideals of distributive, procedural, and recognition justice, *and* grounded in community context to provide a more accurate way of measuring whether specific climate actions promote outcomes that align with residents' perceptions of equity and justice. To this end, traditional approaches to plan evaluation, which tend to be researcher- or expert-led, should be modified to engage the voices and perspectives of residents. Participatory evaluation processes should be designed to ensure that community members' definitions and understandings of equity and justice, lived experience, and knowledge of local conditions are captured by the measures used for evaluation.

Previous evaluations of equity and justice in climate action planning have established an important baseline understanding of how normative equity and justice principles are embedded in climate action plans across cities in Canada and elsewhere. This knowledge has clarified the extent to which climate action plans are engaging with issues of equity and justice from the perspective of the researchers and experts who develop the evaluative criteria. However, these researcher-led evaluations tell us little about the ways community members understand and articulate equity and justice in the context of climate change. Rather than relying on experts to develop frameworks for evaluating equity, tools that are meant to inform or improve local policy decisions should incorporate local input to ensure that evaluation criteria are accurate, representative, and meaningful in the local context (Oulahen et al., 2015). Developing participatory methods for devising equity and justice criteria based on input and feedback from community members is an important direction for future research.

Studies establishing the causal impact of climate action plans on equity and justice goals are also needed. Clarifying the connection between climate actions and the equity- and justice-related trends and patterns that are most important to community members would contribute to establishing whether 'better' plans lead to 'better' outcomes, especially for residents who are disproportionately affected by climate change. Progress on this front would contribute to

addressing the current gap between our theoretical understanding of what constitutes a quality plan, and our practical ability to evaluate whether quality plans support planning outcomes that are equitable and just.

To this end, plan efficacy – specifically, the power of a plan to produce equitable and just outcomes – must be considered a core component of plan evaluation (Connell & Daoust-Filiatrault, 2017). Shifting the current focus of evaluation from the efficiency of the plan's development and the effectiveness of its implementation to the plan itself as the object of evaluation enables us to evaluate a plan as it is written against stated objectives and desired outcomes, specifically those related to equity and justice.

This approach requires a form of plan evaluation that prioritizes and values not only those plan quality characteristics that are clearly concerned with elements of distributive, procedural, and recognition justice (such as participation), but also those characteristics that are less obviously tied to equity and justice but can have important implications for mainstreaming equity and justice concerns in climate action plans (such as inter-organizational coordination). A participatory approach to evaluation, supported by a focus on plan efficacy, would contribute to clarifying the extent to which climate action plans address disparities and advance social justice in communities. This knowledge would increase the value of plan evaluation as a tool for decision-making regarding equitable and just climate action planning, and address a significant oversight in plan evaluation theory and practice.

1.4. Scope and Aims

1.4.1 Summary of the Literature

The preceding literature review – which connects theories of urban justice, critical climate justice, participatory planning, and plan quality and evaluation – has outlined the following:

- 1) Climate change disproportionately affects low-income and minority communities because these groups receive fewer resources to anticipate and recover from climate change impacts, and because climate disruptions often exacerbate existing gender, racial, and socio-economic inequalities (Anguelovski et al., 2016; Hallegatte & Rozenberg, 2017; Kashem et al., 2016; Long & Rice, 2019; Reckien et al. 2017; Steele et al., 2012).
- 2) Climate action plans can exacerbate social and distributional consequences for groups that are already disadvantaged by shifting the dynamics and distribution of vulnerability and adaptive capacity in urban areas. (Anguelovski et al., 2016; Anguelovski et al. 2022; Bulkeley et al., 2013; Byskov et al., 2021; Rice et al. 2020; Schrock et al., 2022; Shokry et al. 2020; Shi et al., 2016).
- 3) Climate justice scholarship emphasizes the need to prioritize disadvantaged residents in our responses to climate change, but participatory planning theory is much less explicit about the need to prioritize marginalized residents during decision-making processes. Consequently, the voices of people experiencing overlapping, concurrent forms of oppression are still largely ignored in climate policy processes. (Adger et al., 2006; Anguelovski et al., 2016; Byskov et al., 2021; Chu & Michael, 2019; Haverkamp, 2017; Hughes, 2015; Reckien et al., 2017).
- 4) Climate action plans have the potential to serve as tools for advancing social justice by tackling longstanding disparities and inequities within cities, but there is ambiguity surrounding the efficacy of these plans for advancing social justice goals on the ground. (Connell & Daoust-Filiatrault, 2017; Drevno, 2022; Guyadeen & Seasons, 2016; Lyles & Stevens, 2014; Schrock et al., 2015; Sirigotis et al., 2022).

- 5) The relationship between plan quality and plan efficacy – the power of a plan to produce the desired result or effect – is not fully addressed in plan quality evaluation theory. Instead, plan evaluation tends to focus on how efficiently a plan was developed, or how effectively it was implemented, while overlooking the written content of the plan itself (Baer, 1997; Connell & Daoust-Filiatrault, 2017; Drevno, 2022; Guyadeen & Seasons, 2016; Lyles & Stevens, 2014).
- 6) The current state of municipal climate action planning indicates a discernible trend toward trying to address equity and justice concerns in local government planning systems, but there is a disconnect between rhetorical commitments to equity or justice and accompanying actions in local government plans. (Bulkeley et al., 2013; Chu & Cannon, 2021; Finn & McCormick, 2011; Peterson, 2022; Schrock et al., 2015; Sirigotis et al., 2022; Zoll, 2022).
- 7) Previous studies have applied variable criteria to uncover gaps and deficiencies in the way climate action planning addresses equity and justice, but the voices of equity-deserving groups are notably absent from these assessments. Accordingly, there is a critical need for research that engages equity-deserving groups in the development of accurate and meaningful criteria for assessing the equity and justice of climate action plans in specific cities (Chu & Cannon, 2021; Finn & McCormick, 2011; Fitzgibbons & Mitchell, 2019; Hughes, 2013; Meerow et al., 2019; Schrock et al., 2015).

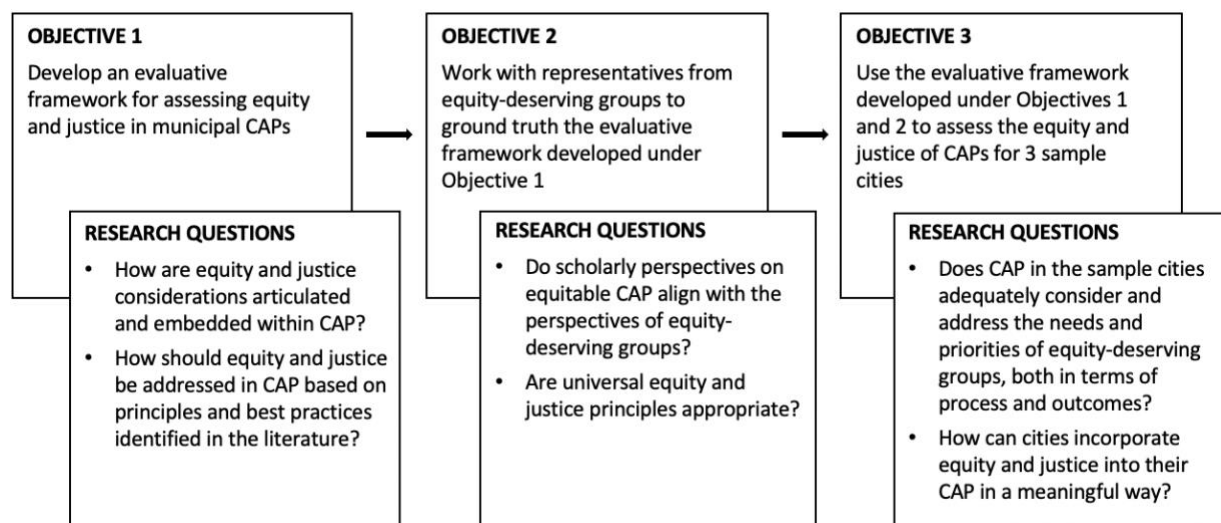
1.4.2 Research Objectives and Questions

Building on these contributions and gaps in existing scholarship, this dissertation explores how equity and justice concerns are addressed within municipal climate action plans, and considers whether local climate action planning reflects and responds to local context and conditions. Given the role of planning in advancing climate action, and the connections between climate change and various forms of urban inequity, we need to consider the consequences of climate action planning for equity-deserving populations who are disproportionately impacted by climate change.

Accordingly, this dissertation addresses the following overarching research question:

Does climate action planning in Canadian municipalities adequately consider and address the needs and priorities of equity-deserving groups, both in terms of process and outcomes? At the crux of this research is the presumption that “we must do our best to make sure that the worst off in our communities are not made worse off by the impacts of climate change, or by our efforts as planners to address this challenge” (Seasons, 2022, p. 58). Figure 1 outlines the specific objectives of the research and the corresponding research questions.

Figure 1. Research objectives and questions



1.4.3 Location of Research

Three cities in Ontario, Canada were selected as the case studies for this research. The sample includes two local municipalities (Brampton and Thunder Bay) and one regional municipality (Region of Waterloo). For simplicity, all locations will be referred to as cities throughout the dissertation. Three locations in Ontario were chosen to minimize the influence of the provincial policy arena on my findings to allow for more direct comparison. Study locations were selected based on the following criteria:

- 1) Their **preparedness** to address climate change (based on rankings by Guyadeen et al., 2019);
- 2) Demographic **diversity** (based on Statistics Canada 2021 Census of Population data);
- 3) The **recency** of their climate change plan(s).

Preparedness to address climate change was used as a selection criterion because cities that are well positioned to tackle climate change are also more likely to have resources and capacities to deal with the complexities of social equity in their climate action plans. Of the top 20 ranked cities in Canada (Guyadeen et al., 2019) with publicly available climate action plans developed within the last five years, I selected three cities in Ontario that are demographically and socio-economically different from one another so I could make observations about the types of equity-related considerations that are discussed (or not) in the plan(s) for each city (Table 3). The final sample includes both local and regional municipalities to correspond to the scope of the climate action plan(s) that have been developed for each location.

Table 3. Case study city demographic data

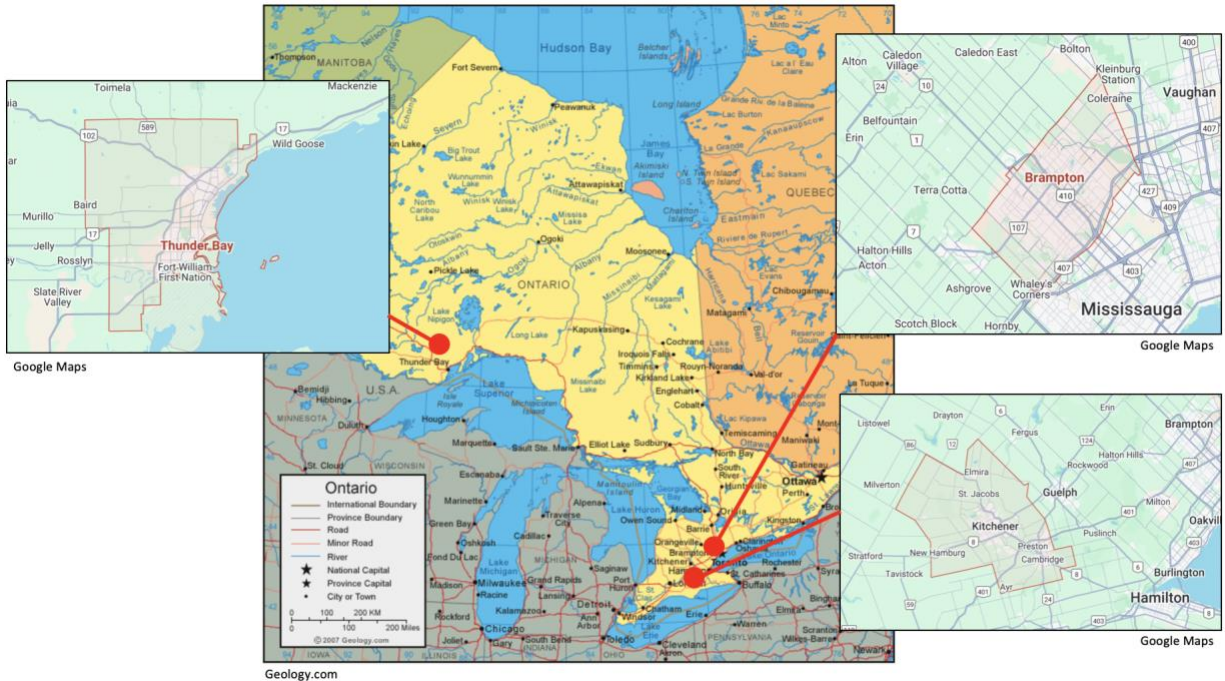
City	Population (% of total Ontario population)	Demographic data				
		Average age of the population	Prevalence of low- income*	# of people with Indigenous identity (% of total population)	# of immigrants (% of total population)	Total visible minority/ racialized population** (% of total population)
Waterloo Region, ON	587,165 (~4%)	39.5	9.3%	9,960 (~2%)	147,190 (~25%)	159,060 (~27%)
Thunder Bay, ON	108,843 (<1%)	43.7	11.6%	15,055 (~14%)	9,190 (~8%)	7,965 (~7%)
Brampton, ON	656,480 (~5%)	37.5	6.4%	3,255 (~0.5%)	343,690 (~52%)	523,850 (~80%)
Provincial Data	14,223,942	41.8	10.1%	406,585 (~3%)	4,206,585 (~30%)	4,817,360 (~34%)

*Based on the low-income measure, after tax.

**Defined by Statistics Canada as persons, other than Aboriginal peoples, who are non-Caucasian in race or non-white in colour. The main groups designated as visible minorities are South Asian, Chinese, Black, Filipino, Arab, Latin American, Southeast Asian, West Asian, Korean, and Japanese.

The locations of each sample city within the province of Ontario are shown below (Figure 2) followed by a brief profile.

Figure 2. Location of research



Waterloo Region is a mid-sized community comprising three cities (Cambridge, Kitchener, and Waterloo) and four townships (North Dumfries, Wellesley, Wilmot, and Woolwich). Waterloo Region has one of Canada's most highly skilled workforces, with 63% of residents between the ages of 25-69 holding a post-secondary degree (Region of Waterloo, 2023). Median income levels are higher for families and individuals in the region than their provincial and national counterparts, and poverty rates are lower than Ontario and Canadian averages. The population in the region is both aging and growing – the population is expected to increase by almost 50% over the next three decades, and it is estimated that by this time close to 1 in 4 people in the region will be 65 years and older (Region of Waterloo, 2023).

The City of Brampton is located at the centre of an extensive transit network with easy access to cities in Canada and the United States, making it one of the most connected cities in North America. As a designated growth centre within the Province of Ontario, the population growth rate in Brampton is more than twice the provincial average and the city has one of the top five largest immigrant populations in the country (City of Brampton, 2019). Brampton benefits from a diverse multicultural population representing more than 209 distinct ethnic backgrounds and a younger population than the Canadian average (City of Brampton, 2019).

Located on the shores of Lake Superior, Thunder Bay is the regional services hub of Northwestern Ontario, offering global transport connections and a gateway to western Canada. Thunder Bay is the most populous municipality in Northwestern Ontario, although the city's rate of population growth between 2016 and 2021 was less than one percent (Statistics Canada, 2021). The percentage of people in Thunder Bay aged 15 and over without a high school diploma is approximately 9% higher than the provincial rate (Statistics Canada, 2021). Fort William First Nation is located on the western shores of Lake Superior adjacent to the city of Thunder Bay.

1.5. Research Methodology

1.5.1 Research Paradigm

A research paradigm is a set of beliefs and understandings that guide a research project. Creswell and Creswell (2018) refer to research paradigms as philosophical worldviews to describe the set of beliefs about the world that a researcher brings to a study. The paradigm that a researcher identifies with depends on their beliefs about the nature of reality – *ontology* – and the nature of knowledge – *epistemology*. The research paradigm guides the research design and the specific methods of research (Creswell & Creswell, 2018).

This study is grounded in a social constructivist perspective – a theory that views knowledge as socially situated and constructed through interaction with others (Creswell & Poth, 2018). Social constructivist research focuses on the specific contexts in which people live to understand the historical and cultural norms that operate in their lives. Social constructivists believe that meaning is not discovered, but constructed by human beings as we engage with the world around us (Creswell & Creswell, 2018; Merriam & Tisdell, 2016). This perspective resonates with me more than a post-positivist worldview because social constructivism holds that characteristics such as gender, race, and class are products of human definition as opposed to objective realities (Creswell & Creswell, 2018).

Crotty (1998) locates the social constructivist perspective at the intersection of subjective and objective epistemologies. Its subjectivity comes from its assumption that human beings make sense of the world around them by attaching subjective meaning to their

experiences. Its objectivity comes from the researcher's role in connecting various pieces of subjective knowledge to construct broader meaning.

Social constructivist research is interpretive and assumes that reality is socially constructed – there is no single, observable reality, but rather multiple realities or interpretations of an event (Merriam & Tisdell, 2016). As such, researchers do not find or discover knowledge, they construct it. This study also has a critical component grounded in a transformative worldview – in addition to understanding how context shapes reality, my research challenges the social structures and power relations that shape the reality that marginalized individuals experience with a view toward dismantling these (Merriam & Tisdell, 2016).

Recognizing that individual perceptions are forged in history and culture, constructivist researchers must carefully consider the context for their study and the positionality of their study participants to account for subjectivity when interpreting research data (Crotty, 1998). The researcher must also reflexively consider their own biases, values, and personal background relative to the study topic (Marshall et al., 2022).

1.5.2 Research Design

The choice of research design depends on the worldview of the researcher and the research problem to be addressed. This dissertation follows a qualitative research design, which is commonly associated with a social constructivist worldview (Merriam & Tisdell, 2016). Qualitative approaches enable researchers to explore and understand the meaning that groups or individuals assign to a specific problem (Creswell & Creswell, 2018) – in this case, qualitative methods were used to explore the meaning of equity and justice in climate change planning and to understand the experiences of equity-deserving groups relative to this topic.

Specifically, I applied a comparative case study research design. A qualitative case study can be defined as “an in-depth description and analysis of a bounded system” (Merriam & Tisdell, 2016, p. 39), or more specifically, “a qualitative approach in which the investigator explores a bounded system (a *case*) or multiple bounded systems (cases) over time, through detailed, in-depth data collection involving *multiple sources of information*...and reports a case description and case-based themes (Creswell, 2013, p. 97; emphasis in original). Case study

research stands apart from other types of qualitative research because it is defined by the unit of analysis rather than the focus of the study – the most defining characteristic of case study research is the case as the object of study (Merriam & Tisdell, 2016; Stake, 2010).

There were several reasons for selecting a case study design for this research. First, case study research is richly descriptive and suited to situations where the boundaries between phenomenon and context are not clear (Yin, 2004). Since an objective of my study was to explore the self-identified needs and priorities of equity-deserving groups in different cities, the qualitative case study design enabled me to capture participant perspectives on equity-related challenges while accounting for the local context that shaped these perspectives.

Second, case study research offers choice about the bounded system to be studied – a researcher can select the unit they choose to study, which could be a single person, a group, a community, or a specific policy (Merriam & Tisdell, 2016). Third, case study research can be comparative – I collected and analyzed data from key informants who advocate for several equity-deserving groups in three cities to compare their perspectives and experiences related to the research problem. Fourth, case study research supports the development of practical recommendations because it investigates a contemporary phenomenon within its real-life context (Yin, 2014). A comparative case study approach is thus appropriate in a field of study like planning where research that advances both theory and practice is valued.

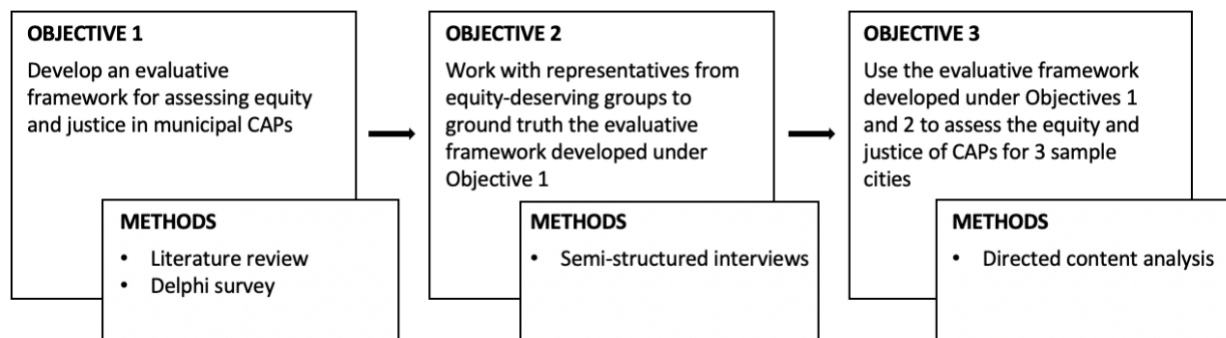
Fifth, since it is the unit of study (in this application, Canadian municipalities) as opposed to the topic of study that defines the case, case study research can be combined with other types of qualitative studies. The comparative case study design applied to this research incorporates elements of grounded theory because the study advances a perspective that is grounded in the views of participants (Corbin & Strauss, 2015). Incorporating grounded theory guidelines such as constant comparative data analysis – comparing one segment of data with another to determine similarities and differences – sharpened the thematic analysis for the study. However, the research design does not constitute a grounded theory approach because a substantive theory was not constructed based on the data – instead, results are richly descriptive.

A qualitative research design allowed me to more accurately capture and report the complexity of the equity-deserving group perspectives I collected through the study. Qualitative research is especially useful when the relevant variables have yet to be identified, for research that explores how and why policy is at odds with local knowledge and practice, and for research that seeks to understand experiences among often marginalized populations (Marshall et al., 2022; Woodley & Lockard, 2016). Given that the purpose of my research was to explore the nature of equitable climate change planning from the perspective of equity-deserving groups, a qualitative research design was the most logical choice.

1.5.3 Research Methods

This study had three key objectives and was correspondingly divided into three main phases of research. Specific research methods were applied during each phase to achieve the stated research objectives (Figure 2). Note that this section of the dissertation reports and briefly describes the methods that were applied; specific details regarding their application, comments on their limitations, and further justification for their use are provided in Chapters 2, 3, and 4, each of which focuses on the process and results of one of the three phases of research.

Figure 3. Overview of research objectives and methods



Literature Review

The literature review guided the development of a preliminary evaluative framework which would subsequently be validated through the Delphi survey of experts and semi-structured interviews with advocates and representatives from organizations that serve equity-

deserving groups. The scope of the literature review included urban justice, environmental justice, and climate justice literature to identify key theories and guiding principles that inform current understandings of equity and justice. I also reviewed participation and plan quality literature to identify key features of fair and inclusive planning processes and characteristics of high-quality plans.

The design of the literature review reflects a snowball approach where I considered the cited references for each publication to select additional helpful literature. My intent was not to be exhaustive, but instead focused on identifying literature that could inform the development of evaluative criteria. The purpose of the literature review was to map the landscape of current knowledge concerning equitable and just climate action planning and to identify guiding principles and best practices from which preliminary evaluative criteria could be derived.

Delphi Survey

The Delphi technique was applied to gather expert feedback on the preliminary framework for evaluating climate action plans in terms of their attention to equity and justice. Delphi studies are commonly carried out in public policy contexts where expert knowledge is needed to inform decision-making or to understand a problem in greater depth (Brady, 2015). A Delphi study typically involves multiple rounds of data collection using questionnaires that are developed iteratively based on the responses given by participants. As a tool for representing and understanding complex problems, the Delphi technique has much to offer the field of planning. Delphi studies work especially well when there is incomplete or conflicting knowledge on a topic, or when a study seeks to improve our collective understanding of a problem. The very nature of urban planning as a field defined by uncertainty and continuous change makes the Delphi technique appropriate for planning research.

There are also several pragmatic benefits of a Delphi study: (a) the Delphi technique is flexible and can be used with quantitative and qualitative data sources; (b) the technique incorporates questionnaires that can be easily and affordably distributed to participants; (c) the technique favours a purposive sample of individuals with specific expertise on a topic, and (d) Delphi studies lack the complexity of many other research designs, making the tool accessible for researchers and practitioners alike (Brady, 2015).

There are several types of Delphi exercises which can usually be assigned to one of three broad categories: normative, forecasting, and policy. In this application, the Delphi survey was normative because its objective was to reach agreement on the plan content and process conditions that are necessary for evaluating the equity and justice of municipal climate action plans. The exercise was both confirmatory and exploratory in nature – the Delphi questionnaire was designed to confirm the key principles and best practices outlined in urban, environmental, and climate justice literature, and to explore the shortcomings and oversights of previous approaches.

Delphi panelists were selected using a strategic sampling method targeting plan evaluation and climate change scholars as well as experts operating in the equity, justice, diversity, and inclusion (EDIJ) space. Snowballing was then used to identify additional experts that participants thought would be a valuable source of information. A total of 15 experts were contacted, of which five agreed to participate as panelists.

The Delphi exercise involved two rounds of expert opinion gathering. The questionnaire for round one (Appendix A) was designed to measure the extent to which experts agree that the distributive, procedural, and recognition dimensions of justice reflect the requirements of climate justice, to elicit feedback on the strengths and weaknesses of the preliminary evaluative framework, and to identify any variables that had been overlooked. Responses from round one were consolidated and thematic analysis was used to identify themes in panelists' feedback. Comments were then used to refine the evaluative framework.

The revised framework was presented to panelists during round two of the Delphi exercise, along with a questionnaire designed to measure agreement among experts about whether the framework would effectively guide evaluations of climate action plans in terms of their attention to equity and justice (Appendix B). The Delphi process stops when agreement is reached, theoretical saturation is achieved, or when sufficient information has been exchanged. In this case, the Delphi exercise was limited to two rounds because following round two there was agreement among all five panelists that the feedback provided during round one was sufficiently addressed in the revised evaluative framework. There was also agreement that all

panelists were comfortable with the revised framework as a tool for assessing the equity and justice of climate action plans.

Part of my motivation for applying the Delphi technique was to explore the feasibility and usefulness of the technique for an area of planning research where it seldom applied. I opted to use the Delphi technique instead of a traditional survey because the anonymous sharing of results offers an opportunity for participants to build on one another's ideas, offer counter perspectives, and ask follow-up questions – this process encourages dialogue between panelists and enriches the results of the exercise. This type of collaboration could also occur during a focus group, but this method has the disadvantage of potential group-think and the discussion being influenced by power dynamics, social identities, or pre-existing relationships among participants. For these reasons, the Delphi survey was the deemed the better choice.

Researchers interested in applying the Delphi technique should keep in mind that the process hinges on full and timely participation by all panelists. Results are analyzed iteratively over the course of the study, as prior rounds of data collection must be analyzed to inform the questionnaires developed for subsequent rounds. A typical Delphi study also involves anonymously sharing the results from previous rounds with all panelists to clarify ideas and elicit additional information. Incomplete or delayed responses affect the content and timing of subsequent rounds of feedback collection, and the anonymity of the exercise makes it impossible to identify panelists who have not completed the questionnaire. As such, ensuring timely and sustained participation by panelists over multiple rounds of feedback collection presents a challenge for researchers applying the Delphi technique.

Semi-Structured Interviews

Following the completion of the Delphi exercise (which validated the framework from a scholarly perspective), I completed a ground truthing exercise designed to test the evaluative framework against the knowledge and experiences of equity-deserving groups. Perspectives were gathered through interviews with representatives from organizations that advocate for equity-deserving groups in each case study city. I conducted 26 semi-structured interviews over a six-month period in 2023 in Waterloo Region (n=10), Brampton (n=8), and Thunder Bay (n=8). The purpose of these consultations was to engage equity-deserving groups in the development

of accurate, representative, and meaningful criteria for assessing equity in climate action planning. The key populations and issue areas around which these organizations focus their advocacy are summarized in Table 4 below.

Table 4. Summary of advocacy areas

Key Populations	Key Issues
Newcomers	Income equality and poverty elimination
Immigrants and refugees	Affordable housing
2SLGBTQIA+ communities	Culturally appropriate services
People with disabilities	Gender equality
Low-income people	Racism and discrimination
Indigenous communities	Newcomer settlement
Children and youth	Diversity and multiculturalism
Families under stress	Food security
Visible minorities and racialized people	Health promotion and illness prevention
Seniors	Social service delivery

Interviewees were selected using a strategic sampling method targeting key informants in senior leadership positions. Snowballing was then used to identify additional experts that interviewees thought would be a valuable source of information. In total, 60 key informants were invited to be interviewed, with a positive response rate of 43%. Of the 26 individuals interviewed, 11 identified as chief executive officers, executive directors, or senior directors; 9 identified as board members or individual members; and 6 identified as program leads or frontline staff. To ensure that the various populations and issues listed in Table 4 were fairly represented in my sample, I recruited interviewees from organizations with comparable mandates across the sample cities (for example, my sample included interviewees from multicultural associations in each city so I could collect data related to the needs of visible minorities and racialized people in each study location).

The interviews involved informal conversation and experience-sharing guided by a semi-structured questioning route (Appendix C) designed to test the scholarly equity and justice criteria devised by the Delphi panelists against the knowledge and experiences of equity-deserving groups. Interviewees were aware that their comments would guide the development of the evaluative framework, but they were not presented with the framework to provide direct feedback. Because interviewees were selected based on their intimate knowledge of local conditions and equity-deserving group needs, and not based on their expertise related to

climate change, interpreting key informants' comments as they pertain to climate action planning was the role of the researcher.

Interviews were audio-recorded and verbatim transcripts were coded using NVivo software. Emergent concept coding was used to assign “big picture” meaning to passages of data and to encourage reflection on the broader themes and ideas suggested by the study (Saldana, 2021). Emergent codes were compiled in a codebook and were accompanied by content descriptions, and in some cases a brief data example for reference (Appendix D).

To ensure inter-coder reliability (ICR), the transcripts were coded independently by two researchers using the same codebook and protocol. This process resulted in 76% inter-coder agreement. The researchers then met to discuss discrepancies until 100% inter-coder agreement was reached. While some researchers object to the use of ICR in qualitative analysis (Braun & Clarke, 2013; Hollway & Jefferson, 2013), I decided to report ICR as an external quality-signaling function to demonstrate the rigor and consistency of my coding frame and its application to the data. Although I can appreciate how the application of reliability standards created for positivist research may be at odds with the interpretive agenda of qualitative research (Madill et al., 2000), ICR has value for showing that my analysis has meaning that extends beyond an individual researcher (O'Connor & Joffe, 2020). I also found ICR to be a helpful means of reflexively improving my analysis by provoking dialogue between myself and the second coder.

Directed Content Analysis

The content analysis of climate change plans for the three case study cities was guided by the evaluative framework developed through my consultations with scholarly experts and representatives from equity-deserving groups. Directed content analysis was used to evaluate plan content against the pre-determined criteria contained in the evaluative framework (47 scored criteria and 18 unscored criteria to guide the collection of qualitative observations). The scored criteria were assigned 0, 1, or 2 points depending on how thoroughly the criteria were addressed in the plan. Scores were assigned based on manifest plan content (i.e., the visible and literal meaning of the text) while qualitative observations were collected based on latent content (i.e., the underlying meaning of the text) (Krippendorff, 2019).

To validate scores, a second rater independently repeated the analysis using the same methods and criteria. This process resulted in 72% overall agreement between the two independent raters, with highest agreement on the scoring of healing justice criteria and lowest agreement on the scoring of procedural justice criteria (Appendix E). To reconcile discrepancies in the assigned scores, the two raters discussed their observations and re-reviewed the strategies together to agree on a new score until 100% agreement was reached.

1.5.4 Positionality Statement

Qualitative research is inherently interpretive and shaped by the positionality of the researcher relative to the research problem – as such, it is important for me to comment on my background to help readers understand the connection between me and my study. My interest in issues of social justice stems from my varied experiences volunteering with non-profit organizations in Central and South America and East Africa on projects spanning education, gender equality, poverty, food and water security, and healthcare. I quickly recognized the interconnections between the various forms of inequity that these organizations were combatting and developed skills to critically evaluate the design and implementation of social justice initiatives. As a 23-year old peace and conflict studies graduate with a taste for adventurous travel and a desire to change the world, the next logical step was to pursue graduate studies with the goal of working for the United Nations.

My graduate studies in global governance led me to a consultancy at the United Nations Development Program in Southeast Asia, where I supported an ongoing project to increase resilience to climate change impacts in Vietnamese coastal communities. The compounding nature of various social and economic inequities once again became clear – this time, with an obvious connection to climate change – as did the need for an integrated response.

I began my PhD with a desire to clarify the role of local policy in responding to the overlapping and concurrent crises of climate change and social inequity. I carried with me strong theoretical knowledge of the co-benefits of integrated solutions and feelings of frustration about the slow pace of progress in many communities. Responding to climate change at the pace required to curb impacts, while taking the time needed to carefully anticipate and mitigate regressive outcomes, presents a truly wicked problem. I thus set out to

explore the nature of this challenge through my doctoral research with the hope of discovering promising solutions that would work for the underserved communities I had worked closely with over many years.

I readily acknowledge that my understanding of the world around me is forged in my personal experiences and views, which in my case, have been shaped by a Western education and professional experience in the Global South (where my limitations as a monolingual woman from the Global North became abundantly clear).

In setting out to complete this research, I had several concerns about my ability to do justice to my chosen topic and to explore my research questions in a sensitive and respectful manner. I was acutely aware of the risk that my education and socialization in a Western settler society may lead me to reproduce discriminatory roles and stereotypes through my research. I reflected on how my own implicit biases – which, by their very nature, go unnoticed – shape the questions that I ask and do not ask. I also thought carefully about the fact that my research agenda required members of equity-deserving groups to prioritize my learning needs. I was especially concerned about my ability to report my findings without imposing my own perspectives and assumptions onto the data or onto the individuals who trusted me enough to share their perspectives with me.

I recognize that my background and experiences shape my interpretations and may cause me to lean toward certain themes or look for evidence to support my positions. In doing this research, I did my best to mitigate these biases as much as possible while keeping in mind that qualitative research, by its very definition, places value on the researcher's interpretation of the data. In trying to strike a balance between remaining objective and applying my own personal lens to the data, I found the following quote helpful:

A qualitative researcher's role is not to reveal universal objective facts, but to apply their theoretical expertise to interpret and communicate the diversity of perspectives on a given topic. Within this epistemological framework, researcher reflexivity and active personal engagement with the data are resources, not "noise" to be minimized (O'Conner & Joffe, 2020, p. 4).

When I felt that my own background as a white, educated, middle-class, able-bodied young woman put me out of touch with some of the communities on which my research

focused, I reflected on a comment made by one of my interviewees whose racial and socio-economic background differs from my own:

There can be people who can be racialized who don't get it, and people who are not who are allies and really do get it. Lived experience is important, but it's not the only driver of progress.

With this perspective in mind, and to be an effective ally and reflexive researcher, I challenge myself to continually reflect on my positionality relative to my research and to work toward naming and dismantling my biases.

1.6. Structure and Contributions of the Dissertation

This dissertation follows an article-based format. My research contributions are organized in three central chapters, each of which relates to one of my three research phases. Because each chapter was written as a standalone article, some repetition across the three chapters was unavoidable.

Chapter 2 proposes an evaluative framework for assessing equity and justice in municipal climate action plans. The framework was developed through a Delphi consultation with climate change scholars and semi-structured interviews with representatives from equity-deserving groups, and is useful as a tool for assessing whether municipal climate policies respond to the self-identified needs and priorities of equity-deserving groups. Chapter 2 advances debate about what constitutes an equitable approach to urban climate action by proposing an evaluative framework that is based on convergence of expert opinion regarding the plan content and process conditions that are necessary to advance equity and justice in climate action planning. The chapter identifies and discusses three key points of departure between scholarly and equity-deserving group understandings of equity in the context of climate action. These differences relate to the level of specificity these groups use when talking about the needs and priorities of marginalized groups, the emphasis on criteria that are future-oriented versus backward-looking, and the sufficiency of distributive, procedural, and recognition justice as evaluative criteria.

Chapter 3 explores the self-identified needs and priorities of equity-deserving groups in the case study cities (Waterloo Region, Brampton, and Thunder Bay) to develop a set of

recommendations for more equitable climate action planning based on input from equity-deserving groups. Citing findings from semi-structured interviews with key informants, the chapter demonstrates that equity challenges are often cross-cutting, but the way these challenges are experienced and by who varies between cities with diverse demographics. Chapter 3 suggests that universal equity principles can serve as general rules for policymaking, but local forms of inequity and demographics must be carefully considered. The chapter argues that climate policies should be evaluated on a case-by-case basis to determine whether they effectively respond to the self-identified needs and priorities of equity-deserving groups in specific cities.

Chapter 4 reports the results of the content analysis of climate action plans for the case study cities, and discusses several recurrent themes that emerged based on the empirical results of the plan evaluation and the qualitative evidence collected through interviews with equity-deserving groups. This chapter builds knowledge of the current state of municipal climate change planning in Canadian municipalities – a study location where previous research is limited – and offers empirical evidence demonstrating that climate action planning in Ontario remains unresponsive to the needs and priorities of equity-deserving groups. The chapter suggests there is considerable risk that equity-deserving groups who have been rendered vulnerable to climate change will be left behind in the transition to more climate friendly communities.

The dissertation closes with overarching recommendations and concluding remarks. Chapter 5 revisits the research questions and clarifies the substantive, theoretical, methodological, and practical contributions of the research before suggesting avenues for further research and offering some final reflections.

Because this dissertation follows an article-based format where Chapters 2, 3, and 4 were prepared as standalone articles, each chapter of the dissertation includes its own list of references (provided at the end of the dissertation) and figure and table numbers are not continuous across the entire dissertation. References to appendices are continuous across the entire dissertation, apart from the reference to Appendix A in Chapter 4, which refers readers to an appendix that is included directly in Chapter 4 as a standalone article.

Chapter 2: Bridging Scholarly and Community Perspectives: A Framework for Assessing Equity in Urban Climate Action Planning

This chapter describes the novel process for developing the proposed evaluative framework that was subsequently used to guide the content analysis of climate action plans for the case study cities (Chapter 4). The key contributions of this chapter are: 1) a flexible framework that can be used as an assessment tool for evaluating equity and justice in climate action planning for various sites; 2) reflections on the feasibility and usefulness of the Delphi technique for an area of planning research where it seldom applied; and 3) clarification as to whether scholarly understandings of equity and justice reflect the way equity-deserving groups understand these concepts. This chapter addresses a methodological shortcoming of previous studies by engaging equity-deserving perspectives in the development of evaluative criteria that reflect these groups' self-identified needs and priorities. Chapter 2 is currently under review by the *Journal of Urban Affairs* (reference details below).

Swanson, K. (2024). Bridging scholarly and community perspectives: A framework for assessing equity in urban climate action planning. *Journal of Urban Affairs*, (JUA-24-412).

Bridging Scholarly and Community Perspectives: A Framework for Assessing Equity in Urban Climate Action Planning

The variable criteria adopted by researchers who assess equity in climate action planning indicate that there are no clear guidelines for ensuring an equitable approach to urban climate action. This paper proposes an evaluative framework that was developed through consultations with climate change scholars and representatives from equity-deserving groups. The framework is useful for researchers interested in assessing whether municipal climate policies respond to the self-identified needs and priorities of underserved residents. The research also clarifies whether scholarly understandings of equity and justice reflect the way equity-deserving groups understand these concepts.

Keywords: Delphi technique; Equity; Justice; Plan evaluation

Introduction

The importance of addressing equity and justice concerns in our response to climate change is acknowledged globally and locally. The United Nations Framework Convention on Climate Change (UNFCCC) (1995) calls for the protection of the climate system on the basis of equity, while the Paris Agreement (2015) and the Glasgow Climate Pact (2021) are guided by the principle of equity and the protection of vulnerable communities. Sustainable Development Goal 13 (2015) similarly encourages actions to combat climate change that focus on marginalized communities. The Sixth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) (2022) says adaptation and mitigation actions that prioritize equity, social justice, climate justice, and inclusivity lead to more sustainable outcomes, reduce trade-offs, support transformative change, and advance climate resilient development.

National and sub-national governments also recognize the need to consider equity and justice when responding to climate change. Canada's National Adaptation Strategy (2023) includes the advancement of equity, climate justice, and environmental justice as a guiding principle to direct and inform decisions on how adaptation actions are designed and implemented. Evidently, equity and justice are widely considered essential components of progressive climate action agendas at global and local scales.

Growing attention to equity in the context of climate action is appropriate given ample evidence demonstrating the uneven distribution of adverse climate change impacts across geographic locations and social groups (Hallegatte & Rozenberg, 2017; IPCC, 2022; Levy & Patz,

2015; Steele et al., 2012). There is also growing recognition that future climate impacts are likely to compound historical processes of colonialism and racial segregation that have created uneven patterns of development (Adger et al., 2006; Bell, 2014). Climate action plans that do not make equity a core concern risk reinforcing trends of vulnerability and perpetuating patterns that favour residents who are already positioned to succeed.

Planners working in the context of urban climate action are called to integrate equity and justice considerations into their practice, but these normative concepts are difficult to quantify. Disagreement about the meaning of equity and justice has led researchers to adopt variable criteria for assessing these principles in climate change plans at different scales. The diversity of approaches proposed by researchers to date indicates that there are no clear guidelines as to what constitutes an equitable approach to urban climate action.

This paper advances debate in this area by proposing an evaluative framework that is based on convergence of expert opinion regarding the plan content and process conditions that are necessary to advance equity and justice in climate action planning. The framework contains 65 criteria organized under four categories of distributive, procedural, recognition, and healing justice, and is proposed as a tool for assessing the extent to which municipal climate action plans address equity and justice considerations. The framework was developed through a rigorous process that involved a modified Delphi survey of climate change scholars and semi-structured interviews with representatives and advocates from organizations that serve equity-deserving groups.² The purpose of these consultations was to answer the following questions: 1) What plan content and process conditions should be considered when evaluating the equity and justice of municipal climate action plans; and 2) Do scholarly understandings of equity and justice reflect the way equity-deserving groups understand these concepts?

The paper begins with an overview of the distributive, procedural, and recognition dimensions of justice before proposing a framework for evaluating these concepts in municipal climate action planning. The paper then describes the multi-step process for developing the

² I recognize that these groups are not mutually exclusive. A scholarly expert can be a member of an equity-deserving group, and vice versa. I distinguish between these groups for clarity regarding who was consulted during each phase of the study.

evaluative framework before concluding with a discussion of findings and avenues for future research.

Theoretical Background

The proposed evaluative framework is grounded in urban justice, environmental justice, and climate justice scholarship. A detailed discussion of the origins and key concerns of the urban, environmental, and climate justice movements is beyond the scope of this paper, but it is noted that these movements emerged to conceptualize how injustice is constructed by social, economic, and political processes that enable certain privileged groups to access socio-economic and environmental benefits while simultaneously denying access for historically underserved groups (Bullard, 1993; Kojola & Pellow, 2021; Schlosberg & Collins, 2014; Wilson, 2010). The urban, environmental, and climate justice movements are distinct in their organizing concepts and focus areas, but all three movements capture the following core dimensions of justice: distributive justice, procedural justice, and recognition justice (for an in-depth review of these concepts and their origins, see Swanson, 2023a). An overview of the distributive, procedural, and recognition dimensions of justice is offered below to provide theoretical background for the proposed evaluative framework. The framework also captures a dimension of justice referred to here as *healing justice*, but since this concept emerged from the study findings rather than from the literature review, this dimension is discussed later in the paper.

Distributive justice concerns the fair allocation of resources and opportunities among members of society. Distributive justice is commonly discussed in the context of climate change given the uneven distribution of environmental benefits and burdens that results from climate disruption, whereby communities who have historically contributed the least to climate change are positioned to suffer the most from its effects (IPCC, 2022). Criteria related to ensuring the equitable distribution of environmental goods and protection from environmental harms for all socio-economic groups are captured under the distributive justice category of the proposed evaluative framework.

Procedural justice relates to fair, transparent, and inclusive decision-making processes for determining distributive outcomes. Procedural justice advocates argue that justice can only be advanced through meaningful participation in democratic decision-making processes that

amplify marginalized voices and protect minority rights (Meerow et al., 2019; Shi et al., 2016). The need for procedural justice during deliberations on climate change is affirmed by the UNFCCC (1994), the Bali Principles of Climate Justice (2002), and the IPCC (2022). These documents affirm the right of local communities to participate at every level of decision-making on matters that affect them.

Recognition justice calls for greater attention to the underlying social processes that determine distributive patterns and create exclusionary participatory processes. Recognition justice considers how certain populations are made visible or invisible in policy development contexts, whose perspectives are considered relevant, and whose needs are given priority during decision-making processes (Klinsky & Mavrogianni, 2020). While procedural justice is about ensuring that diverse voices are included in collective decision-making processes, recognition justice considers whether these voices are heard and respected.

Justice scholars agree that vulnerable residents should be prioritized in our responses to climate change, and this principle is reflected in the proposed evaluative framework. It should be noted that vulnerability is not an inherent or stationary attribute of certain populations. Rather, certain individuals are rendered vulnerable to climate risks through processes of colonialism, racism, and structural discrimination (Adger et al., 2006; Kashem et al., 2016; Thomas et al., 2018). Environmental and climate justice research has tied personal characteristics such as gender and race to the likelihood of experiencing disproportionate climate impacts (UN-Habitat, 2011), but more critical research attributes differential impacts to systems of oppression that deny resources to specific communities (Jacobs, 2019). Vulnerability to climate change should be understood as dynamic and socially produced by policy decisions that shape the composition and spatial distribution of vulnerable populations (Kashem et al., 2016). The proposed evaluative framework considers whether climate action planning efforts pay special attention to vulnerable groups, while also assessing whether policies and plans acknowledge the underlying social processes that create and sustain vulnerability for certain populations.

Evaluative Framework

The framework (Table 1) and corresponding scoring rubric (Table 2) are proposed as tools for evaluating the extent to which municipal climate action plans address equity and justice considerations in their climate action plans. The studies listed under “key literature” either used similar criteria (which were modified for the purpose of this research), raised questions or ideas that inspired new criteria, or presented findings that suggested certain new criteria would be useful for evaluating future efforts. Prompts without reference to specific scholarship either represent follow-up questions that are not necessarily grounded in a specific study or body of literature but were designed to guide the collection of more detailed observations, or were derived directly from consultations with climate change scholars and representatives from equity-deserving groups. After presenting the proposed evaluative framework (Table 1) and corresponding scoring rubric (Table 2) below, the remainder of the paper describes the process for developing the framework and shares findings from the Delphi exercise and consultations with representatives from equity-deserving groups.

Table 1. Evaluative framework

Criteria developed or revised based on Delphi findings

Criteria developed or revised based on interview findings

Distributive Justice			Key Literature
	Criteria	Points	
1	Does the plan define climate justice and/or describe its requirements?	2	
2	How is it defined and/or described?	-	
3	Does the plan explicitly identify equity and/or justice as a priority?	2	
4	Does the plan explicitly define vulnerability?	2	
5	How is it defined?	-	
6	Does the plan identify drivers of vulnerability?	2	Kashem et al. (2016) Thomas et al. (2018) van den Berg and Keenan (2019)
7	Are socio-economic attributes (e.g., education, income) recognized as drivers of vulnerability? (as opposed to only addressing physical exposure to risk)	2	Kashem et al. (2016) Fitzgibbons and Mitchell (2019)
8	Does the plan recognize disparate climate vulnerability?	2	Bali Principles (2002) Bulkeley et al. (2013)
9	Does the plan unpack root causes of these disparities?	-	Thomas et al. (2018) Malloy and Ashcraft (2020) Zoll (2022)

10	Does the plan identify specific neighbourhoods that are underserved?	2	Fitzgibbons and Mitchell (2019) Loh and Kim (2021) Zoll (2022)
11	Does the plan identify specific populations that are underserved? (as opposed to referring broadly to “marginalized” groups)	2	
12	• If yes, what populations are identified?	-	
13	Are specific neighbourhoods identified as vulnerable to climate change?	2	Zoll (2022)
14	Are specific populations identified as vulnerable to climate change?	2	Zoll (2022)
15	• Is their vulnerability explored in-depth? (i.e., the plan describes historical or structural reasons for their vulnerability)	2	Fitzgibbons and Mitchell (2019)
16	• Do proposed actions intentionally target the neighbourhoods and/or populations identified as vulnerable?	2	Fitzgibbons and Mitchell (2019) Zoll (2022)
17	Are the benefits of proposed actions accessible to all residents? (i.e., socially valuable resources [e.g., greenspace] and opportunities to access them are evenly distributed)	-	Fitzgibbons and Mitchell (2019) Graham et al. (2015)
18	• Does the plan acknowledge potential disparities in access?	2	
19	• Do any proposed actions attempt to reduce disparities in access?	2	
20	Does the plan include adaptation strategies that specifically target unhoused people? (e.g., cooling/heating stations, rain shelters)	2	
21	Does the plan include climate emergency response plans for seniors and/or people with disabilities?	2	
22	Do transit-related sections of the plan mention physical accessibility and/or safety?	2	
23	Could any of the proposed actions directly or indirectly negatively affect a vulnerable group? (e.g., through displacement)	-	Bell (2014) Davoudi and Brooks (2014) Anguelovski et al. (2016, 2019) Fitzgibbons and Mitchell (2019) Long and Rice (2019)
24	• Does the plan acknowledge these potential impacts?	2	
25	• Are well-known risks associated with disruptive actions mitigated?	2	Fitzgibbons and Mitchell (2019)
26	Do proposed actions address the root causes of vulnerability? (i.e., discrimination and/or exclusion based on axes of social difference [e.g., class, race, gender])	-	Kashem et al. (2016) Thomas et al. (2018) van den Berg and Keenan (2019)
27	Does the plan mention any obstacles to implementing equitable policies?	-	Loh and Kim (2021)
28	Does the plan identify actions to address past harms? (e.g., compensation, restoration, reparation)	2	Bali Principles (2002) Amorim-Maia et al. (2022)
	<i>TOTAL POSSIBLE POINTS</i>	40	
Procedural Justice			

29	Does the plan describe the stakeholder engagement process?	2	Guyadeen et al. (2019) Meerow and Woodruff (2020)
30	Does the plan identify a diverse set of stakeholders?	2	Graham et al. (2015)
31	Does the plan specify groups <i>not</i> included in the engagement process?	2	
32	Who was targeted for consultation and why?	-	
33	Does the plan indicate which phases included public participation? (i.e., opportunities to participate)	2	Bali Principles (2002) Baer (1997)
34	Were stakeholders engaged in early problem definition and/or a needs assessment?	2	
35	Were stakeholders engaged in plan development?	2	
36	Were stakeholders engaged in plan implementation?	2	
37	Does the plan describe the specific consultation techniques used?	2	
38	In what capacity were stakeholders involved?	-	Klinsky and Mavrogianni (2020)
39	Does the plan state that equity considerations will feature as an indicator of success?	2	Fitzgerald (2022)
40	Does the plan identify metrics for evaluating whether its actions have been successful?	2	Fitzgerald (2022)
41	Were the metrics designed collaboratively?	2	
42	Does the plan provide an opportunity for public participation in monitoring and evaluation?	2	Guyadeen et al. (2019) Seasons (2021)
43	If yes, in what capacity?	-	
44	Does the plan describe any strategies for ongoing communication between planning staff and residents during and/or after plan implementation?	2	Graham et al. (2015)
45	Is the plan accessible for a lay audience? (i.e., the plan is concise and avoids technical jargon)	2	Graham et al. (2015) Bunnell and Jepson (2011)
46	Is the plan available in any languages besides English?	-	Fitzgibbons and Mitchell (2019)
47	Does the plan contain a diversity of culturally relevant examples and/or visuals?	2	
<i>TOTAL POSSIBLE POINTS</i>		30	
Recognition Justice			
48	Does the plan explicitly recognize systemic causes of injustice? (e.g., racism, colonialism, gender inequality)	-	Young (1990) Schlosberg (2013) Chu and Michael (2019) Malloy and Ashcraft (2020)
49	Does the plan identify specific strategies to address systemic causes of injustice? (e.g., anti-racism, reconciliation)	-	Meerow et al. (2019) Chu and Cannon (2021)
50	Does the plan acknowledge intersecting identities? (e.g., race, gender, class, age)	2	Osborne (2015) Meerow et al. (2019) Kojola and Pellow (2021) Amorim-Maia et al. (2022) Sultana (2022)
51	Does the plan acknowledge the need for culturally appropriate responses to climate change?	2	
52	Did the stakeholder engagement process prioritize involvement of vulnerable groups?	2	Bali Principles (2002)

53	Were there special efforts to encourage participation by those normally left out? (e.g., outreach to underrepresented communities)	2	Finn and McCormick (2011) Hughes (2013) Davoudi and Brooks (2014) Meerow et al. (2019) Loh and Kim (2021)
54	Is there evidence that vulnerable groups were afforded an opportunity to self-identify their needs and priorities?	2	Nussbaum (2000) Bali Principles (2002) Harvey (2003) Fitzgibbons and Mitchell (2019)
55	Does the plan mention any barriers to participation?	2	Lawless and Fox (2001) Boswell et al. (2012)
56	If yes, does the plan describe how these barriers were overcome?	-	
57	Is there evidence that stakeholder engagement efforts foster respect for diverse voices?	-	Umemoto (2001) Meerow et al. (2019) Jimmy et al. (2019) Graham et al. (2015)
58	Does the plan include a land acknowledgment?	2	
59	Does the plan acknowledge Indigenous actors' inherent rights and governance as self-determining nations? (as opposed to referring to Indigenous actors as "stakeholder" groups)	2	Bali Principles (2002) Reo et al. (2017)
60	Does the plan mention local or traditional knowledge?	2	McGregor (2018) Olazabal et al. (2021)
61	If yes, how was this knowledge used in planning/decision-making/implementation?	-	Temper (2019)
	<i>TOTAL POSSIBLE POINTS</i>	18	
Healing Justice			
62	Does the plan reference the broader vision/mission for the city/region?	2	
63	If yes, is it clear how specific underserved populations (especially those identified elsewhere in the plan) fit into this vision/mission?	-	
64	Does the plan acknowledge the limitations of actions to address past harms? (e.g., compensation, restoration, reparation)	2	
65	Does the plan identify tools and/or supports to help equity-deserving groups heal from generational trauma and/or historical forms of oppression?	2	
	<i>TOTAL POSSIBLE POINTS</i>	6	
	<i>GRAND TOTAL POSSIBLE POINTS</i>	94	

Table 2: Scoring rubric

Category	Meaning	Points
Fully addressed	There is compelling evidence that the criterion is thoroughly fulfilled (i.e., the plan discusses a topic in depth and/or describes a specific action item)	2
Partially addressed	There is superficial or vague mention of the criterion and/or the criterion is only partly fulfilled (i.e., the plan passively refers to a topic and/or an action item)	1

Not addressed	There is no evidence that the criterion is acknowledged, considered, or fulfilled in the plan (i.e., the plan does not mention a topic and/or action item)	0
Unscored criteria are used to guide the collection of qualitative observations		-

The remainder of the article describes the process for developing the proposed evaluative framework and shares findings from consultations with the Delphi panelists and representatives from equity-deserving groups.

The Delphi Technique: Background and Application to Planning

The Delphi method was developed in the early 1950s as a form of structured, anonymous communication between experts to reach consensus in the areas of policy, practice, or organizational decision-making. Delphi studies are commonly carried out in public policy contexts where expert knowledge is needed to inform decision-making or to understand a problem in greater depth (Brady, 2015). A Delphi study typically involves multiple rounds of data collection using questionnaires that are developed iteratively based on the responses given by participants.

There are several types of Delphi exercises which can usually be assigned to one of three broad categories: normative, forecasting, and policy. Normative Delphi exercises explore what should be, given current knowledge about a specific subject (Martino, 1999). The primary research objective of a normative Delphi is to gain consensus about a preferred future state. Forecasting Delphi exercises make predictions about future events for which limited or conflicting knowledge currently exists (Albright, 2002; Coates et al., 2001). Policy Delphi studies explore matters of political interest or consequence to ensure that a full range of relevant variables are identified and considered. Each category of Delphi study shares certain consistent criteria including purposive sampling, emergent design, anonymous and structured communication between participants, and thematic analysis of responses (Skulmoski et al., 2007). The choice about which type of Delphi exercise is appropriate for a given study depends on the research objectives.

As a tool for representing and understanding complex problems, the Delphi technique has much to offer the field of planning. Delphi studies work especially well when there is incomplete or conflicting knowledge on a topic, or when a study seeks to improve our collective

understanding of a problem. Delphi studies are also useful for exploring philosophical or conceptual issues and research problems that require subjective collective judgments (Linstone & Turoff, 1975; Richey et al., 1985). The very nature of urban planning as a field defined by uncertainty and continuous change makes the Delphi technique appropriate for planning research. There are also several pragmatic benefits of a Delphi study: (a) The Delphi technique is flexible and can be used with quantitative and qualitative data sources; (b) The technique incorporates questionnaires that can be easily and affordably distributed to participants; (c) The technique favours a purposive sample of individuals with specific expertise on a topic, and (d) Delphi studies lack the complexity of many other research designs, making it an accessible tool for researchers and practitioners alike (Brady, 2015).

Findings from Delphi studies can have direct bearing on informing practice, policy, and decision-making, making the technique relevant for both theoretical and practical planning research. The Delphi technique works effectively as a tool for gathering expert opinions on a topic while avoiding the disadvantages of group-think and group dynamics where certain individuals dominate the discussion. The technique reflects the tenets of participatory planning by enabling participants to contribute anonymously without knowing who else is participating, which helps to reduce the impact of power relations (Fletcher & Childon, 2014). Brady (2015) demonstrates that Delphi studies can also effectively allow for greater inclusion and participation from groups that are often left out of traditional research.

Within planning and aligned disciplines, the Delphi technique has been used to explore complex problems pertaining to the natural, social, and built environment. Delphi studies have been completed to evaluate urban resilience indicators in areas facing rapid development changes (Shafiei-Dastjerdi & Lak, 2023), and to determine indicators for sustainability assessments in social housing environments (Escorcia Hernández et al., 2023). Delphi studies have also been done to improve the quality of leisure environments (Hasanpour et al., 2023), to identify variables related to social vitality (Mirzaei & Zangiabadi, 2021), and to explore variables that influence walkability (Cerro-Herrero et al., 2022). The method has also supported efforts to detect the critical success factors of urban renewal projects (Chen et al., 2022), to investigate barriers to the implementation of Smart Cities (Correia et al., 2022), and to evaluate future

settlement patterns and scenarios in the context of population decentralization (Bolleter et al., 2022).

Despite the value and growing application of Delphi studies in the planning realm, the technique has not been applied to research exploring the meaning of equity or the tenets of justice. Accordingly, this study explores the potential of the Delphi technique for gathering a variety of perspectives regarding the conditions of equitable climate action planning. The study does not represent a fully developed quantitative Delphi exercise; rather, the purpose of the modified Delphi consultation was to: 1) explore the feasibility and usefulness of the Delphi technique for an area of planning research where it is seldom applied; 2) to gather a variety of perspectives on the research question; and 3) to enhance the researcher's confidence in the content and structure of an evaluation tool.

Previous Approaches to Evaluating Equity

Several studies have attempted to uncover gaps and deficiencies in the way climate action planning addresses equity and justice. The variety of approaches to defining and measuring equity and justice highlighted in the literature indicates that “there are no coherent, widely held criteria for ensuring social justice” in urban climate action planning (Chu & Cannon, 2021, p. 86-87). Rather, previous studies have refined widely accepted distributive, procedural, and recognition justice principles to develop frameworks for assessing the equity and justice of climate action planning at different scales, with notable variation in the way equity and justice are defined and assessed within each study (refer to Swanson 2023b for a detailed overview of previous approaches).

These studies have repeatedly found variation in the degree to which cities feature equity and justice considerations in their CAPs. Scholars have noted that efforts to address equity and justice concerns in CAPs are mainly rhetorical (Finn & McCormick, 2011), and that there is a disconnect between rhetorical commitments to equity and justice and proposed climate actions (Zoll, 2022). Studies have also revealed that despite principles of participation and inclusion becoming integrated into cultures and practices of planning, climate action planning processes are often devoid of meaningful inclusion or engagement of marginalized groups (Anguelovski et al., 2016; Chu & Michael, 2019; Haverkamp, 2017; Hughes, 2015). These

studies have identified the shortcomings of climate action planning regarding equity and justice, but the voices and perspectives of equity-deserving groups³ (who are often disproportionately affected by climate change) are notably absent from these assessments.

Rather, the development of the assessment criteria guiding previous studies has been researcher-led. Previous frameworks for assessing equity and justice in climate action planning have been developed using a top-down approach where the researcher decides what the equity criteria should be, and how the various criteria should be weighted or scored in the overall assessment of the climate action plan. Previous studies have thus devised and weighted equity criteria based on researcher judgment rather than input and feedback from equity-deserving groups. Reductionist approaches to developing universal equity and justice criteria may also be insensitive to variability between cities facing different equity-related challenges, and between equity-deserving groups whose experiences are context-specific.

Previous studies have established an important baseline understanding of how normative equity and justice priorities are embedded in climate action planning. This knowledge has clarified the extent to which climate action plans are engaging with issues of equity and justice from the perspective of the researchers who develop, refine, and weight the criteria, but tell us little about the ways equity-deserving groups understand and articulate equity and justice in the context of climate action planning. Previous studies have revealed how scholars define and assess equity in the context of climate change, but the perspectives of equity-deserving groups are less understood. Consequently, researchers tend to *tell* members of marginalized communities what is equitable without *asking* these groups what equitable climate action planning means to them.

Rather than relying solely on researchers to develop frameworks for assessing equity, tools that are meant to inform or improve local policy decisions should incorporate local input to ensure that assessment criteria are accurate, representative, and meaningful in the local context (Oulahen et al., 2015). To develop such tools, researchers must pay more explicit attention to the distributive, procedural, and recognition justice implications of climate action

³ Defined as those who face barriers to equal access, opportunities, and resources due to disadvantage and discrimination tied to gender, race, ethnicity, economic status, age, and (dis)ability.

plans from the perspective of equity-deserving groups. Accordingly, this study engaged advocates and representatives from organizations that serve equity-deserving groups in the development of the proposed framework for assessing the equity and justice of climate action plans.

Methods

A preliminary evaluative framework was developed based on a literature review and was subsequently validated by five expert panelists in two rounds of the Delphi technique. There were several pragmatic reasons for selecting the Delphi technique for this research: (a) participants were located across North America and Australia, making in-person collaboration unrealistic; (b) the online questionnaires provided busy participants with flexibility in terms of when they participated; and (c) the technique derives the benefits of the opinions of a group of experts without their responses being impacted by power dynamics, social identities, or pre-existing relationships. The limited use of the Delphi technique in qualitative planning research also presented an opportunity to explore the feasibility and usefulness of the technique for research on a topic as contested and subjective as the nature of equity and justice.

Following the completion of the Delphi exercise (which validated the framework from a scholarly perspective), I completed a ground truthing exercise designed to test the evaluative framework against the knowledge and experiences of advocates and representatives from equity-deserving groups. The sections below explain the step-by-step process for developing the preliminary evaluative framework and refining the framework based on consultations with experts.

Preliminary Evaluative Framework

To develop the evaluative framework that was presented to the Delphi panelists, I reviewed urban justice, environmental justice, and climate justice literature to identify key theories and guiding principles that inform our understanding of equity and justice. The proposed framework broadly reflects elements of the right to the city (Harvey, 2003; Lefebvre, 1968; Marcuse, 2009), the just city (Fainstein, 2010), and the climate-just city (Steele et al.,

2012), which collectively demand material equity and the inclusion of marginalized residents in decision-making processes.

The right to the city as theorized by Lefebvre (1968), Harvey (2003), and Marcuse (2009) asserts an active right of citizens, especially those who are excluded or directly oppressed, to not only access the benefits of urban life, but also to shape the city in accordance with their desires. The right to the city is captured under criteria in the framework that deal with access to environmental amenities and recognition of marginalized groups. Fainstein's (2010) just city promotes redistributive policies that favour marginalized residents – the proposed framework reflects this principle by assessing how the material and non-material benefits of climate policy are distributed among community members. The framework also incorporates elements of the climate-just city described by Steele et al. (2012) by proposing criteria that integrate principles of climate justice *and* social equity.

I also reviewed participation and plan quality literature to identify key features of fair and inclusive planning processes and characteristics of high-quality plans. The purpose of the literature review was to map the landscape of current knowledge concerning equitable and just climate action planning and to identify guiding principles and best practices from which preliminary evaluative criteria could be derived.

I then reviewed previous studies that evaluate equity and justice in different types of climate change plans at various geographic scales and developed criteria to address the shortcomings of climate action planning identified by these studies. For example, recognizing that there is a disconnect between rhetorical commitments to equity and justice and the climate actions proposed in plans (Zoll, 2022), I developed criteria to assess whether climate action plans that recognize differential vulnerability also direct resources to the people and places identified as vulnerable. Criteria from previous studies that related to a specific type of climate action (e.g., adaptation actions) were modified to apply to climate action planning more broadly. Criteria derived from more general urban justice principles were modified to ensure that they related to climate change specifically. Some additional criteria were informed by the Bali Principles of Climate Justice (2002), which affirm the need for solutions that address the rights of members of society who are rendered vulnerable through various types of exclusion.

The criteria in the evaluative framework were initially categorized under the distributive, procedural, and recognition dimensions of justice. Distributive justice criteria are grounded in the work of Davidoff (1975) and Krumholz (2003) and the contributions of several scholars who have since applied the concept of distributive fairness to environmental- and climate-related outcomes. Key scholars whose theories about public deliberation underpin the procedural justice criteria include Arnstein (2019[1969]), Healey (1992, 1997), and Hillier (2003), as well as more recent contributions by Blue (2016) and Blue et al. (2019).

Recognition justice criteria draw broadly on the work of several scholars whose research concerns the knowledge and ways of knowing that are privileged and overlooked when responding to climate change, namely Abimbola et al. (2021), Byskov (2021), Olazabal et al. (2021), Schrock et al. (2022), Turnhout et al. (2010), Umemoto (2021), and Wijsman and Feagan (2019). Criteria grounded in critical climate justice perspectives are incorporated across the categories of distributive, procedural, and recognition justice, namely contributions by Reo et al. (2017), McGregor (2018), and Sultana (2022). The category of healing justice was not included in the preliminary evaluative framework – healing justice criteria were developed based on the interview findings and are therefore discussed later in the paper.

The format of the evaluative framework was modeled after Fitzgibbons' and Mitchell's (2019) framework, which was used to evaluate resilience strategies. The format of their framework can easily be applied to other types of climate change planning once the criteria contained within the framework have been modified appropriately. In this case, the structure of the framework was retained but the evaluative criteria were not. The result of the literature review was a preliminary evaluative framework to be validated through the Delphi exercise.

Modified Delphi Exercise

The Delphi technique was applied to gather expert feedback on the preliminary framework for evaluating climate action plans in terms of their attention to equity and justice. The Delphi exercise was normative because its objective was to reach agreement on the plan content and process conditions that are necessary and sufficient for evaluating the equity and justice of climate action plans. The exercise was both confirmatory and exploratory in nature – the Delphi questionnaire was designed to confirm the key principles and best practices outlined

in urban, environmental, and climate justice literature, and to explore the shortcomings and oversights of current approaches.

Delphi panelists were selected using a strategic sampling method targeting plan evaluation and climate change scholars as well as experts operating in the equity, justice, diversity, and inclusion (EDIJ) space. Snowballing was then used to identify additional experts that participants thought would be a valuable source of information. Recognizing that assumptions about who should be considered an expert are contextual, subjective, and often Western-centric, my selection process for the Delphi panel was guided by the following criteria: (a) panelists hold an advanced degree in a discipline related to the research domain, and (b) panelists have a relevant publication record demonstrating expertise and interest in the subject matter.

The decision not to include frontline community members in the Delphi panel was made intentionally to ensure that the resulting framework reflected *scholarly* understandings of climate justice.⁴ The purpose of the subsequent consultations with representatives from equity-deserving groups was to determine whether the equity and justice criteria proposed by scholars resonate with community members with lived experience, so these perspectives had to be collected separately.

A total of 15 experts were contacted, of which five agreed to participate as panelists. The final set of participants included five panelists from North America and Australia with self-identified expertise in adaptation and mitigation planning, plan evaluation, EDIJ in relation to urban resilience and risk reduction, EDIJ in relation to urban decision-making processes, civil society mobilization and community organizing for climate justice, and systemic elements of the climate crisis including colonial, capitalist, white supremacist, and hetero-patriarchal systems.

Although the five-member panel was smaller than a typical Delphi panel of 8-12 members, panel size is secondary to ensuring that the most relevant perspectives on the issue being explored are addressed through the composition of the panel (Novakowski & Wellar, 2008). This goal was achieved through purposive sampling where panelists were selected based

⁴ See note 1.

on their expert ability to answer the research question. Although it was my objective to construct a panel of more than five experts, process challenges including incomplete responses, participation by some participants in only one round of feedback collection, and one confirmed participant withdrawing from the study altogether left me with five completed sets of feedback.

Nevertheless, the five-member panel allowed me to achieve the goals of the exercise, which were to: 1) explore the feasibility and usefulness of the (modified) Delphi technique for an area of planning research where it is seldom applied; 2) to gather a variety of perspectives on the research question; and 3) to enhance confidence in the resulting evaluation tool. My communication with the five panelists was structured and anonymous and therefore adhered to the key features of the Delphi technique.

The Delphi exercise involved two rounds of expert opinion gathering. The questionnaire for round one was designed to measure the extent to which experts agree that the distributive, procedural, and recognition dimensions of justice reflect the requirements of climate justice, to elicit feedback on the strengths and weaknesses of the preliminary evaluative framework, and to identify any variables that had been overlooked. The questionnaire was delivered online through Qualtrics. Responses from round one were consolidated and thematic analysis was used to identify themes in panelists' feedback. Comments were then used to refine the evaluative framework.

Based on the feedback received, some criteria were added to more explicitly capture elements of interactional, spatial, and temporal fairness (Graham et al., 2015), as well as epistemic justice (Temper, 2019) which had been overlooked in the preliminary version. These additional dimensions of justice relate to the nature of interpersonal interactions during decision-making processes, the fair distribution of socially valued resources and opportunities to access them, the ability to exercise discretionary control over one's time, and active engagement with diverse ways of knowing and being. Some additional communicative-specific criteria grounded in plan quality scholarship were also developed to assess whether plans are accessible to a lay audience. Regarding the format of the framework and point rubric, some criteria in the framework were re-worded or separated to avoid double-barreled questions, and

the meaning behind each score in the point rubric was described in greater detail to more clearly distinguish between scores.

The revised framework was presented to panelists during round two of the Delphi exercise, along with a questionnaire designed to measure agreement among experts about whether the framework would effectively guide evaluations of climate action plans in terms of their attention to equity and justice. The Delphi process stops when agreement is reached, theoretical saturation is achieved, or when sufficient information has been exchanged. In this case, the Delphi exercise was limited to two rounds because following round two there was agreement among all five panelists that the feedback provided during round one was sufficiently addressed in the revised evaluative framework. There was also agreement that all panelists were comfortable with the revised framework as a tool for assessing the equity and justice of climate action plans.

Consultations with Representatives from Equity-Deserving Groups

To ground truth the equity and justice criteria developed by scholarly experts, I conducted 26 semi-structured interviews with representatives from organizations that serve equity-deserving groups in Ontario, Canada over a six-month period in 2023. The purpose of these consultations was to engage local experts and advocates (many of whom identify as members of one or more equity-deserving groups) in the development of accurate, representative, and meaningful criteria for assessing equity in climate action planning. The key populations and issue areas around which these organizations focus their advocacy are summarized in Table 3 below.

Table 3. Summary of advocacy areas

Key Populations	Key Issues
Newcomers Immigrants and refugees 2SLGBTQIA+ communities People with disabilities Low-income people Indigenous communities Children and youth Families under stress Visible minorities and racialized people Seniors	Income equality and poverty elimination Affordable housing Culturally appropriate services Gender equality Racism and discrimination Newcomer settlement Diversity and multiculturalism Food security Health promotion and illness prevention Social service delivery

Interviewees were selected using a strategic sampling method targeting key informants in senior leadership positions. Snowballing was then used to identify additional experts that interviewees thought would be a valuable source of information. The interviews involved informal conversation and experience-sharing guided by a semi-structured questioning route designed to test the scholarly equity and justice criteria devised by the Delphi panelists against the knowledge of local experts who advocate for equity-deserving groups (many of whom also identify as a member of one or more equity-deserving groups). Open-ended questions were used to elicit thoughts and perspectives from key informants on various issues related to equity, justice, inclusion, and climate change, including how inequity manifests in their community (both generally and with respect to climate change), how the experiences of equity-deserving groups are considered in decision-making processes, and whether current and/or previous climate actions carried out in their community reflect local needs and priorities.

Interview transcripts were coded using NVivo software. To ensure inter-coder reliability, the transcripts were coded independently by two researchers using the same codebook and protocol. This process resulted in 76% inter-coder agreement. The researchers then met to discuss discrepancies until 100% inter-coder agreement was reached. Simple percentage-based approaches are not ordinarily recommended for measuring agreement between coders because these measures do not correct for the possibility that coders might occasionally agree by chance (Hallgren, 2012; Lombard et al., 2002). However, percentage agreement was deemed appropriate in this case for several reasons. First, the codebook contained several codes, which reduced the likelihood that the coders agreed by chance (Grayson & Rust, 2001). Second, the coding protocol for this study allowed coders to assign multiple codes to a passage of text, which creates problems for calculating inter-coder agreement with more complex statistics (Burla et al., 2008). Third, in qualitative studies where the purpose of coding is to guide the classification of text, the use of complex inter-coder agreement statistics is less imperative (Campbell et al., 2013). Qualitative findings were used to refine the evaluative framework developed previously. Specific revisions and additions are discussed in detail below.

Community Perspectives on Equitable Climate Action

The results of consultations with representatives from organizations that serve equity-deserving groups guided the refinement of the evaluative framework. Specifically, several criteria were added to address the needs of specific populations who are disproportionately affected by climate change but whose unique needs had been overlooked in the previous framework, namely unhoused people, seniors, and people with disabilities:

If you're living with poverty and you don't look the way somebody would deem as acceptable, just trying to sit in a coffee shop or the lobby of a mall [is difficult]. People tend to kick them out because they don't want them there, but where are they supposed to go to cool down or get out of the elements?

This summer it has been raining a lot, and when it's not raining, it's very muggy. So, you've got these people living outside, and there's not enough places for them to get out of the rain or out of the heat. [We have some] community centers that are cooling and heating centers, and that helps, but I don't think a lot of homeless people or low-income people know about them or can reach them easily. So, on a hot muggy day, I'd rather sit in front of a little fan in my apartment than go out looking for a cooling station.

A lot of the bus routes don't have shelters, so that leaves you in the path of weather. Like if it's raining, it's raining on you, or it's snowing on you, or it's cold. And some have seating and some do not, which is not a very good thing for seniors or disabled people. For a lot of people who are disabled, it's not a disability that you can see easily, so they might need to sit down because they have breathing problems, but they don't have [a place to sit].

Criteria were also developed to assess how clearly a plan recognizes and articulates its intentions for equity-deserving groups, either by identifying specific populations that are underserved (as opposed to referring broadly to marginalized groups) and/or clarifying how these populations fit into the plan's overall purpose and vision. One interviewee noted, "you can't just say 'we support marginalized groups'. I mean, name some...go out of your way to actually identify who these groups are because a marginalized group could be anything." An evaluation tool cannot accurately assess whether climate actions account for vulnerable or marginalized groups without specifying who these groups are.

The importance of culturally appropriate responses to climate change also emerged as a key theme during the interviews, so additional criteria were developed to assess whether a plan

acknowledges this need and/or incorporates a diversity of culturally relevant examples. One interviewee noted that non-culturally responsive services disproportionately affect young people who are disconnected from their culture and newcomers who are unfamiliar with the social support systems in their community. These groups stand to experience heightened vulnerability caused by being disconnected from services and information that can enhance adaptive capacity. Another interviewee suggested that culturally relevant examples can include visual elements of plans that convey information while avoiding language barriers. Criteria pertaining to recognition of Indigenous communities were also re-worded to clarify that Indigenous communities' rights as self-determining nations are inherent and therefore cannot be "recognized" in policy documents; rather, interviewees suggested that plans should be evaluated based on whether the document treats this reality as fact.

The most significant revision to the evaluative framework was the addition of a fourth category of criteria referred to here as "healing justice". The concept of healing has broad application in disciplines ranging from nursing, psychology, and social work to public health, education, religion, and spirituality (Firth et al., 2015). Healing can be defined as "a holistic, transformative process of repair and recovery in mind, body, and spirit resulting in positive change, finding meaning, and movement towards self-realization of wholeness" (Firth et al., 2015). The concept of "healing justice" has been invoked by grassroots organizations and community organizers to recognize the impact of trauma and violence on individuals and communities (Indigenous Climate Action, 2024), and to create mechanisms for wellness and safety in community organizing spaces (Kindred South Collective, 2024). This conception of healing justice focuses on creating trauma-informed ways of community organizing to resist hyper-productivity and burn out culture (Indigenous Climate Action, 2024).

For this study, the concept of healing justice was invoked with a different meaning. Here, healing justice describes a form of justice that is future-oriented and considers whether a plan actively enables equity-deserving groups to "build something new" by overcoming cycles of generational trauma and historical discrimination. This conception of healing justice, which considers the future-orientation of climate action, differs from the way the concept is applied in community organizing spaces, where the focus is on collective care for community organizers

(Page & Woodland, 2023). The term healing was chosen to describe this form of justice given the concept's broad relevance and application across disciplines.

The healing justice criteria were developed based on input from interviewees who suggested that redistributive action alone, while necessary, entrenches marginalized groups in the past without supporting these communities in transcending generational trauma. For equity-deserving groups to overcome deep-seated forms of oppression, they need to be able to see themselves clearly in the future vision for their community.

The healing dimension of justice, as conceived for this study, also involves educating the broader population about equity-deserving group experiences to build understanding and recognition of the historic and ongoing challenges these groups experience. This forward-looking form of justice complements (but does not replace) more backward-looking actions to address past harms (e.g., compensation, restoration, and reparation) by focusing on the future. One interviewee whose advocacy focuses on Indigenous outreach and support described the limitations of compensation as a form of justice:

The idea of justice equating some type of compensation inherently limits the concept. Just think about reconciliation...how do you compensate people for all the land value or all the resource value [that has been lost]? You can't. So, thinking about compensation freezes you in the past because you'll always focus on the injustice of it. If you want to get to the future, people need to be enabled to heal themselves out of those systems and cycles.

Healing justice is distinct from distributive justice because the concept explicitly considers whether redistributive actions empower equity-deserving groups to transcend the legacies of historical discrimination, rather than simply to cope with them. Unlike distributive justice, which seeks to remedy deficits and achieve fairness, healing justice focuses on nurturing the assets of equity-deserving communities to move toward a better future. While distributive justice focuses on the fair distribution of resources and opportunities, healing justice acknowledges that actions to address past harms (such as compensation, restoration, and reparation) are limited in terms of their effectiveness for helping communities heal from historical forms of oppression and associated generational traumas.

Although the concept of healing justice shares some characteristics of restorative justice, namely its focus on providing opportunities for healing for those who have been

harmed, these types of justice are distinct. Unlike restorative justice, which supports communication surrounding a past wrong-doing with the goal of repairing relationships and building understanding, healing justice requires the future-oriented development of capabilities with the goal of enabling equity-deserving groups who have been historically marginalized to overcome cycles that entrench these groups in patterns of disadvantage.

Discussion

The Delphi exercise and consultations with representatives from organizations that serve equity-deserving groups resulted in a revised evaluative framework that is grounded in scholarly expertise, local knowledge, and the lived experiences of advocates (many of whom identify as members of one or more equity-deserving groups). The framework captures guiding principles from urban, environmental, and climate justice scholarship and addresses some previously identified shortcomings of climate action planning in terms of its attention to equity and justice.

The Delphi process confirmed that the distributive, procedural, and recognition dimensions of justice are generally accepted by scholarly experts, but that the nuances of each of these categories remain contested. It became evident through the Delphi process that it is difficult to tease out the precise nature of each dimension of justice. For example, there was some debate among panelists about whether reparations are a form of distributive or recognition justice, or whether reparations fall under a conceptually distinct category of redistributive justice. One panelist noted that recognition is about amplifying social positions, identities, rights, ideas, knowledge, and ways of life that have been systematically excluded, undermined, or erased, while reparations are about redressing the distribution of resources and services to rectify past exclusions, burdens, and erasure.

Given that reparations can be made for both social exclusion and unfair resource distributions – and that these forms of exclusion are closely related because social dynamics often determine resource distributions – under which category of justice do reparations belong? This question is complicated by equity-deserving voices that suggest reparations (although necessary) may cause harm by entrenching marginalized groups in the past without clear recourse for including these groups in the future vision for a community. Based on this

feedback, criteria related to addressing past harms and exclusion were included under both the distributive and recognition justice categories of the framework, and an additional criterion was developed under the healing justice category to assess whether a plan acknowledges the limitations of actions to address past harms.

The Delphi exercise and consultations with local experts also help clarify whether scholarly understandings of equity and justice reflect the way members of equity-deserving groups understand these concepts. When equity-deserving group representatives were asked what equity means to them, they described elements of distributive, procedural, and recognition justice that closely resembled the way these concepts are described in scholarly literature. Specifically, interviewees highlighted the need to supply people with what they need to survive and thrive (distributive justice), to create space for different experiences to be heard, especially for groups who have historically been denied access (procedural justice), and to recognize intersections of identity (recognition justice).

I found three key points of departure between scholarly and equity-deserving group understandings of equity, both in terms of how the concept should be defined and how it should be assessed. The first relates to the level of specificity these groups use when talking about the needs and priorities of marginalized groups. While the scholarly experts I consulted approved criteria that referred broadly to marginalized community members, interviewees emphasized that specific underserved populations (e.g., unhoused people, people with disabilities, seniors) need to be named to be properly recognized.

Second, scholarly experts overlooked the need for criteria that are future-oriented and instead focused on properly accounting for past harms. Conversely, interviewees advocated a more forward-looking approach, emphasizing the need for clarification in policy documents on how equity-deserving groups will be supported in healing from generational trauma and how these groups fit into the broader vision for the community.

Third, and related, while the Delphi panelists agreed that the distributive, procedural, and recognition dimensions of justice (when comprehensively addressed and appropriately nuanced) were sufficient as evaluative criteria, input from equity-deserving group

representatives necessitated the creation of an additional category of novel criteria related to healing from generational trauma and historical forms of oppression.

The Delphi process and equity-deserving group consultations also revealed that equity and justice have normative dimensions that cannot easily be quantified. Frameworks for evaluating equity and justice are inherently limited because some considerations cannot be fully captured as evaluative criteria. For example, it was difficult to translate the need for culturally appropriate responses to climate change into a criterion that could easily be identified and measured in a climate action plan because cultural relevance is often subjective. Clearly, the concept of justice cannot be reduced to a single set of tangible criteria, no matter how comprehensive.

At the same time, efforts to properly define the various categories of justice and accurately capture their meaning as quantifiable criteria do not equate the realization of climate justice. One Delphi panelist noted that properly defining equity and justice in our assessment tools helps us move toward some improvements in urban planning processes, but getting the language right is a long way from achieving climate justice for marginalized groups.

On this note, I acknowledge that the evaluative framework proposed here is limited because it does not (and cannot) fully capture the core concerns of the climate justice movement, which go well beyond definitional and official planning processes. The framework also does not include criteria that explicitly address inter-generational or inter-species equity, which some scholars argue are critical for advancing environmental and climate justice (Agyeman et al., 2016; Bell, 2014). I also recognize that while my process for developing the evaluative framework represents an improvement in terms of engaging equity-deserving perspectives, the preliminary framework was still initially developed by a researcher and the translation of interview findings into assessment criteria relied on researcher interpretation.

Related, the interviewees' comments reflect their lived experiences as members of one or more equity-deserving groups *and* their positionality as organizational leaders within the social service sector. As such, comments grounded in an interviewee's own experiences as a member of an equity-deserving group could not be entirely delineated from those that reflect their role as organizational leaders advocating for underserved residents. Future research could

use the Delphi technique or focus groups to collect input directly from frontline community members to develop fully bottom-up evaluation criteria.

Conclusions

There are no clear and reliable guidelines as to what constitutes an equitable approach to urban climate action. My study advances this debate by contributing a carefully developed evaluative framework that is based on convergence of expert opinion regarding the plan content and process conditions that should be considered when evaluating the equity and justice of municipal climate action plans. The proposed evaluative framework was developed based on a modified Delphi survey of scholarly experts and interviews with representatives from organizations that advocate for underserved groups, many of whom also have lived experience as members of one or more equity-deserving groups. The framework is grounded in scholarly understandings of equitable climate action planning *and* the self-identified needs and priorities of equity-deserving groups. This study advances climate justice scholarship because unlike previous researcher-driven approaches, the proposed framework was developed through a novel and rigorous process that involved gathering input from both scholarly experts and representatives from equity-deserving groups.

The framework is useful for researchers interested in assessing the extent to which municipal climate policies acknowledge and tackle the impacts of socio-economic and environmental inequities on various groups in the city, and for comparing progress on this front across multiple communities of interest. Forthcoming research will test the framework by using it to guide a content analysis of climate action plans for a sample of cities in Ontario, Canada.

My process for developing the evaluative framework addresses a methodological shortcoming of previous approaches by engaging equity-deserving perspectives in the development of evaluative criteria that reflect these groups' self-identified needs and priorities. Beyond informing the evaluative framework presented here, the interview findings contribute to debates about equitable climate change planning in two key ways: 1) by revealing how the needs and priorities of equity-deserving groups compare across geographic areas within Ontario to clarify the value of universal equity principles, and 2) by informing practical

recommendations for developing equitable climate change policies from the perspective of equity-deserving groups. The findings from this analysis will be the focus of a companion paper.

The key contribution of this research is a flexible framework – developed through a novel process – that can be used as an assessment tool for evaluating the equity and justice of climate action plans for various sites. The framework – which integrates theories of climate justice and plan quality – could also be used by planning practitioners and other urban governance actors as a tool to guide the development of climate action plans and policies that are both ambitious and equitable. The guiding questions underpinning the criteria in the framework are a starting point to more fully account for overlapping social, spatial, and environmental inequities. The framework should be thought of as an additional diagnostic tool to help researchers and practitioners measure progress and identify oversights, rather than a final assessment of justice.

It is now a widely accepted reality that climate change will increasingly disrupt our usual way of life over the next several decades. Transition toward more widespread mitigation and adaptation efforts is inevitable and is already underway in many cities, but advancing climate justice as part of this transition is not guaranteed. Moving forward, planners and other urban governance actors must more intentionally address the underlying forms of inequity that create and sustain vulnerability to climate change. Developing tools that guide the development and evaluation of more equitable climate action plans is a partial but positive step in the right direction.

Chapter 3: Unveiling Inequity: Community Perspectives on Climate Action Planning in Canadian Cities

Chapter 3 builds on Chapter 2 by providing a deep analysis of the interview findings that informed the development of the evaluative framework presented in Chapter 2. Because Chapters 2 and 3 correspond to two closely related phases of my study, readers will notice similarities between the chapters in terms of the theoretical background and description of research methods. Chapter 3 makes a distinctive contribution to the dissertation by: 1) revealing how the needs and priorities of equity-deserving groups compare across geographic areas within Ontario; 2) clarifying whether criteria for assessing equity in climate action planning can reliably be used to compare progress in cities with diverse demographics, policy environments, and social climates; and 3) informing practical recommendations for developing equitable climate change policies from the perspective of equity-deserving groups.

Chapter 3 is currently under review by *Cities* for inclusion in a special issue titled “Navigating the Nexus: Intersectional Climate Justice in Urban Adaptation Planning” which explores the connections between climate justice, intersectionality, and urban planning (reference details below).

Swanson, K. (2024). Unveiling inequity: Community perspectives on climate action planning in Canadian cities. *Cities*, (JCIT-D-24-01817).

Unveiling Inequity: Community Perspectives on Climate Action Planning in Canadian Cities

Researchers have repeatedly demonstrated that climate change disproportionately affects equity-deserving groups and that climate policies do not necessarily reduce disparities. Planners and policymakers need to understand the needs of underserved communities to design responsive and equitable solutions. This study explores the self-identified needs and priorities of equity-deserving groups in three cities in Ontario, Canada, to develop a set of recommendations for more equitable climate action planning based on input from equity-deserving groups. Findings contribute to clarifying whether universal criteria for assessing equity in climate action planning can reliably be used to compare progress across cities.

Keywords: Climate action planning; Equity; Plan evaluation; Policy

Introduction

There is growing evidence that climate change impacts people “differently, unevenly, and disproportionately” (Sultana, 2022, p. 118). Researchers have repeatedly connected the dots between climate impacts and various forms of social inequity to demonstrate that vulnerability to climate change is multidimensional, intersectional, and dynamic.

Several studies have identified poverty, race, gender, age, and ability as indicators and multipliers of vulnerability (Anguelovski et al., 2016; Hallegatte & Rozenburg, 2017; Thomas et al., 2019; Steele et al., 2012). Research has also shown that vulnerability to climate events – and the ability to cope with impacts – varies across space and over time. Studies exploring the composition and dynamics of vulnerability have found that the relative importance of indicators like age, race, gender, and socio-economic status change over time and vary between geographic locations (Cutter & Finch, 2008; Kashem et al., 2016).

At the same time, carefully designed climate policies often inadvertently distribute costs and benefits unevenly across communities. These outcomes can reproduce existing inequities and create new forms of injustice (Dolšák & Prakash, 2022; Reckien et al., 2017, Wolch, 2014). Bell (2014) describes this phenomenon as a triple injustice, where the double inequality of climate change – that those who contribute to climate change the least are positioned to suffer the most from its effects – is compounded by climate action policies that exacerbate social and distributional consequences for groups that are already disadvantaged (Anguelovski et al., 2016; Bulkeley et al., 2013).

Given that climate change disproportionately affects equity-deserving groups – defined as those who face barriers to equal access, opportunities, and resources due to disadvantage and discrimination tied to gender, race, ethnicity, economic status, age, and (dis)ability – and that climate policies do not necessarily reduce disparities, planners and policymakers need to understand the needs and priorities of underserved communities to design responsive and equitable climate actions.

Accordingly, this study explores the self-identified needs and priorities of equity-deserving groups in three sample cities in Ontario, Canada to respond to the following research questions: 1) What do equity-deserving groups see as the most important considerations when developing equitable climate change policies; and 2) How do the needs and priorities of equity-deserving groups compare across cities? Findings inform a set of recommendations for more equitable climate action planning based on input from representatives from equity-deserving groups. The study also contributes to clarifying whether criteria for assessing equity in climate action planning can reliably be used to compare progress in cities with diverse demographics, policy environments, and social climates.

The paper begins with an overview of previous approaches to defining and assessing equity in climate action planning, followed by an explanation of the methods applied to the study. The paper then presents key findings from semi-structured interviews with key informants in Waterloo Region, Brampton, and Thunder Bay (Ontario, Canada). The discussion section elaborates on several recurring themes that emerged from the interviews and offers corresponding recommendations for advancing equity in climate action planning. The study results provide guidance on equitable climate action planning from the perspective of equity-deserving group representatives, and clarify the value of universal equity criteria for assessing climate action planning efforts in different cities. The paper concludes by offering guiding principles for advancing equitable climate change planning and suggesting future directions for planning research and practice.

Defining Equitable Climate Action Planning

Equity is a contested concept that continues to be negotiated. Young (2001) suggests that the concept of equity is intertwined with the concept of justice because we evaluate equity and inequity to make judgments about justice and injustice. When considering the nature of equitable climate action planning, researchers commonly use justice discourse to frame their analyses under the assumption that for there to be justice, there must also be some form of equity. Accordingly, this section provides an overview of key justice discourses that inform our understanding of equity, and in which assessments of equitable climate action are often grounded, namely distributive, procedural, and recognition justice. Several additional types of justice (e.g., substantive, informational, interactional, structural, epistemic, temporal) have been proposed to further nuance the distributive, procedural, and recognition dimensions – this overview focuses on the latter three types of justice because these are the dimensions in which assessments of equity in climate change planning are commonly grounded (refer to Table 1 below).

Distributive Justice

In the context of climate action planning, distributive justice concerns the allocation of environmental benefits and burdens among members of society. Distributive justice scholars make a direct connection between justice and the distribution of resources, defining equity as fairness in how material goods are distributed (Krumholz, 2003; Rawls, 1971). Critical theorists challenge purely distributive approaches for overlooking underlying social processes and power relations that determine who gets what (Nussbaum, 2000; Sen, 2009; Young, 1990). The capabilities approach advances distributive models of justice by considering how social processes affect the conversion of material goods into substantive opportunities – here, the key question is not how many resources a person has, but what they can do with those resources (Nussbaum, 2000).

Distributive theorists agree that the most vulnerable members of society deserve special attention in our redistributive efforts. Rawls' (1971) difference principle considers the needs of disadvantaged residents by arguing that social and economic inequalities should only be

tolerated if disadvantaged residents are better off under an unequal distribution than they would be under an equal distribution. Davidoff (1975) is similarly concerned with designing policies that reduce differences between the haves and the have-nots, and Krumholz (2003) calls on planners to advocate for social groups who are traditionally disadvantaged. Distributive justice discourse thus has important implications for climate action planning, namely ensuring that vulnerable groups are centered in redistributive efforts.

Procedural Justice

Procedural justice centers on the fairness and inclusivity of decision-making processes. Procedural justice complements distributive justice by focusing on processes rather than outcomes, while accounting for power relations and social dynamics that affect participation. This shift occurred in response to critiques that outcome-focused approaches fail to consider the fairness of procedures for making distributional decisions (Hunold & Young, 1998). Procedural justice theorists argue that democratic decision-making processes are needed to ensure social justice (Shi et al., 2016; Young, 1990), and that participatory processes help prevent underrepresented or marginalized groups from being dominated during decision-making (Bell, 2014).

Critical scholars have argued that procedural justice approaches often neglect the root causes of inequity, and fail to prevent power relations from taking hold during decision-making (Fainstein, 2010). Further, procedural justice often fails to deliver on the promise of achieving meaningful forms of participation and protecting minority rights (Blue et al., 2019; Flyvberg & Richardson, 2002; Hillier, 2003; Tewdwr-Jones & Allmendinger, 1998; Yiftachel, 1998). These oversights are problematic in the context of climate action planning because poorly designed planning processes can lead to policies that compound rather than improve inequity (Anguelovski et al., 2016).

Recognition Justice

Recognition justice calls us to pay attention to the underlying social processes that determine patterns of distribution and lead to oppressive participatory processes. While procedural approaches stress the need to recognize different interests, values, and priorities

during decision-making, recognition justice considers how certain groups are made visible or invisible during policy development processes and questions how we determine whose needs are prioritized during decision-making processes (Klinsky & Mavrogianni, 2020). Recognition should not be conflated with representation (i.e., assuming groups are recognized if they are present during participatory processes). Recognition justice requires us to be attuned to nuances of social diversity within so-called homogenous groups – this is essential in the context of climate action planning because vulnerability to climate change is multidimensional, intersectional, and dynamic. The following section provides an overview of previous approaches to assessing equity in climate action planning based on criteria that are broadly grounded in theories of distributive, procedural, and recognition justice.

Assessing Equity in Climate Action Planning

Cities grappling with climate change and multiple, overlapping equity crises implement diverse strategies to respond to these challenges. Several studies have devised criteria for assessing the equity of various types of climate change strategies to compare progress in different locations and at different scales. Various approaches taken by researchers to date are compared in Table 1 below.

Table 1. Previous approaches to assessing equity in climate action planning

Study	Study Location(s)	Assessment Criteria
Finn & McCormick (2011)	New York City, NY (United States), Los Angeles, CA (United States), and Chicago, IL (United States)	a. Procedural equity – equitable processes with special efforts to include underrepresented groups b. Geographic equity – spatial location of harms c. Social equity – targeting interventions toward groups that need them most
Hughes (2013)	Delhi (India)	a. Inclusiveness – representation of vulnerable groups in planning processes b. Prioritization – setting and framing priorities to recognize the needs of vulnerable groups c. Impacts – enhancing the freedoms and assets of vulnerable groups
Schrock et al. (2015)	28 cities in the United States	a. Procedural equity – fairness in decision-making b. Geographic equity – equity across communities c. Social equity – equity across social identities
Meerow et al. (2019)	10 cities in the United States	a. Distributional equity – access to goods, amenities, opportunities b. Recognitional equity – respect for different groups and social statuses

		c. Procedural equity – equitable participation in decision-making processes
Fitzgibbons & Mitchell (2019)	31 global cities	a. Recognition – recognitional public engagement processes b. Redistribution – actions to reallocate material wealth and income c. Participation – inclusive public engagement processes
Chu & Cannon (2021)	10 cities in the United States	a. Equity – equal and fair distribution of opportunities and resources b. Inclusion – transparent and accountable decision-making processes that include diverse voices c. Justice – recognition that minority groups are structurally vulnerable
O'Donnell & Doyon (2023)	Vancouver, BC (Canada)	a. Distributive justice – equitable distribution of benefits and burdens b. Procedural justice – meaningful involvement of relevant communities in decision-making c. Recognition justice – respect for historically marginalized groups d. Epistemic justice – engagement with marginalized knowledge systems

These studies use variable criteria to assess the equity of different types of climate change plans and strategies, but overall the criteria tend to focus on the fair distribution of material resources and opportunities (distributive justice), inclusive decision-making processes that center vulnerable communities (procedural justice), and recognition of marginalized voices and underrepresented groups (recognition justice). Collectively, the results of these assessments – which have revealed the shortcomings and oversights of current approaches – suggest that commitments to social equity in climate action planning are often cursory and secondary to environmental and economic goals.⁵

Each of these studies contributes to establishing our understanding of the current state of climate action planning regarding its attention to equity and justice. At the same time, these studies raise questions about whether the same set of assessment criteria can reliably be used to evaluate equity in cities with diverse demographics, inconsistent policy environments, and unique social climates. Studies that rely on a single set of evaluative criteria to compare the equity of climate change plans and strategies in different contexts assume these criteria translate between cities (i.e., that these criteria are universally applicable). Since the climate

⁵ For a detailed overview of previous approaches to evaluating equity in climate change planning, see Swanson (2023).

impacts and equity challenges cities grapple with are often location-specific, a more contextual approach may be needed.

This study contributes to clarifying whether criteria for assessing equity in climate action planning are universal and transferrable (i.e., can reliably be used to evaluate equity in different locations), or contextual and city-specific (i.e., need to be modified based on local context). I advance this debate by exploring the self-identified needs and priorities of equity-deserving groups in diverse cities to identify areas of agreement and disagreement regarding the nature of equitable climate action planning. Findings help us determine whether the equity criteria deemed important to underserved groups in one location can reliably be used to assess equity in climate change plans for other cities.

Study Locations

The sample for this study is two local municipalities (Brampton and Thunder Bay) and one regional municipality (Region of Waterloo) in Ontario, Canada (for simplicity, all locations will be referred to as cities). Three study locations in Ontario were selected to minimize the influence of the provincial policy arena on my findings to allow for more direct comparison of local equity-related priorities. The case study cities were selected based on Statistics Canada 2021 Census of Population demographic data. Cities with diverse demographic makeups were purposely selected so I could identify areas of overlap and points of departure regarding the key concerns described by equity-deserving groups in each city. Demographic data for the three case study cities are compared in Table 2 below.

Notable differences between the cities can be observed, namely the Indigenous and racialized populations as a percentage of the total population of each city. The significant racialized population in Brampton (80%, with South Asians representing 65% of the racialized population and 52% of the total population), and the Indigenous population in Thunder Bay (14%) are especially noteworthy. Conversely, the Indigenous population in Brampton is the lowest among the three cities (0.5%), while Thunder Bay has the lowest racialized population of the three cities (7%). Waterloo Region represents a “middle ground” between Brampton and Thunder Bay, with a population that is 2% Indigenous and 27% racialized. These demographic differences are important given ample evidence that climate change disproportionately affects

racialized residents and that environmental benefits and burdens are often distributed along racial lines (Hoffman et al., 2020; Wilson, 2020).

Table 2. Case study city demographic data

City	Population	Demographic data				
		Average age of the population	Prevalence of low-income*	# of people with Indigenous identity (% of total population)	# of immigrants (% of total population)	Total visible minority/ racialized population** (% of total population)
Waterloo Region, ON	587,165	39.5	9.3%	9,960 (~2%)	147,190 (~25%)	159,060 (~27%)
Thunder Bay, ON	108,843	43.7	11.6%	15,055 (~14%)	9,190 (~8%)	7,965 (~7%)
Brampton, ON	656,480	37.5	6.4%	3,255 (~0.5%)	343,690 (~52%)	523,850 (~80%)

*Based on the low-income measure, after tax.

**Defined by Statistics Canada as persons, other than Aboriginal peoples, who are non-Caucasian in race or non-white in colour. The main groups designated as visible minorities are South Asian, Chinese, Black, Filipino, Arab, Latin American, Southeast Asian, West Asian, Korean, and Japanese.

Methods

The purpose of this qualitative study was to 1) identify key considerations for equitable climate action planning from the perspective of equity-deserving groups; and 2) compare the needs and priorities of equity-deserving groups across the case study cities to determine the reliability of universal equity criteria. Perspectives were gathered through interviews with representatives and advocates from organizations that serve equity-deserving groups in each case study city. I conducted 26 semi-structured interviews over a six-month period in 2023 in Waterloo Region (n=10), Brampton (n=8), and Thunder Bay (n=8). The key populations and issue areas around which these organizations focus their advocacy are summarized in Table 3 below.

Table 3. Summary of advocacy areas

Key Populations	Key Issues
Newcomers Immigrants and refugees 2SLGBTQIA+ communities People with disabilities Low-income people Indigenous communities	Income equality and poverty elimination Affordable housing Culturally appropriate services Gender equality Racism and discrimination Newcomer settlement

Children and youth Families under stress Visible minorities and racialized people Seniors	Diversity and multiculturalism Food security Health promotion and illness prevention Social service delivery
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Interviewees were selected using a strategic sampling method targeting key informants in leadership positions. Of the 26 individuals interviewed, 11 identified as chief executive officers, executive directors, or senior directors; 9 identified as board or individual members; and 6 identified as program leads or staff. The decision to interview organizational staff and leaders rather than service users was made intentionally for two reasons. First, the interview questioning route required an in-depth understanding of organizational activities and priority areas, as well as the challenges facing the community more broadly. Second, because interviewees were not compensated for their time by the researcher, it was important to mitigate the burden of participation by selecting interviewees who are compensated by the organization they represent.

Snowballing was used to identify additional experts who fit the research criteria and who interviewees thought would be a valuable source of information (Parker et al., 2019). Snowball sampling is useful for qualitative research studies that seek to understand the experiences of marginalized groups because the method allows a researcher to gain access to hard-to-reach populations in a non-intrusive manner (Woodley & Lockard, 2016). Recruitment of interviewees continued until reaching the point of saturation in terms of identifying key themes and key players (Parker et al., 2019).

The interviews involved informal conversation and experience-sharing guided by a semi-structured questioning route. Open-ended questions were used to elicit thoughts and perspectives from key informants on various issues related to equity, justice, inclusion, and climate change, including how inequity manifests in their community (both generally and with respect to climate change), how the experiences of equity-deserving groups are considered in decision-making processes, and whether current and/or previous climate actions carried out in their community reflect local needs and priorities. Interviewees were not selected based on their knowledge of climate action planning in their respective communities (although some interviewees incidentally did possess this knowledge and shared some reflections on the topic).

Rather, interviewees described equity-related needs, priorities, and challenges in their respective communities and, where appropriate, these comments were interpreted by the researcher as they pertained to climate change.

Interview transcripts were coded using NVivo software. Emergent concept coding was used to assign “big picture” meaning to passages of data and to encourage reflection on the broader themes and ideas suggested by the study (Saldana, 2021). To ensure inter-coder reliability, the transcripts were coded independently by two researchers using the same codebook and protocol. This process resulted in 76% inter-coder agreement. The researchers then met to discuss discrepancies until 100% inter-coder agreement was reached. This method improved the overall analysis of the data by provoking dialogue between the researchers (O’Connor and Joffe, 2020). Simple percentage-based approaches are not ordinarily recommended for measuring agreement between coders because these measures do not correct for the possibility that coders might occasionally agree by chance (Hallgren, 2012; Lombard et al., 2002). A variety of more complicated statistics are available for calculating inter-coder agreement, but these were deemed inappropriate for several reasons.

First, the codebook contained several codes, which reduced the likelihood that the two coders agreed by chance (Grayson & Rust, 2001). Second, the coding protocol for this study allowed coders to assign multiple codes to a passage of text – multiple coding creates problems for calculating inter-coder agreement with statistics that require single coding (Burla et al., 2008). Third, not all codes had an equal probability of being used – for example, when asked about the most pressing equity-related challenges in a specific community, some interviewees might have identified housing affordability but others might not. Hence, the secondary code “housing-affordability” might not have appeared in every transcript, whereas the secondary code “climate change-awareness” appeared in every transcript because all interviewees were asked about their awareness of climate action in their respective communities. Fourth, in qualitative studies where the purpose of coding is to guide classification and retrieval of text, the use of complex inter-coder agreement statistics is less imperative (Campbell et al., 2013).

Because the coding process relied on the researchers’ interpretation of the interviewees’ comments about equity, it is important to comment on the positionality of the

researchers relative to the study topic. The lead researcher identifies as a white, middle-class, able-bodied young woman, while the secondary researcher identifies as a Filipino immigrant, middle-class, able-bodied young woman. Discrepancies in how the two researchers understood the interviewees' comments can partly be attributed to differences in our personal experiences of (in)justice and the implicit biases we hold as members of the groups listed above. It was sometimes difficult to disaggregate the equity-related challenges that key informants described because different forms of inequity are often concurrent and intertwined. In cases of coding disagreement, power dynamics between the lead and secondary researcher were managed through an agreement that codes would be assigned only once consensus was reached through discussion, rather than based on the final say of the lead researcher.

Results

The interview findings demonstrate that community agencies are a critical safety net, absorbing demand for services and coordinating to meet the needs of the most vulnerable. The equity-related challenges that key informants identified as being the most pressing in each case study city (plus underlying drivers) and the populations who are most affected by these challenges are compared in Table 4 below. Percentages refer to the proportion of interviewees in each case study city who identified a specific challenge as one of the most evident forms of inequity in their community.

Table 4. Comparison of challenges in case study cities

Waterloo Region		Brampton		Thunder Bay	
<i>Underlying drivers: income inequality, barriers to service access, resource shortages in the social service sector</i>		<i>Underlying drivers: severe resource and funding shortages, lack of culturally appropriate services for diverse populations</i>		<i>Underlying drivers: geographic isolation, widespread discrimination</i>	
Issue	Affected Populations	Issue	Affected Populations	Issue	Affected Populations
Housing (70%)	Low-income people Students Renters	Housing (63%)	Refugees and newcomers	Racism and discrimination (63%)	Indigenous people Newcomers 2SLGBTQIA+ community
Transit (40%)	Low-income people People with disabilities Rural youth	Health inequity (50%)	Racial minorities Newcomers	Housing (50%)	Indigenous people Newcomers Low-income people Youth

Food security (30%)	Low-income people Families under stress	Access to culturally relevant services (38%)	Children and youth Families under stress Newcomers	Transit (50%)	Indigenous people Low-income people Youth
Access to mental health support and crisis services (30%)	Indigenous people 2SLGBTQIA+ youth Women	Food security (25%)	Low-income people Racialized seniors	Access to culturally relevant services (25%)	Indigenous people Newcomers
				Food security (25%)	Low-income people Youth

After key informants identified the most evident forms of inequity in their respective cities, they were asked whether the challenges they described are heightened in their city or region relative to other parts of Ontario. In Waterloo Region, 57% of key informants believe challenges are heightened in the region relative to the rest of the province, while 86% of key informants in Brampton and 88% of key informants in Thunder Bay expressed that they experience the equity-related challenges highlighted in Table 3 disproportionately compared to other cities. It is notable that 77% of key informants across the three cities believe that they are “worse off” than their counterparts elsewhere in the province when it comes to these challenges.

Regarding underlying drivers, in Waterloo Region interviewees attributed the scale of challenges to income inequality, barriers to accessing crisis services (especially mental health support), and resource shortages in the social service sector. Interviewees in Brampton said challenges are heightened because Brampton and the surrounding municipalities of Mississauga and Caledon have experienced significant population growth (driven mainly by the large number of immigrants the region receives), but these municipalities receive disproportionately less funding than other cities in Ontario. Multiple interviewees in Brampton commented on the correlation between the region’s diversity⁶ and the allocation of funds. One interviewee commented, “there’s a certain point at which you stop and go, well, what makes us different, and then you stop and go, well hang on, we’re 80% racialized.” His comment suggests there is a connection between race, the scale of challenges being experienced in Brampton, and

⁶ 80% of the population in Brampton identifies as racialized; South Asians represent 65% of the city’s racialized population and 52% of the city’s total population (Statistics Canada, 2022).

policy responses. Interviewees in Thunder Bay said challenges are intensified by geographic remoteness and historical and ongoing racism and discrimination against Indigenous communities, newcomers, and members of the 2SLGBTQIA+ community.

Discussion

The results presented above translate to several key findings that are discussed in greater detail below. Each subsection presents a recurring theme emerging from the interviews (with the caveat that challenges are nuanced and have unique drivers and consequences in each case study city) and offers corresponding recommendations for advancing equity in climate action planning. These recommendations are policy-relevant and grounded in the self-identified needs and priorities of the equity-deserving groups consulted. Quotations have been slightly edited for grammar and some words [placed within brackets] have been added for clarity.

Equity-related challenges are often cross-cutting, but populations of concern (i.e., the specific segments of the population who experience the challenges most acutely) are location-specific.

The interviews conducted in Waterloo Region, Brampton, and Thunder Bay revealed equity-related challenges that cross-cut the three case study cities. The following subsections discuss key challenges that were identified in at least two of the three sample cities. Although food security was described as a pressing concern by key informants in all three cities, this challenge was discussed at a high level in the context of comments about income inequality and is therefore not a focus of this section.

(i) Housing

Housing inequity was identified as one of the most pressing challenges in all three cities, with 70% of key informants in Waterloo Region, 63% of key informants in Brampton, and 50% of key informants in Thunder Bay citing housing as one of the most evident forms of inequity in their respective cities:

Housing and homelessness is the biggest crisis that we see in our communities.
(Waterloo Region)

Housing has gotten to the point where...I've almost taken it off my plate because there's just no way to get people housing right now, so I almost don't offer that as a support which I guess probably says that it's the worst of all the issues that we're facing. (Thunder Bay)

We have a housing crisis going on in this community. The level of homelessness is quite dramatic...we have large numbers of people coming to one geographic area without the infrastructure or support for those people...so the biggest issues in our community are related to housing and homelessness. (Brampton)

Across the three case study cities, key informants commented on housing affordability, the quality and location of available housing, and discriminatory practices in the housing market that prevent certain demographics from securing adequate housing. In Waterloo Region, key informants explained that the shortage of housing that is both affordable and accessible to people with disabilities is compounded by discrimination:

Landlords often see that their source of income is [the Ontario Disability Support Program] or Ontario Works, and that's a red flag for them for some reason. They're hesitant to rent to individuals whose income is like that, even though we're telling them this is guaranteed income so there's no risk of defaulting in rent. So, we have issues trying to find apartments or housing for people with a disability even though they can afford market rent.

In Thunder Bay, racial discrimination against Indigenous youth is evident in the housing market: "Racism still exists when it comes to finding youth housing. It's to the point that if an Indigenous youth is going to view an apartment, they do not go without a white advocate because they'll get steamrolled by landlords or they'll just turn you away." These comments indicate that although housing is a cross-cutting challenge that universally affects low-income people and families under stress, the specific sub-populations who experience the challenge most acutely vary between cities.

(ii) *Transit*

Interviewees in Waterloo Region and Thunder Bay described accessibility, affordability, and connectivity issues with public transit that disproportionately affect low-income people and people with disabilities. In Waterloo Region, several interviewees expressed frustration about the lack of public transit connecting the downtown core to areas of the city where affordable

housing is located. One interviewee explained that low-income people who cannot afford to live in the downtown core but who rely on public transit to access services that are located downtown experience a time tax that does not affect wealthier residents: “We’re basically forcing people who are less well-off to live on the outskirts of the city, so now they have to commute longer distances which is a time tax. So it’s both expensive and it’s pretty time consuming.”

Another key informant explained that connectivity issues are experienced more acutely by seniors and people with disabilities who rely on multiple modes of public transit but are unable to walk long distances between transfer points. In Thunder Bay, interviewees described the bus system as a “neglected aspect” of the city despite buses being the only real mode of public transit available to residents. Compared to the other case study cities included in this study, Thunder Bay is geographically isolated and spread out, leading residents to rely primarily on private vehicles. For residents without access to a private vehicle (such as youth), interviewees identified high fares and low frequency as barriers to widespread public transit use.

In Thunder Bay, poor transit connectivity disproportionately affects Indigenous residents who live on reserve land at the edge of the city but rely on buses as a means of accessing the city center where services and resources are located. One key informant explained that safety concerns also often preclude the use of buses by Indigenous youth who experience racist and discriminatory remarks from fellow riders. The same key informant described the connection between poor transit and other forms of inequity that are evident in Thunder Bay:

Our transportation system is unreliable and inaccessible for a lot of people, and dangerous at times for different folks. We’re a very [spread out] city, so it’s tricky to get from one place to another. There’s quite a divide for folks, so if you live on one side of the city you kind of stick to that side of the city, and it makes it harder to access any of the services and resources on the other side. [The result] is little pockets of spaces where we see higher rates of poverty, homelessness, violence, those types of things. So it almost creates [those challenges], whereas I think if we had a better way of moving around the city, we would see less of some of those challenges.

Although transit was identified as a key challenge in both Waterloo Region and Thunder Bay, the populations who are most affected by limited transit options vary between the two cities. Investments in public transit and strategies to encourage its use are commonly included as mitigation strategies in municipal climate action plans and policies, so ensuring equitable access is essential.

(iii) Access to services

Key informants in all three case study cities emphasized the need for services that are accessible, affordable, and culturally relevant because service access can alleviate or aggravate other forms of inequity. For example, one interviewee in Brampton explained the connection between culturally relevant services and food security:

One of the fights that's been ongoing is Meals on Wheels, for example, where you have South Asian populations that are getting pasta from their Meals on Wheels service, and so you have people who are not eating because they don't recognize the food. They're seniors who are very much engrained with their cultural foods, and Meals on Wheels is saying, well, we don't have any providers in the area that can provide food that they recognize. Well, it's [Brampton]...we are living in one of, if not the most, diverse regions in the country. Surely, we can solve the problem of getting culturally appropriate food through this service.

In Brampton and Thunder Bay, several key informants mentioned the need for culturally relevant services and community-based supports, especially for youth:

There's still a lot of need for culturally sensitive programs...it's probably better for children and young people than it used to be, but there are many, many people who are pretty disconnected from their culture and there are not enough opportunities for them to make that connection. (Thunder Bay)

In all three case study cities, access to services is also restricted by limited public transit options that disproportionately affect youth. One interviewee from Waterloo Region noted that queer and trans youth who live in rural areas have reduced access to support and programming due to limited bus routes servicing rural communities.

When asked who is most affected by the forms of inequity described above, key informants identified different populations of concern. In Waterloo Region, several interviewees raised concerns about the large youth and student population and the high

portion of low-income residents who live in insecure or unaffordable rental housing. In Brampton, several interviewees discussed the needs and priorities of visible minorities, newcomers, and refugees. In Thunder Bay, Indigenous people overwhelmingly stand out as being highly at risk of experiencing racism and various types of discrimination.

These findings tell us that the demographic makeup and history of a community must be carefully considered when developing equity-oriented climate actions. Access to housing, transit, and culturally appropriate services is essential for reducing climate vulnerability and increasing adaptive capacity, but actions must be informed by an accurate understanding of the demographic profile of a specific city. Special attention should be given to understanding how youth and people with disabilities experience these challenges, as these groups evidently continue to be overlooked by policymakers. Data about *who* is accessing services and how this changes over time could also reveal something about the efficacy of climate action plans for responding to the needs of underserved communities.

Key informants in all three cities consistently reported tokenistic or superficial forms of engagement, or described instances where equity-deserving groups are left out of decision-making processes altogether.

In Waterloo Region, 88% of key informants believe equity-deserving groups are left out of decision-making processes on matters that affect them, while 12% are content with the level of engagement carried out by city officials. In Brampton, 57% of key informants believe equity-deserving groups are excluded, while 43% are content with the level of engagement carried out by city officials. In Thunder Bay, 100% of key informants believe equity-deserving groups are left out of decision-making processes at the city level. The comments below capture interviewees' perceptions of public engagement in their communities:

It often feels like we just show up because it's a box that they have to tick. We give our speech, [but] they still want to do what they want to do. It's like they just needed to make sure that they showed they tried, that they brought somebody in. We really feel like we aren't listened to for the most part. (Waterloo Region)

I don't think elected officials are necessarily concerned about how community engagement happens as long as community engagement is done. (Brampton)

I get frustrated with these colonial modes of engagement. There are some days when I go into a meeting, and I'm getting ready ahead of time, putting on all my armour because I know that I'm going to be ruffling feathers...there are times when I'm so frustrated that I want to walk away. So a lot of Indigenous people try, but you're essentially up against colonialism and it's so much easier to just walk away. (Thunder Bay)

Interviewees named specific populations that tend to be left out of decision-making processes, namely youth and people with disabilities. Key informants attributed the exclusion of these groups to assumptions that they are unable to contribute something useful to the deliberation or participate in a meaningful way. Interviewees in Waterloo Region and Thunder Bay expressed that when youth are consulted, their involvement is limited to providing feedback on a decision that has already been made rather than actively participating in decision-making.

One notable exception was Brampton, where an interviewee whose organization offers programming for children and youth shared that youth engagement has grown in recent years. However, he questioned whether youth consultations translate into actions that truly reflect youth's lived experience. Interviewees also expressed concern that policymakers are not necessarily well-positioned to make decisions about services that they themselves do not rely on, namely public transit and affordable housing.

Key informants repeatedly recommended that input on municipal policies – climate-related and otherwise – should be solicited in spaces that equity-deserving groups already occupy (e.g., places of worship, schools, community centres, libraries, food banks). Planners also need to recognize that members of equity-deserving groups are often required to invest time and labour into advocating for themselves, so engagement processes should not add to this burden more than necessary:

There is recognition from officials that they need to work with us to really make some meaningful change. So, that recognition has come, but it has come after significant effort and a significant amount of work that we have put in on top of our regular jobs. And so, we have invested in not only running our own supports and organizations and services, but we've taken on this additional burden, so to speak, of ensuring that the community doesn't get left behind and that the needs of the racialized community are highlighted and heightened at every opportunity. (Brampton)

Knowledge sharing and better coordination among municipal agencies could reduce the burden on equity-deserving groups who are frequently tapped on the shoulder to do advocacy work. Piecemeal approaches where the same information is sought repeatedly by different departments place an unnecessary burden on advocates. Compensation could also help to offset the time and emotional labour associated with this work:

As a minority community, the same people are being asked to do these things over and over again, and when you're talking about these problems that are so closely linked to your identity there is a level of emotional labour that is added to the [time and effort it takes to participate], so offering these people some kind of payment in return for their time and their expertise is important. (Brampton)

As part of their engagement efforts, planners need to seek direction from community members around appropriate methods of interacting with equity-deserving groups to determine how best to streamline engagement.

There is a desire among equity-deserving groups for sustained participation throughout the entire planning process, but this type of ongoing engagement is not currently the norm.

Key informants explained that equity-deserving groups may be engaged in program development or asked to provide feedback on a proposed initiative, but they are rarely involved in monitoring progress or measuring outcomes. One interviewee from an organization that offers services for racialized people in Brampton commented, "I think we are still in that space where we can be heard, but I'm not sure if we are in the space to make significant change just yet...I think we're at the starting point, but actually seeing those really strong policy changes might be a little way away. I'm not sure we're there yet." (Brampton)

Evidently, there is a need for continuous streams of communication between planners and community members. Ongoing consultation with equity-deserving groups, not just in making decisions but also in measuring progress, would help planners move toward more participatory forms of evaluation (Swanson, 2023). Continuous contact with equity-deserving groups could also help build the kind of trusting relationships that are needed to enact change in the long-term (Fitzgerald, 2022).

Policymakers need a better understanding of intersectionality.

Several key informants described linkages between poverty, disability, race, mental health, and gender identity that are well-documented in scholarly literature but are commonly misunderstood or overlooked by municipal policymakers. Community organizations are aware that intersecting identities affect service access and they try to communicate this concept to decision-makers, but the concept is rarely reflected in policy.

Key informants in Brampton and Thunder Bay said their cities tend to address equity-related challenges such as housing, healthcare, and anti-racism in silos when they should be thinking about the interconnections between these issues. One interviewee from Thunder Bay commented, “any work that is done in the city is isolated, so if they’re looking at the issues that the Indigenous populations are facing then that’s one aspect, then any issues related to newcomers and refugees are handled separately.”

When asked if city officials understand how intersectionality plays into the equity-related challenges that different community members experience, one key informant from Brampton responded, “there’s education to be done there. That’s my polite way of saying no.” Another interviewee expressed that awareness of intersectionality sits on a continuum that is inconsistent across departments. A third interviewee commented, “whether our elected representatives understand how the intersections work, I don’t know. With all the conversations that have been happening, I can’t imagine that they don’t. That’s not to say, though, that their understanding then translates to actions that demonstrate that understanding.”

Intersecting axes of identity shape vulnerability to climate change and determine how impacts are distributed and experienced (Osborne, 2015). Climate action planners thus need to understand the interconnections between different forms of inequity, and the relationship between these disparities and vulnerability to climate change. Planning activities aimed at advancing progressive climate goals *and* social equity must be grounded in a solid understanding of the causal relationship between multiple forms of marginalization.

A better understanding of intersectionality would support coherence among municipal policies for addressing climate change and related challenges so plans can more effectively

respond to concurrent and compounding forms of inequity. Climate policy should not be separated from struggles for social justice – planners should work closely with community agencies to identify service needs and gaps, promote knowledge transfer, and design multidimensional solutions. Creating links between community agencies’ mandate to advocate and cities’ mandate to support the individuals they serve would support the creation of plans that accurately reflect the differentiated needs and capabilities of individuals across and within underserved groups.

There is low awareness of municipal or regional climate action plans and policies among organizations that represent equity-deserving groups.

The key informant interviews revealed low levels of awareness of climate strategies among equity-deserving group representatives. When key informants were asked whether they are familiar with any climate change plans or policies for their city, their responses were overwhelmingly negative. One key informant from Brampton commented that she is not very familiar with the regional climate action plan, and noted, “I guess that’s also telling that I don’t necessarily see a direct correlation between [the plan] and my everyday work.”

Across all three cities, 88% of key informants were unfamiliar with any regional or municipal climate change plans or policies. In several cases, interviewees would say that they had not heard of any city-led climate initiatives, but would go on to name local environmental advocacy organizations or mention their own efforts to reduce their carbon footprint or consumption. Of the key informants who were familiar with specific plans and policies for their city (n=3), only one indicated that she encountered these documents within her capacity as an organizational executive. These comments indicate that climate action information and resources are often provided by grassroots community organizations rather than municipal governments, and that municipalities have not necessarily made a clear connection between climate impacts and the forms of social disparity that advocacy organizations work to reduce.

Low awareness of municipal climate action planning may also be driven by barriers to accessing climate change information, such as reduced access to technology among low-income populations or language barriers among refugees and newcomers. Several key informants expressed that climate change – either awareness of climate change itself or knowledge about

municipal actions – is simply not on the radar for residents who have more pressing concerns or for advocates whose organizations are faced with resource shortages:

If you talk about climate action to people in this community, it's like, can we feed people first please? (Brampton)

It's just too hard to explain to [a newcomer] who's worried about food on the table and about their kid doing well at school. (Brampton)

My attention is often directed at other more urgent things. (Thunder Bay)

Integrating access to climate change information with other social programs or services that equity-deserving groups regularly access could increase awareness and help residents make connections between different types of community programming. One key informant in Brampton recommended collaboration between organizations that address different social challenges:

Sometimes the pitch doesn't really matter. [We need to] connect the community to resources, but it doesn't really matter what the entry point is. That's what we find when we work in collaboration with other organizations. We're not necessarily pitching it as 'come to us and we're going to talk about climate change' because obviously no one is going to show up to that.

Integrating some elements of the work being done by environmental and social advocacy organizations might help equity-deserving residents make personal connections to climate change. For example, highlighting the importance of communities of care for climate resilience bridges social service delivery with climate change information and awareness.

The relationship between climate change and equity is not necessarily well-understood by leaders of organizations that advocate for equity-deserving groups.

The key informant interviews demonstrated that equity-deserving group representatives are not necessarily aware of how climate change impacts people differently, unevenly, and disproportionately. One interviewee from Waterloo Region expressed that there is a lack of exposure for queer and trans youth to information about the linkages between queer identity and climate justice: "Obviously there are overlaps [between climate justice and queer identity], but within these spaces we don't necessarily even know what they are." She

was pleasantly surprised that I had reached out to her in the context of a study on climate change, noting that queer and trans youth are more often engaged in other forms of social advocacy.

A key informant from Thunder Bay similarly observed that social justice organizations in the city have had to be educated on the equity aspects of climate change. In Brampton, one interviewee explained that the city has taken considerable steps toward supporting equity, diversity, and inclusion, but that the connection between these struggles and climate change has not yet been established. Another interviewee from Brampton commented that equity-deserving groups who are fighting for resources are not necessarily concerned with the “academic” explanations for their struggles: “When communities are fighting for survival, they’re not really paying attention to how and who is not supporting them.”

These comments imply that there may be more awareness of the connections between climate justice and struggles for other types of social justice among the scholarly community than within advocacy organizations and among members of equity-deserving groups, who are necessarily preoccupied with matters that they perceive as having more practical relevance. There is thus an important role for researchers and scholarly ‘experts’ to make these links explicit by connecting seemingly remote theories of climate justice to the knowledge and everyday experiences of equity-deserving groups.

Conclusions

The purpose of this qualitative study was to 1) identify key considerations for equitable climate action planning from the perspective of equity-deserving groups; and 2) compare the needs and priorities of equity-deserving groups across the case study cities to determine the reliability of universal criteria for assessing equity in climate change planning. The study revealed that there is no single policy directive or set of criteria for advancing equity, but that certain equity principles stand despite differences in local context.

First, any planning activity aimed toward progressive reform must be grounded in a complete and accurate understanding of how systems of capitalism, patriarchy, racism, and settler colonialism affect access to the benefits of social life. These underlying social processes have important implications for climate change planning because these ideologies justify the

various types of oppression that contemporary environmental injustices are based upon. Planners and policymakers thus need to understand how the various types of inequity and discrimination that these systems support intersect and overlap to create and sustain vulnerability to climate change.

Second, planners and policymakers must operate under the assumption that an equitable distribution of supports and resources is based on differential need. Uncovering these needs requires ongoing engagement with underrepresented groups throughout the entire planning process.

Third, strategies for addressing climate change must create pathways for equal access to the benefits of social life. Solutions should be grounded in a solid understanding of the relationship between climate change and equity, and this knowledge should be transferred to equity-deserving groups to help build resilience and adaptive capacity.

These principles should be understood as universal guidelines for climate change planning, but each principle must be considered in the context of local forms of inequity and demographics. Put differently, universal equity criteria serve as general rules for policymaking, but climate policies should be evaluated on a case-by-case basis to determine whether they effectively respond to the self-identified needs and priorities of equity-deserving groups in specific cities.

Policymakers need an accurate understanding of *what* equity-related challenges are most pressing in a specific city, *who* experiences these challenges most acutely in that city, and *how* these challenges are experienced by these populations. This study revealed that equity challenges are often cross-cutting, but their specific impacts are localized – assessment criteria must therefore also be contextualized to accurately measure progress. Assessment criteria cannot measure a city’s progress toward advancing equity by referring broadly to “vulnerable” or “marginalized” groups because the composition of these groups varies between cities. Solutions that work for newcomers in Brampton are unlikely to work the same way for Indigenous youth in Thunder Bay, even though these groups are both considered “vulnerable”. To reliably measure equity, assessment criteria need to name specific populations of concern to capture demographic differences between cities.

Developing climate change strategies that are equitable from the perspective of equity-deserving groups requires that members of these groups occupy positions of authority that grant control over decision-making. Consultation is necessary but insufficient for ensuring that the needs and priorities of equity-deserving groups are reflected in policy. Meaningful engagement processes at lower levels are not enough; equity-deserving groups need to see a local governance system that is reflective of themselves at every level. One interviewee from Brampton made the need for this transition plain:

Senior positions at [the municipality] are being filled by white folks. So, where is the commitment? [The municipality] claims that they believe in diversity and they want to be fair and just, but in terms of the actual actions...the talk doesn't match the walk and that's where things are falling short. And so, when I say that decisions are not reflective of the needs of the community, it's because there are blind spots and biases that continue to fuel.

A diversified decision-making body with lived experience is required to advance a form of planning that more accurately reflects the self-identified needs and priorities of equity-deserving groups. To this end, lived experience needs to be given greater value and recognized as a legitimate form of expertise so that policymaking spaces include individuals who have personally experienced the forms of inequity that the policy in question aims to address.

Rather than calling for creative solutions to the climate crisis, we should call for creativity in problem framing so that planners and other actors understand the linkages between seemingly separate issues. This type of thinking prepares planners to move beyond silver bullet solutions to design more holistic interventions that address overlapping challenges. Partnerships and collaborations that involve information sharing and exchange of ideas between organizations and municipal governments are a promising step. Municipalities should be clear about how they plan to address the needs of specific populations in their long-term strategic plans or visions to enable the social service sector to more proactively support these goals. Finally, in-depth research on the specific equity-related challenges impacting equity-deserving groups in different cities is needed to enable planners to develop tailored interventions and locally-informed assessment criteria.

This study demonstrates that equity challenges are often cross-cutting, but the way these challenges are experienced and by who varies between cities with diverse demographics. Planners thus need to be acutely aware of the specific challenges that arise as demographics shift. This knowledge should be applied to develop context-specific assessment criteria that are appropriate and reliable for assessing the equity of climate change planning in specific cities. This type of locally informed approach contributes to ensuring that resources are directed appropriately to develop climate actions that are responsive to local needs.

Chapter 4: “The Big Ship Turns Around Slowly”: An Evaluation of Equity and Justice in Canadian Climate Action Plans

Chapter 4 deploys the evaluative framework proposed in Chapter 2 to assess the degree to which climate action plans in the three case study cities address distributive, procedural, recognition, and healing justice. Because Chapter 4 was written as a standalone article focused on the content analysis phase of my study, it was necessary to describe the process for developing the evaluative framework that guided the content analysis. Readers will thus notice some repetition between Chapters 2 and 4 in the literature review and the description of research methods.

Chapter 4 builds on Chapters 2 and 3 by demonstrating the application of the evaluation tool in the case study cities and using qualitative evidence from the interviews to support the empirical results of the plan evaluation. Chapter 4 makes a distinctive contribution to the dissertation by: 1) building knowledge of the current state of municipal climate change planning in a study location where previous research is limited; 2) offering empirical evidence demonstrating that climate action planning in Ontario remains unresponsive to the needs and priorities of equity-deserving groups; and 3) offering practical recommendations for integrating equity into municipal climate action plans.

“The Big Ship Turns Around Slowly”: An Evaluation of Equity and Justice in Canadian Climate Action Plans

This paper reports the results of an evaluation of climate action plans for three cities in Ontario, Canada. The evaluation was guided by a framework containing criteria for assessing the degree to which climate action plans address distributive, procedural, recognition, and healing justice. The framework was developed through consultations with climate change scholars and representatives from equity-deserving groups. Results suggest there is considerable risk that equity-deserving groups will be left behind in the transition to more climate friendly communities. Findings are based on empirical evidence from the plan evaluation and qualitative evidence from interviews with representatives from equity-deserving groups in the case study cities.

Keywords: Canada; Climate action planning; Equity; Justice; Plan evaluation

Introduction

Cities are singled out as key arenas for climate action given their position as substantial consumers of energy and sources of emissions, and the sites where the economic and human costs of climate change are most noticeable (IPCC, 2022; Boswell et al., 2012). According to the Federation of Canadian Municipalities (2024), roughly half of national greenhouse gas (GHG) emissions in Canada are under the direct or indirect control of municipal governments. Cities are also sites of heightened socio-economic disparities that are further amplified by the disproportionate impacts of climate change on underserved communities (Hughes & Hoffmann, 2020; Bulkeley et al., 2013). Municipal governments are influential in curbing or intensifying these disparities because municipalities control a range of everyday services that affect the adaptive capacity of community members.

Despite these dynamics, equity continues to be the “least developed dimension of urban sustainability, with priority given to economic development and ecological innovations” (Armitage et al., 2023, p. 150). Researchers are particularly concerned about the potential of climate policies to reproduce and exacerbate existing inequities in cities, especially by redistributing environmental benefits and burdens along racial and class lines (Hoffman et al., 2020; Wilson, 2020) and displacing vulnerable groups (Anguelovski et al., 2022; Rice et al., 2020; Shokry et al., 2020).

Municipal governments are well-positioned to advance climate action agendas given their experience managing core urban issues, but municipalities across Canada and beyond need concrete guidance on how to design and implement equitable climate action plans and policies. Accordingly, this study evaluates whether municipal climate action planning adequately considers and addresses the needs and priorities of equity-deserving groups, both in terms of process and outcomes, and considers how cities can integrate equity into their climate action plans in a meaningful way.

This paper presents the results of a plan evaluation where I deployed an evaluative framework developed through consultation with climate change scholars and equity-deserving groups to assess the equity and justice of climate action plans for three cities in Ontario, Canada. The study builds knowledge of the current state of municipal climate change planning in a study location where previous research is limited (O'Donnell & Doyon, 2023), and offers empirical evidence demonstrating that climate action planning in Ontario generally remains unresponsive to the needs and priorities of equity-deserving groups. I also offer recommendations for incorporating equity into municipal climate action plans.

The paper begins by reviewing previous evaluations of equity in climate change planning to map the current state of knowledge. I then present the numerical results of the plan evaluation and discuss several recurrent themes that emerged. These themes are based on empirical evidence from the plan evaluation and qualitative evidence from interviews with equity-deserving groups in the case study cities. Climate change planning and climate action planning are used interchangeably throughout this paper to refer to planning activities that support mitigation or adaptation. These activities may be captured in a variety of plans including climate action plans, emissions reduction plans, and sustainability or resilience plans.

The Current State of Equity and Justice in Climate Change Planning

Researchers continue to debate the meaning of equity as it relates to climate change. This debate has led to several studies that explore how equity and justice considerations are embedded in plans and policies developed to respond to climate change in cities around the world. These studies have identified several shortcomings of climate change planning both in terms of process and outcomes.

Research on climate change plans across U.S. cities has found that commitments to equity in plans are mostly rhetorical and rarely include concrete strategies for achieving stated equity goals (Bulkeley et al., 2013; Finn & McCormick, 2011). Plans also tend to lack measurable indicators to evaluate progress toward achieving equity goals (Caggiano et al., 2023). Studies beyond the U.S. have found that procedural equity seems to be overlooked during plan development, and that planning processes often fall short in terms of actively including underrepresented groups (Armitage et al., 2023; Hughes, 2013).

Other research has revealed that many cities continue to overlook social equity goals relative to environmental and economic imperatives (Angelo et al., 2022; Schrock et al., 2015; Pearsall & Pierce, 2010). Plans also tend to focus on the equal distribution of material resources while overlooking systemic factors that create and sustain inequity (Fitzgibbons & Mitchell, 2019; Meerow et al., 2019). Where systemic injustice is acknowledged, engagement with the concept seems superficial (O'Donnell & Doyon, 2023). Some cities are beginning to address differential vulnerability and adaptive capacity in their climate change plans, but more work is needed to tackle underlying socio-economic structures that drive climate injustice (Zoll, 2022; Chu & Cannon, 2021).

Studies have also cited weak consideration of vulnerable groups as a common shortcoming of climate action plans (Meerow et al., 2019; Jabareen, 2014). Where vulnerable groups are identified, plans rarely direct resources to the people or places that are considered vulnerable (Armitage et al., 2023; Zoll, 2022).

Data on Canadian municipal plans are more limited but suggest that plans variably integrate equity goals and vaguely describe corresponding action items (Tozer, 2018). Plans also tend to focus on benefits-for-all approaches without specifying key groups whose needs may vary (O'Donnell & Doyon, 2023). Some cities in Canada fail to explicitly define social equity as it pertains to climate action, leading researchers to wonder how progress will be measured (Armitage et al., 2023).

Collectively, these studies reveal several key shortcomings of climate change planning regarding its attention to equity and justice: the overall focus on equity across cities engaged in climate action is piecemeal; cities struggle to translate rhetorical commitments to equity into

concrete and measurable actions, creating a disconnect between equity goals and outcomes; climate change planning processes are often devoid of meaningful participation and inclusive decision-making; and plans rarely name and tackle underlying drivers of vulnerability or issues of structural inequity.

Case Study Cities

The sample for this study was two local municipalities (Brampton and Thunder Bay) and one regional municipality (Region of Waterloo) in Ontario, Canada (for simplicity, all locations will be referred to as cities). Three locations in Ontario were chosen to minimize the influence of the provincial policy arena on my findings to allow for more direct comparison. Study locations were selected based on their preparedness to address climate change (based on rankings by Guyadeen et al., 2019), demographic diversity (based on Statistics Canada 2021 Census of Population data), and the recency of their climate change plan(s).

Preparedness to address climate change was used as a selection criterion because cities that are well positioned to tackle climate change are also more likely to have resources and capacities to deal with the complexities of social equity in their climate action plans. Of the top 20 ranked cities in Canada (Guyadeen et al., 2019) with publicly available climate action plans developed within the last five years, I selected three cities in Ontario that are demographically and socio-economically different from one another so I could make observations about the types of equity-related considerations that are discussed (or not) in the plan(s) for each city.

The final sample includes both local and regional municipalities to correspond to the scope of the climate action plan(s) that have been developed for each location. In Ontario, local municipalities can choose to defer to their regional counterparts when it comes to climate action planning; this is the case for the City of Waterloo (which deferred to Waterloo Region) but not for the City of Brampton or the City of Thunder Bay.

Policy Context

There are three levels of government in Canada – federal, provincial, and municipal – each with its own set of responsibilities. Climate action in Canadian municipalities is shaped by upper-level government policies and global commitments and goals. Federal policies including

Canada's Strengthened Climate Plan (2020), the Pan-Canadian Framework on Clean Growth and Climate Change (2016), the 2030 Emissions Reduction Plan (2022), and Canada's National Adaptation Strategy (2022) shape key provincial policies such as the Made-in-Ontario Environment Plan (2020) and the Provincial Policy Statement (2020). Canadian municipalities are not mandated to create climate change plans, but Ontario's Provincial Policy Statement (2020) compels municipalities to consider climate change in relevant sections of their official plans. Guidance for incorporating equity into municipal climate change planning can be found in the Canadian Institute of Planning (CIP) Policy on Climate Change Planning (2018), the CIP Equity, Diversity, and Inclusion Roadmap (2020), and the Provincial Policy Statement (2020). These documents call planners to create equity-oriented communities that are resilient to climate change.

This collection of documents guides climate change planning in Ontario municipalities including Waterloo Region, Brampton, and Thunder Bay. Climate change adaptation plans for Waterloo Region and Thunder Bay were developed through a step-by-step process (widely known as BARC – Building Adaptive and Resilient Communities) developed by ICLEI Canada. The BARC program is administered through the Federation of Canadian Municipalities (FCM) – a national membership-based organization that advocates for the needs of municipalities – and supports communities in setting adaptation objectives and targets, selecting adaptation actions, and drafting an adaptation plan.

The City of Brampton is currently developing its first climate change adaptation plan, which will further develop and deliver the directions identified in the municipal Grow Green Environmental Master Plan (2020). Waterloo Region, Brampton, and Thunder Bay are among more than 650 municipalities in Ontario to declare a climate emergency, and are part of the FCM Partners for Climate Protection (PCP) program – a network of over 500 Canadian municipal governments who have committed to acting on climate change.

Methods

Evaluative Framework

The directed content analysis was guided by an evaluative framework containing criteria for assessing the degree to which the plans address distributive, procedural, recognition, and healing justice (Appendix A). Collectively, these criteria concern the allocation of environmental benefits and burdens among community members (distributive justice), the plan development process (procedural justice), respect for differences between subaltern and dominant groups (recognition justice), and the future-orientation of planning (healing justice). A companion paper offers a detailed discussion of these four dimensions of justice and cites contributions from several scholars whose work directly informs the evaluative criteria developed for this study. While distributive, procedural, and recognition justice are commonly used as criteria for assessing equity in climate change planning, the healing justice category was developed for this study. These four dimensions of justice are defined in Table 1 below; the complete evaluative framework and detailed criteria are provided in Appendix A.

Table 1. Dimensions of justice guiding the plan evaluation

Justice Dimension	Definition
Distributive Justice	Concerns the allocation of environmental benefits and burdens among community members with variable vulnerability and adaptive capacity.
Procedural Justice	Concerns the fairness, inclusivity, and transparency of processes for making decisions and allocating resources.
Recognition Justice	Considers the influence of political, social, and economic forces on the distribution of power and resources with the goal of amplifying ways of knowing, being, and doing that have been systematically excluded or undermined.
Healing Justice	Concerns the future-oriented development of capabilities with the goal of enabling groups who have been historically marginalized to transcend legacies of oppression.

The framework was developed through consultations with climate change scholars and representatives from equity-deserving groups, and represents convergence of expert opinion regarding the plan content and process conditions that are necessary to advance equity in climate change planning. The step-by-step process for developing the evaluative framework is the subject of the companion paper mentioned previously.

Briefly, a preliminary framework was developed based on a review of urban justice, environmental justice, climate justice, participation, and plan quality literature, and was

subsequently validated by five expert panelists in two rounds of the Delphi technique. Delphi panelists included scholars with self-identified expertise in plan quality and evaluation, equity in urban resilience and risk reduction, equity in urban decision-making processes, civil society mobilization and community organizing for climate justice, and systemic elements of the climate crisis including colonial, capitalist, white supremacist, and hetero-patriarchal systems. The Delphi exercise involved two rounds of expert opinion gathering to collect feedback on the strengths and weaknesses of the evaluative framework, and to identify any variables that had been overlooked. Comments were then used to refine the evaluative framework.

Following the completion of the Delphi exercise, I completed a ground truthing exercise designed to test the scholarly equity and justice criteria devised by the Delphi panelists against the knowledge and lived experiences of members of equity-deserving groups. I completed 26 semi-structured interviews with advocates and representatives from organizations that serve equity-deserving groups in Waterloo Region, Brampton, and Thunder Bay. The interviews involved informal conversation and experience-sharing guided by a semi-structured questioning route that focused on various issues related to equity, justice, inclusion, and climate change, including what equity means to the groups consulted and what justice-oriented policymaking processes and outcomes look like from their perspective. The evaluative framework was refined based on interviewees' comments and new criteria were developed to address gaps and oversights.

The Delphi exercise and consultations with representatives from equity-deserving groups resulted in a revised evaluative framework that is grounded in scholarly expertise *and* the perspectives of equity-deserving groups. This approach represents a point of departure from previous studies that rely on evaluative criteria developed by members of the research team without input from community members. To my knowledge, this is the first study to evaluate a set of climate action plans using criteria that are grounded in the self-identified needs and priorities of equity-deserving groups, and to use qualitative evidence from key informants to enrich the findings from the content analysis.

Data Collection

Of the municipalities selected, two had separate mitigation and adaptation plans (Waterloo Region and Thunder Bay) and one had a mitigation plan and an environmental master plan (Brampton). Plans that did not directly address climate change but might have contained climate change elements were reviewed to determine whether climate change was a core focus of the plan. Only plans for which climate change mitigation and/or adaptation was a central organizing theme were evaluated. The specific plans that were evaluated for each city are listed in Table 1 below.

Table 2. Plans included in the evaluation

Study Location	Plan
Waterloo Region, ON	1. Community Climate Adaptation Plan for Waterloo Region (2019) 2. TransformWR: Waterloo Region's Transition to an Equitable, Prosperous, Resilient Low Carbon Community (2022)
Brampton, ON	1. Community Energy and Emissions Reduction Plan (2020) 2. Grow Green Environmental Master Plan (2020)
Thunder Bay, ON	1. Climate-Ready City: City of Thunder Bay Climate Adaptation Strategy (2015) 2. Climate-Forward City: City of Thunder Bay Net-Zero Strategy (2020)

Since all three case study cities have produced multiple plans over the past decade, the decision about which plan(s) to review was made based on the content and recency of the plan(s). In cases where the plans are complementary to one another (e.g., one plan focuses on GHG mitigation strategies and another focuses on adaptation strategies), both plans were reviewed. In cases where a plan updated or superseded earlier plans, only the most recent plan was reviewed.

Where a local municipality was located within a regional municipality, the lower tier plan was evaluated. For example, in Brampton, the Peel Region Climate Change Master Plan (2020-2030) sets forth directions for how the Region will lead through example through the management of its assets, infrastructure, and services. The regional plan was reviewed for context but was not evaluated because it does not speak to the specific climate actions being implemented in Brampton, local needs and priorities, or the process through which the lower tier plans were developed.

Some supplementary and supporting documents were also reviewed for context but were not evaluated as standalone plans. The Community Engagement Summary Report (2020)

for TransformWR was reviewed to score criteria related to procedural justice since TransformWR refers directly to this report in its description of the plan’s development process. The Engagement Plan Report for Brampton’s Community Energy and Emissions Reduction Plan (CEERP) was reviewed for the same reason.

The Brampton Grow Green Environmental Master Plan (EMP) comprises a suite of documents including a Background Report (2012), a Green Paper (2013), an Implementation Action Plan (2013) and an EMP Refresh (2020). The Background Report and Green Paper provide background material for the EMP, while the Implementation Action Plan and EMP Refresh are action-oriented. All documents were reviewed for context, but only the Implementation Action Plan and the Refresh documents were evaluated.

Analytical Techniques

The plan evaluation focused on the plans themselves as the object of evaluation, evaluated against the desired result (Connell and Daoust-Filliatrault, 2017). In this case, plan content was evaluated against context-specific equity and justice criteria that were developed based on input from scholarly experts and ground-truthed in the case study communities. The evaluative framework that guided the content analysis contains 47 scored criteria and 18 unscored criteria to guide the collection of qualitative observations. The scored criteria were assigned 0, 1, or 2 points depending on how thoroughly the criteria were addressed in the plan (Table 2).

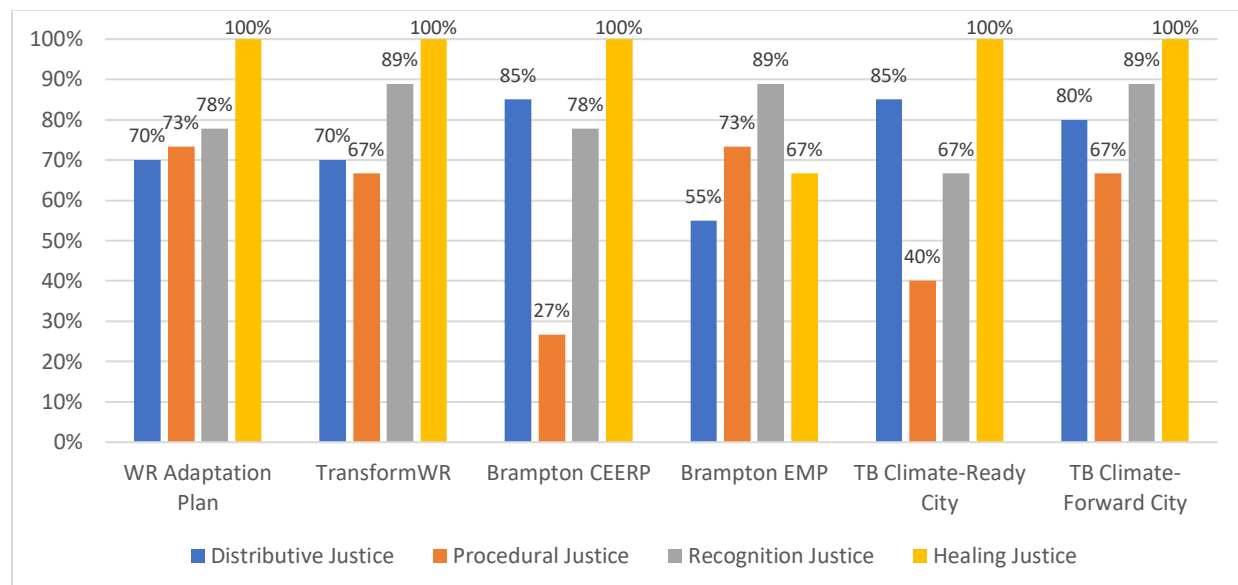
Table 3. Point rubric for assigning scores

Category	Meaning	Points
Fully addressed	There is compelling evidence that the criterion is thoroughly fulfilled (i.e., the plan discusses a topic in depth and/or describes a specific action item in detail)	2
Partially addressed	There is superficial or vague mention of the criterion and/or the criterion is only partly fulfilled (i.e., the plan refers to a topic and/or action item in a cursory manner)	1
Not addressed	There is no evidence that the criterion is acknowledged, considered, or fulfilled in the plan (i.e., the plan does not mention a topic and/or action item)	0

Directed content analysis was used to evaluate plan content against pre-determined criteria. Scores were assigned based on manifest plan content (i.e., the visible and literal

meaning of the text) while qualitative observations were collected based on latent content (i.e., the underlying meaning of the text) (Krippendorff, 2019). To validate scores, a second rater independently repeated the analysis using the same methods and criteria. This process resulted in 72% overall agreement between the two independent raters, with highest agreement on the scoring of healing justice criteria and lowest agreement on the scoring of procedural justice criteria (Figure 1). To reconcile discrepancies in the assigned scores, the two raters discussed their observations and re-reviewed the strategies together to agree on a new score until 100% agreement was reached.

Figure 1. Percentage of evaluative criteria in agreement before reconciling scores (by city)



Scope and Limitations

Because the evaluative framework guiding this study was developed based on input from equity-deserving group representatives in specific cities in Canada, the framework does not necessarily allow users to accurately compare the equity orientation of climate action plans across multiple jurisdictions with diverse demographics, policy environments, and social climates. For example, criteria that consider whether plans include a diversity of culturally relevant examples are essential when evaluating climate action planning in a city like Brampton where South Asian residents comprise 52% of the total population (Statistics Canada, 2022), but may be less indicative of overall progress in cities with a different demographic makeup. The

framework offers guiding questions that encourage planners and policymakers to reflect on whether they are accounting for equity-deserving groups when planning for climate change, but certain criteria (namely those related to specific populations of concern) should be tailored to reflect the context in specific cities.

In addition to some criteria being location-specific and requiring modification for application elsewhere, overall scores do not necessarily mean that one plan outperformed another in every category. Two plans could receive the same overall score by scoring 1 point on 20 criteria or 2 points on 10 criteria, so a higher overall score does not automatically mean that one plan is more equitable and just than another. The framework used here was designed to evaluate the current state of climate action planning in specific cities by identifying parts of the city's plan(s) where sufficient attention to equity was paid and revealing which (if any) equity considerations were neglected. Final scores are not definitive indicators of progress in one city compared to another; rather, the scores help cities identify specific gaps and oversights in their climate change planning efforts.

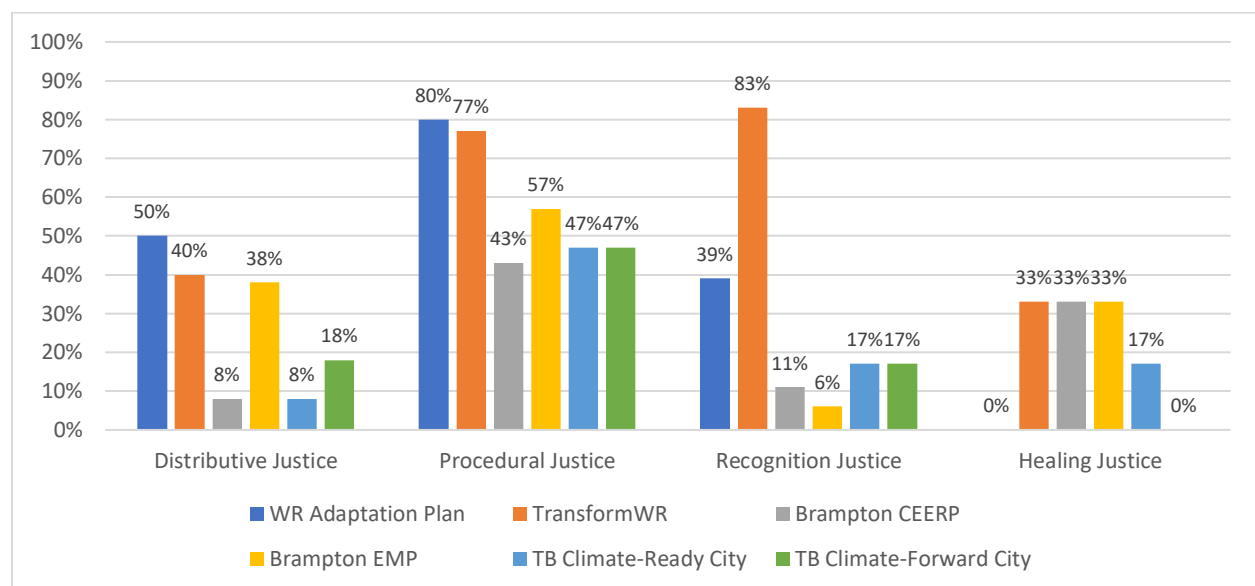
Finally, plans were evaluated *as they are written* – when assigning scores, the two raters tried to avoid “reading between the lines” or inferring meaning based on ambiguous plan content. Relying on manifest rather than latent content analysis when assigning scores helped maintain consistency by minimizing rater bias, but means that some aspects of the planning process may not be reflected in the numerical scores. For example, a plan that involves stakeholders in plan implementation but does not mention this anywhere in the plan would receive a score of 0 and so would a plan that does not involve stakeholders in implementation. Evaluating latent content and the “behind-the-scenes” components of plan development and implementation would be an interesting direction for future research, but is outside the scope of this study.

Results

The empirical results of the plan evaluation are presented below. The interviews with equity-deserving groups provide important qualitative evidence to support the empirical results of the plan evaluation, and are explored in the discussion section that follows.

The percentage of possible points that each plan achieved under the four categories of evaluative criteria are presented in Figure 2 below. Scores are presented as the relative percentage of possible points achieved rather than the actual number of points achieved because each justice category in the evaluative framework contained a different number of criteria – categories with less criteria where fewer points could be assigned would therefore be misrepresented as having been fulfilled to a lesser extent than categories with more criteria where more points could be assigned. Overall, plans tended to score highest on procedural justice criteria and lowest on criteria related to recognition justice. TransformWR is a notable exception to this trend – the plan achieved 23 out of 30 possible points (83%) under the recognition justice category, representing the highest number of points achieved by any plan under any category.

Figure 2. Percentage of possible points achieved in each justice category (by city)



Overall, TransformWR achieved the highest percentage of total possible points across all criteria, while the Brampton CEERP achieved the lowest percentage of possible points (Figure 3). These results should be interpreted with a caveat that overall scores do not necessarily mean that one plan outperformed another in every category. As explained above, two plans could receive the same overall score by scoring 1 point on 20 criteria or 2 points on 10 criteria,

so a high overall score could mean that a plan addressed several criteria in a cursory manner, or that it addressed fewer criteria more comprehensively.

Figure 3. Percentage of total possible points achieved across all criteria (by city)

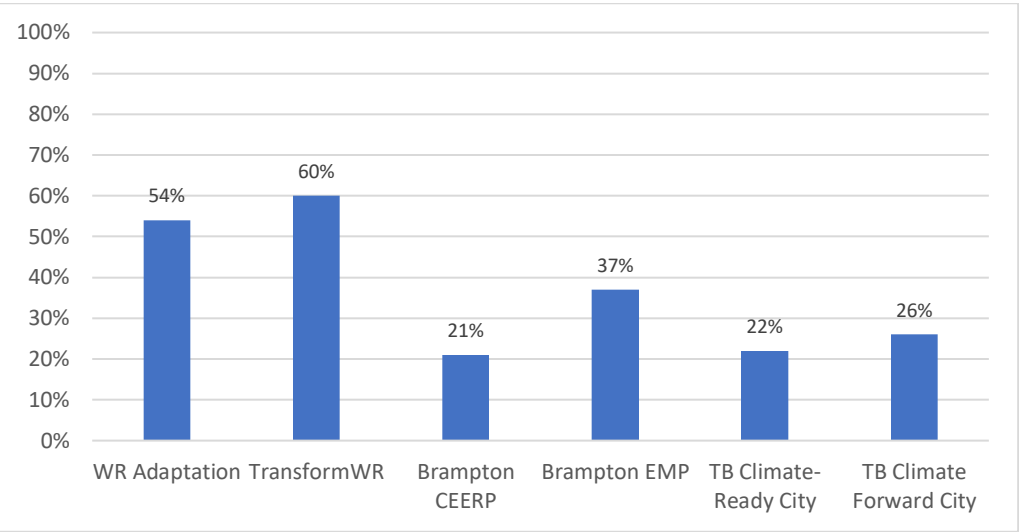
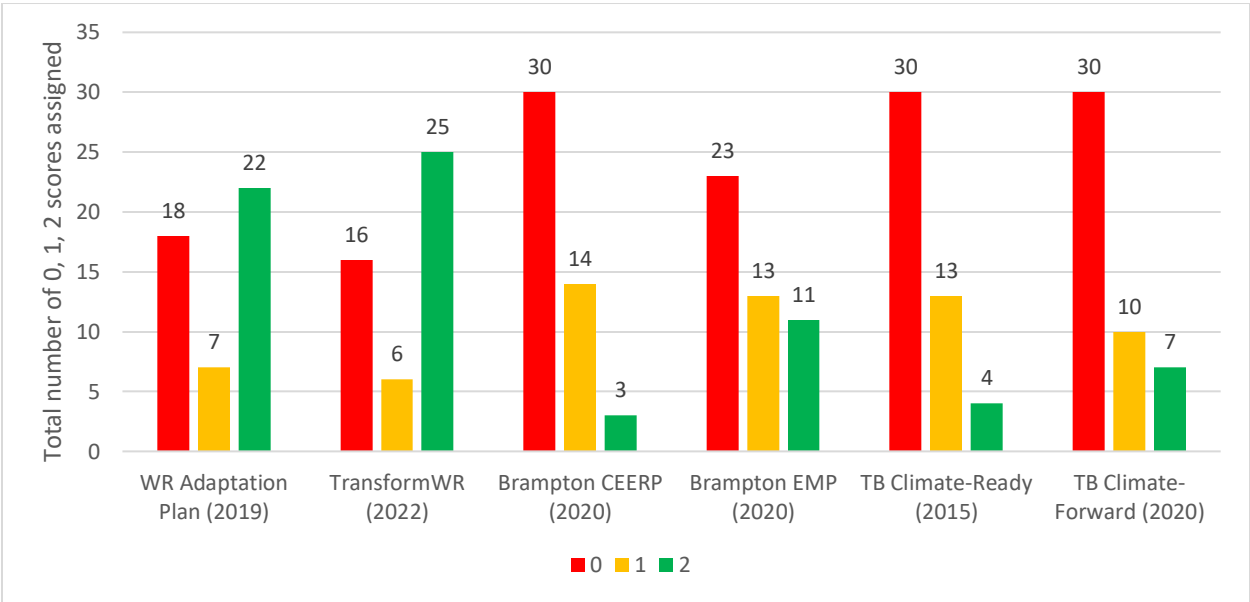


Figure 4 below clarifies the distribution of points that each plan achieved across all 47 scored criteria (i.e., how many 0's, 1's, and 2's each plan received). Figure 4 shows that most criteria were not addressed (received 0 points) or were addressed in a cursory manner (received 1 point).

Figure 4. Overall distribution of points (0, 1, or 2) across all criteria (by city)



Figures 5-8 clarify how thoroughly the criteria under each justice category were addressed across all plans (i.e., which type of justice received the most 0's, 1's, and 2's overall). Figures 5-8 were calculated as relative percentages because each justice category contains a different number of criteria for which points could be assigned – for example, Figures 5 and 6 show that 62% of the 20 scoreable criteria under the distributive justice category received 0 points, while 29% of the 15 scoreable criteria under the procedural justice category received 0 points. Results indicate that procedural justice criteria – which received 2 points 46% of the time – are addressed most thoroughly in the plans evaluated. Conversely, distributive, recognition, and healing justice criteria received 0 points 62%, 65%, and 78% of the time respectively – these scores indicate that in most cases, these dimensions of justice were not acknowledged, considered, or fulfilled in the plan.

Figure 5. Distributive justice (relative % of 0, 1, or 2 points)

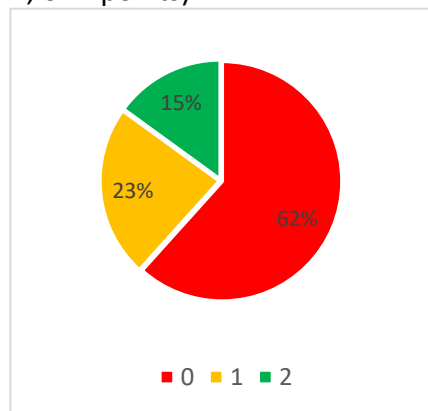


Figure 6. Procedural justice (relative % of 0, 1, or 2 points)

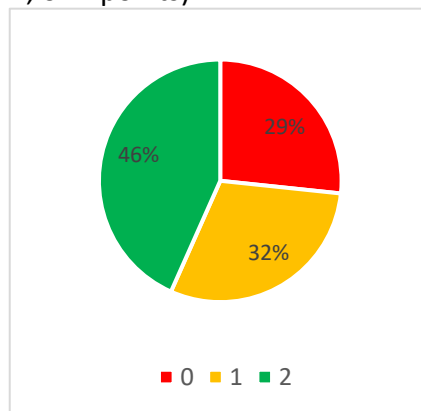


Figure 7. Recognition justice (relative % of 0, 1, or 2 points)

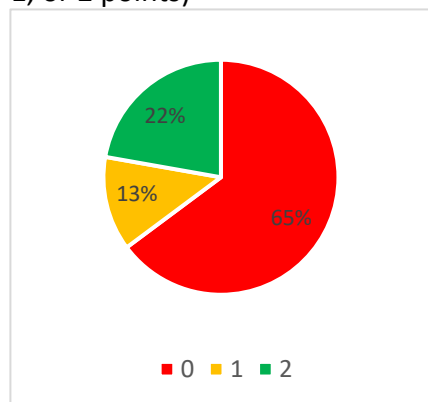
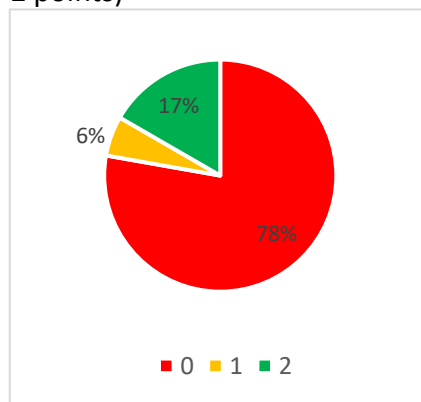


Figure 8. Healing justice (relative % of 0, 1, or 2 points)



Discussion

Several recurrent themes emerged based on the empirical results of the plan evaluation and the qualitative evidence collected through interviews with representatives from equity-deserving groups. Key findings and recommendations are discussed below, citing evidence from the climate action plans and comments from interviewees. Quotations have been slightly edited for grammar and some words [placed within brackets] have been added for clarity.

Municipalities do not necessarily prioritize social equity goals relative to economic imperatives in climate action planning.

The plan evaluation revealed that municipalities tend to focus on economic and environmental goals while progress on equity-related challenges remains slow. The stated goal of the Thunder Bay Climate-Ready City adaptation strategy is to build resilience with an emphasis on infrastructure and the natural environment – the plan focuses on how climate change will impact city departments while attention to the impacts on community members is lacking. Specifically, the plan outlines how changes in temperature, precipitation, and extreme weather events will affect the four pillars of the city’s Corporate Strategic Plan (environment, lifestyle, economy, governance) but shows little concern for the impacts on community members. Community health and wellness are described as co-benefits of economic development rather than standalone goals, indicating that overall the plan is more concerned with how climate disruptions will affect the local economy than the community.

The Brampton CEERP describes how climate change will manifest in Brampton including specific changes (e.g., more intense storms), their effects (e.g., flooding), and community impacts (e.g., the cost of disaster relief), but the plan does not identify at-risk populations or neighbourhoods, and the discussion of community impacts mainly focuses on disruptions to the local economy. Key informants in Brampton noted that the regional government seems to be aware of the most pressing equity-related challenges in the community (namely housing, health equity, social service access, and food security), but that “their focus seems to be more on the [economic landscape] and there doesn’t seem to be a large focus on ensuring that those who need the services are receiving them.”

Change is especially gradual in Thunder Bay, where several key informants commented on the lack of effort to advance social equity relative to other priorities. One interviewee noted, “I simply haven’t heard [equity concerns] highlighted...I don’t see it as being really salient in the discourse here.” Another interviewee commented that the municipal government seems to be preoccupied with economic development at the expense of equity, diversity, and inclusion considerations. Across the case study cities, key informants said the limited messaging around climate change that they do receive focuses more on general social and economic impacts than on how specific vulnerable populations will be affected.

One possible explanation for the slow pace of progress on equity-related challenges may be that the lack of obvious solutions to pressing problems creates a feeling of overwhelm among policymakers. Advocates in Waterloo Region perceive a sense of apathy toward their concerns among policymakers that they believe translates to a lack of urgency and ultimately inaction:

I think the [municipal government] has been made aware of [the challenges], but to tell you the truth I don’t think they really care.

Despite legislation, despite everything, if I asked where the needle has moved on equity, diversity, and inclusivity, the answer is nowhere.

When action is taken to advance equity in policymaking, key informants expressed frustration about the lack of appreciable outcomes. One interviewee in Waterloo Region whose organization advocates for the 2SLGBTQIA+ community commented, “they’re headed in the right direction but they haven’t fully thought it out I don’t think and the actions they’re taking aren’t always as helpful as we would hope.” Another interviewee whose organization serves a range of equity-deserving populations commented that the municipal government is “guilty of using platitudes, and then not implementing [solutions].” A third interviewee who advocates for youth observed that well-intentioned policy developments do not necessarily translate to well-thought-out-actions, but there are rarely efforts to rework policies that have proven meaningless in practice. Several key informants noted that the apathy toward equity-related challenges that they perceive among municipal governments exists at the system level rather than the individual level:

I certainly don't think it's on a personal level. I don't think [people who work for the city] don't want to listen to Indigenous people, but I think that they are, by the very nature of their job, stuck in that colonial model. (Thunder Bay)

We have a lot of advocates at the staff level of the city that support us and bring our agendas forward. It doesn't always work, but we see the relationship as being mutually beneficial. (Brampton)

Across the case study cities (but most notably in Brampton and Thunder Bay where overall scores were the lowest), strategic economic and environmental priorities featured in the plans without evidence that the equity dimensions of the strategies were also being carefully considered.

Municipalities tend to focus on retroactively fixing problems through “band-aid” solutions that fail to address the real drivers of inequity.

The content analysis of plans indicated that municipalities do not necessarily have a good understanding of the structural drivers of inequity in their respective communities. Plans typically do not mention systemic causes of injustice (e.g., racism, colonialism, gender inequality) or identify any strategies for addressing these issues (e.g., anti-racism, reconciliation). Plans that mention structural drivers tend to do so superficially without additional explanation. TransformWR acknowledges the role of structural oppression in creating vulnerability to climate change, but does not specify what forms of structural oppression are relevant, nor does the plan elaborate on how these structures have been perpetuated in Waterloo Region or explain how the consequences of structural oppression play out locally.

Superficial and incomplete understandings of structural inequity among policymakers leads municipalities to focus on retroactively fixing problems through “band-aid” solutions that fail to address the real drivers of inequity. Key informants in Thunder Bay described retroactive responses to equity concerns that fall short in terms of measurable outcomes. One interviewee noted, “we do this whole reactive thing where we’re constantly reacting to the problems in the city and we’re never one step ahead.” Another interviewee attributed the lack of action to curb discrimination against the 2SLGBTQIA+ community to “an absence of awareness among decision-makers” who are “often out of the loop.” The same interviewee described the

municipal government in Thunder Bay as reactive rather than proactive, and critiqued city officials for not actively investigating the key challenges affecting equity-deserving groups in the city.

Key informants in Waterloo Region similarly highlighted the need for city officials to be upfront about what they don't know about the equity-deserving groups in their communities, and to take active steps to educate themselves about the challenges these groups face. One interviewee expressed frustration that the Region continues to disregard his recommendation to scale up mental health support for Indigenous community members, which he suggests would contribute to building adaptive capacity and reducing vulnerability. When asked about the reasons behind the lack of uptake of his recommendations, he commented: "Who knows why. Maybe they have other priorities. Possibly they don't care. I don't believe the [municipal government] has a real interest in solving these things beyond band-aid, tokenistic solutions."

To design and implement proactive solutions that tackle underlying forms of inequity, planners and policymakers must educate themselves on the drivers of key challenges facing a specific community. One key informant recommended having a dedicated point person in the municipal government who is responsible for liaising with representatives from equity-deserving groups, gathering information about emerging issues, needs, and priorities, and reporting this information to city officials. This idea represents a proactive approach to information gathering, whereby the city consistently gathers information through dedicated channels rather than relying on advocates from equity-deserving groups to raise the alarm.

To adopt a more future-oriented and forward-looking approach, municipalities need to do two things: 1) invest in community support services that already exist, and 2) remove barriers to accessing these services. If community engagement is done properly, planners and policymakers should know exactly what the barriers to service access are, enabling them to focus on removing barriers rather than retroactively managing them. In addition to removing barriers to *accessing* services, municipal governments should remove barriers to *providing* services. Application processes and mechanisms of reporting should be simplified to enable grassroots service providers to access funding without jumping through administrative hoops

that further stretch resource-strained organizations with limited capacity. These steps would help engender a more proactive and preventative approach than is currently the norm.

Municipal climate action plans tend to make justice the object rather than the subject of planning.

Lake (2016) differentiates between justice as the *subject* of planning and justice as the *object* of planning – while the former makes justice a normative end that planning practice should strive to achieve, the latter involves centering justice considerations throughout the entire planning process. Planning that makes justice its subject considers the specific standards of justice that must be met to address a problem, then designs and implements actions that actualize those standards in their goals, means, and outcomes (Lake, 2016). When justice is made the subject of planning, the operative questions become “what do we mean by justice here?”, “what does justice look like under these circumstances”, and “what is the just thing to do in this situation?” (Lake, 2016, p. 1212).

The municipal climate change plans that were evaluated as part of this study overwhelmingly make justice the *object* of planning. One of the guiding principles of TransformWR is to increase equity, prosperity, and resilience for all, but standards for meeting this goal and metrics to measure progress have not yet been established. The plan includes an action item to apply an equity lens to all actions outlined in the plan, but this approach is retroactive because it only considers questions of justice after the actions have been set in motion.

Thunder Bay’s Climate-Forward City has similar limitations. The plan claims that the net-zero strategy could be implemented in such a way that it might redress social inequities, but this outcome is not guaranteed and does not appear to be a core requirement or organizing principle of the plan. Rather, equity is an ancillary and incidental benefit of other priorities. For example, the plan frames improvements in health and social well-being as co-benefits of GHG reductions and economic development rather than standalone imperatives, making these outcomes the (incidental at best) objects of the plan rather than its subject.

Brampton’s CEERP similarly describes social equity as a co-benefit of reducing climate change. Climate actions that also advance social goals are described as “win-win” strategies,

making equity a welcome but seemingly incidental outcome of climate action rather than a guiding principle of the plan. Brampton's EMP Refresh acknowledges that the original plan did not fully recognize the interrelated nature of environment, economy, and equity and instead focused solely on improving Brampton's environmental performance. The refreshed plan recognizes that to achieve environmental goals, an integrated approach that also advances economic development and social equity goals is needed. This recognition is encouraging, but retroactively applying an equity lens to established action items that are already in motion does not amount to making justice the subject of planning.

There is a disconnect between the community engagement processes described in municipal climate action plans and the way equity-deserving groups perceive their participation.

Plans tended to score well on procedural justice criteria, but key informants from equity-deserving groups consistently reported feeling left out of decision-making processes. In Waterloo Region, 88% of key informants believe equity-deserving groups are left out of decision-making processes on matters that affect them, while 12% are content with the level of engagement carried out by city officials. In Brampton, 57% of key informants believe equity-deserving groups are excluded, while 43% are content with their engagement. In Thunder Bay, 100% of key informants believe equity-deserving groups are left out of municipal decision-making processes. The comments below capture interviewees' perceptions of public engagement in their communities:

I speak to various governments and organizations all the time. Do I feel that I'm listened to? No...I'm tokenized because I'm articulate and I can see things that very few people can see, but that's not really of much use to me. (Waterloo Region)

I'm seeing the shift a little...there has been the acceptance that you can't move the needle on diversity, equity and inclusion if you leave the community out. So there is recognition and there have been some efforts where that has translated into some meaningful actions, but with that said...the broadest community still remains untapped or disengaged. (Brampton)

I would say that the city does not have a clear agenda in terms of targeting marginalized groups [for consultation]. (Thunder Bay)

Key informants expressed a desire for sustained participation throughout the entire planning process, but this type of ongoing engagement is not currently the norm. Equity-deserving groups may be engaged in program development or asked to provide feedback on a proposed initiative, but they are rarely involved in monitoring progress or measuring outcomes. This oversight was reflected in the content analysis, which revealed that most plans do not provide opportunities for public participation in monitoring and evaluation and rarely specify whether metrics for measuring progress were designed collaboratively.

Findings indicate that while cities may perform well in terms of the more process-oriented aspects of procedural justice (i.e., offering opportunities for the public to provide feedback on policy alternatives), their ability to properly recognize equity-deserving group perspectives during these consultations falls short. It becomes clear that procedural justice does not necessarily equate recognition justice from the perspective of equity-deserving groups.

Municipal climate action plans do not anticipate unintended social consequences of proposed actions or mitigate well-known regressive outcomes associated with certain climate actions.

The content analysis suggests that municipal climate action plans do not necessarily anticipate and prevent unintended social consequences from occurring. Across the case study cities, only one plan (vaguely) mentioned that potentially regressive outcomes have been considered and mitigated.

TransformWR repeatedly emphasizes the importance of enabling everyone to participate in climate action and benefit from its outcomes, but it is not entirely clear how actions will be tailored for populations with different adaptive capacity and vulnerability. The plan states that the transition to sustainability must be equitable, but goes on to propose one-size-fits-all climate actions that are out of reach for some community members and may not be culturally appropriate for others. For example, TransformWR acknowledges the costs associated with upgrading to electric vehicles, retrofitting homes, and buying local, and recognizes that these actions are not accessible to all community members. However, the plan does not identify any concrete strategies for reducing the costs of these actions or making their benefits accessible to groups with high vulnerability and low adaptive capacity. In other words,

the municipality knows that action items *should* be accessible and beneficial to all, but municipal actors are unsure how to enact this principle in practice.

Several plans also overlook well-known risks associated with certain climate actions. TransformWR promotes energy efficient forms of urban development (e.g., 15-minute neighbourhoods, higher density mixed use developments, pedestrian-friendly design, transit-oriented development), but does not acknowledge the documented risks of these actions. There is also no way to guarantee that all groups will benefit from these actions because the plan does not include established metrics for measuring progress toward increasing equity through these initiatives.

Brampton's CEERP similarly suggests that planning and designing smart, transit-oriented, energy efficient communities simultaneously supports climate action, economic development, and social equity, but the plan overlooks well-known risks associated with low carbon communities including gentrification and displacement (Schrock et al., 2022) changes in neighbourhood composition (Shokry et al., 2020), and increased overall emissions (Rice et al., 2020). The refreshed EMP states that incorporating social equity into the city's sustainability approach involves thoughtfully considering the implications of Brampton's climate action choices for marginalized populations, then goes on to advocate robust public transit and green amenities as a means of attracting talent and capital. The plan does not include any acknowledgment of existing evidence that demonstrates how efforts to attract industries and investors by greening the economy can cause urban shifts that are detrimental for marginalized communities (Rice et al., 2020).

Finally, plans that propose enhancing green infrastructure such as street trees, green roofs, and urban forestry do not specify where these enhancements will occur or discuss potential disparities in access. This omission is concerning given evidence showing that urban greening tends to be distributed unevenly (Hoffman et al., 2020; Wilson, 2020) and can create uneven exposure and sensitivity to climate risks for marginalized groups. These findings indicate that planners in the case study cities are either unaware of the risks associated with some of their proposed climate actions, or they are aware of these consequences but choose to

ignore them. Either way, it appears that these municipalities have not fully thought through the ways in which some of their directives undermine their rhetorical commitment to equity.

Encouraging Trends

Despite scoring low on most evaluative criteria related to equity and justice, some strengths of the plans included in the study should be noted. A key strength of TransformWR is that in describing the way people move throughout the city, the plan considers differences between community members in terms of their transit needs and options. The plan specifically states that key community services and subsidized housing needs to be cited in central areas where they can be easily accessed using active transportation and public transit systems. This practice aligns with feedback from key informants from equity-deserving groups who emphasized the need for connectivity between quality housing, public transit, and social services. For many equity-deserving community members, the search for quality housing is closely connected to their ability to access a food bank or counselling services from that location. Since shelter, food security, and mental health affect vulnerability and adaptive capacity, climate change plans must account for these interconnected struggles. Plans that recognize and coherently respond to these challenges more effectively address multiple overlapping forms of inequity.

A notable strength of Thunder Bay's Climate-Ready City adaptation strategy is that it integrates climate change adaptation across existing plans and policies to bridge cross-departmental gaps while building on existing strengths. Thunder Bay's Climate-Forward City net-zero plan similarly makes direct connections to the Climate-Ready City adaptation plan to clearly explain how these documents speak to one another and work together to advance shared goals.

A key strength of the Brampton CEERP is that it refers to the EMP and other supportive strategies and programs, which suggests at least some degree of plan integration and alignment between goals (although a careful comparison of these plans might reveal discrepancies). This type of policy coherence supports cities in working toward a long-term vision and more effectively responding to concurrent challenges.

Recommendations and Conclusions

The purpose of this study was to determine whether municipal climate action planning adequately considers and addresses the needs and priorities of equity-deserving groups, and to offer recommendations for incorporating equity into climate change planning in a meaningful way. The results of the content analysis of municipal climate action plans indicate that there is considerable risk that equity-deserving groups who have been rendered vulnerable to climate change will be left behind in the transition to more climate friendly communities.

Overall, municipalities do not necessarily prioritize equity relative to economic and environmental imperatives, and solutions are often retroactive “band-aid” fixes that fail to address underlying drivers of inequity. Instead of solely focusing on undoing previous harms, climate action plans must also advance healing justice by being future-oriented and supportive of equity-deserving communities in transcending generational trauma and historical discrimination. Climate action plans that clearly articulate a future vision for the community – and specify how equity-deserving groups are part of this vision – contribute to supporting these groups in overcoming deep-seated forms of oppression that increase vulnerability and reduce adaptive capacity.

Plans that feature equity and justice as goals or indicators of success tend to frame justice as a normative end that planning practice should strive to achieve rather than a core focus of the planning process. Rather than retroactively applying an equity lens to already-in-progress plans, climate action plans must be designed and implemented with justice as their subject (Lake, 2016) by continually considering what justice means in a certain context, what justice looks like under specific circumstances, and what justice in a certain situation entails.

There is also a disconnect between the community engagement processes described in municipal climate action plans and the way equity-deserving groups perceive their participation. This disconnect suggests that a “just” planning process does not necessarily equate recognition justice from the perspective of equity-deserving groups. Closing the current gap between best practice and actual practice regarding meaningful engagement of underserved communities should be a goal for climate action planners. Future research could

gather perspectives from community members and city officials to investigate the specific points in the planning process where this disconnect occurs.

The content analysis also revealed that municipal climate action plans rarely anticipate unintended consequences of proposed actions or identify steps to mitigate well-known risks associated with certain climate actions. Research on the potentially regressive outcomes of climate action planning is ample and these findings must be more carefully considered by planners and policymakers. Just as municipal governments take stock of the physical and financial impacts that climate change will have on the condition and longevity of municipal assets and resources, they similarly need to assess the physical, financial, and social impacts that their interventions will have on vulnerable community members.

To meaningfully integrate equity into climate change planning, planners and policymakers must educate themselves about the underlying drivers of inequity in a specific community. A better understanding of concurrent and compounding challenges would support coherence among municipal policies for addressing climate change and other issues. A city's portfolio of planning documents should collectively form a roadmap toward a unifying long-term vision; for this type of integration to occur, climate policy cannot be separated from struggles for other types of social equity.

Researchers who develop and deploy evaluative frameworks to assess equity and justice in climate action planning should tailor their criteria based on the context in a specific city of interest. The framework deployed here serves as a guide for assessing equity and justice in Canadian climate change plans, but the framework is meant to be flexible. Not all criteria will apply to every plan, and evaluative criteria should be refined to name specific populations of concern and clearly identify pressing challenges in specific cities.

Because many local governments rely on the ICLEI BARC framework for adaptation planning guidance (over 120 municipalities in Canada including the three case study cities have used the BARC framework to guide their adaptation and resilience building efforts), it would be worthwhile to assess whether the BARC program engenders a focus on equity. Future research could also explore understandings of equity among city officials to determine whether the perceived needs and priorities of equity-deserving groups align with their self-identified needs

and priorities. Such a study would clarify the degree to which city officials are well-versed with equity and justice principles and reveal whether planners and policymakers are incentivized to prioritize equity in their work.

Appendix A. Evaluative framework

Distributive Justice		
	Criteria	Points
1	Does the plan define climate justice and/or describe its requirements?	2
2	• How is it defined and/or described?	-
3	Does the plan explicitly identify equity and/or justice as a priority?	2
4	Does the plan explicitly define vulnerability?	2
5	• How is it defined?	-
6	Does the plan identify drivers of vulnerability?	2
7	• Are socio-economic attributes (e.g., education, income) recognized as drivers of vulnerability? (as opposed to only addressing physical exposure to risk)	2
8	Does the plan recognize disparate climate vulnerability?	2
9	• Does the plan unpack root causes of these disparities?	-
10	Does the plan identify specific neighbourhoods that are underserved?	2
11	Does the plan identify specific populations that are underserved? (as opposed to referring broadly to “marginalized” groups)	2
12	• If yes, what populations are identified?	-
13	Are specific neighbourhoods identified as vulnerable to climate change?	2
14	Are specific populations identified as vulnerable to climate change?	2
15	• Is their vulnerability explored in-depth? (i.e., the plan describes historical or structural reasons for their vulnerability)	2
16	• Do proposed actions intentionally target the neighbourhoods and/or populations identified as vulnerable?	2
17	Are the benefits of proposed actions accessible to all residents? (i.e., socially valuable resources [e.g., greenspace] and opportunities to access them are evenly distributed)	-
18	• Does the plan acknowledge potential disparities in access?	2
19	• Do any proposed actions attempt to reduce disparities in access?	2
20	Does the plan include adaptation strategies that specifically target unhoused people? (e.g., cooling/heating stations, rain shelters)	2
21	Does the plan include climate emergency response plans for seniors and/or people with disabilities?	2
22	Do transit-related sections of the plan mention physical accessibility and/or safety?	2
23	Could any of the proposed actions directly or indirectly negatively affect a vulnerable group? (e.g., through displacement)	-
24	• Does the plan acknowledge these potential impacts?	2
25	• Are well-known risks associated with disruptive actions mitigated?	2
26	Do proposed actions address the root causes of vulnerability? (i.e., discrimination and/or exclusion based on axes of social difference [e.g., class, race, gender])	-
27	Does the plan mention any obstacles to implementing equitable policies?	-
28	Does the plan identify actions to address past harms? (e.g., compensation, restoration, reparation)	2
	TOTAL POSSIBLE POINTS	40
Procedural Justice		
29	Does the plan describe the stakeholder engagement process?	2
30	Does the plan identify a diverse set of stakeholders?	2
31	Does the plan specify groups <i>not</i> included in the engagement process?	2
32	Who was targeted for consultation and why?	-
33	Does the plan indicate which phases included public participation? (i.e., opportunities to participate)	2

34	• Were stakeholders engaged in early problem definition and/or a needs assessment?	2
35	• Were stakeholders engaged in plan development?	2
36	• Were stakeholders engaged in plan implementation?	2
37	Does the plan describe the specific consultation techniques used?	2
38	In what capacity were stakeholders involved?	-
39	Does the plan state that equity considerations will feature as an indicator of success?	2
40	Does the plan identify metrics for evaluating whether its actions have been successful?	2
41	• Were the metrics designed collaboratively?	2
42	Does the plan provide an opportunity for public participation in monitoring and evaluation?	2
43	• If yes, in what capacity?	-
44	Does the plan describe any strategies for ongoing communication between planning staff and residents during and/or after plan implementation?	2
45	Is the plan accessible for a lay audience? (i.e., the plan is concise and avoids technical jargon)	2
46	Is the plan available in any languages besides English?	-
47	Does the plan contain a diversity of culturally relevant examples and/or visuals?	2
	TOTAL POSSIBLE POINTS	30
Recognition Justice		
48	Does the plan explicitly recognize systemic causes of injustice? (e.g., racism, colonialism, gender inequality)	-
49	Does the plan identify specific strategies to address systemic causes of injustice? (e.g., anti-racism, reconciliation)	-
50	Does the plan acknowledge intersecting identities? (e.g., race, gender, class, age)	2
51	Does the plan acknowledge the need for culturally appropriate responses to climate change?	2
52	Did the stakeholder engagement process prioritize involvement of vulnerable groups?	2
53	• Were there special efforts to encourage participation by those normally left out? (e.g., outreach to underrepresented communities)	2
54	Is there evidence that vulnerable groups were afforded an opportunity to self-identify their needs and priorities?	2
55	Does the plan mention any barriers to participation?	2
56	• If yes, does the plan describe how these barriers were overcome?	-
57	Is there evidence that stakeholder engagement efforts foster respect for diverse voices?	-
58	Does the plan include a land acknowledgment?	2
59	Does the plan recognize Indigenous communities' right to self-determination?	2
60	Does the plan mention local or traditional knowledge?	2
61	• If yes, how was this knowledge used in planning/decision-making/implementation?	-
	TOTAL POSSIBLE POINTS	18
Healing Justice		
62	Does the plan reference the broader vision/mission for the city/region?	2
63	• If yes, is it clear how specific underserved populations (especially those identified elsewhere in the plan) fit into this vision/mission?	-
64	Does the plan acknowledge the limitations of actions to address past harms? (e.g., compensation, restoration, reparation)	2
65	Does the plan identify tools and/or supports to help equity-deserving groups heal from generational trauma?	2
	TOTAL POSSIBLE POINTS	6
	GRAND TOTAL POSSIBLE POINTS	94

Chapter 5: Conclusions

This dissertation explored several interrelated questions about the nature of equitable climate change planning and the degree to which Canadian municipalities address the needs and priorities of equity-deserving groups in their responses to climate change. **Specifically, the dissertation responded to the following overarching question: Does climate action planning in Canadian municipalities adequately consider and address the needs and priorities of equity-deserving groups, both in terms of process and outcomes?**

To answer this question, the dissertation investigated several related questions: 1) Do scholarly perspectives on equitable climate action planning align with the perspectives of equity-deserving groups? 2) Are universal equity and justice principles appropriate and reliable as criteria for assessing climate action planning? and 3) How can cities integrate equity and justice into their climate action planning in a meaningful way?

These questions and their answers cannot be entirely delineated. As such, rather than answering each question in turn, this section of the dissertation outlines the empirical, theoretical, methodological, and practical contributions of the dissertation and explains how my research findings relate to these questions. I also revisit the limitations of the research, comment on the relationship between theory and practice, and suggest directions for further research.

5.1 Empirical Contributions

The dissertation provides empirical evidence suggesting that **climate action planning in Canadian municipalities does not adequately consider and address the needs and priorities of equity-deserving groups**. Qualitative evidence collected through semi-structured interviews with key informants in the case study cities reveals that while equity-related challenges often cross-cut diverse communities, the specific segments of the population who experience the challenges most acutely are location-specific (Chapter 3). It also became evident through the interviews that **municipal policymakers commonly misunderstand or overlook linkages between different forms of marginalization**. The content analysis of climate action plans subsequently revealed that the concept of intersectionality is rarely reflected in policy, leading

municipalities to focus on retroactively fixing problems through “band-aid” solutions that fail to address the real drivers of inequity (Chapter 4).

Related, the dissertation provides empirical evidence suggesting that **the relationship between climate change and social equity is not necessarily well-understood by leaders of organizations that advocate for equity deserving groups** (Chapter 3). While the connections between climate justice and struggles for other types of social justice are well-understood among the scholarly community, awareness is lower among advocacy organizations and members of equity-deserving groups.

Findings also indicate that **tokenistic or superficial forms of engagement or outright exclusion of equity-deserving groups remain commonplace in the case study cities** (Chapter 3). The interview findings and the content analysis of plans reveal a discrepancy between the community engagement processes described in municipal climate action plans and the way equity-deserving groups perceive their participation (Chapter 4).

The numerical results of the plan evaluation provide empirical evidence suggesting **there is considerable risk that equity-deserving groups will be left behind in the transition to more climate friendly communities** (Chapter 4). The content analysis of climate change plans for the cases study cities indicates that municipalities do not necessarily prioritize equity relative to economic imperatives in climate action planning. Where equity-related challenges are addressed, municipalities tend to frame justice as a normative end that climate action planning seeks to achieve rather than a core organizing principle for the entire planning process. Municipal climate action plans also rarely anticipate unintended social consequences of proposed actions, or mitigate well-known regressive outcomes associated with certain climate actions.

Finally, by focusing on Canadian municipalities as case studies, the dissertation builds empirical knowledge of the current state of municipal climate change planning in a study location where previous research is limited.

5.2 Theoretical Contributions

The dissertation makes **five key theoretical contributions to planning scholarship**. First, the dissertation integrates justice, participatory planning, and plan quality and evaluation

theories to identify plan attributes that advance equity and justice in the context of climate change (Chapters 1 and 2). Second, the dissertation advances plan evaluation theory by exploring how traditional plan evaluation approaches can be modified to better assess the efficacy of climate action plans for advancing equity and justice goals (Chapters 1 and 4). Third, the dissertation explores the reliability of universal versus contextual equity and justice principles to determine their value as evaluative criteria (Chapter 3). Fourth, the dissertation identifies areas of agreement and disagreement between scholarly perspectives on equitable climate action planning and the perspectives of equity-deserving groups (Chapter 2). Finally, the dissertation advances participation theory by questioning the researcher-led development of previous equity-based evaluative frameworks (Chapter 2). Each of these theoretical contributions is explained in greater detail below.

First, the dissertation's literature review connects justice discourse – namely theories of distributive, procedural, and recognition justice – to participation theory. Climate justice scholarship emphasizes the need to prioritize disadvantaged residents in our responses to climate change, but participatory planning scholarship is much less explicit about the need to prioritize marginalized residents during decision-making processes. This disconnect is problematic given that procedural justice (which relates directly to participatory processes) is a requirement of climate justice.

The dissertation addresses this theoretical disconnect by integrating climate justice and participatory planning theories. Bridging these theories clarifies the practical implications of justice theory for plan design and implementation and advances debate about how communities should decide who participates, and how, in climate change planning processes. I argue that addressing equity and justice principles in climate action planning requires participatory processes that support communication across differences in social position *and* systems of meaning. I recommend a more reflexive form of participatory practice that centers vulnerable and marginalized residents, and a full accounting of the underlying social processes that drive vulnerability to climate change.

The literature review also integrates theories of climate justice and plan quality to identify plan attributes that advance equity and justice in the context of climate change.

Integrating these theories to devise evaluative criteria that could guide climate action planning in different communities also represents a practical contribution, and is thus discussed in greater detail in Section 5.4 below.

Second, the dissertation advances plan evaluation theory by exploring how traditional plan evaluation approaches can be modified to better assess the efficacy of climate action plans for advancing equity and justice goals. Cities are variably operationalizing equity and justice concerns in their plans, but there is ambiguity surrounding the efficacy of these plans for advancing social justice goals on the ground. Citing contributions from Lake (2016), I recommend making efficacy a feature of plan evaluation by shifting the focus of evaluation from plan development (process) or implementation (outcomes) to the plan itself.

Third, a key theoretical contribution of the dissertation is its exploration of the value of universal versus contextual equity and justice principles. The literature review demonstrates that the question of justice – what it entails and how it can best be achieved – can never be settled once and for all (Fischer, 2009; Lake, 2016). Community members’ perceptions and understandings of equity and justice depend on several factors including social, geographical, and historical context (Brand, 2015), personal experiences of injustice (Schlosberg, 2013), and one’s position among intersectional social relations and categories of difference (Kaijser & Kronsell, 2014). The dissertation’s empirical findings, namely the interviews with equity-deserving groups, confirmed that equity-related challenges are often cross-cutting, but the specific populations who experience the challenges most acutely are location-specific. Determining the appropriate criteria for assessing equity and justice is thus a place-based endeavour.

Fourth, through its use of the Delphi technique and semi-structured interviews, the dissertation clarifies the extent to which scholarly perspectives on equitable climate action planning align with the perspectives of equity-deserving groups. I found three key points of departure between scholarly and equity-deserving group understandings of equity; these differences relate to the level of specificity these groups use when talking about the needs and priorities of marginalized groups, the emphasis on criteria that are future-oriented versus

backward-looking, and the sufficiency of distributive, procedural, and recognition justice as evaluative criteria.

Finally, the dissertation advances participation theory by questioning the researcher-led development of previous equity-based evaluative frameworks. This contribution to plan evaluation theory, which also represents a methodological contribution, is discussed in more depth in Section 5.3 below.

5.3 Methodological Contributions

Methodologically, **the dissertation addresses a shortcoming of previous climate change plan evaluations by deploying a novel process for developing community-based criteria for assessing equity and justice in specific cities** (Chapter 2). Previous climate change plan evaluations have clarified the extent to which climate action plans are engaging with equity and justice from the perspective of the researchers and experts who develop the evaluative criteria, but tell us little about the ways community members understand and articulate equity and justice in the context of climate change. The dissertation addresses this methodological gap – to my knowledge, this is the first study to evaluate a set of climate action plans using criteria that are grounded in the self-identified needs and priorities of equity-deserving groups, and to use qualitative evidence from key informants to enrich the findings from the content analysis. A key contribution of the study’s plan evaluation is thus that it was guided by evaluative criteria that capture community members’ definitions and understandings of equity and justice, lived experience, and knowledge of local conditions.

The dissertation also makes a methodological contribution by exploring the use of the Delphi technique in an area of planning research where it is seldom applied (Chapter 2). Despite the value and growing application of Delphi studies in planning and aligned disciplines, the technique has not been applied to research exploring the meaning of equity or the tenets of justice. Accordingly, this study explores the potential of the Delphi technique for gathering a variety of perspectives regarding the conditions of equitable climate action planning. The dissertation offers some guidance for researchers wishing to use the Delphi technique for qualitative planning studies by sharing challenges, outcomes, and lessons learned.

Finally, the dissertation challenges typical plan evaluation methods by using content analysis techniques to evaluate climate action plans *as they are written* (Chapter 4). Plan evaluation tends to focus on how efficiently a plan was developed, or how effectively it was implemented, while overlooking the written content of the plan itself. Connell and Daoust-Filliatrault (2017) suggest that plan efficacy could be better assessed by focusing on a plan itself as the object of evaluation, evaluated against the desired result. In this case, plan content was evaluated against context-specific equity and justice criteria that were developed based on input from scholarly experts and ground-truthed in the case study communities. The dissertation contributes to plan evaluation methodology by shifting the focus of evaluation from the efficiency of the plan's development and the effectiveness of its implementation to the plan itself as the object of evaluation.

5.4 Practical Contributions

The principal contribution of the dissertation is an assessment tool for evaluating the equity and justice of climate action plans for various sites (Chapters 2 and 4). The flexible framework – which integrates theories of climate justice, participatory planning, and plan evaluation – contains guiding criteria that can (and should) be adapted based on local demographics and pressing issues. Beyond working as a practical evaluation tool, the framework could be adopted by planning practitioners and other urban governance actors as a tool to guide the development of climate action plans and policies that are both ambitious and equitable. The guiding questions underpinning the criteria in the framework are a starting point to more fully account for overlapping social, spatial, and environmental inequities – the framework thus serves the dual purpose of an evaluation tool and a guide for the creation of equity-oriented climate action plans.

The dissertation also offers several practical recommendations for incorporating equity and justice into climate change planning in a meaningful way. These recommendations – which have implications for planning practice – are detailed in Chapters 3 and 4 and are reiterated below.

5.5 The Interaction of Theory and Practice

For municipal government planning systems to simultaneously advance equity goals and ambitious climate action, planning theory and practice must interact. This dissertation bridges planning theory and practice by offering guidance for translating urban, environmental, and climate justice discourse into practices that encourage an equity-orientation for climate action planning.

Planning theory informs planning practice by framing debate and setting the terms for action (Barry et al., 2018), so advancements in our theoretical understanding of equity and justice – both generally and regarding climate change – should be carried into policies that enact these principles on the ground. One key informant who was interviewed for this research affirmed the value of research for practice by expressing that community service agencies “rely on what happens in academia to get data [they] can draw on to create programs and do advocacy work on the ground.” Comments from another key informant revealed that there seems to be more awareness of the connections between climate justice and struggles for other types of social justice among the scholarly community than within advocacy organizations and among members of equity-deserving groups. There is thus an important role for researchers and scholarly ‘experts’ to make these links explicit by connecting seemingly remote theories of climate justice to the knowledge and everyday experiences of equity-deserving groups.

Keeping in mind the role for planning research in forging the link between theory and practice, the dissertation’s empirical, theoretical, and methodological contributions translate to several recommendations for urban governance generally, and planning practice specifically.

First, **the demographic makeup and history of a community must be carefully considered when developing equity-oriented climate actions.** Widely accepted equity and justice criteria serve as general guidelines for policymaking, but climate policies should be evaluated on a case-by-case basis to determine whether they effectively respond to the self-identified needs and priorities of equity-deserving groups in specific cities. To this end, planners need an accurate understanding of *what* equity-related challenges are most pressing in a specific city, *who* experiences these challenges most acutely in that city, and *how* these

challenges are experienced by these populations. Climate action plans should be grounded in theories of social vulnerability and neighbourhood change so plans reflect an accurate understanding of *what* makes people vulnerable and *how* certain planning decisions reinforce these patterns.

Second, and related to the first recommendation, **climate action planners need to understand the interconnections between different forms of inequity, and the relationship between these disparities and vulnerability to climate change.** Planning activities aimed at advancing progressive climate goals *and* social equity must be grounded in a solid understanding of the causal relationship between multiple forms of marginalization. Related, planners must pay attention to available research on the potentially regressive outcomes of certain climate actions. Just as municipal governments take stock of the physical and financial impacts that climate change will have on the condition and longevity of municipal assets and resources, they similarly need to assess the physical, financial, and social impacts that their interventions will have on specific community members and neighbourhoods.

Third, **criteria for assessing equity and justice in climate action planning must be both locally-informed and future-oriented.** This means that assessment criteria must name specific populations of concern, *and* specify how these groups fit within the broader future vision for the community. Climate action plans that solely focus on undoing previous harms do not necessarily support equity-deserving communities in transcending the constraints placed on them by race-, class-, and gender-based discrimination. Actions to redress past harms are a necessary component of any equity agenda, but these backward-looking actions must be bolstered by future-oriented efforts to support equity-deserving groups in overcoming deep-seated forms of oppression.

Fourth, **climate action planning must foster recognition justice to address the shortcomings of current participatory approaches.** Specifically, participatory processes must be designed to support communication across differences in social positions *and* systems of meaning. Co-productive approaches to knowledge framing are required here – the scope of knowledge that climate action planners consider should include knowledge embedded within the worldviews, social relations, and traditions of different social groups. Ongoing interactions

between different knowledge systems contribute to gradually interweaving formerly disparate worldviews to create a new approach.

Related, **equity-deserving group perspectives should be gathered in spaces that these groups already occupy** to reduce the time and labour that these groups must invest in advocating for themselves. Knowledge sharing and coordination among municipal agencies would also reduce the burden associated with participation. As part of their engagement efforts, planners need to seek direction from community members around appropriate methods of interacting with equity-deserving groups to determine how best to streamline engagement.

At the same time, local governments must recognize that **consultation alone is insufficient for ensuring that the needs and priorities of equity-deserving groups are reflected in policy**. Meaningful engagement processes at lower levels are not enough; equity-deserving groups need to see a local governance system that is reflective of themselves at every level of decision-making. A diversified decision-making body with lived experience is required to advance a form of planning that more accurately reflects the self-identified needs and priorities of equity-deserving groups. To this end, lived experience needs to be given value and recognized as a legitimate form of expertise so that policymaking spaces include individuals who have personally experienced the forms of inequity that the policy in question aims to address.

Fifth, **planners and policymakers must strive for coherence among municipal policies for addressing climate change and related challenges** so plans can more effectively respond to concurrent and compounding forms of inequity. Climate policy should also not be separated from struggles for social justice – planners should work closely with community agencies to identify service needs and gaps, promote knowledge transfer, and design multidimensional solutions. Creating links between community agencies' mandate to advocate for underserved groups and cities' mandate to support the individuals they serve would support the creation of plans that accurately reflect the differentiated needs and capabilities of individuals across and within underserved groups.

Sixth, to raise awareness of municipal climate actions and to clarify the relationship between climate change and social equity, **local governments should integrate access to climate change information and other social programs or services that equity-deserving groups regularly access.** Collaboration between municipal governments and advocacy organizations would help residents make connections between different types of community programming, namely environmental and social programs, to bridge social service delivery with climate change information and awareness. Such an approach would contribute to public education and more widespread recognition of equity-deserving groups, which would support enhanced adaptive capacity and reduced vulnerability.

Finally, **current approaches to plan evaluation should be revisited to more explicitly link plan quality to equity.** Commonly referenced plan quality characteristics (i.e., fact base, goals, policies, implementation, monitoring and evaluation, inter-organization coordination, participation, plan format) should be expanded to include characteristics that refer clearly to the plan's equity-orientation. Planners should also consider how equity concerns relate to plan characteristics in ways that are not immediately evident. For instance, a justice-oriented approach to plan evaluation might consider how inter-organizational coordination contributes to mainstreaming equity and justice concerns across a municipality's suite of plans.

Related, climate change plan evaluations should not be carried out during a specific stage of the planning process; rather, explicit consideration of equity should be an integral part of the entire planning process. Finally, to simultaneously improve our approach to plan evaluation and support of recognition justice, plan evaluations should be grounded in participatory forms of evaluation that include community members in the development of evaluation metrics and indicators.

Implementing these recommendations **requires planners and other urban governance actors to adopt a reflexive perspective.**⁷ Planners should reflect on and question the subset of social values that inform their work, then work toward naming and dismantling the biases

⁷ I understand reflexive practice as a more intentional and challenging form of reflective practice. Planners acting reflectively are aware of their attitudes and motivations and may think critically about these, while planners acting reflexively look for strategies to question and challenge the thought processes that inform their attitudes and motivations.

inherent in these. This type of reflection, done by individual planners, would contribute to embedding an equity-orientation in the collective conscious of planning. Equipping planners with the skills to do this work is an ambitious but worthwhile goal for planning education and training.

5.6 Limitations and Directions for Future Research

Perhaps the most important limitation of this research is that no evaluative framework for assessing equity and justice can ever be comprehensive or universally applicable. These tools are a starting point to more fully account for social, spatial, and environmental inequities, but they do not (and cannot) capture the essence of the climate justice movement, which goes well beyond official planning processes. The framework proposed and deployed in this dissertation should be thought of as an additional evaluation tool to help researchers and practitioners measure progress and identify oversights, rather than a final assessment of justice.

I also recognize that while my process for developing the evaluative framework represents an improvement in terms of engaging equity-deserving perspectives, the preliminary framework was still initially developed by a researcher and the translation of interview findings into assessment criteria relied on researcher interpretation. Because the key informants that were interviewed for this study were selected based on their intimate knowledge of local conditions and equity-deserving group needs, and not based on their expertise related to climate change, some researcher interpretation was necessary to connect key informants' comments to climate change planning. Still, it would be worthwhile for future researchers to further modify my approach by collecting input directly from frontline community members to develop fully bottom-up evaluation criteria.

The dissertation has demonstrated that universal equity criteria cannot reliably be used to measure and compare progress in cities with diverse demographics, policy environments, and social climates. The criteria guiding my study would thus need to be modified to include location- and issue-specific content before being used to evaluate climate change plans for other sites. My study also does not evaluate outcomes, so there is uncertainty as to whether the climate action plans for the case study cities will mitigate or exacerbate social and

distributional consequences for certain groups. Liao et al. (2020) found that equity-focused goals and strategies ultimately lead to more equitable outcomes, so one can reasonably assume that plans that do not prioritize equity will conversely lead to less equitable outcomes.

Similarly, my evaluative framework does not assess the efficacy of a plan for advancing equity on the ground – for example, a plan could meet certain recognition justice criteria by including a land acknowledgment, but there is no way to measure whether the acknowledgment translates to tangible reconciliatory action. Likewise, a plan that references the city's vision statement does not necessarily contribute to implementing that vision, and a solid engagement strategy does not necessarily translate to actions that reflect the input collected.

The best approach to evaluating plan efficacy remains unclear, but Lake (2016) recommends that an explicit consideration of justice should be made a central element of the entire planning process. It would be ambitious but worthwhile for future researchers to closely follow a municipality's entire process for developing a climate change plan using Lake's justice as subject approach (2016, p. 1212) – that is, continually asking “what do we mean by justice here?”, “what does justice look like under these circumstances”, and “what is the just thing to do in this situation?” throughout the entirety of the planning process. Such a study would make a valuable contribution to plan evaluation and climate justice scholarship by providing much needed guidance on carrying out dedicated evaluations of plan efficacy.

On this note, few studies have focused on linking plan quality to planning outcomes to determine whether quality plans tend to be associated with better outcomes (Guyadeen & Seasons, 2016; Lyles & Stevens, 2014). Plan evaluation theory recognizes that a plan meeting the accepted plan quality criteria could still have little effect in the real world (Baer, 1997), and in practice, plan evaluation has not established a clear connection between plan quality and good outcomes.

Interestingly, the study by Guyadeen et al. (2019) that used plan quality indicators to rank Canadian cities in terms of their preparedness to address climate change – rankings which informed my selection of case study cities – ranked the Thunder Bay Climate-Ready Adaptation Strategy (2015) eighth overall (out of 63 cities) in terms of plan quality. The study also

evaluated the Brampton Grow Green Environmental Master Plan (originally published in 2014 and updated in 2020), which was ranked fifteenth overall. Despite being ranked as high-quality plans based on widely accepted plan quality indicators, my evaluation of these plans' equity orientation revealed several deficiencies on criteria related to distributive, procedural, recognition, and healing justice (Appendix E). Evidently, more research is needed to establish a causal connection between plan quality and equity. A comparative assessment of a plan's quality and its equity orientation would be valuable for empirically determining whether plan quality indicates how equitable a plan is likely to be. Such a study could provide the evidence needed to support an argument for revising or adding to the eight commonly referenced characteristics that guide plan quality evaluations (fact base, goals, policies, implementation, monitoring and evaluation, inter-organization coordination, participation, plan format) to include characteristics pertaining to social equity.

Another limitation of my study is that my findings regarding planners' and policymakers' understanding of intersectionality are based on empirical evidence from the interviews with representatives from equity-deserving groups and the plan content analysis, without incorporating the perspectives of planners or policymakers themselves. Because my research questions focused on understanding equity-deserving group perspectives, interviews with city officials were out of scope; my approach to evaluating the sample plans *as they are written* also eliminated the need for consultations with city officials. Although beyond my scope, exploring the perspectives of equity-deserving groups *and* planners and policymakers to determine whether there are mismatches between the way these groups understand concepts like equity and intersectionality would be an interesting direction for future research.

It would also be worthwhile to further explore the discrepancy between the community engagement processes described in municipal climate action plans and the way equity-deserving groups perceive their participation. Such a study could gather perspectives from community members and city officials to investigate the specific points in the planning process where this disconnect occurs. Related, it would be interesting to examine how planners perceive their professional and personal obligation or responsibility to advance equity through

their work, and to explore whether planners and other municipal governance actors are incentivized to do this type of work.

Finally, exploring potential tensions and trade-offs between the needs and priorities of various equity-deserving groups would be a valuable focus of future work. Previous research has revealed that there are often trade-offs between upholding justice ideals and advancing urgently needed climate action (Byskov et al., 2021; Chu et al., 2016), but we have not necessarily considered what happens when the needs of different marginalized groups directly conflict. What happens when the needs of one equity-deserving group are at odds with the needs of another? When (if ever) is it reasonable for justice-related trade-offs to be made? And who decides?

Justice theorists have offered some guidance – Rawls (1971), for example, argues that social or economic inequalities are tolerable insofar as the most disadvantaged members of society are not made any worse off than they would be under an equal distribution. Fainstein's (2010) version of justice encompasses equity, democracy, and diversity, but when tensions between these principles arise, Fainstein insists that equity trumps democracy and diversity. We can thus condone the privileging of some needs over others in theory, but justice studies would benefit from additional clarification on the precise nature of these trade-offs, and evidence-based recommendations about how to navigate them. In other words, it would be worthwhile for social equity researchers to empirically determine whether a rising equity tide truly lifts all boats, and if not, how justice theory should be operationalized to make difficult decisions about whose needs prevail.

5.7 Final Reflections

Documented trade-offs between the viability of municipal climate action agendas and meaningful engagement with equity and justice considerations (Chu et al., 2016) mean that local government planning systems may not be equally capable of advancing progressive climate action *and* equity and justice goals. This trade-off creates considerable challenges for climate action planners but does not preclude them from helping trends take shape.

Planners do not necessarily have the power to implement policy on their own, but to the extent that planners gather community members' perspectives and present analyses of the

costs and benefits of planning decisions, they can shift debate toward a greater concern with equity (Fainstein, 2010). For climate action planners, this step requires understanding the social processes and practices that have contributed to producing urban inequities, and a commitment to not reinforcing or replicating these through planning's responses to climate change (Porter et al., 2020).

Although cities increasingly invoke justice in their approaches to climate change planning, this dissertation has demonstrated that these efforts are often cursory and insufficient. As Petersen and Ducros (2022, p. xvi) point out, “invoking justice reflects good intentions, but realizing just outcomes demands something more”. It is imperative for planning researchers and practitioners to remember that although the transition toward climate change preparedness is inevitable, the realization of justice as part of this process is not.

I find that thinking about equity and justice as evolving discourses rather than concepts that can be clearly or definitively defined challenges me to continually reflect on what these concepts truly mean. Through this research, I have learned that different interpretations of equity and justice are appropriate in different contexts – researchers who choose to focus their work in this subject area will forever be challenged by this reality, and as an early-career researcher, this is something that both intimidates and excites me.

As I have progressed through this PhD, I have determined that it might be more helpful to shift our thinking away from applying an equity lens to ask how and where equity principles fit into our plans, and to instead adopt a default equity orientation that considers how our plans fit into our equity frameworks. I hope the contributions made through this study help us get there.

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Chapter 1.4-1.6 References – Scope and Aims, Research Methodology, Structure and Contributions of the Dissertation

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Chapter 2 References – Bridging Scholarly and Community Perspectives: A Framework for Assessing Equity in Urban Climate Action Planning

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Chapter 3 References – Unveiling Inequity: Community Perspectives on Climate Action Planning in Canadian Cities

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Chapter 5 References – Conclusions

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Appendix A: Delphi questionnaire (Round 1)

By providing your consent, you are not waiving your legal rights or releasing the investigator(s) or involved institution(s) from their legal and professional responsibilities.

☐ YES ☐ NO I agree to participate in this study

Round 2 of the Delphi survey involves anonymously sharing ideas collected in the first round with all participants to clarify and refine ideas.

☐ YES ☐ NO I agree to have my responses shared anonymously with other participants

General Questions

1. What are your research interests related to climate change, plan evaluation, and/or equity, diversity, inclusion, and justice?
2. Do you believe distributive, procedural, and recognition justice (as these concepts are commonly understood in planning and urban studies scholarship) reflect the requirements of climate justice? (Yes/Somewhat/No) (Please explain)

Framework Related Questions

3. Are the criteria relevant for assessing climate action planning in terms of its attention to equity and justice? (Yes/Somewhat/No) (Please explain)
4. Do the criteria adequately capture the core concerns of distributive, procedural, and recognition justice? (Yes/Somewhat/No) (Please explain)
5. Do the criteria adequately capture the core concerns of the climate justice movement? (Yes/Somewhat/No) (Please explain)
6. Does the framework adequately capture the equity- and justice-related requirements of climate action planning? (Yes/Somewhat/No) (Please explain)
7. Have any variables been overlooked? (Please explain)
8. The framework includes scored and unscored criteria. Scored criteria are used to assign points, while unscored criteria are used to guide the collection of qualitative observations. Have scores been assigned to the appropriate questions? Are there any questions that are currently scored that would be more effective as unscored questions, or vice versa? (Please explain)

9. Do you anticipate any challenges associated with the format of the framework for guiding a content analysis of climate action plans? (I.e., do you expect that the framework will work effectively as an evaluation tool?) (Yes/Somewhat/No) (Please explain)
10. Do you have any additional comments about the framework's content or format? Should any criteria be deleted? (Please explain)

This study has been reviewed and received ethics clearance through a University of Waterloo Research Ethics Board (REB 45284). If you have questions for the Board, contact the Office of Research Ethics, toll-free at 1-833-643-2379 (Canada and USA), 1-519-888-4440, or reb@uwaterloo.ca. For all questions or general comments related to this study, please contact Kayleigh Swanson, School of Planning, University of Waterloo, kayleigh.swanson@uwaterloo.ca or Dr. Mark Seasons, School of Planning, University of Waterloo, 519-888-4567 ext. 45922, mark.seasons@uwaterloo.ca

Appendix B: Delphi questionnaire (Round 2)

Introduction

Welcome to Round Two of the Delphi survey. Thank you for your participation!

Please review the documents titled “Round One Results Report” and “Revised Framework for Evaluating Equity and Justice in Climate Action Plans” before completing this questionnaire. Feedback received during Round One has been incorporated into the revised document.

Comments that could not easily be incorporated into the evaluative framework and/or which require additional background or discussion will be addressed in the write-up of the study:

- The write-up will explain that vulnerability is not an inherent or stationary attribute of certain populations. Rather, certain individuals are rendered vulnerable to climate risks through processes of colonialism, racism, and structural discrimination.
- The write-up will discuss additional dimensions of fairness (e.g. temporal) that were difficult to fully capture as criteria in the evaluative framework.
- The write-up will acknowledge that the core concerns of the climate justice movement extend beyond definitional and official planning processes.
- The write-up will indicate the sources/bodies of literature behind the prompts in the coding protocol.

Questions

1. Are the comments and feedback you provided during Round One reflected in the revised evaluative framework and/or the notes regarding the planned write-up of the study? (Yes/No) (Please explain)
2. Overall, are you comfortable with the evaluative framework as a tool for assessing the equity and justice of climate action plans? (Yes/No) (Please explain)
3. Do you have any additional comments? (Please explain)

Thank you very much for completing this questionnaire. Your feedback is extremely valuable. **Please proceed to the next page to submit your response.**

This study has been reviewed and received ethics clearance through a University of Waterloo Research Ethics Board (REB 45284). If you have questions for the Board, contact the Office of Research Ethics, toll-free at 1-833-643-2379 (Canada and USA), 1-519-888-4440, or reb@uwaterloo.ca. For all questions or general comments related to this study, please contact Kayleigh Swanson, School of Planning, University of Waterloo, kayleigh.swanson@uwaterloo.ca or Dr. Mark Seasons, School of Planning, University of Waterloo, 519-888-4567 ext. 45922, mark.seasons@uwaterloo.ca

Appendix C: Interview guide

Black text = Questions I will ask

Grey text = What I am hoping to learn from responses

1. Can you tell me about the work you do? What are the highest priority areas and service needs for your organization?
2. What does equity mean to you?
 - Does this definition align with scholarly interpretations?
3. What does social justice in an urban setting look like to you?
 - Does this perspective reflect scholarly understandings of urban justice?
4. What forms of inequity are most evident in your city?
 - What equity- and justice-related issues should planners in the city be addressing?
5. Do the residents who are supported by your organization have needs or priorities that seem to be overlooked by decision-makers in your city?
 - What types of issues should be addressed in planning documents? What types of challenges are not being captured?
6. Do the residents who are supported by your organization experience challenges that are heightened in your city relative to other cities?
 - How important is local context?
7. What are the most important considerations for city officials when designing programs that are intended to advance equity and social justice in your city?
 - a. What makes a policy or plan developed by the local government equitable and just?
 - Are procedural matters or distributive outcomes emphasized?
 - b. How should equitable or just outcomes be defined and measured?
 - What is considered an equitable outcome and how do we know when it has been achieved?
8. Community engagement is widely seen as a condition of fair and equitable decision-making. What does meaningful engagement look like to you?
 - Do expectations for meaningful participation reflect scholarly understandings of procedural and recognition justice?
 - a. Do the residents who are supported by your organization feel left out of city-led processes for making decisions about matters that affect them?
 - b. Why might this be the case?

9. Are you familiar with any policies or programs in your city for addressing climate change?
 - a. What do you see as the strengths and weaknesses of these efforts?
 - Does my framework overlook any key variables for evaluating climate action planning from the perspective of equity-seeking groups?
10. Is there anything else you would like to add?
11. I am hoping to gather as many perspectives as possible even if there is overlap. Is there anyone else from your organization or others in the region that you work with that you recommend I speak to?

Appendix D: Codebook for interview analysis

Name	Description
Climate change	Comments that are explicitly about climate change.
Access to information	Comments about accessing climate data, adaptation information, and technology.
Awareness	Comments about levels of climate change awareness among key informants and vulnerable groups (could be awareness of specific policies or of climate change generally).
Narratives	Personal experiences and stories about climate change preparedness, adaptive capacity, and vulnerability.
Definitions of equity and justice	Comments about the meaning of equity and social justice.
Intersectionality	Comments about how personal identities intersect and about whether decision-makers are aware of these intersections. You could also include comments that mention multiple issues that are difficult to separate (e.g. “we are dealing with a lot of systemic failures at the moment in terms of responding to women's experience of gender based violence, as well as housing and you know, just income sufficiency and food security”).
Key issues	Comments about the most pressing issues in each sample city.
Access to services	Comments about the availability and accessibility of social services, and whether these services are culturally appropriate.
Environment	Comments about the distribution of environmental benefits and burdens.
Food security	Comments about accessing healthy and affordable food.
Healthcare	Comments about accessing physical and mental health supports.
Disability support	
Medical care	
Mental health support	
Housing	
Affordability	Comments about the cost of housing.
Attainability	Comments about whether housing is accessible for people with disabilities and about discriminatory practices in the housing market.

Name	Description
Availability	Comments about housing shortages and the quality and location of available housing.
Resource shortages	Comments about staff and resource shortages in the social service sector.
Transportation	Comments about public transportation.
Accessibility	Comments about whether public transportation is accessible for people with disabilities and safe for residents.
Affordability	Comments about the cost of using public transportation.
Connectivity	Comments about transportation frequency, connectivity, and ease of use.
Perceptions of government	Comments about the strengths and weaknesses of municipal governments and/or their commitment to equity concerns versus other priorities.
Policy considerations	Comments about key considerations for more equitable policy development or things decision-makers should pay attention to.
Progress indicators	Comments about how progress should be measured and indicators of success (i.e., the actual, tangible outcomes or changes being recommended)
Public engagement	Comments about how equity-deserving groups are engaged in decision-making processes and how these processes could be improved.
Descriptions of meaningful engagement	Comments about how equity-deserving groups should be engaged during decision-making processes.
Engagement experiences	Narratives or stories about exclusionary or inclusionary forms of public engagement.
Scale of challenges	Comments about whether challenges are heightened in the sample city relative to other cities.
Target populations	Comments that identify specific vulnerable or marginalized populations in each sample city or that mention specific barriers or challenges that these groups face.
2SLGBTQ+	
Indigenous people	
Low-income	
People with disabilities	

Name	Description
Racial minorities and newcomers	
Students	
Youth	

Appendix E: Final plan evaluation scores after reconciling and inter-rater variance (scored criteria only)

Red = Higher variance (more discrepancies in inter-rater scores across a criterion)

Green = Lower variance (fewer discrepancies in inter-rater scores across a criterion)

No.	Criteria	Possible Points	WR Adaptation Plan (2019)	TransformWR (2022)	Brampton CEERP (2020)	Brampton EMP (2020)	TB Climate-Ready (2015)	TB Climate-Forward (2020)	Inter-rater Variance
DISTRIBUTIVE JUSTICE									
1	Does the plan define climate justice and/or describe its requirements?	2	0	2	1	0	0	0	17%
3	Does the plan explicitly identify equity and/or justice as a priority?	2	2	2	1	2	0	1	8%
4	Does the plan explicitly define vulnerability?	2	2	0	0	1	0	0	8%
6	Does the plan identify drivers of vulnerability?	2	2	0	0	1	0	0	8%
7	Are socio-economic attributes (e.g., education, income) recognized as drivers of vulnerability? (as opposed to only addressing physical exposure to risk)	2	2	0	0	1	0	0	8%
8	Does the plan recognize disparate climate vulnerability?	2	2	2	0	2	0	0	8%
10	Does the plan identify specific neighbourhoods that are underserved?	2	0	0	0	0	0	0	0%
11	Does the plan identify specific populations that are underserved? (as opposed to referring broadly to “marginalized” groups)	2	0	2	0	2	0	0	8%
13	Are specific neighbourhoods identified as vulnerable to climate change?	2	1	0	0	0	0	0	17%
14	Are specific populations identified as vulnerable to climate change?	2	2	2	0	2	1	1	0%

15	Is their vulnerability explored in-depth? (i.e., the plan describes historical or structural reasons for their vulnerability)	2	0	1	0	0	0	0	0%
16	Do proposed actions intentionally target the neighbourhoods and/or populations identified as vulnerable?	2	0	0	0	1	0	1	33%
18	Does the plan acknowledge potential disparities in access?	2	1	1	0	1	0	0	33%
19	Do any proposed actions attempt to reduce disparities in access?	2	1	1	0	0	0	1	17%
20	Does the plan include adaptation strategies that specifically target unhoused people? (e.g., cooling/heating stations, rain shelters)	2	2	0	0	0	1	0	0%
21	Does the plan include climate emergency response plans for seniors and/or people with disabilities?	2	2	0	0	0	1	0	8%
22	Do transit-related sections of the plan mention physical accessibility and/or safety?	2	1	2	1	0	0	1	25%
24	Does the plan acknowledge these potential impacts?	2	0	1	0	1	0	0	0%
25	Are well-known risks associated with disruptive actions mitigated?	2	0	0	0	0	0	1	8%
28	Does the plan identify actions to address past harms? (e.g., compensation, restoration, reparation)	2	0	0	0	1	0	1	0%
TOTAL POSSIBLE POINTS		40	20	16	3	15	3	7	
PROCEDURAL JUSTICE									
29	Does the plan describe the stakeholder engagement process?	2	2	2	1	1	1	2	25%
30	Does the plan identify a diverse set of stakeholders?	2	2	2	1	1	1	1	25%

31	Does the plan specify groups <i>not</i> included in the engagement process?	2	0	2	0	0	0	0	0%
33	Does the plan indicate which phases included public participation? (i.e., opportunities to participate)	2	2	2	1	2	1	2	17%
34	Were stakeholders engaged in early problem definition and/or a needs assessment?	2	2	2	1	2	1	2	17%
35	Were stakeholders engaged in plan development?	2	2	2	1	2	1	2	8%
36	Were stakeholders engaged in plan implementation?	2	2	0	2	1	1	2	25%
37	Does the plan describe the specific consultation techniques used?	2	2	2	2	2	1	2	0%
39	Does the plan state that equity considerations will feature as an indicator of success?	2	1	2	1	0	0	0	17%
40	Does the plan identify metrics for evaluating whether its actions have been successful?	2	2	2	1	2	2	0	0%
41	Were the metrics designed collaboratively?	2	2	1	0	2	0	0	33%
42	Does the plan provide an opportunity for public participation in monitoring and evaluation?	2	2	0	0	0	1	0	25%
44	Does the plan describe any strategies for ongoing communication between planning staff and residents during and/or after plan implementation?	2	0	0	1	1	2	0	17%
45	Is the plan accessible for a lay audience? (i.e., the plan is concise and avoids technical jargon)	2	2	2	1	1	2	1	0%
47	Does the plan contain a diversity of culturally relevant examples and/or visuals?	2	1	2	0	0	0	0	33%
TOTAL POSSIBLE POINTS		30	24	23	13	17	14	14	
RECOGNITION JUSTICE									

50	Does the plan acknowledge intersecting identities? (e.g., race, gender, class, age)	2	0	1	0	0	0	0	8%
51	Does the plan acknowledge the need for culturally appropriate responses to climate change?	2	1	2	0	0	0	0	8%
52	Did the stakeholder engagement process prioritize involvement of vulnerable groups?	2	2	2	0	0	0	0	8%
53	Were there special efforts to encourage participation by those normally left out? (e.g., outreach to underrepresented communities)	2	2	2	0	1	0	0	8%
54	Is there evidence that vulnerable groups were afforded an opportunity to self-identify their needs and priorities?	2	2	2	1	0	0	1	17%
55	Does the plan mention any barriers to participation?	2	0	0	0	0	0	0	0%
58	Does the plan include a land acknowledgment?	2	0	2	1	0	0	2	8%
59	Does the plan acknowledge Indigenous actors' inherent rights and governance as self-determining nations? (as opposed to referring to Indigenous actors as "stakeholder" groups)	2	0	2	0	0	1	0	17%
60	Does the plan mention local or traditional knowledge?	2	0	2	0	0	2	0	8%
	TOTAL POSSIBLE POINTS	18	7	15	2	1	3	3	
HEALING JUSTICE									
62	Does the plan reference the broader vision/mission for the city/region?	2	0	2	2	2	1	0	0%
64	Does the plan acknowledge the limitations of actions to address past harms? (e.g., compensation, restoration, reparation)	2	0	0	0	0	0	0	8%
65	Does the plan identify tools and/or supports to help equity-deserving groups heal from generational trauma?	2	0	0	0	0	0	0	0%

	<i>TOTAL POSSIBLE POINTS</i>	6	0	2	2	2	1	0	
	<i>GRAND TOTAL POSSIBLE POINTS</i>	94	51	56	20	35	21	24	