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CLIMATE ACTION EQUITY IN CANADA

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II.

EXECUTIVE SUMMARY

Following Climate Emergency Declarations in 2019, many municipalities in Canada have been working to publish modern climate action plans to operationalize this declaration. This report is an effort to synthesize recent policy advancements from across the country that specifically include equity in climate action planning.

Over 50 climate plans were analyzed in the making of this report with materials available as of January 2021 (see Appendix A). Additional filters were applied based on equity inclusions, and eventually, the equity themes of jobs/economy, costs related to housing, transport, and energy, food security, health, Indigenous relations, and urban greenery equity emerged. A total of 24 plans were reviewed for these themes (see Appendix B). Additionally, demographic filters were applied to acknowledge diversity and target audiences of these equity actions. Seven cities have been shortlisted for in-depth analysis including Saanich, Halifax, Winnipeg, Montreal, Windsor, Markham, and Vancouver.

This report is presented as insight into climate action equity across Canada, however, gaps between policy planning and action exist that are exacerbated by the amount of publicly available information. For this reason, this report should serve to inform and create further discussions. It should also be noted that additional research is intended to follow this report.



01

INTRODUCTION

In 2019, hundreds of municipalities across Canada signed a Climate Emergency Declaration signalling the need for immediate and dramatic climate action. However, the costs and benefits of a changing climate, as well as the responsibility to act, are not evenly distributed globally or locally. With the most negative impacts and the littlest contribution often being associated with low socio-economic classes, racialized minorities, folks with disabilities, and otherwise systemically disadvantaged groups. For this reason, equity and justice are crucial pillars of climate action. The concepts of distributional, procedural, and recognition equity must be embedded in all climate action to prevent further inequitable processes and outcomes. From mitigating the worst effects on vulnerable populations to creating inclusive and accessible adaptation solutions, equity must become an action item instead of merely a vague goal. The aim of this report is to provide insight into how equity is being included in municipal climate action plans across Canada to inform local actions. This report begins with an outline of the process involved in this research, an overview of the findings, then some specific initiatives are highlighted, before moving presenting the seven case study cities.

It is recognized that this work is being conducted and applied to the unceded territories of the Skwxwú7mesh (Squamish), səliłilwətaʔt (Tsleil-Waututh), and xʷməθkʷəy̓əm (Musqueam) Indigenous peoples to which to we owe thousands of years of land stewardship.

This case study analysis was conducted to assist the City of Vancouver with embedding equity in their current and future climate actions, specifically within the Climate Emergency Action Plan. Guidance for this plan has been provided by Marga Pacis of the Sustainability Group, and Dr. Andréanne Doyon from SFU's School of Resource and Environmental Management.

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METHODOLOGY

This research began with a list of 473 municipalities in Canada that have declared a Climate Emergency[1]. The initial scan of cities was based on province, municipality size, nature of governance, and especially tried to note any similarities to Vancouver such as the presence of a municipal Charter. Initially, the goal was to focus on cities with either the same population size or bigger than Vancouver, but this leaves few cities in Canada, so majority of the municipalities included have populations of 100,000 or more. In addition, regional governments were generally left out, with the exception of York, Ontario. Based on the list of over 400, after applying these criteria it was narrowed to about 50. Next, major cities that had not declared climate emergencies were noted. This included Calgary, Winnipeg, and Saskatoon. I also took note of the date of the declaration to use in reference to the date their climate action plan was published.

With the final list of 54 cities the climate action plans were scanned for mentions of equity, during this process the nature of the plan was also recorded; whether mitigation or adaptation. For the most part, the entire list was kept intact and can be viewed in Appendix A. Fifteen cities on that list were excluded from consideration in the next steps. These included cities in Quebec that had no English materials available. Additionally, some plans older than 2013 had no equity considerations, were inaccessible online or generally contained irrelevant information. Additionally, some did not have enough or adequate information available to conduct an adequate analysis, such as Moncton, New Brunswick. Two more were First Nations that have declared a climate emergency but have no official plans. The spreadsheet in Appendix A outlines the exclusionary criteria.

The final cities were selected for evaluation based on whether they mentioned equity. All plans with the word equity in them made the list. While reviewing the action items and goals within the plans, similarities began surfacing, which informed the equity themes used to analyze the plans. The final equity themes included: costs (i.e. affordability of housing, transport, energy), jobs or economy, urban greenery equity, food security, health, and Indigenous relations. This table was adapted into the summary of this paper. Additionally, demographic-based filters were applied to keep track of who mentioned and addressed specific groups within the broad category of equity-seeking or vulnerable communities. The demographics considered were socio-economic status, race, age, and physical ability, this full table is available in Appendix C. There were 24 cities considered in this final filter, inclusive of Vancouver. A shortlist of cities was created that either had unique initiatives, had an interesting way of conducting their plan, or were surprising based on their size and resources. The seven cities shortlisted are Saanich, Winnipeg, Montreal, Markham, Windsor, Halifax, and Vancouver.

The actions selected out of the seven key case studies later in this report may not all explicitly reference equity, but in more ways than one they fit into a working definition of equity which prioritizes participation, access, inclusion and, safe and healthy spaces.

1 Random Acts of Green, *493 Canadian Municipalities have Declared a Climate Emergency*, (2019). (<https://raog.ca/2019/04/03/457-canadian-municipalities-have-declared-a-climate-emergency/>)



03

FINDINGS

Given the geographic, economic, and demographic conditions across Canada, the approaches to climate action vary greatly based on how climate change may affect that region. Though the number of mitigation plans is the same as the number of plans that contained a mix, a few cities had two separate plans. Where this was the case (Edmonton, Saskatoon, Surrey, and Windsor), both plans were reviewed for equity considerations. Saskatoon mentioned equity in their mitigation plan as a desired outcome but with no equity-focused actions. Otherwise, equity was generally only present in the adaptation plan, so these were used as the subjects of the equity filters. Ten out of the final 24 plans contain a mix of mitigation and adaptation. The others included four primarily adaptation plans, and ten primarily mitigation.

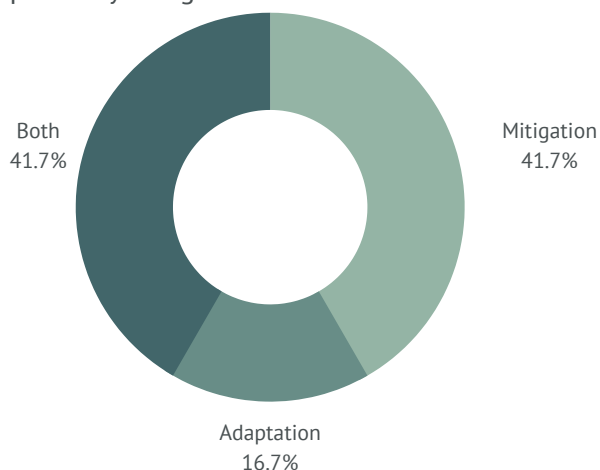


Figure 1.1 Focus of plan in %; based on 54

Throughout this research, evidence surfaced that equity considerations across Canada need to be enhanced. The numbers shown above only address broad equity goals but have not been filtered for actual equity actions. So, although over 60% of the cities reviewed are considering equity, many come across as baseless goals without concrete actions outlining how equity will be achieved. Some plans such as Saskatoon mentioned equity as a co-benefit of acting on climate change. Rather than recognizing it as an action item on its own, the City determined that equity would come as a result of the climate actions outlined in their plan. This was still considered an equity consideration in the above chart but created gaps in the actual review of equity themes.

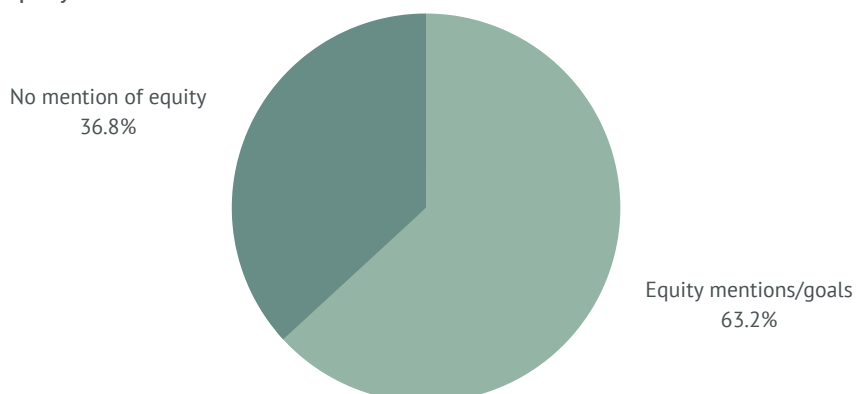


Figure 1.2 % of plans that mention equity; based on 54

04

FINDINGS

In the process of focusing on GHG emissions reduction, many plans failed to include equity in mitigation goals. For example, Saskatoon has a plan to mandate both solar panels and energy-efficient appliances in homes, but they do not cite any current subsidies or initiatives to reduce the financial burden of these initial investments for low-income households, nor do they offer city implemented retrofits the way Toronto has for low carbon social housing[2]. Mitigation-based plans typically favour cost reduction and accessibility strategies as an equitable way to encourage home retrofits, EVs, and public transport use. Whereas adaptation-based goals were more likely to address equitable access to emergency management resources, the resilience of resources themselves, and lean on partnerships to effectively reach the populations they considered vulnerable.

In recognition that the cities can't act alone, or don't have the relationships necessary to create appropriate change within their target communities is common and important. Many cities are channelling this into providing funding initiatives for individuals or organizations wanting to contribute to this work, some are partnering with community organizations already doing the work in order to serve the right communities, and some have developed advisory council-type arrangements with representatives from various sectors or minority groups.

Transparency and language are critical elements of this work and it must be noted that only three plans (Saanich, Toronto, and Edmonton), included definitions of equity in the plan directly, two more cities had brief definitions in a glossary/appendix (Montreal and Markham). Though any inclusion of the definition allows readers to identify how that city is defining equity, it was really valuable and notable for Saanich to dedicate a whole page to these definitions, and much closer to the front of the report than Toronto for example. The nature of these definitions varied greatly, which leads to the assumption that the word equity means different things to different municipalities. The variety ranges from Saanich's comprehensive definitions outlining distributional, procedural, structural and transgenerational equity[3], to Edmonton's loose definition of conducting actions that benefit the highest number of people[4]. Additional language-based findings include the avoidance of the terms 'decolonization', 'anti-racism', and 'recognition justice' in all plans.

[2] City of Toronto, *TransformTO Climate Action for a Healthy, Equitable, Prosperous Toronto: Results of Modelling Greenhouse Gas Emissions to 2050* (2017),84.

[3] District of Saanich, *Climate Plan 100% Renewable and Resilient Saanich* (2020), 2.

[4] City of Edmonton, *Climate Resilient Edmonton Adaptation Strategy and Action Plan* (2018),13.

05

FINDINGS

Within the demographic themes applied, the most commonly mentioned one was socio-economic status, with 58% of the 24 plans addressing the barriers low-income people face, and often providing suggestions and goals to mitigate the financial burden. Mentions of race were primarily in regard to immigrant populations and partnering with immigrant service providers to aid their transition to Canada and community involvement. Very little consideration was given to translating climate action materials in other commonly spoken languages.

Food security was a common action item across Canada as municipalities recognized the risk climate change poses to their food systems and the need for increased food security amongst residents. 54% of the 24 cities evaluated have actions related to food security. They are acting on this through programs such as urban agriculture (Montreal, Barrie), increased self-sufficiency for residents (Saanich), and food rescue programs in partnership with food banks and grocery stores (Saanich, Victoria). This action is in contrast to the common acknowledgement that food waste has a high carbon footprint, instead of simply focusing on the carbon emissions element of food waste and production, cities are using it as an opportunity to grow social equity with redistribution of food and promotion of local food systems.

Figure 2.1: % of plans with actions based around these equity categories; based on 24

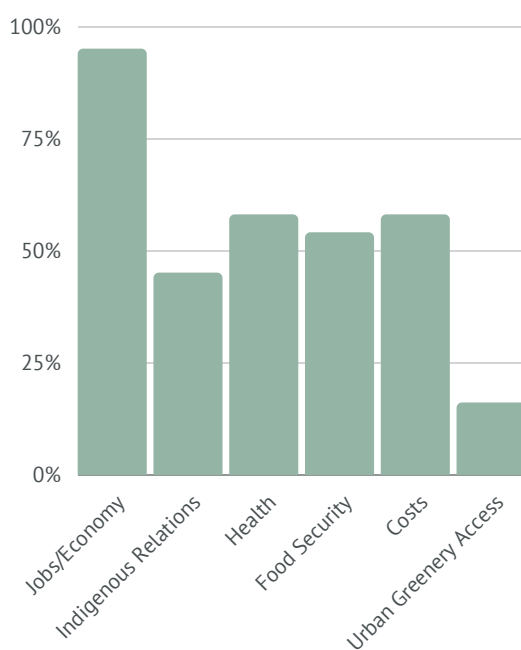
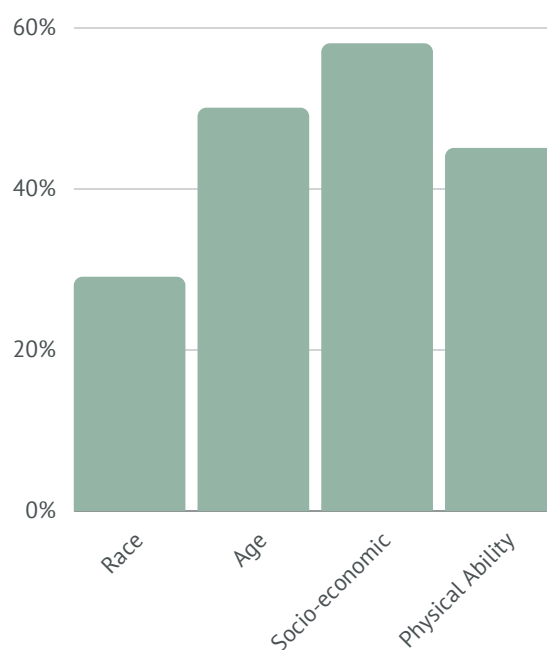


Figure 2.2: % of plans directly addressing specific demographic groups; based on 24



06

INITIATIVE SPOTLIGHT

FREE BICYCLE REPAIR WORKSHOPS

Toronto and Winnipeg both have a variation of a free bicycle repair and maintenance workshop. These programs allow residents to freely access the knowledge and experience they may need to begin cycling, making it far more accessible for all socio-economic classes to engage in a low carbon commute. By encouraging education on safety and maintenance these programs also build community amongst locals. Toronto has the Bicycle Repair Hubs[5] program while Winnipeg has W.R.E.N.C.H[6].

LOW CARBON AFFORDABLE HOUSING

Low carbon retrofits are commonly encouraged in privately owned homes, but Saanich, Toronto, and Brampton have lead Canada in establishing low carbon affordable and social housing. In partnership with the Greater Victoria Housing Society, Saanich will provide a Passive affordable housing complex to families, seniors, and people living with disabilities[7]. Similarly, Toronto, with assistance from provincial funding, has launched a large-scale retrofit of social housing complexes[8], while in Brampton the Chapelview Apartments became Canada's first LEED-certified affordable seniors' complex[9]. Montreal is also revising their 'AccesLogis' program which funds social housing, in order to increase the efficiency and resilience of their projects[10].

FOOD SECURITY

While many municipalities are tackling food security some notable initiatives have come from Toronto and Barrie. The Toronto Urban Harvest project[11] is dedicated to collecting surplus backyard fruits and distributing them to food banks, both reducing food waste and providing healthy food to those in need. Barrie[12] and Markham[13] have initiatives to increase food security based on community garden access and are using the number of gardens as an indicator.

SOCIAL CONNECTIVITY

Montreal stood out in the category of social connectivity and community building. Many actions revolve around youth involvement, curating inclusive spaces, and co-creation. The Climate Resilience Hubs initiative uses community knowledge to educate, encourage action, and build capacity for climate action. Additionally, they will be measuring resident's social capital as an indicator to monitor long-term success. Montreal also plans to increase garden equipment rentals to youth, which will increase contact with nature and educate them about urban ecology[14].

[5] City of Toronto, *TransformTO Climate Action for a Healthy, Equitable & Prosperous Toronto Implementation Update 2017 and 2018* (2018), 39.

[6] City of Winnipeg, *Winnipeg's Climate Action Plan Report* (2018), 33.

[7] Saanich, *Climate Plan*, 41.

[8] Toronto, *TransformTO 2050*, 84.

[9] City of Brampton, *Our 2040 Energy Transition: Community Energy and Emissions Reduction Plan* (2020), 77.

[10] Montreal, *Climate Plan 2020-2030* (2020), 80.

[11] Toronto, *TransformTO Implementation Update 2017 and 2018*, 39.

[12] City of Barrie, *Climate Change Adaptation Strategy* (2017), 70.

[13] Town of Markham, *Markham's Greenprint Sustainability Plan* (2011), 59.

[14] Montreal, *Climate Plan* (2020).

07

SAANICH, BC

With geographic and governmental similarities to Vancouver, Saanich is an excellent example of combined mitigation and adaptation plan with thoughtful equity considerations and actions. The city has 3 main goals for this plan and those are to cut emissions by 50% by 2030 and achieve net-zero by 2050, rely only on renewable energy by 2050, and adapt to the changing climate,(p.iv). These are followed by 6 action categories including, “mobility, buildings and infrastructure, food and materials, ecosystems, community wellbeing, and leadership in district operations,”(p.vii). The plan starts out with a recognition of the city’s main risks, two of which being food system interruptions and extreme urban heat. Each sector of Saanich’s goal involves at least one key community partnership ranging from BC Transit, Greater Victoria Housing Society, Saanich Neighbourhood Community Kitchens, to local First Nations. These partnerships have been identified as a key to their success.

In terms of equity, the plan has multiple acknowledgements that the burdens of climate change are not evenly shared but goes a step further to include these in their actions as well. For example, not only do they plan to expand cycling and walking infrastructure but they are aiming to improve bike parking at buildings which importantly completes the formula for accessible active transport. They also aim to create stronger integration between transportation methods to allow a variety of affordable and accessible modes of transport, while also aiming to make transit travel times competitive with driving. In terms of cost-based initiatives, there is a high focus on affordable low carbon housing, as well as rebate and loan programs for home retrofits and EV-related purchases with seemingly fair repayment programs to keep long-term costs low.

Uniquely, Saanich also recognizes the importance of funding and encouraging public art even though it is not direct mitigation or adaptation effort. They cite that it can create community cohesion, enthusiasm and inspiration for change. The plan also identifies a goal to support skills development to ensure the community is equipped for a low carbon economy. Importantly, Saanich is the only municipality studied in this report that offers comprehensive definitions of equity which can be found on page 2 of the plan.

KEY EQUITY ACTIONS

- F3.1 Accelerate the implementation of the Agriculture and Food Security Plan (p.70)
- C1.6 Work with service providers to vulnerable populations to develop adaptation strategies (p.88)
- C2.6 Develop an equity tool: Factors such as income, age, gender, ethnicity and ability can affect resilience to climate change and the ability to transition to renewable energy. The equity approach can include: compiling and reporting on equity data; developing ongoing relationships with equity-seeking groups in the community to inform action; and evaluating program design to avoid replicating or furthering historical inequities and to better address the diverse barriers, needs, and priorities of different parts of our community," (p.89)
- C2.8 Seek opportunities to work with neighbouring First Nations (p.90)

08

WINNIPEG, MB

Though no climate emergency has been declared, in 2018 Winnipeg released this comprehensive climate action plan. Winnipeg's plan is primarily mitigation-based and has seven 'Strategic Opportunities' including community climate resilience, waste reduction and diversion, low carbon and energy-efficient buildings, complete development and urban density, advancing sustainable transport, empower community leaders and collaborate with stakeholders, as well as corporate leadership. Though this is a mitigation-based strategy, systems thinking is employed to facilitate affordable action and community empowerment. This plan stands out for its seemingly genuine connection and respect for Indigenous collaboration, including recognitions of the value traditional knowledge has in climate action, as well as the commitment to transparency and community engagement. This plan focuses on transparency and community engagement, which they exemplify by including resident feedback from engagement events in the appendices of the plan. This allows readers to compare the community's desires with the actual outcomes of the plan.

The City has placed a large focus on providing funds to individuals or businesses for personal action. For example, a key goal is to, "create conditions to enable community climate action"(p.34), where sub-actions include the Land Dedication Fund to support small scale action in parks, as well as continuously providing technical and financial support to a variety of community initiatives like the W.R.E.N.C.H program,(p.34). In addition to funding programs, the city is highly focused on food security and creating local means of food production in which they're partnering with the Winnipeg Food Council to support localized agriculture and food security in the city. Winnipeg is also one of the only cities that mentions creating equal access to urban forest.

KEY EQUITY ACTIONS:

- 2.1 Engage with the Mayor's Indigenous Advisory Circle twice a year to solicit feedback on actions, priorities, and opportunities for engaging Winnipeg's Indigenous community
- 2.1 Identify opportunities to have ongoing discussions and collaborations with industry and Indigenous environmental stewardship groups to identify opportunities and to co-create solutions" (p.33)
- 5.4 Build Climate Equity: partnerships with key stakeholders such as the local neighbourhood associations, Building Urban Industries for Local Development (BUILD) and Centre for Aboriginal Human Resource Development (CAHRD) to build local capacity and equity (p.48)
- 7.2 Continue to work with neighbourhoods/communities to ensure equal access to resources and funds that facilitate urban forest initiatives. In these cases, the City should consider how best to enable community organizations or other neighbourhood scale forestry investment initiatives (p.54)

09

MONTREAL, QC

Montreal's 2030 action plan consists of 46 actions in 5 sectors. The plan outlines both adaptation and mitigation with a strong focus on community mobilization and resilience. The 5 sectors identified are mobilization, mobility, buildings, exemplarity of the city, and governance. This plan is unique in that most actions have some broad relation to quality of life, even when the focus is carbon reduction. For example, they have framed home retrofits as improved quality of living, with the benefit of GHG reduction.

Prioritization of pedestrian spaces is high, and Action 1 outlines the use of a “transitory urbanism” approach in which open spaces like parking lots will be repurposed into housing or parks, (p.46). Additionally, with the lowest homeownership rates in Canada[15], Montreal has adequately considered the population that is reliant on affordable rental homes. This is shown in Action 29, focused on respecting tenants' rights and keeping housing affordable, even while improving its ecological impact, (p.84). In addition, the City is producing a program to incentivize owners of multi-unit residences to renovate to higher green standards, they cite this will improve tenant quality of living. They will also provide higher subsidies to buildings with at least 30% affordable units, (p.84). A similar program will be available to individual homeowners.

In order to mobilize the community effectively, the City is working to build platforms for communication with local administration in each borough of the City, ultimately advancing procedural equity. In addition, Montreal is prioritizing resilience within vulnerable communities and has recognized youth as a valuable component to change. The ‘just transition to employability’, (p.57) approach, “seeks to redirect workers’ expertise toward emerging sectors, (p.57). A mobility plan will accompany this initiative to create equitable access to new economic hubs. A key priority in Montreal's transport planning is fair access, both allowing adequate connections to neighbourhoods with jobs, as well as implementing social pricing for transit. In planning for climate action and resilience, the City is working to reclaim car infrastructure to create safer, welcoming, and diverse spaces, ultimately encouraging social cohesion.

KEY EQUITY ACTIONS:

- Action 88: Educate Montrealers about the ecological transition by prioritizing the resilience of people in vulnerable situations (p.54)
- Action 10: Measure and support the development of Montrealers' social capital (p.57)
- Action 22: Develop urban agriculture (p.22)
- Action 1: Create open spaces, notably by applying the transitory urbanism approach
 - Highlight the identity of communities and promote the vitality of districts and the culture of proximity by developing cultural quarters(p.46)
- Action 17: Enhance land-use planning and regulation tools to favour the development of districts on a human scale and adapted to climate change (p.67).
- Action 29: Develop a collaborative approach to ensure respect for tenants' rights (p.84).

Montreal, *Climate Plan 2020-2030* (2020).

<https://res.cloudinary.com/villemontreal/image/upload/v1611255391/portail/ndbtwahsmb7x24rsiqxl.pdf>

[15] Statistics Canada, *Housing in Canada: Key results from the 2016 census*(2017).

<https://www150.statcan.gc.ca/n1/daily-quotidien/171025/dq171025c-eng.htm>

10

HALIFAX, NS

Halifax is the only city in this study that specifically uses “Just Transition” language, in which they focus highly on the transition to a green economy and making sure retraining options are available. The plan is a mix of adaptation and mitigation, with most adaptation efforts revolving around emergency management, and resilience of infrastructure and City services.

This plan is the most economy-focused of those reviewed in this report, uniquely focusing on growing skills and assisting businesses in climate planning. The City aims to empower residents and businesses to act by providing support primarily in the form of education and planning, with little focus on funding aids. They do note the need to diversify sources in order to improve the availability of funding to the community.

The City has focused highly on enhancing community engagement in their disaster planning efforts, stating that this will work to build capacity and a sense of community, ultimately creating communities that can bounce back from the effects of climate change, both physically and socio-economically. Included in their engagement efforts are reconciliation attempts with Mi’kmaq groups as well as African Nova Scotians.

In order to tackle food security and food system risks the City will create the Food Action Plan with a climate change lens applied, this aims to mitigate vulnerability in supply chains and increase access for residents, (p.45).

KEY EQUITY ACTIONS:

- 31: Create Disaster Support/ Community Resilience Hubs for community self-sufficiency (p.45)
- 33: Undertake climate planning sessions with neighbourhood organizations to develop local climate plans and coordinate mitigation and adaptation efforts (p.45)
- 34: Work purposefully, meaningfully, and collaboratively with Mi’kmaq and other groups seeking reconciliation including African Nova Scotian communities, (p.45)
- 35: Improve food security and food systems resilience (p.45)
- 36: Expand workforce and technology development programs and funding to grow skills and trades for decarbonization and resilience (p.46)

11

WINDSOR, ON

In 2018, Windsor released an update to their 2012 climate change adaptation plan, with 7 key action areas including, “integrate climate change thinking and response, protect public health and safety, reduce risk to buildings and property, strengthen infrastructure resilience, protect biodiversity and enhance ecosystem functions, reduce community service disruptions, build community resilience,”(p.32). In order to implement the actions laid out by the plan, Windsor has established a community task force consisting of health authorities, Indigenous groups, housing boards, universities, and school boards, to name a few.

The City stands out for its community engagement initiatives. Especially those related to ecosystem education and activity. The City is capitalizing on citizen science programs, launching education on the importance of ecosystem health, and increasing support for the Ojibway Nature Centre, (p.46). Many of Windsor’s actions revolve around health and communication of health risks, citing often that their extreme heat and rain events are high-level hazards for the municipality. For this reason, they have many goals to increase shade and cooling centres, and encourage everyone, especially those without shelter, to gather in community buildings when necessary. One important goal is the development of comprehensive communication materials in partnership with migrant workers associations and groups working closely with this population. The emergency management elements of this plan emphasize the adaptation focus, and they are especially focusing these efforts on vulnerable communities. The City is importantly working to mitigate the impact storms have on public infrastructure, affecting systems like transit. This focus is important to keeping public transportation reliable in most circumstances.

This plan is narrow in scope and is the most emergency management focused of the plans reviewed. The City also focuses highly on increasing communications surrounding their emergency action planning, which can increase procedural equity while focusing resources on typically underserved communities or populations.

KEY EQUITY ELEMENTS:

- Action 1.2: Continue to consult and engage local First Nations to further climate action based on traditional knowledge, insights and experience; (p.34).
- Action 2.3: Produce targeted messaging for at-risk populations including seniors and persons with limited mobility as well as their caregivers; (p.36).
- Action 5.1: Enhance communication and coordination with other agencies; (p.45).
- Action 5.8 Increase community level of knowledge on the benefits of natural areas
 - Enhance support for the Ojibway Nature Center;
 - Continue to provide education to the public about the importance of natural areas, invasive species and endangered species;
 - Utilize Citizen Science Programs such as iNaturalist to help monitor and collect information on species at risk and invasive species (p.46).
- Action 7.9: Collaborate with partners to produce and implement a targeted heat education program for vulnerable populations including migrant workers, international students and new Canadians (p.51).

12

MARKHAM, ON

The Markham Greenprint Sustainability Plan came out in 2011 but has a scope until 2050 to address complex issues like climate change and broader sustainability, they note that this plan should be used in tandem with other community plans in order to embed sustainability and climate action throughout governance and planning. There are 12 pillars of this plan including social equity, identity and culture, individual health, shelter, food security, access and mobility, education and skills, economic vibrancy, materials management, water efficiency, ecosystem integrity, and energy and climate. This plan stands out for a few reasons, one being the extensive use of systems thinking. Every action outlined in the plan is followed by a grid outlining how the action relates to the 12 aforementioned pillars. This transparency is highly valuable in communicating the action goals and intentions. Additionally, following each objective the plan outlines key actions on the municipal scale, businesses, community groups, as well as partnership suggestions. The City also included extensive data explaining their current status of various issues such as poverty, and how that information is being used to inform action as well as what indicators will measure success. Uniquely, Markham has a direct objective to encourage cultural diversity and a strong sense of place, which they are doing by partnering with school boards, ethnically diverse organizations, arts communities and heritage groups, (p.38). They are also working to have cultural spaces available in every neighbourhood so citizens do not have to travel far to these community hubs, this is being done through increased funding of cultural centres.

The City has a comprehensive measurement of affordable housing and identifies a strong need to diversify the housing market that is dominated by ownership. To address this, the city is working on an affordable housing strategy linked to climate action through density planning, (p.51). Markham has the Retail Food Environment Index which they use to gauge food deserts by mapping access to grocery stores and farmers markets versus fast food and convenience stores, this is a highly unique approach to measuring and advancing food security. They are also using indicators including the measure of community gardens and community kitchens. Of the plans in this study, Markham was the only one to address every demographic filter.

KEY EQUITY ELEMENTS:

- Objective: Regenerate existing neighbourhoods through sensitive evolution (p.52)
- Objective: Reduce the impact of household poverty (p.28)
- Objective: Promote and celebrate all that makes Markham great(p.37)
- Objective: Develop an Affordable Housing Strategy (p.51)
- Objective: Significantly increase food production opportunities(p.63)
- Objective: Promote green business development and business greening strategies for existing and new employers (p.88)

13

VANCOUVER, BC

Vancouver's Climate Emergency Action Plan (2020) offers a mitigation-based plan in which they aim to embed equity in procedure and outcomes. This plan stands out for the development of the Climate and Equity Working Group which includes diverse voices to guide actions. The work being done to recognize and address systemic barriers and historical injustices are apparent through the expression of support for Indigenous climate action, procedural inclusion, and attempts to mitigate financial burdens on already disproportionately impacted communities. Additionally, this plan has the most extensive recognition of systemic racial discrimination of plans reviewed in this report.

Much of the Cities' equity-based actions are related to increasing transportation options and safety, lowering the environmental impact of building while considering the need to reduce renovation risk, and to build complete communities that offer walkable access to full amenities.

However, because this plan and its actions are not fully formulated and published, it appears that some goals are not backed up by clear actions. For example, attempts to make the City more affordable are made, but actions do not directly mention the introduction of an affordable green housing initiative, nor initiatives to reduce transportation pricing burdens. The expectation of higher-income residents to take more action in reducing their carbon footprint is very unique as no other cities in this study have framed climate action that way. However, clear actions to enforce this are not made clear.

In general, the full plan lacks detail in actions making it hard to infer how equity will be addressed. However, procedural equity seems to be very strong through the previously mentioned Climate and Equity Working Group, the Climate Justice Charter, and Indigenous engagement

KEY EQUITY ACTIONS:

- Make low-cost sustainable transportation options easy, safe and reliable for all Vancouverites, so that people get to work, school and other destinations without needing to rely on gas and diesel vehicles and the noise and pollution they produce. (p.21)
- Ensure that everyone has the opportunity to live and work in zero emissions buildings, and is able to benefit from the comfort, quiet, healthy air, and lower energy costs they offer. (p.21)
- Share the costs of reducing our carbon pollution in ways that reflect people's ability to contribute to that transition. (p.21)
- Create new and varied opportunities for people to participate in a zero-carbon economy, including the support people need to transition to those opportunities. (p.21)
- Development of a Climate Justice Charter. (p.23)
- Engaging impacted people. (p.23)
- Interviews conducted in Mandarin, Cantonese and Punjabi,(p.5)

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PLAN SUMMARY

To conclude this report, the tables below present information regarding the type of climate action, how the plans connect to other strategies, partnerships mentioned in the plans, and their reflexive mechanism. Although Toronto was not part of the original seven case studies, due in part to the fragmentation of their policies, the city has unique equity initiatives that have been discussed throughout this report. For this reason, Toronto is included below. It should be noted that the connections to other plans and partnerships section are non-exhaustive lists of examples found within the plans themselves.

PLAN & DATE	PURPOSE	CONNECTION TO OTHER PLANS	PARTNERSHIPS	REFLEXIVE MECHANISM
100% RENEWABLE & RESILIENT SAANICH 2020-2030	Mitigation & Adaptation	Active Transportation Plan, Electric Mobility Strategy, BC Energy Step Code.	Capital Region District, First Nations, local non-profits, utility providers, BC Transit.	Annual 'report card' , resilience indicators, internal accountability groups.
WINNIPEG'S CLIMATE ACTION PLAN 2018	Primarily mitigation	OurWinnipeg, Sustainable Transportation, Complete Communities, A Sustainable Winnipeg, Waste Management Strategy, Transportation Master Plan.	Mayor's Indigenous Advisory Council, community organizations,, industry, academia	Most goals pertain to the current Council term, yearly review, sector specific indicators.
MONTREAL 2030: CLIMATE PLAN 2020-2030	Mitigation & Adaptation	Montreal 2030 Master Plan, Housing Action Plan,Waste Management Master Plan, Resilient City Strategy.	Civil society, housing organizations, public transport,	Mitigation & adaptation indicators, public annual updates on progress. Plan update every 5 years.
HALIFACT 2050 : ACTING ON CLIMATE TOGETHER 2020	Primarily Mitigation	Food Action Plan, Integrated Mobility Plan, Urban Forest Master Plan, Green Network Plan.	Internal and external partnerships; little specificity, First Nations, Regional Council.	Yearly evaluation and reporting, timelines included with actions.
CITY OF WINDSOR DEGREES OF CHANGE CLIMATE CHANGE ADAPTATION PLAN 2020	Adaptation	Update from the 2012 adaptation plan, Parks and Outdoor Recreation Master Plan, Community Energy Plan, Active Transport Master Plan.	Task Force of about 24 community groups/authorities/First Nations, non-profits.	Climate change projections & risk assessment every 5 years, biennial Council % Task Force updates, indicators.
MARKHAM'S GREENPRINT SUSTAINABILITY PLAN (2011, scope until 2050)	Adaptation & Mitigation	Integrated Leisure Master Plan, Affordable Housing Strategy, Local Food Strategy, Diversity Action Plan, Transportation Master Plan.	York Region, Task Force, school boards and libraries, immigration services, various community organizations.	Short, medium& long term goals, measure and report on indicators every 2-5 years, implementation matrix.
VANCOUVER CLIMATE EMERGENCY ACTION PLAN 2020	Mitigation	Greenest City Action Plan, Neighbourhood Energy Strategy, Transportation 2040, Vancouver Plan.	Provincial gov, utilities companies, Climate Equity Working Group, Translink.	Annual reports, indicator framework.
TORONTO: TRANSFORMTO 2050 (2017)	Mitigation	TRANSFORMTO, Toronto Green Standard, Electric Mobility Strategy, Toronto Resilience Strategy.	Indigenous Climate Action, Reference Panel on Climate Action, Toronto District School Board, Province.	Near yearly update on the plan, actions defined by initiated, planning, in progress, and completed.

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EQUITY SUMMARY

PLAN	EQUITY DEFINITION PROVIDED	EQUITY TARGETS	EQUITY MILESTONES/TIMELINES	NOTES
100% RENEWABLE & RESILIENT SAANICH 2020-2030	Comprehensive definition of distributional, procedural, structural, and transgenerational equity at front of report		Can be found on pg. 101	
WINNIPEG'S CLIMATE ACTION PLAN 2018			Found on pg.28-54	
MONTREAL 2030: CLIMATE PLAN 2020-2030	Brief definition in appendices		Found on pg.108	Timeline related goals are mentioned in each action page
HALIFACT 2050 : ACTING ON CLIMATE TOGETHER 2020			Each action has an associated timeline	Each action has a timeline associated with it
CITY OF WINDSOR DEGREES OF CHANGE CLIMATE CHANGE ADAPTATION PLAN 2020				No timeline to measure implementation just general reflexive initiatives
MARKHAM'S GREENPRINT SUSTAINABILITY PLAN (2011-2050)	Brief definition in the glossary		Implementation matrix. p.138-140 specifically address social equity goals	
VANCOUVER CLIMATE EMERGENCY ACTION PLAN 2020			Equity indicators and milestones are being developed but not yet published	Broad targets are present but not backed by action items
TORONTO: TRANSFORMTO 2050 (2017)	Definition can be found on page 102.		Each action has a timeline and a goal associated with it (equity, resilience, health, etc.)	Includes a framework explaining the potential harms of certain actions on pg.84

The table to the left briefly acknowledges which plans/cities have laid out specific equity targets, milestones or timelines, as well as noting if a definition of equity has been provided.

Cells that are filled in with the darker green represent that the element has been included, some notes have been provided in the cells for further research or consideration.

All equity targets were found interwoven through the cities listed actions. The specific target areas are shown in the table below.

Jobs and economy relate to any action related to job creation, security, or diversification. Indigenous relations are described as any partnerships or engagements with Indigenous groups throughout the creation of the plan and in future climate action. Urban greenery equity is classified by taking into account under-served areas. Foodbank services, community gardens, food rescue programs, local production support, or healthy food initiatives such as food desert reduction, were classified as food security. The health category pertains specifically to urban heat, health services, and equitable access to facilities like cooling centres. Lastly, costs related to energy, transport, and housing and actions that target reduction, incentives or subsidies, or otherwise address affordability were classified in this category.

CITY	JOBS/ECONOMY	INDIGENOUS RELATIONS	URBAN GREENERY EQUITY	FOOD SECURITY	HEALTH	COSTS (TRANSPORT, HOUSING, ENERGY)
Saanich, BC						
Winnipeg, MB						
Montreal, QC						
Halifax, NS						
Windsor, ON						
Markham, ON						
Vancouver, BC						
Toronto, ON						

APPENDIX A: ORIGINAL LIST OF 54 CITIES WITH LINKS

CITY	CEP DATE	EQUITY	REASON FOR EXCLUSION	LINK TO PLAN
Halifax, NS	Jan/29/2019	Yes		https://www.halifax.ca/sites/default/files/documents/about-the-city/energy-environment/HRM_HaliFACT_vNew%20Logo_.pdf
Kingston, ON	Mar/06/2019	N/A	Plan has been archived	
Richmond, BC	Mar/25/2019	No		https://www.richmond.ca/_shared/assets/ceep37697.PDF
Hamilton, ON	Mar/27/2019	Yes		https://greenventure.ca/wp-content/uploads/2019/02/hamilton_ccap_final_2015.pdf
Edmundston, NB	Feb/19/2019	No		https://edmundston.ca/documents/espaces-verts/plan-vert-en.pdf
Moncton, NB	April/01/2019	No		https://www5.moncton.ca/docs/2020_Climate_Action_Report.pdf
Charlottetown, PEI	April/08/2019	Yes		https://www.charlottetown.ca/UserFiles/Servers/Server_10500298/Image/Environment%20and%20Sustainability/Sustainability/Programs%20and%20Initiatives/Community%20Energy/Energy%20Plan%20Booklet-Feb%205%20(web%20version).pdf
London, ON	April/23/2019	Yes		https://getinvolved.london.ca/12452/widgets/49288/documents/40242/download
Burlington, ON	April/23/2019	Yes		https://www.burlington.ca/en/resources/Lynn/Burlington-CAP-Apr2020-FINAL.pdf
Ottawa, ON	April/24/2019	Yes		https://ottawa.ca/en/planning-development-and-construction/official-plan-and-master-plans/climate-change-master-plan
Nanaimo, BC	April/29/2019	No		https://www.nanaimo.ca/docs/social-culture-environment/sustainability/climate-change-resilience-strategy-(2020).pdf
St. Catharines, ON	April/29/2019	Yes		https://www.stcatharines.ca/en/governin/resources/FINAL--St.-Catharines-Sustainability-Strategy.pdf
Vuntut-Gwitchin First Nation, Old Crow, YK	June/19/2019	N/A	No formal action plan	
Sudbury, ON	May/28/2019	Yes		https://www.greatersudbury.ca/sudburyen/assets/File/Comms/FINAL%20Greater%20Sudbury%20CEEP.pdf
Vaughan, ON	June/04/2019	No	Outdated plan 2014 & no equity	https://www.vaughan.ca/cityhall/environmental_sustainability/General%20Documents/Vaughan%20Community%20Climate%20Action%20Plan%20-%20DRAFT.pdf
Brampton, ON	June/05/2019	Yes		https://www.brampton.ca/EN/residents/GrowGreen/Documents/CEERP/CEERP_Combined_20200921.pdf
Port Moody, BC	June/11/2019	Yes		https://www.portmoody.ca/common/Services/eDocs.ashx?docnumber=511721
Kitchener, ON	June/24/2019	No	Only has a corporate mitigation plan	https://www.kitchener.ca/en/resourcesGeneral/Documents/Kitcheners-Corporate-Climate-Action-Plan.pdf
Squamish, BC	July/02/2019	Yes		https://squamish.ca/assets/5a46b62375/CCAP-Update-January-2020-v2.pdf
North Vancouver District, BC	July/08/2019	Yes		https://www.dnv.org/programs-services/community-energy-and-emissions-plan-cep

APPENDIX A: ORIGINAL LIST OF 54 CITIES WITH LINKS

CITY	CEDED DATE	EQUITY	REASON FOR EXCLUSION	LINK TO PLAN
West Vancouver, BC	July/08/2019	No	Out of date plan(2010) with no equity	https://westvancouver.ca/sites/default/files/Climate%20Action%20Working%20Group%20Final%20Report.pdf
Mississauga, ON	June/19/2019	No		https://www.mississauga.ca/wp-content/uploads/2020/09/13161337/Mississauga_Climate_Change_Action_Plan_FINAL_Approved-1.pdf
Edmonton, AB	Aug/27/2019	Yes		https://www.edmonton.ca/city_government/documents/Climate_Resilient_Edmonton.pdf
Burnaby, BC	Sept/09/2019	No		https://www.burnaby.ca/City-Services/Policies--Projects---Initiatives/Environment/Climate-Action.html
Toronto, ON	Oct/02/2019	Yes		<ul style="list-style-type: none"> https://www.toronto.ca/wp-content/uploads/2017/11/91f6-TransformTO-Modelling-Torontos-Low-Carbon-Future-Results-of-Modelling-Gr....pdf https://www.toronto.ca/wp-content/uploads/2020/02/92f8-TransformTO-Climate-Action-for-a-Healthy-Equitable-Prosperous-Toronto-Implementation-Update-2017-and-2018.pdf
Barrie, ON	Oct/07/2019	Yes		https://www.barrie.ca/Living/Environment/Conservation/Documents/Barrie-Climate-Change-Adaptation-Strategy.pdf
Surrey, BC	Nov/04/2019	Yes		https://www.surrey.ca/sites/default/files/media/documents/ClimateAdaptationStrategy.pdf .
St. Johns, NFL	Nov/04/2019	N/A	Only provincial climate plan	
Windsor, ON	Nov/18/2019	Yes		https://www.citywindsor.ca/residents/environment/climate-change-adaptation/Pages/default.aspx#:~:text=The%20adaptation%20plan%20focuses%20on,basements%2C%20roads%20and%20other%20infrastructure
New Westminster, BC	Mar/11/2019	No		https://www.newwestcity.ca/database/files/library/ESAPweb.pdf
Victoria, BC	Mar/14/2019	Yes		https://www.victoria.ca/assets/Departments/Sustainability/Documents/City%20of%20Victoria%20Climate%20Action%20Plan.pdf
Treaty #3, ON	Oct/03/2019	N/A	No formal action plan	
Waterloo, ON	Oct/09/2019	No		http://www.climateactionwr.ca/wp-content/uploads/2017/06/Our-Progress-Our-Path.pdf
Quebec City, QC	2019	N/A	No available plan yet	
Sherbrooke, QC	2019	N/A	No English materials	https://www.enviroaccess.ca/blog-en/2013/10/30/test-title/
Terrebonne, QC	2019	N/A	No available materials	
Laval, QC	2019	N/A	No municipal materials	
Trois-Rivieres, QC	2019	N/A	No municipal materials	
Longueuil, QC	2019	N/A	Likely covered in Montreal	
Montreal, QC	April/08/2019	Yes		https://res.cloudinary.com/villemontreal/image/upload/v1611255391/portail/ndbtwahsmb7x24rsiqxl.pdf

APPENDIX A: ORIGINAL LIST OF 54 CITIES WITH LINKS

CITY	CEC DATE	EQUITY	REASON FOR EXCLUSION	LINK TO PLAN
Gatineau, QC	2019	N/A	No materials	
Calgary, AB	N/A	No		https://www.calgary.ca/uep/esm/climate-change/climate-actions.html
Winnipeg, MB	N/A	Yes		https://winnipeg.ca/sustainability/PublicEngagement/ClimateActionPlan/pdfs/WinnipegsClimateActionPlan.pdf
Saskatoon, SK	N/A	Yes		https://www.saskatoon.ca/sites/default/files/images/local_actions_report-ccas-disclaimer.pdf
Markham, ON	Feb/2020	Yes		https://www.markham.ca/wps/wcm/connect/markham/d5e52804-39c1-45a4-bc18-3167a021f50e/greenprint-community-sustainability-plan.pdf?MOD=AJPERES&CONVERT_TO=url&CACHEID=ROOTWORKSPACE.Z18_2QD4H9010GV160QC8BLCRJ1001-d5e52804-39c1-45a4-bc18-3167a021f50e-mDpOd0e
Prince George, BC	N/A	No		https://www.princegeorge.ca/City%20Services/Documents/Environment/Climate%20Action/COPG_Climate%20Change%20Plan%20-%20Mayors%20Letter%20(proof_V2).pdf
Guelph, ON	N/A	No	Only plan is from 2007, no equity	https://guelph.ca/plans-and-strategies/community-energy-initiative/
Saanich, BC	June/2019	Yes		https://www.saanich.ca/assets/Community/Documents/Planning/sustainability/2020-climate-plan-web-v13.0.pdf
York Region, ON	Not every suburb declared	Yes		https://yorkpublishing.escribemeetings.com/filestream.ashx?DocumentId=10811#:~:text=The%20Energy%20Conservation%20and%20Demand, York%20Region%27s%20control%20and%20influence.&text=The%20plan%20also%20aligns%20with, zero%20corporate%20greenhouse%20gas%20emissions.
Fredericton, NB	N/A	No		https://www.fredericton.ca/sites/default/files/pdf/cof_climate-change-adaptation_report-eng.pdf
Saint. John, NB	May/07/2019	Yes	No formal action plan developed	
Thunderbay, ON	Jan/2020	N/A	Plan to be released 2021	https://climatereadycity.com/strategic-directions/
North Bay, ON	N/A	N/A	No plan yet, refusal to declare CE	
Vancouver, BC	Jan/2019	Yes		<ul style="list-style-type: none"> https://council.vancouver.ca/20201103/documents/p1.pdf https://vancouver.ca/files/cov/climate-emergency-action-plan-summary-2020-2025.pdf

APPENDIX B: 24 CITIES + EQUITY THEMES

CITY	JOBS/ ECONOMY	INDIGENOUS RELATIONS	URBAN GREENERY EQUITY	FOOD SECURITY	HEALTH	COSTS (TRANSPORT, HOUSING, ENERGY)
Toronto,ON						
York Region, ON						
Saanich, BC						
London,ON						
Windsor,ON						
Winnipeg,MB						
Halifax,NS						
Brampton,ON						
Squamish,BC						
Surrey,BC						
Edmonton,AB						
Burlington,ON						
Ottawa,ON						
Port Moody, BC						
Barrie,ON						
Victoria,BC						
Montreal,QC						
Markham,ON						
Vancouver, BC						
District of NV, BC						
Saskatoon,SK						
Hamilton,ON						
Sudbury,ON						
Charlottetown,PEI						

APPENDIX C: 24 CITIES + DEMOGRAPHICS

CITY	RACE	AGE	SOCIO-ECONOMIC	PHYSICAL ABILITY
Toronto,ON				
York Region, ON				
Saanich, BC				
London,ON				
Windsor,ON				
Winnipeg,MB				
Halifax,NS				
Brampton,ON				
Squamish,BC				
Surrey,BC				
Edmonton,AB				
Burlington,ON				
Ottawa,ON				
Port Moody, BC				
Barrie,ON				
Victoria,BC				
Montreal,QC				
Markham,ON				
Vancouver, BC				
District of NV, BC				
Saskatoon,SK				
Hamilton,ON				
Sudbury,ON				
Charlottetown,PEI				

APPENDIX D: 24 CITIES + LANGUAGE

PLAN	EQUITY & EQUITABLE	INCLUSIVE/ INCLUSIVITY	JUSTICE	RECONCILIATION	NOTES
Toronto: TransformTO Results of Modelling 2050 (2017)	Equity: 29	1	0	0	Unable to use 'equitable' because it is in the plan name.
York Region Draft Climate Change Action Plan (2019-2020)	Equity: 3 Equitable: 5	0	1	0	
Climate Plan: 100% Renewable and Resilient Saanich (2020)	Equity: 15 Equitable: 2	2	0	2	
London: Climate Emergency Action Plan Meeting on: August 11, 2020	Equity: 2	1	0	0	
Windsor: Degrees of Change Climate Change Adaptation Plan (2018)	Equity: 1	0	0	0	
Winnipeg's Climate Action Plan 2018	Equity:17 Equitable:1	1	7	7	
HalifACT 2050 (2019-2020)	Equity: 5 Equitable: 4	3	0	3	"just transition" referenced 3 times
Brampton Our 2040 Energy Transition (2020)	Equity: 9 Equitable:2	3	1	0	
District of Squamish Community Climate Action Plan 2020	Equity: 10 Equitable: 3	2	0	0	
City of Surrey Climate Adaptation Strategy	Equity: 1	1	0	0	
Climate Resilient Edmonton 2018	Equity: 1	4	0	0	
Burlington Climate Action Plan 2020	Equitable: 3	0	0	0	
Ottawa Climate Change Master Plan Draft 2019	Equity: 1	1	0	0	
Port Moody Climate Action Plan 2020	Equity: 4 Equitable:2	0	1	0	
Barrie Climate Change Adaptation Strategy 2017	Equity: 1	3	0	0	
Victoria Climate Leadership Plan 2020	Equity: 1	0	0	0	'Inequity' is used instead of equity
Montreal Climate Plan 2020-2030	Equity: 9 Equitable: 7	11	0	0	"just" is used 4 times in reference to justice
Markham's Greenprint Sustainability Plan 2050 (2011)	Equity: 28 Equitable:7	12	1	0	
Vancouver CEAP Report to Council 2020	Equity: 290 Equitable: 62	0	1	0	Equity # skewed by the 'Climate Equity Working Group' mentions
North Van Impact 2050 Community Energy and Emissions Plan 2019	Equity: 7 Equitable: 4	0	0	0	
Saskatoon Low Emissions Community Plan: MitigationReport 2019	Equity: 7 Equitable: 5	1	0	0	
Taking Action on Climate Change in Hamilton - A Community Plan 2015	Equity: 2	1	0	0	
Greater Sudbury Community Energy and Emissions plan (2019)	Equitable: 1	1	0	0	
Charlottetown Community Energy Plan	Equity: 1 Equitable:1	0	0	0	