

ON A JUST FEMINIST ECOLOGICAL TRANSITION IN MONTRÉAL



Acknowledgments

The Conseil des Montréalaises (CM) extends its heartfelt thanks to everyone who participated in this process. This opinion paper would not have been possible without their time and voices.

This opinion paper was adopted by the CM members at the regular meeting held on August 23, 2022, and was submitted to the municipal council of the City of Montréal.

The CM uses nonsexist language in its communications and its written research. This commitment is one step toward adopting language that represents and includes nonbinary and trans people.

The Conseil des Montréalaises working committee

Dominique Daigneault (CM member), Mélissa Côté-Douyon (CM member until June 2022), Marie-Ève Rancourt (CM member until June 2022), Marianne-Sarah Saulnier (CM member)

Literature review

Jen Gobby, with the collaboration of Simona Bobrow, Leila Cantave, Rosalie Thibault

Research

Naomie Léonard, Hélène Madénian, Gabrielle Perras St-Jean

Writing

Mélissa Côté-Douyon, Naomie Léonard, Hélène Madénian, Gabrielle Perras St-Jean, Marianne-Sarah Saulnier

Coordination

Kenza Bennis, CM coordinator

Translation

Josée Lafrenière

Graphic design and creation

Sonia Bluteau – Antimoine Atelier

Graphics

Marie-Josée Forest

OCTOBER 2022

Legal deposit

Bibliothèque et Archives nationales du Québec

ISBN : 978-2-7647-1969-5

CONSEIL DES MONTRÉALAISES

1550 Metcalfe Street, 14th Floor, Suite 1424

Montréal, Quebec H3A 1X6

Telephone: 514-868-5809

conseildesmontrealaises@ville.montreal.qc.ca

www.ville.montreal.qc.ca/conseildesmontrealaises

 conseildesmontrealaises

 C-Montréalaises

Table of contents

About the Conseil des Montréalaises	6
List of acronyms and initialisms	7
About climate change	8
Introduction	10
01 Methodology	12
02 Overview of climate change through the lens of gender	16
2.1 Gendered perceptions of climate change	17
2.2 Gendered impacts of climate change	19
2.3 The solutions under consideration and their impacts along gender lines	20
03 Montréal women and climate change: Current and forthcoming issues	24
3.1 Access to affordable, quality housing	25
3.1.1 Women in precarious housing or homelessness situations: More vulnerable to climate change	25
3.1.2 Housing, heat islands and heat waves	26
3.1.3 Buildings' energy performance and thermal comfort in winter	28
3.2 Transportation and mobility	28
3.2.1 Public transportation	29
3.2.2 Active transportation	31
3.3 Accessibility of parks and green spaces	33
3.4 Access to nearby shops and services	36
3.5 A desire for citizen involvement	38
Conclusion	40

Recommendations	44
References	48
Appendix 1: Interview grids	56
Grid for experts	56
Grid for activists	57
Grid for women's groups and community organizations	58
Appendix 2: Theoretical bases	60
Sexual division of labour	60
Ecofeminism	60
Territorial equity	60
Intersectionality	61
Climate justice	61
Just ecological transition	62
Social reproduction and care work	62
Appendix 3: Maps	64
Intra-urban heat islands in the Montréal agglomeration	64
Map of flood-prone areas	65
Social and material deprivation map	66
Notes	67

About the Conseil des Montréalaises

The Conseil des Montréalaises (CM) was founded in 2004 and is made up of 15 volunteer members who reflect the diversity of Montréal's women. It acts as a consultative body of the municipal government on matters related to the status of women and gender equality for all. The CM takes an intersectional feminist approach to understanding the different realities of Montréal women.

The CM has the following roles:

- Providing opinions, on its own initiative or by request from the City of Montréal's mayor, executive committee or city council, on matters related to gender equality, equality among women and the status of women, and submitting its recommendations to the Montréal city council;
- Soliciting opinions, and receiving and considering requests and suggestions from any person or group on matters related to gender equality, equality among women and the status of women;
- Helping to develop and implement a gender equality policy framework for municipal employees;
- Conducting or commissioning studies and research it deems useful or necessary to the performance of its roles.

The CM is an invaluable democratic tool. It is well aware of the ideas and ways of thinking of feminist citizens and community organizations in the region, and it stays abreast of their analyses and voices. Its main areas of intervention are city life, city governance and working for the City. The CM's work therefore focuses on the quality of life of Montréal women (in transportation, housing, the fight against poverty, safety, homelessness, sports and leisure offerings, etc.), on the presence and participation of women in municipal politics, on the employability of Montréal women and on the working conditions of women who are civil servants.

List of acronyms and initialisms

CM: Conseil des Montréalaises

COP: Conference of the Parties

GHGs: greenhouse gases

INSPQ: Institut national de santé publique du Québec (Quebec public health institute)

IPCC: Intergovernmental Panel on Climate Change

NGO: nongovernmental organization

PACCAM: Plan d'adaptation aux changements climatiques de l'agglomération de Montréal (Climate Change Adaptation Plan for the Montréal Urban Agglomeration)

PUM: Plan d'urbanisme et de mobilité (Land Use and Mobility Plan)

REM: Réseau express métropolitain (Montréal express urban transportation network)

SDGs: sustainable development goals (UN)

STM: Société de transport de Montréal (Montréal public transit company)

TGFM: Table des groupes de femmes de Montréal (regional round table of women's groups)

About climate change

Climate change has been an international political issue since the United Nations Conference on Environment and Development, also known as the Rio Conference or Earth Summit, in Rio de Janeiro in 1992. This Summit led to the creation of the United Nations Framework Convention on Climate Change (UNFCCC), which defines climate change as “a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods” (United Nations, 1992). The Earth Summit’s goal was to enable international cooperation to fight climate change, with a view to limiting global warming on the one hand, and facing its unavoidable impacts on the other.

Since 1992, the international community has been meeting yearly at the Conference of Parties (COP). Some of the key events of these meetings have been the signing of the Kyoto Protocol in 1997 and of the Paris Agreement at COP 21 in December 2015. The objective of the Paris Agreement is to contain “a global temperature rise this century well below 2 degrees Celsius above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5 degrees Celsius” (United Nations, 2015).

Intergovernmental Panel on Climate Change (IPCC)

The IPCC was created in 1998 by the World Meteorological Organization and the United Nations Environment Programme. Its objective is to provide scientific information to governments for the development of climate policies. The IPCC’s sixth assessment cycle has given rise to three reports in 2021 and 2022, summarizing the latest scientific knowledge about the current climate situation. In addition to its cycle reports, the IPCC publishes regular special reports, such as the *Special Report on Global Warming of 1.5 °C* (2019), which consolidates the existing knowledge after the Paris Agreement.

Mitigation and adaptation

The fight against climate change involves two strategies: reducing greenhouse gases (GHGs), which is known as mitigation, and adapting to the changes in the climate.

Mitigation describes the human actions that can reduce emissions (e.g. from transportation or buildings) or improve greenhouse gas sinks (e.g. natural or technological means of capturing GHGs). Carbon neutrality is a concept that is often associated with GHG reduction. It refers to a situation where there are equal amounts of GHGs emitted from human activity and of GHGs absorbed or suppressed. This would occur when one ton of GHGs emitted from transportation is offset by planting enough trees to absorb that quantity of carbon dioxide (CO₂), which is one type of GHG.

The second strategy, adaptation, is the process of adjusting to the current or expected climate variations and their impacts, to lessen the ensuing damages or to draw any potential benefits. For instance, greening (e.g. developing parks and adding curb extensions, also known as bump-outs) helps reduce the urban heat island effect and it helps prevent urban flooding by draining rainwater. Often linked with adaptation is the idea of resilience, which may be defined as the capacity to adapt, through resistance or change, in order to keep functioning.

Cities and climate change

Cities are important actors relative to climate change. First, they emit large quantities of GHGs, including CO₂. The major GHG emitters in cities are generally the industrial, transportation and building sectors. Second, city infrastructures and populations are highly vulnerable to the impacts of climate change. One need only think of the material damage caused by storms or flooding, or the health impacts of heat waves. And lastly, the high density and proximity of services in urban areas also means that the amount of GHG emitted per person is often lower than in peri-urban or rural areas (Baiocchi et al., 2015).

As economic and demographic centres, cities are also part of the solution to the climate crisis. For many years, cities have been taking action on the climate through commitments and declarations, climate plans and urban experiments. Many cities want to contribute to reaching the international goal of the 2015 Paris Agreement to limit global warming to 1.5 °C and to become carbon neutral by 2050. Another example of how cities are making a contribution is through participation in the C40 Cities Climate Leadership Group. This international group of cities focuses on fighting climate change through collaboration and knowledge sharing, so that actions lead to greater equity and create sustainable cities for all.

Just ecological transition

While there is no single definition of a just ecological transition, it may be understood as a “fair and equitable process to move toward a post-carbon society and resilient and sustainable development” [translation] (Masson-Delmotte et al., 2021). See Appendix 2 (Theoretical Bases) for a more complete definition.

Introduction

During its sixth assessment cycle in 2021–2022, the IPCC published three reports summarizing the most recent scientific knowledge on the current status of climate change, on future climate scenarios and on the most promising actions to reduce GHGs and adapt to climate change. Several chapters look specifically at cities, highlighting the risks they are exposed to and the solutions they should focus on.

The IPCC emphasizes that vulnerability within urban communities varies according to embedded social and economic processes as well as other determinants, notably gender and ethnic origin. Along these lines, the report of the IPCC's Working Group II, *Impacts, Adaptation and Vulnerability*, explains why it is important to consider the various population groups that make up any given territory when diagnosing, reflecting on, participating in or implementing policies relating to climate disruptions. It also reminds us of the need to propose political measures that have a long-term vision and that target transformations that are in line with social rules, standards and behaviours, in order to simultaneously fight structural inequalities and plan for an environment that allows marginalized groups to adapt effectively to climate change.

Like many other world cities, Montréal has been involved in the fight against climate change for many years. In December 2020, it published *Climate Plan 2020–2030: Building An Inclusive, Resilient, Carbon-neutral City*. The plan aims to reduce GHG emissions 55% by 2030 and to put some adaptation measures in place. Montréal has already started to see the signs of climate change and these will ramp up in years to come, be they increased average annual precipitation or more frequent heat waves. However, these climatic variations affect different inhabitants of the city in inconsistent ways. Studies show that, generally, women are more vulnerable to the impacts of climate change, while they contribute the least to GHG emissions. Also, women are more involved than men in climate action, but paradoxically are less represented in the decision-making arenas with power to act on the issues.

The City of Montréal's *Climate Plan 2020–2030* speaks of “making the city more resilient, greener and carbon neutral, but also more inclusive and fairer”; however, it does not specifically address gender issues. In this, Montréal is not an isolated case. The scientific literature shows that the notion of gender only recently entered into discussions on climate change mitigation and adaptation. Gender-differentiated concerns and impacts are still far too rarely addressed in public policy and environmental practices, despite the fact that scientific research has clearly demonstrated the importance of taking

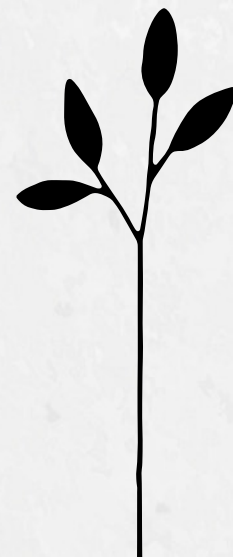
this into account in order to gain a tangible understanding of climate changes, since gender influences how the crisis is experienced (Köhler et al., 2019).

The aim of this opinion paper is to document the impacts of climate change on Montréal women¹ and to make recommendations to the City of Montréal for a just ecological transition. By using an intersectional approach (see definition in Appendix 2) to take gender into account in its fight against climate change, the City would avoid reproducing sexist biases and worsening the inequalities that exist between men and women, and among women themselves.

Taking the dual perspectives of fairness and intersectional feminism in the fight against climate change is all the more important given that the City of Montréal has made commitments in this regard in its *Climate Plan 2020–2030*. Further, to “speed up the ecological transition” is one of the four areas of action in the City's strategic plan, “Montréal 2030,” and the ecological transition is an integral part of the current thinking in the City's 2050 land use and mobility plan (PUM). These show how much the environment impacts the City's many policies and speaks to the fact that the actions taken today are shaping the future of our city and its inhabitants.

This opinion paper is based on research that involved a literature review, document analysis, interviews with experts on gender and the environment and with community workers, and a focus group of environmental activists.

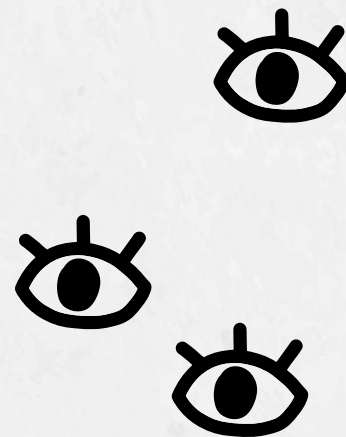
The document comprises four sections. The first section presents the research methodology. The second provides a situational analysis of gender issues relating to climate change. In the third section, the current and forthcoming environmental issues identified by our research participants are outlined: access to affordable quality housing, transportation and mobility, accessibility of parks and natural areas, accessibility of local shops and services and, lastly, the role of citizen involvement in the fight against climate change. In the fourth and final section of the opinion paper, the CM presents its recommendations to the City of Montréal to implement a just, feminist ecological transition.



01 Methodology

This opinion paper aims to shine a light on the impacts of climate change on Montréal women and to look at the planned adaptation measures in order to make recommendations to the City of Montréal to make an equal and inclusive ecological transition. More specifically our approach was guided by these questions: What are the factors of vulnerability to climate change that specifically affect urban women? How can the impacts of climate change on Montrealers in general and on women more specifically be reduced? What are the most promising solutions to achieve the vision of a just, feminist ecological transition?

This opinion paper is based on a qualitative research approach inspired by the principles of feminist research. Its difference lies in its desire to showcase women's knowledge and experience and in its interest in phenomena overlooked by the dominant perspectives. This type of research is consistent with the CM's mission, the topic of the opinion paper and the theoretical bases on which it builds. Intersectionality recognizes that systems of oppression overlap. Thus, special attention has been given to the views of Montréal women of varied backgrounds, ages, sexual orientations and ability, as well as from different neighbourhoods and socioeconomic milieus.



The methodological strategy was deployed in two stages. The first consisted of a review of the recent scientific literature on gender and on climate change (Gobby et al., 2021). The documents consulted allowed us to grasp the major interactions between the two aspects of the phenomenon under study and to gather information on the principal climate risks threatening Montréal. Concurrently, exploratory discussions were held with three Quebec experts on gender and climate change issues in order to guide our process.

The literature review and preliminary discussions revealed that there is nothing “natural” about climate change vulnerability factors. Instead, they result from land use issues and social inequalities that take material shape over a territory. In Montréal, some communities are more affected by the climate crisis due to land use issues (such as lack of green spaces, presence of heat islands and heavy infrastructure, and the creation of enclaves) and social inequalities (such as sexism, racism, poverty and ageism).

To identify areas that have already been impacted by climate change, or are most likely to be, we consulted two sources of map data: the maps of heat islands and flood-prone areas from the PACCAM 2017 Report, and the map on material and social deprivation in Montréal (2016) created from INSPQ data. These maps are included in Appendix 3.

Overlaying the maps of heat islands and flood zones with the deprivation map reveals that the most vulnerable areas are concentrated in Montréal's northeast (Montréal-Nord, Rivière-des-Prairies, Pointe-aux-Trembles), east (Mercier-Hochelaga-Maisonneuve), southwest (Pointe-Saint-Charles, Ville-Émard, Lachine) and along the Des Prairies River (Pierrefonds, Ahuntsic-Cartierville). The neighbourhoods of Parc-Extension and Saint-Michel are also more vulnerable due to sociodemographic factors and to material inequities reflected in its built environment.

Secondly, data was collected during 16 semi-directed discussions and one focus group, which consisted of three categories of participants: experts, community workers and environmental activists.

The first category included provincial specialists on gender, environment, urban planning, health and human rights issues. Participants were selected on the basis of their ability to speak to questions relating to climate justice, urban planning and social inequality. Eight discussions were held with 10 participants, touching upon the following themes, among others: the gender-differentiated impacts and perceptions of climate change; the actions to be given priority to reduce, or not worsen, inequalities between men and women and among women themselves; and the measures that should be implemented in Montréal.

The second category—workers from community organizations—was included to reach participants from areas previously identified as vulnerable. While the organizations' missions do not specifically focus on the environment, our assumption was that workers from these organizations would be able to provide helpful testimonials on climate change due to their close ties to the communities affected. Eight discussions were held with employees from organizations working with various subgroups of women (e.g. mothers, seniors, immigrants and racialized women). The themes addressed covered the needs of women in their neighbourhoods, local environmental challenges, the risks perceived and experienced by the women and the actions that should be prioritized.

The third focus group brought together five activists involved in mobilizing citizens around social and environmental justice in Montréal, and it allowed us to dig deeper into the themes of the convergence of the feminist and environmental struggles, to discuss local environmental issues and to look critically at the courses of action currently being recommended. A very rich dialogue ensued, and links were made between ongoing struggles taking place at various scales and mobilizing diverse communities.

In total, 23 people took part in the data collection. Discussions with the participants were recorded and then summarized immediately after the meetings. The thematic analysis of the data was done using NVivo qualitative data analysis software.

Overview of climate change through the lens of gender

Studies on the topic all conclude that the perceptions and impacts of climate change differ according to gender. A similar finding is reached regarding adaptation or mitigation solutions and measures and their effects. It should be noted however that there is a limited amount of data available on the gendered impacts of climate change in cities of the Western world.



Gendered perceptions of climate change

Studies reveal that perceptions about climate change (its seriousness and the measures required to respond to it) are differentiated along gender lines. Generally speaking, the perception of a climate threat is higher among women, who also are less likely to be climate-change skeptics. Le Baromètre de l'action climatique (Champagne et al., 2021), which looks at Quebecers' attitudes toward the fight against climate change, confirms that the abovementioned findings also apply in Quebec. The document reports that women

- have a greater perception of climate change as a short-term threat,
- experience more negative emotions (e.g. powerlessness, anger, grief) about climate change than men, and
- are more inclined than men to consider variations in the way climate change will affect Quebecers as a whole.

Social reproduction responsibilities (domestic and care work) play a role in women's greater awareness of the threat that climate change represents. Women thus show greater sensitivity and pragmatism than do men in response to climate change. They also incur more severe mental health repercussions, and they feel negative emotions on a daily basis, as a result of the climate crisis (McCright, 2010).

This more acute sensitivity and feeling of responsibility that women feel toward climate change can be explained in part by the messages in awareness-raising campaigns, which often mention the need to change daily living and domestic habits—areas in which women are highly invested. As a result, practices that fall under the individual category along the spectrum of environmental action (such as zero waste, making things homemade [DIY] and countering food waste) can actually add to women's burden, since they are generally the ones responsible for household consumption on a day-to-day basis.

Given women's heightened awareness, experts argue that communication and awareness-raising strategies should take gender differences into account, particularly since they also involve differences in motivation about how to act to tackle the climate emergency.

Reproductive work and climate change

The fact that women are mainly responsible for social reproduction work, i.e., domestic and care work (care given to children, seniors and others) modulates women's vulnerability to climate effects as well as their perceptions of these changes and the actions they take to confront them (Rochette, 2018c). Although it may vary due to other social factors, gender socialization means that women are still vastly overrepresented in unpaid reproductive work (domestic tasks and care of dependents) and in caregiving professions (e.g. teaching and nursing). The lack of social recognition for the reproductive work done by women has two major consequences. First, it makes them more vulnerable to climate change and its effects by increasing their individual mental and economic load and decreasing their quality of life. Second, it contributes to the invisibilization of potential adaptation and mitigation measures, since women's realities and voices are underrepresented—and even overlooked—in discussions about possible action and decision making (Khosla and Masaud, 2010).

2.2

Gendered impacts of climate change

Studies show that, generally, women are more vulnerable to the effects of climate change, as a result of social inequities (Gaard, 2015). If women, as a heterogeneous social group, show greater overall vulnerability to the effects of climate change, it is because this intersects with other vulnerability factors, such as poverty. The results of vulnerability are twofold: women are more at risk of being impacted by climate change, and they are more at risk of being unable to adapt.

Our review of the literature revealed that there are four major aspects of climate change impacts that are especially differentiated along gender lines.

First, we recall that women's greatest vulnerability to changes in climate seems to stem from their greater economic insecurity, especially as it relates to reproductive work (IPCC, 2022, ch. 18; Weiss, 2012). Climate change triggers higher economic stress for women and has stronger impacts on their means of subsistence and food security (Belsey-Priebe et al., 2021; Sellers, 2016). Combined with other structural inequalities, such as systemic racism, this insecurity puts women in a marginal position that has negative repercussions on their living conditions, on their resilience to climate change and on the invisible work they do to maintain healthy environments (Arora-Jonsson, 2019).

Further, when extreme climate events do occur, or in post-disaster situations such as power outages, the load of work (paid or not) can increase, leading to a greater demand on women to provide care, which in turn, intensifies their stress (Alber et al., 2017). It should be noted that, in Canadian caregiving jobs, women make up the majority, and racialized women (including immigrant women) are overrepresented (Canadian Research Institute for the Advancement of Women, 2021). In Quebec, women account for 90% of nurses and 88% of assistant nurses and personal care assistants (Gouvernement du Québec, 2019). The most recent Statistics Canada figures (2016) showed that women of African descent or origin and women of Maghreb origin made up over 50% of this workforce, and specialists believe this percentage has likely increased (Turcotte and Savage, 2020).

This finding also relates to the second aspect of gender-differentiated climate change impacts: damage to health and, especially, mental health. Studies reveal that the long-term impacts of extreme events (e.g. flooding) are more intense because of the way social reproduction (domestic and care work) is allocated (Sellers, 2016; Waldron, 2018). This allocation of reproductive work also has disproportionate consequences on the physical and reproductive health of women specifically, because of their greater exposure to pollutants or endocrine disruptors. Along these lines, Waldron (2018) underscores that this disproportionate exposure to environmental risks or degradations must be understood from an intersectional perspective and through the complex fabric of social inequalities (e.g. poverty, colonialism) that combine and reinforce each other to create greater exposure and vulnerability to risks, particularly among racialized and Indigenous communities.

Adding to this is the third aspect in which climate change impacts are gender-based, namely, the rise in physical, psychological and sexual violence toward women during extreme events such as floods, heat waves and pandemics (Perkins and Peat, 2017).² This phenomenon has been observed multiple times and is most likely underestimated due to the difficulty of collecting this type of data during humanitarian and environmental crises (Perkins, 2019). The Global Gender and Climate Alliance takes stock of this situation using the case of Hurricane Katrina. During this crisis, psychological violence rose 35% for women and 17% for men, and physical violence against women increased 98% (Sellers, 2016). Similarly, during the COVID-19 pandemic, conjugal violence against women intensified worldwide (Dlamini, 2021; UN Women, 2020).

Fourthly, climate change contributes to increasing the inequalities between women and men but also among women themselves (Eastin, 2018). This is because environmental crises strengthen the sexual division of labour that assigns social reproduction (domestic and care work) to women. This differentiation according to gender goes hand in-hand with other existing social inequalities (e.g. racism, ableism). These issues must be taken into account when adopting policies and laws to fight climate change, to avoid consolidating existing inequalities (Rochette, 2018a).

In urban areas, citizens are more reliant on municipally provided infrastructures and services. However, access to these is not uniform and varies according to social characteristics (Alber, 2011). Urban territorial inequities tend to accentuate the climate vulnerability of people and communities that are already socioeconomically disadvantaged (Alber et al., 2017; Khosla and Masaud, 2010). Special attention must also be paid to various social factors, such as gender, class, ethnicity, age and ability, that influence the climate vulnerability of some communities (Wilby and Keenan, 2012; Ranganathan and Bratman, 2019; Thomas, Cretney and Hayward, 2019).

That said, while it is important to acknowledge women's increased vulnerability, it is also important to remember that they are agents of change in the fight against climate change as well and that they have solutions to contribute. In light of the fact that this vulnerability is the outcome of socio-environmental processes and factors, it is possible— and necessary—to pursue a just ecological transition and to propose solutions that consider these socio-environmental gaps.

2.3

The solutions under consideration and their impacts along gender lines

If the perceptions and impacts of climate change are differentiated by gender, then so should the ways of responding to it. This is important to consider, to give some thought to a just ecological transition that helps reduce inequalities between men and women and among women, rather than one that maintains or exacerbates them.

The scientific literature reveals that the idea of gender only recently entered into discussions on climate change mitigation and adaptation policies. Indeed, these policies generally don't take into account gender-differentiated aspects, concerns and impacts. Therefore, while the Canadian federal climate policy mentions that vulnerability increases according to gender, it neither proposes nor implements any concrete actions to address this (Rochette, 2016). The situation is not much better at the provincial level in Quebec, since no consideration or action on the gender-differentiated impacts of climate change is mentioned in the *2030 Plan for a Green Economy*. The same can be said for the City of Montréal, since its *Climate Plan 2020–2030* talks about a “more inclusive and fairer” transition but does not consider gender.

Thus, not only are women—especially those at the intersection of oppressions—overlooked by public policy, but this gender blindness deprives everyone of transformative solutions that would benefit social and climate justice (Cohen, 2017). The rare studies that have looked at this issue show that the solutions envisioned to respond to climate change and the ensuing environmental disasters differ by gender. Men are more likely to value solutions focused on the financial market and technological or scientific approaches, while women are more likely to prioritize actions of daily life³ (Cohen, 2017; Rochette et al., 2013; Faulkner, 2000). This led one researcher (Chalifour, 2017) to affirm that increasing the number—and tangible participation—of women involved in developing climate policies is an essential strategy to diversify adaptation and mitigation measures. Otherwise the inequalities between men and women and among women become more entrenched (Nagoda and Nightingale, 2017; Garcia et al., 2020).

Another research paper (Solomon et al., 2021) reaches the same conclusions about gender equality. This team conducted a study on how urban adaptations enable or impede reaching the UN's fifth Sustainable Development Goal (SDG): “achieve gender equality and empower all women and girls.” The study concludes that most current interventions (e.g. awareness raising, ecosystem-based adaptation programs, heat-related adaptation measures) pose a barrier to reaching SDG 5, insofar as they are devoid of gender-differentiated analysis and measures to encourage women to participate in planning, designing and implementing these interventions. In fact, the adaptation or mitigation measures that have had positive impacts in terms of SDG 5 were those that increased women's participation in decision making and their access to resources.

In the dominant discourse, there are two major trends emerging among the solutions to fight climate change: techno-economic measures and individual-scale action. However, these two action categories have the shortcoming of reproducing existing inequalities between men and women.

Techno-economic measures focus on the economy (e.g. carbon tax) or technology (e.g. carbon capture) to fight climate change. Such solutions usually overlook the social and economic roots of the current climate crisis. They fall under an economic development model that continues to target growth and that favours traditionally male economic sectors (Buck et al., 2014). Further, these solutions embody a perspective of having control over nature, which, according to many ecofeminists and Indigenous activists, goes hand-in-hand with the domination and exploitation of women.

These techno-economic measures are also gender-blind in their application, which is likely to produce uneven social impacts and to exacerbate existing inequalities (Faulkner, 2000). For instance, the energy transition favours an approach that structurally moves modes of production and consumption toward greener energy. This approach reproduces the tendency to overlook women. In fact, it fosters the development of “good jobs” in male-dominated sectors, thereby entrenching pre-existing professional inequalities (Lieu et al., 2020).

According to Cohen (2014), solutions responding to climate change should not be confined to technology. Notably, they should extend to valuing social reproduction (domestic and care work, predominantly performed by women), which is crucial to the functioning of our systems, but largely disregarded in climate change adaptation solutions. Including it would enable an acknowledgement of the mental load that climate change imposes on women (increase in the number of dependents, work overloads in caregiving positions) and broaden the spectrum of pro-environmental actions (without exacerbating individual mental and economic loads), while also contributing to reducing inequalities between men and women and among women.

The second type of solution that has the undesirable effect of contributing to existing inequalities is the valuing of individual-scale climate action (e.g. zero waste, homemade, anti-waste). Insofar as women are still largely overrepresented in the responsibility for social reproduction (domestic and care work), environmental concerns and measures are added onto their daily workload, including the associated mental load. Furthermore, the positive impacts of individual action are limited. In fact, though individual actions have some importance, it is especially critical for us to adopt collective actions and political and economic directions that support a just transition, as has been underscored by the IPCC (2022).

The fight against climate change and gender stereotypes

A differentiated reading of the impacts of climate change and of the solutions considered must be done in a way that does not reproduce or strengthen gender stereotypes. For instance, the discourse on sustainable development in countries of the South tends to position women as champions of sustainable development, as though it was a skill inherent to their sex (Resurrección, 2013). On the other hand, some of the international discourse portrays women as victims of the climate crisis, thereby denying their agency and their ability to take action on the events taking place. Thus, it is important in this discussion to not reproduce the archetypal figures of women, as solely virtuous or vulnerable in the fight against climate change (Arora-Jonsson, 2011).

Montréal women and climate change: Current and forthcoming issues

The data collected reveals that the living conditions of Montréal women vary greatly from one area of the city to another, and that these variations significantly impact women's resilience to climate change. As previously mentioned, climate vulnerability is related to the material and social deprivation index. On average, women have a lower standard of living than men. More women than men live below the low-income cut-off, and a greater percentage of women are renters. These vulnerability factors increase tenfold for women at the intersection of oppressions, who notably have even lower incomes.

Some issues that are already a concern are likely to worsen with the climate crisis. When we asked community workers what the major needs of women in their neighbourhoods were, their answers clustered around four major themes: housing, transportation and mobility, parks and access to nature, and the proximity of services and businesses. These issues are not only interdependent, they are directly linked to climate change resilience.



Access to affordable, quality housing

The lack of social and affordable housing is unquestionably one of the most glaring problems in Montréal at the moment. Not only is housing a fundamental need, it is also “an important prerequisite to the citizen and political participation of Montréal women” [translation] (TGF, 2019). Housing conditions impact the well-being and physical and mental health of individuals, along with their resilience to climate change (Rochette, 2016). Indeed, people with inadequate housing are more vulnerable to the risks associated with climate change, because their home does not offer them the same protective benefits. For instance, they are more likely to feel effects of extreme climate events, such as intense periods of heat or bitter cold, because the poor quality of their built environment reduces their thermal comfort at home.

3.1.1 Women in precarious housing or homelessness situations: More vulnerable to climate change

The participants in our research acknowledge that Montréal, like other cities in Quebec, is experiencing a housing crisis. Issues like the dramatic rise in rent prices, evictions and inadequate housing conditions are disproportionately a problem for women, since more of them are tenants or live below the poverty line. The activists we consulted say this situation creates an enormous amount of insecurity for women renters, especially those who are immigrants, racialized, in a precarious financial situation, single mothers, seniors or living with a disability.⁴

In several city neighbourhoods, the stock of adequate and affordable housing is so low at the moment that women must make significant sacrifices to have a place to live. To find something affordable, they are forced to relocate far from shops and services, and considerably reduce their expectations of size or quality, or both. In such situations, housing is not able to fulfill its protective function against the impacts of climate change.

According to the community workers we consulted, the pandemic seems also to have worsened the problem of homelessness among women. Homelessness is addressed in Montréal's *Climate Plan* (Action 8), which takes this portion of the population into consideration. Situations of homelessness make women highly vulnerable on several levels. In terms of the risks associated to climate change, the major threats facing women experiencing homelessness relate to their reduced ability to protect themselves from extreme climate events, be it heat waves that put them at risk of dehydration or cold snaps that result in the death of homeless women every year. Such events, which will become more frequent with climate change, have significant repercussions on their health.

The organizations that currently work with women experiencing homelessness have very little means to support women during such episodes. During the pandemic, many businesses and public places where women used to take refuge implemented access restrictions. Organizations were forced to distribute public transport tickets so women experiencing homelessness could take shelter in the metro during periods of extreme cold or heat. This last-resort “solution” is obviously not viable, and more sustainable strategies are needed.

3.1.2 Housing, heat islands and heat waves

As pointed out in the Methodology section, when the map of Montréal's heat islands is overlaid with the map of material and social deprivation, there is almost a perfect correspondence. This means that the most disadvantaged neighbourhoods are hardest hit by heat waves, because the poor quality of the built environment worsens the effect of heat. In these neighbourhoods, a high percentage of tenants live in poorly insulated or aging dwellings, be it apartments rented from private owners or social housing managed by the Office municipal d'habitation de Montréal (OMHM). In many cases, the building condition makes it impossible to install an air conditioning system. This serious problem is addressed in Montréal's *Climate Plan 2020–2030*, particularly in Sector 3, "Buildings" (page 74), which aims to increase the amount of affordable housing and improve comfort in anticipation of major temperature fluctuations.

During heat waves, poorly insulated, aging dwellings become extremely hot, creating a health risk and causing a great deal of discomfort, notably by disrupting sleep and hindering recovery. The scientific literature shows that children, seniors, and people living with disabilities and health problems are especially vulnerable to heat waves. The community workers we interviewed stated that heat waves have many negative impacts on women's physical and mental health. In addition, women often have to care for other people around them, such as seniors, which adds to their workload. Women living with a disability are faced with an additional risk, since it may be difficult, or even impossible, for them to go outdoors to cool off during periods of extreme heat.

Since women often rent, and are among the most precarious tenants, there are very limited means available to them to improve the comfort of their dwelling during hot periods. Many tenants do not have access to outdoor spaces at home, such as a yard or balcony. The solution available to them is to go cool off in green spaces or air-conditioned public places. Thus it is important that these be available nearby. Women with functional limitations restricting their mobility suffer greatly during heat waves, since they have more difficulty leaving their home.

While there are several organizations disseminating information on what to do during heat waves, they often have limited resources. Organizations that have appropriate facilities will take in women so they can cool off. Those that do not, try to organize outdoor activities to get these women out of their home.

The Brin d'Elles housing project with community support: Making energy-efficient choices keeps residents comfortable

Brin d'Elles is a community organization founded in 1998, working to improve the living conditions of single women in precarious financial or housing situations, by giving them access to a safe, decent and affordable permanent dwelling. The organization owns and manages three buildings with community support: the Saint-Laurent project (2002) located in the Ahuntsic-Cartierville borough, which includes 22 apartments; the Saint-Michel project (2008) located in the Saint-Michel borough, with 13 studio apartments; and the Villeray project (2019) with 26 dwellings reserved for women aged 55 and over. By offering support, Brin d'Elles helps residents integrate socially and helps break the isolation felt by women struggling with various problems (e.g. drug addiction, social disorganization, physical and mental health problems).

When the organization observed that heat-related problems were lowering the residents' quality of life, its board of directors decided to install heat pumps in each unit—something quite outside the norm in social housing projects. The decision made a real difference for the residents of all three buildings, whose thermal comfort improved significantly year-round. This option was also much more energy efficient than the use of individual air conditioning units and it reduces the use of electricity for heating in winter. The heat pump was a beneficial choice for both the environment and residents.

3.1.3 Buildings' energy performance and thermal comfort in winter

The energy wasted by poorly insulated buildings is a major environmental problem that has real repercussions on people's well-being, especially during winter's bitter cold. Unfortunately, the consulted community workers report that women tenants have very little leverage to improve the thermal comfort of their apartment since they are often dependent for building maintenance and/or renovation. Despite the fact that there are incentive programs available to them, many Montréal landlords are reluctant to take on the major work needed to improve their buildings' energy performance, not only due to the cost of the renovations themselves but also because the resulting increase in building value will lead to a property tax hike. Thus, investing in this type of work has little appeal, particularly for non-occupant owners.

Cold snaps pose significant risks to women with inadequate housing. A poorly insulated dwelling is expensive to heat, forcing the occupants to lower the indoor heat to prevent oversized power bills. Organizations that are able to will take in women who can't heat their home enough, so they can warm up. The community workers we interviewed mentioned however that it is very difficult to reach women in winter and to convince them to leave their home, in part due to increased transportation problems.

In short, since housing quality has an impact on resilience to climate change, taking action to improve the housing conditions of Montréal women amounts to providing them with additional protections to face these changes. As mentioned by the Table des groupes de femmes de Montréal in its recent report on the housing issues faced by women, "access to adequate, safe, adapted and affordable housing is a basic need" [translation] (TGFM, 2019). We would also add that it's a vital component of a just ecological transition.

3.2

Transportation and mobility

Mobility is a critical issue⁵ for women because it affects their social and economic integration and, as a result, their quality of life. Every day, Montréal women are required to travel in order to work, study, take care of their children, do the shopping, receive healthcare and services, participate in leisure activities and more. Furthermore, they need to move around considerably due to social reproduction responsibilities (domestic and care work) that they take on and that are likely to increase with climate change. The scientific literature confirms that women must do more caregiving work during disasters like floods or heat waves (Dominelli, 2013).

The means of transportation used by urban dwellers have a considerable environmental impact. The scientific literature on this is clear: transport must be completely revisited to radically reduce the use of private cars and focus on active and public transportation (IPCC, 2022, Working Group III, 5-3, TS-100).

Although a greater percentage of women than men already use public transit (Enquête Origine-Destination 2018), the most recent data available for the Montréal Metropolitan Region shows that the number of women who have a driver's licence and are becoming drivers is on the rise. While this gain in autonomy for women in the area of transport may seem encouraging in some respects, it is also worrisome for the ecological transition. Indeed, despite advocacy for the electrification of transport and generous government incentives for electric vehicles (EVs), the literature clearly shows that the

best way to reduce GHG emissions from the transportation sector is to make the use of public and active transport more widespread.

In order to support and promote the use of these ecological transportation options, the City of Montréal proposes a range of actions in its *Climate Plan 2020–2030* (see Sector 2, p. 58), aimed at improving public transit and making environmentally responsible (electric) modes of transportation more accessible. Their planned actions include increasing the number of EV charging stations and expanding the network of electric buses. These changes are necessary. Research shows that several components of the current public transportation offering can be bettered, and that a number of actions are still required to improve the physical and economic accessibility of these modes of transportation, as well as their reliability and safety. Added to this is the need to take into account the specific requirements of women when planning and implementing the transportation offer, to ensure that climate action in this area will be more effective and not further entrench social inequalities.

3.2.1 Public transportation

Two priorities our participants raised repeatedly were the accessibility and reliability of public transportation. Outside central areas, public transit often only consists of buses and is substantially insufficient, and this seriously affects women's daily lives. Service is often insufficient for women who must make several trips a day to carry out their professional and family responsibilities, and this deters them from choosing public transportation. Women who have the option will often turn to private cars or carpooling to get around.

The need to develop the public transit network is especially dire in the eastern and northern parts of the Island of Montréal, a situation that has been known and documented for many years. The participants in our research from Montréal-Est and Pointe-aux-Trembles, Rivière-des-Prairies, Montréal-Nord and Mercier-Hochelaga-Maisonneuve all agreed that transportation infrastructure must be expanded. While they all approved of the extension of the metro's blue line, some had major criticisms of the Réseau Express Métropolitain (REM)⁶ de l'Est project. According to them, its design primarily supports the economic development of the far east of the island, at the expense of the residential areas that will be disrupted during the installation of imposing railway structures. The participants stressed the importance of developing public transport that prioritizes the well-being of the neighbourhoods concerned and that has ecological benefits.

The women who depend on public transit are those most penalized by a weak service offering. The participants pointed out that buses are not frequent enough and the schedule not reliable enough, especially outside peak hours and in winter. Women must therefore change their plans to suit the bus schedule, which sometimes makes them feel trapped. Needing to plan routes and leave early to avoid missing connections adds to women's mental load and causes an additional burden in their day-to-day life.

The stress caused by service delays or interruptions also has negative repercussions on women's well-being, according to the community workers we consulted. Travel over longer distances or that requires several transfers is especially time consuming. In the city's peripheral areas, local service does not extend to all areas, meaning that public transit users must walk long distances to get to a bus stop.

The community workers interviewed also noted that when waiting times for public transit are too long, women restrict their activities to the strict minimum, which may penalize them on several fronts (e.g. financial, social, diet) and cause isolation. One community worker in Rivière-des-Prairies explained it clearly: “The two metro stations closest to the women’s centre are Henri-Bourassa and Radisson, and it takes 45 minutes by bus to get to them. The borough doesn’t get good service. Often, several bus transfers are needed to get places, making it necessary to plan every trip. This makes women lose a lot of time.”

The consultations also brought out the importance of ensuring women’s safety in public transit at all hours. For instance, several community workers pointed out that members of their organization are reluctant to participate in evening activities because they feel unsafe while waiting for or travelling by bus or metro. One community worker from an organization in Plateau-Mont-Royal, whose members come from several of Montréal’s peripheral neighbourhoods, explained this eloquently: “There are issues with travelling to evening activities, for example. During rush hour, it takes an hour by public transit, but at night, it’s much longer. And in less lively neighbourhoods, when you’re all alone, you’re at greater risk when walking. This has a deterrent effect.”

For women balancing work and family obligations, transportation is a key issue. Unfortunately, women working atypical schedules are penalized even further, because public transportation is rarely offered outside peak hours in many parts of the city. For women living below the low-income cut-off, the cost of using public transit may be a significant barrier and may worsen their financial instability by depriving them of employment opportunities and limiting their access to resources and services.

Despite improvements in recent years, universal accessibility of public transit has yet to be reached. Even though it benefits everyone to plan public transportation based on principles of universal accessibility, this has been slow to materialize in the STM, Montréal’s public transit network. The issue also has major repercussions on women living with a disability or functional limitations. For them, an out-of-service elevator in a metro station (those that have them) or bus ramp can mean having to cancel an outing. Adapted transport has several drawbacks (limited service and schedules, suspended service during storms, the need to make a reservation), which unfortunately have gotten worse during the pandemic. Women with a disability are therefore particularly affected by the lack of resources in public transportation.

In summary, critical improvements are needed in Montréal’s public transportation system. Given this situation, it is not surprising that the percentage of women who have a driver’s licence or are becoming drivers is on the rise. The transportation sector, which accounts for 40% of the GHG emissions of the Montréal community,⁷ is a major priority area to work on to reduce Montréal’s carbon footprint. Offering alternatives to cars includes improving the public transport offering, both in terms of developing the network and improving existing services.

3.2.2 Active transportation

Walking and cycling are the main active modes of transportation used by women. In addition to being eco-friendly, since they create no GHG emissions, these activities also have health benefits for individuals, and thus deserve to be encouraged. To foster these active modes of transportation and improve the experience of women who use them, several urban design choices must be reconsidered. It should be noted however that “choosing” active transportation is sometimes done under constraint, because other means of transportation are unavailable.

Walking

In many parts of the city, the urban design is not conducive to walking, due to the presence of high-traffic roads, heavy infrastructure or industry. A community worker in the Pointe-Saint-Charles neighbourhood highlighted several issues that compromise active mobility: “Access [to public spaces] requires many things, including proper snow removal from sidewalks in winter, traffic lights, pedestrian crossings... Our matriarch was run over [by a vehicle] a few months ago.”

The urban planning experts we consulted stated that the pandemic and its associated distancing requirements highlighted the importance of designing public spaces to be more pedestrian friendly. Traffic calming measures, lower speed limits, greening initiatives and the addition of street furniture are simple, effective ways to do this.

Urban safety is an important issue that was raised by several of the research participants. According to the community workers we consulted, the increase in gun violence in some Montréal areas is a major concern for residents there. Street harassment is a nuisance for many women, particularly those with intersecting oppressions, notably women from the 2SLGBTQIA+ (two-spirit, lesbian, gay, bisexual, transgender, queer, questioning, intersex, asexual, and all other sexual orientations and genders) community, racialized women, women with a disability or working-class women (Blais, Dumerchat and Simard, 2021).

While urban safety is raised several times in the City’s *Climate Plan* (see Action 10, for instance), the specific situation of women, in terms of their feelings of safety or discomfort, sadly go without mention, and few real actions are planned. And yet, the CM has issued many recommendations on this subject in its two opinion papers on women’s safety.⁸ As a result, women residing in areas considered “unsafe” go out less or avoid doing so at night. While women’s feelings of safety in public spaces can be improved through certain installations (e.g. urban lighting) and through crime prevention, their actual safety in public spaces fundamentally has structural causes (sexism, heteronormativity, racism) that must be addressed.

Cycling

While there continue to be gender disparities in using cycling as a mode of transportation, the number of women doing it continues to increase in Montréal’s central neighbourhoods (Vélo Québec, 2021). We would like to highlight the City’s efforts to expand the network of bike routes, and some actions toward this goal are included in the *Climate Plan* (see Sector 2). The most recent situational overview from Vélo Québec shows that the vast majority of Montréal women who use a bicycle regularly for transportation live in the city’s downtown neighbourhoods, and cover distances of 5 km or less per trip on average (Vélo Québec, 2021).

Improving public transport in Pointe-aux-Trembles: A long-standing, still open request from the women's centre

The borough of Rivière-des-Prairies-Pointe-aux-Trembles is the perfect example of the mobility issues affecting women in the eastern part of Montréal. Located far from downtown, the borough does not have metro service and suffers from an insufficient local bus service. Dependence on cars is very high in this area. For women who don't have access to a car, daily travel can be quite complicated.

The gaps in the public transportation service not only restrict women's mobility, but also pose a sizable obstacle to their social participation. At the Centre des femmes de Montréal-Est/Pointe-aux-Trembles (CDFME/PAT), workers witness these limitations regularly. For instance, public transit problems curtail women's attendance to the centre's activities, due to restricted bus schedules. The centre's workers also mentioned several actions, marches and demonstrations that the centre would have liked to join in the past, but for which member participation was low due to the length of the trip to get downtown. Despite their interest in these causes and despite the organization's offer to pay for their fare, the women members were unable to get there. This represented a direct constraint on the exercise of their citizenship.

Given the many negative impacts of these service gaps on its members, the women's centre has long been involved in advocating for improvements to public transit in the east end of the city. In the past, the centre contributed to a joint reflection process with the STM and the borough council, to find ways of improving public transportation in Pointe-aux-Trembles. More broadly, the centre has participated very actively in various mobilizations concerning public transit in Montréal, and it continues to call for change in this key area.

Nonetheless there are notable differences among the women who use bicycles for practical purposes. While little data is available on this topic, a recent cross-Canada study cited in *Vélo Mag* reveals that 74.5% of people who use bikes exclusively to get around are white (Anctil, 2022). It is recognized that choosing to cycle is strongly influenced by age, socioeconomic status and cultural references.

According to the study participants, there are several potential barriers to women cycling: cost of equipment and maintenance, lack of know-how and experience, physical fitness and functional limitations, lack of cycling infrastructure, cultural factors, distance to cover and responsibility for young children. In addition, the world of cycling and of bike mechanics is still largely male-dominated.

Although the bike route network is expanding in Montréal, our research participants pointed out that it is overly concentrated in central neighbourhoods. According to them, increasing the use of this mode of transportation would notably require that safe paths and bike lanes be developed in several neighbourhoods that currently do not have any. However, democratizing cycling involves more than just city planning issues. It is essential that the representation of cyclists be diversified so that women of all origins and walks of life can see themselves as practitioners.

A report on the state of diversity in the Montréal cycling world, published in *Vélo Mag* in March 2022, lists several community initiatives to introduce various communities to biking in the city. This type of project deserves to be better supported. Accessibility would also be promoted by community workshops on cycling, where some women-only sessions would be offered, so women can feel comfortable receiving training on bike mechanics and have access to the necessary equipment. Such initiatives help make the world of cycling more inclusive. Also recommended are awareness-raising campaigns encouraging all users, including cyclists of different skill levels, to share the road, to improve safety and civic-mindedness on roads and bike paths.

In sum, all Montrealers benefit from encouraging active transportation since it is especially environmentally friendly and provides individual health benefits. However, it is important to emphasize that active transportation is not within the reach of all women, and it must be supported in tandem with public transit.

3.3

Accessibility of parks and green spaces

In the city, parks and green or natural spaces make a key contribution to quality of life. These spaces are essential to mental and psychological health, providing a place for relaxation and leisure, to cool off in summer and to connect with nature. At the city scale, green spaces play a decisive role in countering heat islands, in addition to improving air quality and helping to reduce air pollution (Benedict and McMahon, 2006).

While Montréal has many parks, they are not equally distributed over the territory, which causes accessibility problems in many neighbourhoods. This situation was raised in the City's *Climate Plan 2020–2030*, which proposes a number of actions: increasing the proportion of protected areas to 10% (Action 19); planting and protecting 500,000 trees, prioritizing areas vulnerable to heat waves (Action 20); restoring public riverbanks of large parks (Action 21); and developing urban agriculture (Action 22).

Our consultations raised the point that women often look at the environmental question from the viewpoint of access to parks, green spaces and nature in their own neighbourhood. This concern for the nearby environment is consistent with what is reported on gender-specific perspectives of nature in the scientific literature. It is acknowledged that women have a greater tendency to mobilize for their immediate environment, in part because they have a special relationship to it due to their social roles. However, this does not prevent them from being concerned for the environment at a more global scale.

The data collected shows that access to urban parks with sports and leisure facilities is a widespread request among all subgroups of women. However, many Montréal neighbourhoods are desperately lacking them. Mothers especially call for recreational equipment, because they want safe places near home to do activities with their children. One community worker in Montréal-Nord emphasized this point: “Mothers’ priority in their neighbourhood is to provide their children with quality of life, overall health. [...] They want their children to be able to enjoy the outdoors, they want more green spaces to do outdoor activities, which converges with their environmental concerns.”

There is a great need for splash pads since these facilities are in high demand by families in summer and are lacking in many neighbourhoods. In addition to their recreational aspect, splash pads offer considerable benefits during heat waves by allowing children to cool off, which is essential to their well-being and reduces the health risks of extreme heat.

When there are no green spaces nearby, it is especially difficult for women living with a disability. Not only do they face pre-existing problems in terms of their ability to leave their home, but they must also factor in travel over great distances to access green spaces in times of high heat.

The workers we consulted also reported that many women demonstrate a keen interest in gardening and greening activities. Several organizations whose mission is not environmental have added courses on these activities in recent years, in response to their members’ requests. According to the workers, this demonstrates women’s interest in having some form of contact with nature and in environmental issues. Others also reported that women in their neighbourhoods have called for green alleys and other greening initiatives in public spaces to improve their living environment. However, where the number of such developments increases, there is a risk of “green gentrification,” which the City must be especially vigilant about. Furthermore, these initiatives should not be based solely on the mobilization of local residents, given the amount of time women already dedicate to social reproduction (domestic and care work) in addition to their paid work.

For citizens who are not able to get out of the city, the network of nature parks and unprotected natural spaces, such as undeveloped land, offer precious points of contact with nature. The participants in fact made a distinction between undeveloped land, where nature is abundant and often less subjected to human intervention, and parks, which are developed more deliberately. The environmental activists we consulted stated that the accessibility of natural spaces in the city is essential for the urban population. One of these activists, from the Hochelaga-Maisonneuve neighbourhood, testified to this: “I don’t have a car. I don’t go to provincial parks on weekends. The natural spaces in the city are my only access to nature.”

These spaces, which are home to a variety of plants and animals, also play a key role in preserving biodiversity in the city. They also have an educational function, as they allow urban citizens to learn about nature. According to the environmental activists, such knowledge is critical to citizen involvement in protecting the environment. Rightly pointing out that humans tend to protect what they know and appreciate, these activists emphasized that the desire to protect nature arises out of education and awareness.

Paradoxically, despite their appeal, many nature parks are difficult to get to because they are located in the outskirts of the city. The stakeholders we consulted noted that there is often poor public transportation service to these parks, making it difficult for women without a car to enjoy them. They believe women would feel more ownership of these parks if public transit improvements paid special attention to considering large parks as destinations.

In short, having access to parks and green spaces that are safe, appealing and well equipped is essential to urban women’s quality of life, not to mention that these types of spaces offer considerable ecological benefits. What’s more, these spaces provide citizens with oases of coolness during heat waves,⁹ thus contributing to community resilience.

Green gentrification, or “greentrification”

This expression refers to greening initiatives that aim at improving the environment but that lead to social exclusion (Meerow and Newell, 2017; Meerow, 2020). By increasing the attractiveness of parts of the city that were previously unappreciated, greening initiatives can have the negative side effect of making property values rise (Ottaviano, 2020).

A classic example of this phenomenon is the High Line in Manhattan, New York. The conversion of a former rail line into a linear park going through Chelsea and Greenwich Village caused a considerable increase in property values in those neighbourhoods—up to 80% higher than the average increase for all of Manhattan over the same period (Ottaviano, 2020). Like a conventional gentrification process, such an increase has repercussions on rent prices and forces less fortunate residents out of their own neighbourhood. Therefore, to ensure that greening projects benefit the whole population, they must include protective measures for low-income residents.

3.4

Access to nearby shops and services

Neighbourhood resilience also depends on there being local services and shops that are tailored to the local population's needs. In Montréal, community organizations are concerned about two trends in particular: First, some neighbourhoods are devitalized and the shops and services available there are very limited. Second, several neighbourhoods that used to be more affordable are going through rapid gentrification, which radically changes the local commercial offering. In both cases, the most disadvantaged segment of the population in these neighbourhoods eventually faces geographical and economic accessibility problems.

The scientific literature also tells us that climate change impacts food security, notably because prices rise due to production problems. The increasing food basket cost is already disproportionately affecting single mothers and low-income women, and this trend threatens to worsen with the climate crisis.

The case of food supply provides a good illustration of how these accessibility problems affect women specifically. Because of their social reproduction role (domestic and care work), women are often responsible for making daily purchases. However several areas of the city, mainly located in the eastern part of the island, can be described as "food deserts." There are very few large grocery stores in these neighbourhoods, and they are generally located on major thoroughfares and are very spread out, meaning that women must travel great distances to get to them. Those who don't have access to a car are penalized, since public transit is often lacking in these same areas.

The geographical distances involved mean that shopping around to take advantage of better prices is often not an option, though this strategy is important for people on a tight budget. Lastly, transportation problems force women to do their shopping over multiple trips, to be able to carry their purchases.¹⁰ In such situations, the residents in these areas often resign themselves to buying from smaller stores located nearby, which offer a limited range of fresh foods and charge more than the large grocery stores.

Food price is also an issue in neighbourhoods undergoing gentrification. When inexpensive food stores shut down and are replaced by upscale ones, this restricts the food choices available to some households. The community workers we consulted said that not all women have the means to buy organic products or shop in premium food stores. Many of them mentioned the need to maintain a diverse food offering suited to every budget. "When it comes to nearby services, women are losing their affordable stores for businesses aimed at gentrifiers. Not everyone can afford organic vegetables from speciality stores," explained one community worker from Plateau-Mont-Royal. "What's needed is a variety of businesses with a variety of prices."

School parks in Parc-Extension: An original solution to compensate for the lack of green space

In Parc-Extension, there are 28,775 people living in a 1.6 km² area (Centraide, 2020). It is by far the most densely populated neighbourhood in Montréal. Its density of 17,672 people per km² is four times higher than the city average. Its population is overwhelmingly immigrant, living in poverty and renting. Locked in by road and rail infrastructure, the area suffers from a desperate lack of vegetation cover. Heat islands are a significant problem, in some cases aggravated by the poor quality of the built environment. Furthermore, the percentage of families with children in Parc-Extension is higher than the city average, but an estimated 80% of residents do not have access to a yard. These factors together make the need for green spaces and safe play areas critical for the neighbourhood children.

Since every square metre of green matters, the school park project is a promising one. It pools resources by greening schoolyards and making them accessible to the general population outside school hours. Not only do these parks create cool oases, but they also provide recreational and leisure areas to neighbourhood residents. Parc-école Barclay is one of these school parks and is currently the focus of a large-scale citizen mobilization. Neighbourhood women and mothers are playing an active role in the "Save Barclay Park" campaign to prevent a Montréal school board (Centre de services scolaire de Montréal, CSSDM) from installing modular buildings on the grounds. The campaign wants the community to be able to continue to enjoy the park. The people involved emphasize that "the deprivation of outdoor and play spaces [that would occur if the structures were installed] would cause unacceptable harm to us and our children for two years, given this local park's high visitation rate" [translation] (Siguineau, 2021). They also underscore the great vulnerability of Parc-Extension's population due to the alarming presence of heat islands and the high rates of air pollution in the area.

This citizen campaign illustrates the challenges involved in advocating for territorial equity and climate justice at the local level.

3.5

A desire for citizen involvement

The conversations and group discussions that took place over the course of this study revealed that women are mobilizing for the environment in a variety of ways. Be it as activists, professionals, entrepreneurs, politicians, mothers or simply citizens, women are active agents who can make a difference in their community.

Our data collection also showed that young women and students feel especially compelled by environmental issues. This seems promising in light of the present and future challenges. In order for this willingness to translate into action, it is critical to increase the presence of women—especially those at the intersection of oppressions—in decision-making bodies on the fight against climate change. It is also important that women remain vigilant, because there is a risk of stereotypical gender roles being reproduced and women being assigned social reproduction work within the environmental cause.

One of the aspects revealed by our process is that women often address environmental issues at the level of their tangible effects on their living environment. Our data collection highlights that women want to live in resilient neighbourhoods, meaning those served by public transportation and designed to promote inclusive active transportation. There must also be enough quality, suitable and affordable housing to meet the needs of all residents. Resilient neighbourhoods must also include nearby stores and services, as well as green spaces that allow for recreation and contact with nature.

Reaching these goals necessarily involves greater recognition of the expertise of women citizens on the issues that affect their living environments: through their day-to-day experiences with these neighbourhoods, they have a profound understanding of their specific features and challenges. Because of this knowledge, their proposals should be given credibility and Montréal women should be involved in decisions about their living environments. People who mobilize develop solutions that are rooted in their community. It is essential that local communities be trusted and given means to implement projects that are in line with the needs they identify. Even if these initiatives develop outside conventional processes, they tend to bring concrete solutions to environmental problems. Their merits should be recognized, and they would benefit from being valued more and even encouraged.

Additionally, several participants emphasized the need for women citizens to receive better training and support so they can make their voices heard, since they often deal with professionals, and even lobbyists, when they are calling for change or opposing projects. “Citizens are confronting big lobby groups, so we have to move toward taking a lobbying approach, but we’re improvising,” said one activist from Parc-Extension. “There is a need to be supported in the political process.”

Community organizations play a strategic role in supporting these mobilizations. Thanks to their close ties to local communities, they are essential actors in a just ecological transition. What’s more, environmental projects led by community organizations are fantastic opportunities for popular education. The positive outcome of raising environmental awareness goes beyond strictly ecological benefits. For instance, it fosters empowerment, for individual and groups, and strengthens social ties. Thus, it seems essential to give women the resources they need to carry out projects to improve their living environments and fight climate change, while trying as much as possible not to add to their load.

Solidarity in supplying food to Montréal-Nord and Rivière-des-Prairies

In these neighbourhoods, which include several food deserts, it is not always easy for residents to buy fresh fruits and vegetables. To address this, the organization Paroles D’ExcluEs set up a food cooperative called Panier Futé. Until April 2022, this initiative supplied area residents with fresh produce at modest prices. The cooperative delivered the food to drop points strategically distributed across the borough. The organization also raised awareness about environmental issues through its Marchés du Nord project, which organized outdoor markets throughout the summer in borough parks and green alleys.

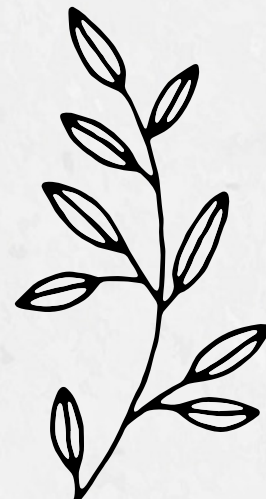
The project was so successful that a new component was developed in partnership with the Centre des femmes de Rivière-des-Prairies. The Bonne Boîte Futée project launched in 2021, and the centre became a drop point for produce baskets. Every two weeks, subscribers came to pick up their produce. Members of the women’s centre volunteered to pack the boxes and include affordable recipes to make with the basket contents. The project fostered links between women and was an opportunity for popular education.

As food prices continue to rise and plant-based eating is increasingly advocated as a response to climate change, initiatives like these offer economic, ecological and social benefits, in addition to being a plus for the health of the communities. The project came to an end in the spring of 2022, but this type of activity surely deserves to be repeated and replicated throughout Montréal.

Conclusion

The most recent IPCC reports and other publications underscore the importance of using an interdisciplinary and cross-cutting approach to fight climate change equitably and effectively. Structural changes are needed in the areas of the economy, urban planning, mobility, housing, health and food, and others. Such changes would have positive impacts simultaneously on climate change and on the most vulnerable urban populations, including women.

However, the issues of the fight against climate change and of gender equality have been addressed in silos. The data we gathered in this research clearly shows that climate justice and territorial equity depend on reducing social inequalities. Our analysis also highlights the importance of implementing collective adaptation and mitigation measures in order to avoid putting the weight of these strategies on women's shoulders. Not only are individual "solutions" guilt-inducing and much less effective, but they also reproduce inequalities between men and women and among women. A just, feminist ecological transition is therefore an opportunity to act to reduce social inequalities.



And while the fight against climate change involves two components, namely, mitigation and adaptation, the reduction of GHGs has been prioritized greatly over developing adaptation measures. Techno-optimism still dominates the solutions favoured to fight climate change, as though the problem were merely technical or economic in nature. But climate change impacts are already being felt and will increase in the coming decades, even if we reduce GHG emissions right now.

Changes in the climate create or exacerbate socioeconomic vulnerabilities and affect the most vulnerable communities first. And let's not forget that people experiencing precarity or poverty are those who contribute least to the climate crisis, but are those who risk suffering most from its effects. This is one of the reasons that researchers call for recognition of the unequal (albeit involuntarily) responsibility of various social groups in creating this crisis and for the adoption of climate change mitigation and adaptation strategies from a social justice and equity perspective.

The implementation of the City of Montréal's *Climate Plan 2020–2030* and its forthcoming 2050 Land Use and Mobility Plan must incorporate these issues of social inequality in a way that makes the ecological transition effective and a vector for greater social justice. Some cities are already active in this area. For instance, the City of Vancouver has implemented a Climate and Equity Working Group¹¹ to include in its climate plans diverse voices and perspectives (new arrivals, people with disabilities, Indigenous people living in cities, people experiencing poverty) (Armitage et al., 2021).

In order to lead a just ecological transition, it is essential that the City of Montréal integrate gender into its analysis of climate change impacts, as well as into the types of solutions to implement. As we have seen, gender plays a role not only in perceptions and impacts of climate change but also in the types of solutions envisioned and their effects. This is why it's so important to adopt a cross-cutting and intersectional approach to these issues. This is what the ADS+ inclusion tool makes possible during the development, implementation and assessment of public policies and in climate change mitigation or adaptation projects.

One of our participants said it well: "When it's good for the environment, it's good for women." Advocating for women's well-being on a daily basis is a way of advocating for equitable climate change adaptation measures. In other words, the fight against climate change is fundamentally feminist.

It is indeed important to consider the mutual benefits when proposing measures fostering equality between men and women or among women themselves or measures to adapt to climate change. While current governmental responses are mainly based in mitigation, climate action has the potential to contribute to protecting other human rights and to promote social justice and equity actions through adaptation measures. While such measures have the reputation of being expensive, we must learn to integrate their positive benefits in terms of long-term savings, for instance in health care. As an example, and as previously mentioned, adding green spaces in disadvantaged neighbourhoods, which suffer disproportionately from heat waves, not only improves the health and well-being of inhabitants by reducing heat islands, but it also promotes access to nature, protects biodiversity and acts as a source of drainage for rainwater.

In other words, what's needed is a cross-cutting situational analysis and to assign value to the social justice benefits that pro-environmental policies can provide. At the City scale, this is done mainly through urban development, which calls for reflection on how to create capacity-building solutions. Without devaluing involvement in strategies to combat climate change at the individual level (e.g. recycling, eating vegetarian, using active transportation), an individualistic approach to environmental issues masks the larger-scale damages and omits systemic or regulatory actions to truly address them. An individual-scale approach also fails to acknowledge that the power to take individual action is unequal and it invisibilizes the disproportionate impacts felt by the most vulnerable people and communities, who are already suffering from environmental injustice.

In addition to using tools like ADS+, a good way to ensure that “no one is left behind,” as stated in Montréal's *Climate Plan*, is to include a broad range of people representing the population's diversity, including women who are at the intersection of oppressions. In Montréal, community organizations and citizen groups are actors that can be relied on, since they have an in-depth understanding of the realities on the ground and the issues faced by communities. Thanks to their sensitivity, their positions and their actions, Montréal women are already at the forefront of the ecological transition, and in coming years, this role promises to expand. It is therefore critical to make better use of their contributions and give them the means to carry out a transition that corresponds to their vision.

Recommendations

Whereas the IPCC's sixth assessment cycle emphasizes the importance of taking vulnerable populations into account in climate policy diagnosis, thinking, participation and implementation;

Whereas gender has a differentiated impact on vulnerability as it relates to climate change;

Whereas the research conducted by the Conseil des Montréalaises for this opinion paper demonstrates that Montréal's population is already feeling the impacts of climate change in a way that is differentiated and unequal according to certain vulnerability factors;

Whereas reducing social inequalities contributes to improving resilience to climate change, and climate action can contribute to reducing social inequalities;

The Conseil des Montréalaises makes the following recommendations:

Recommendation 1

That the City of Montréal ensure that its *Climate Plan* takes vulnerable populations, particularly women, into account in applying the climate test approach to assessing impacts.

Recommendation 2

That the City of Montréal strengthen its application of the ADS+ intersectional gender analysis when implementing all actions relating to climate change adaptation; and that the ADS+ results be published in the annual reporting called for under the *Climate Plan*.

Recommendation 3

That the City of Montréal ensure that the entire team at the Bureau de la transition écologique et de la résilience (BTER) receives ADS+ training.

Recommendation 4

That the City of Montréal collect gendered, intersectional and local data, so that its implementation of the *Climate Plan* be better adapted to the realities of various communities in different parts of the City.

Recommendation 5

That the City of Montréal expand its eight indicators for the follow-up of the *Climate Plan* by adding gender-based and intersectional targets (e.g. increase the modal share of active transportation among women by X%).

Recommendation 6

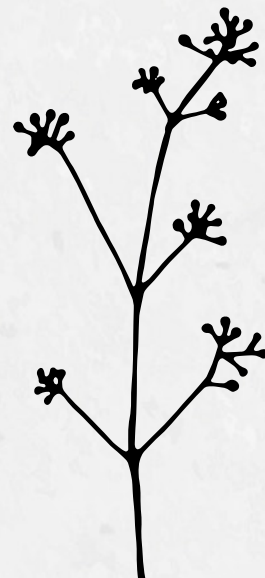
That the City of Montréal make sure that information contained in the yearly *Climate Plan* reporting is transparent, accessible and presented in a way that is easy for all Montrealers to understand.

Recommendation 7

That the City of Montréal set up a permanent advisory committee to guide the implementation of its *Climate Plan*, along the lines of the City of Vancouver's Climate and Equity Working Group.

Recommendation 8

That the City of Montréal recognize women's groups as partners in the ecological transition (Action 2 in its *Climate Plan*) by providing them with recurrent financial support, with funds specifically earmarked for this, for their climate change-related activities and by giving them more tools in this area.



Recommendation 9

That the City of Montréal ensure that its Resilient City Strategy take into account the impacts on women of climate change–related events, such as increased economic insecurity, increased risk of violence and health effects.

Recommendation 10

That the City of Montréal take gender into account in an intersectional perspective in Actions 4 and 8 of its *Climate Plan*; that its strategies to encourage the adoption of eco-responsible practices be equitable and not rely on women’s reproductive work (domestic and care tasks).

Recommendation 11

That the City of Montréal make sure that the ecological transition education and awareness-raising programs (Actions 4 and 8 of the *Climate Plan*) take gender-differentiated perceptions and realities into account, in an intersectional perspective.

Recommendation 12

That the City of Montréal prioritize supporting citizen initiatives on the ecological transition in the city’s most vulnerable areas (see definition of Montréal’s vulnerable areas in the Methodology section of this paper, on page 12).

Recommendation 13

That the City of Montréal prioritize support for the creation of climate resilience hubs (Action 9 of the *Climate Plan*) in the city’s most vulnerable areas (see definition of Montréal’s vulnerable areas in the Methodology section of this paper, on page 12).

Recommendation 14

That the City of Montréal include, in its *Plan d’urbanisme et de mobilité* (PUM), the demands relating to mobility, housing and neighbourhood life included in “Feminists for the Right to the City”¹² platform from the Table des groupes de femmes de Montréal.

Recommendation 15

That all boroughs in Montréal implement strategies and action plans on the ecological transition and that these plans take vulnerable populations, particularly women, into account.

References

Adger, W. N., Paavola, J., and Huq, S. (2006). "Multifaceted Justice in Adaptation to Climate Change," in Mace, M. J. (ed.), *Fairness in Adaptation to Climate Change*, Cambridge, MIT Press, pp. 263–278. Online: <https://direct.mit.edu/books/book/2368/chapter/62320/Multifaceted-Justice-in-Adaptation-to-Climate> (consulted April 27, 2022).

Alber, G. (2011). *Gender, Cities and Climate Change*, Thematic Report, Gender Mainstreaming Unit of UN-HABITAT.

Alber, G., Cahoon, K., and Röhr, U. (2017). "Gender and Urban Climate Change Policy: Tackling Cross-Cutting Issues towards Equitable, Sustainable Cities," in Buckingham, S. and Le Masson, V. (eds.), *Understanding Climate Change through Gender Relations*. London; New York, Routledge, Taylor & Francis Group.

Anctil, G. (2022). "Quand vélo rime avec diversité," *Vélo Mag*, vol. 42, no. 1, pp. 21–27.

Arora-Jonsson, S., Westholm, L., Temu, B. J., et al. (2016). "Carbon and Cash in Climate Assemblages: The Making of a New Global Citizenship," *Antipode*, vol. 48, no. 1, pp. 74–96.

Autorité régionale de transport métropolitain (ARTM) (2018). Enquête Origine-Destination 2018 – Faits saillants de l'état de la mobilité des personnes dans la région métropolitaine de Montréal. Online: <https://www.artm.quebec/faits-saillants-eod-2018/> (consulted April 29, 2022).

Baiocchi, G., Creutzig, F., Minx, J., et al. (2015). "A Spatial Typology of Human Settlements and their CO₂ Emissions in England," *Global Environmental Change*, vol. 34, pp. 13–21. DOI: [10.1016/j.gloenvcha.2015.06.001](https://doi.org/10.1016/j.gloenvcha.2015.06.001).

Barnett, C., and Parnell, S. (2016). "Ideas, Implementation and Indicators: Epistemologies of the Post-2015 Urban Agenda," *Environment and Urbanization*, vol. 28, no. 1, pp. 87–98.

Bazargani, M. (2016). "Indice de défavorisation matérielle et sociale" (map), Direction de la santé publique du CIUSS du Centre-Sud-de-l'Île-de-Montréal, Montréal. Online: https://emis.santemontreal.qc.ca/fileadmin/emis/Sant%C3%A9_des_Montr%C3%A9alais/D%C3%A9terminants/D%C3%A9mographiques/Cartes_d%C3%A9favo_2016_Montr%C3%A9al/Mtl_Defavo_2016_Comb.png (consulted April 29, 2022).

Beattie, M. (1988). "Recherche féministe : recherche novatrice," in Deslauriers, J.-P. (ed.), *Les méthodes de la recherche qualitative*, Sillery, Presses de l'Université du Québec, pp. 133–141.

Beau-Ferron, C., Casselot, M.-A., Desaulniers, É., Lefebvre-Faucher, V., et al. (2017). *Faire partie du monde – Réflexions écoféministes*, Montréal, Les éditions du remue-ménage, 176 pages.

Benedict, M. A., and McMahon, E. T. (2006). *Green Infrastructure: Linking Landscapes and Communities*. (Vol. June). Washington, DC: Island Press.

Belsey-Priebe, M., Lyons, D., and Buonocore, J. J. (2021). "COVID-19's Impact on American Women's Food Insecurity Foreshadows Vulnerabilities to Climate Change," *International Journal of Environmental Research and Public Health*, vol. 18, no. 13, 6867. DOI: [10.3390/ijerph18136867](https://doi.org/10.3390/ijerph18136867).

Blais, M., Dumerchat, M., and Simard, A. (2021). *Les impacts du harcèlement de rue sur les femmes à Montréal*, Montréal, Service aux collectivités de l'Université du Québec à Montréal, Centre d'éducation et d'action des femmes, 76 pages.

Brunet-Kirk, M. (2021). "Espace vert à l'école Barclay," *Parc-Extension News*. Online: <https://www.px-news.com/espace-vert-a-lecole-barclay/> (consulted April 25, 2022).

Buck, H. J., Gammon, A. R., and Preston, C. J. (2014). "Gender and Geoengineering," *Hypatia*, vol. 29, no. 3, pp. 651–669.

Campbell, J.A. (2020). "Écologie et droits humains – Penser les crises" (report), *Droits et libertés*, vol. 39, no. 1, pp. 11–40.

Casteigts, M. (n.d.). "Les paradoxes de l'équité territoriale," p. 18.

Centraide of Greater Montreal (2020). *Villeray, Saint-Michel and Parc-Extension: Territorial Analysis 2019–20*, Montréal.

Chalifour, N. J. (2017). "How a Gendered Understanding of Climate Change Can Help Shape Canadian Climate Policy," in Cohen, M. G. (ed.), *Climate Change and Gender in Rich Countries: Work, Public Policy and Action*, New York/London, Routledge.

Champagne St-Arnaud, V., Lalloz, C., Alexandre, M., et al. (2021). *Baromètre de l'action climatique – Disposition des Québécoises et des Québécois envers les défis climatiques 2021*, Québec, Laboratoire de l'action climatique.

Cheng, C. S., Li, G., and Auld, H. (2011). "Possible Impacts of Climate Change on Freezing Rain Using Downscaled Future Climate Scenarios: Updated for Eastern Canada," *Atmosphere-Ocean*, vol. 49, no. 1, pp. 8–21.

Cohen, M. G. (2014). "Gendered Emissions: Counting Greenhouse Gas Emissions by Gender and Why It Matters," *Alternate Routes: A Journal of Critical Social Research*, vol. 25, pp. 55–80.

Cohen, M. G. (2017). "Introduction: Why Gender Matters When Dealing with Climate Change," in *Climate Change and Gender in Rich Countries: Work, Public Policy and Action*, London, Routledge.

Conseil des Montréalaises (2009). *Opinion Paper– Opinion paper Accessibility of Public Transportation, and Its Impact on the Quality of Life of Montréal Women*, Montréal, 11 pages.

Conseil des Montréalaises (2016). *Women and Homelessness in Montreal: Seeing What Is Hidden*, Montréal, 36 pages.

Conseil des Montréalaises (2019). *Se loger à Montréal : avis sur la discrimination des femmes en situation de handicap et le logement*, Montréal, 68 pages.

Cordeau, L. (2021). *La valeur du travail du care sous la loupe de la pandémie*, Conseil du statut de la femme. Online: <https://csf.gouv.qc.ca/article/publicationsnum/les-femmes-et-la-pandemie/societe/la-valeur-du-travail-du-care-sous-la-loupe-de-la-pandemie/> (consulted April 29, 2022).

Crenshaw, K. (1989). "Demarginalizing the Intersection of Race and Sex: A Black Feminist Critique of Antidiscrimination Doctrine, Feminist Theory, and Antiracist Politics," in *Feminism in the Law: Theory, Practice, and Criticism*, Chicago, University of Chicago Law School, pp. 139–167.

Demers-Bouffard, D. (2021). *Les aléas affectés par les changements climatiques : effets sur la santé, vulnérabilités et mesures d'adaptation*, Québec, Institut national de santé publique du Québec (INSPQ).

Demuzere, M. (2014). "Mitigating and Adapting to Climate Change: Multi-Functional and Multi-Scale Assessment of Green Urban Infrastructure," *Journal of Environmental Management*, vol. 146, pp. 107–115.

Dlamini, N. J. (2021). "Gender-Based Violence, Twin Pandemic to COVID-19," *Critical Sociology*, vol. 47, nos. 4–5, pp. 583–590. DOI: [10.1177/0896920520975465](https://doi.org/10.1177/0896920520975465).

Dominelli, L. (2013). "Mind the Gap: Built Infrastructures, Sustainable Caring Relations, and Resilient Communities in Extreme Weather Events," *Australian Social Work*, vol. 66, no. 2, pp. 204–217. DOI: [10.1080/0312407X.2012.708764](https://doi.org/10.1080/0312407X.2012.708764).

Eastin, J. (2018). "Climate Change and Gender Equality in Developing States," *World Development*, vol. 107, July, pp. 289–305. DOI: [10.1016/j.worlddev.2018.02.021](https://doi.org/10.1016/j.worlddev.2018.02.021).

MMIWG – National Inquiry into Missing and Murdered Indigenous Women and Girls (2019). *Reclaiming Power and Place: The Final Report of the National Inquiry into Missing and Murdered Indigenous Women and Girls. A Supplementary Report*, Kepek-Quebec, Volume 2, Ottawa.

Faulkner, W. (2000). "Dualisms, Hierarchies and Gender in Engineering," *Social Studies of Science*, vol. 30, no. 5, pp. 759–792.

Frank, B., Delano, D., and Caniglia, B. S. (2017). "Urban Systems: A Socio-Ecological System Perspective," *Sociology International Journal*, vol. 7, no. 1, pp. 1–8.

Gaard, G. (2015). "Ecofeminism and Climate Change," *Women's Studies International Forum*, vol. 49, pp. 20–33.

Garcia, A., Tschakert, P., and Karikari, N. A. (2020). "'Less Able': How Gendered Subjectivities Warp Climate Change Adaptation in Ghana's Central Region," *Gender, Place & Culture*, vol. 27, no. 11, pp. 1602–1627.

Gay-Antaki, M. (2020). "Feminist Geographies of Climate Change: Negotiating Gender at Climate Talks," *Geoforum*, vol. 115, pp. 1–10.

Gobby, J., Deranger, E., Sinclair, R., et al. (2021). *Decolonizing Climate Policy in Canada (Report from Phase One)*, Indigenous Climate Action. Online: https://static1.squarespace.com/static/5e8e4b5ae8628564ab4bc44c/t/6061cb5926611066ba64a953/1617021791071/pcf_critique_FINAL.pdf.

Gobby, J., Bobrow, S., Thibault, R., and Cantave, L. (2021). *Climate Change & Gender: A Literature Review for the Conseil des Montréalaises*.

Gurstein, P., and Ortiz Escalante, S. (2017). "Urban Form Through the Lens of Gender Relations and Climate Change: Cases from North America and Europe," in Cohen, M. G. (ed.), *Climate Change and Gender in Rich Countries: Work, Public Policy and Action*, New York/London, Routledge.

Hachem, C. (2016). "Impact of Neighborhood Design on Energy Performance and GHG Emissions," *Applied Energy*, vol. 177, pp. 422–434. DOI: [10.1016/j.apenergy.2016.05.117](https://doi.org/10.1016/j.apenergy.2016.05.117).

ICI.Radio-Canada.ca (2021). "Montréal, territoire non cédé : que dit le droit ?" *Chronique Espaces autochtones*, Radio-Canada.ca. Online: <https://ici.radio-canada.ca/espaces-autochtones/1834612/canadien-montreal-territoire-non-cede-droit> (consulted April 27, 2022).

IPCC (2022a). *Climate Change 2022: Mitigation of Climate Change*. Working Group III Contribution to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change. UN. Online: https://report.ipcc.ch/ar6wg3/pdf/IPCC_AR6_WGIII_FinalDraft_FullReport.pdf.

IPCC (2022b). *Climate Change 2022: Impacts, Adaptation and Vulnerability*. Working Group II Contribution to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change. UN. Online: https://www.ipcc.ch/report/ar6/wg2/downloads/report/IPCC_AR6_WGII_FinalDraft_FullReport.pdf.

International Trade Union Confederation (2010) "What's Just Transition?" Online: <https://www.ituc-csi.org/what-s-just-transition> (consulted May 12, 2022).

Kernaghan, S., and Da Silva, J. (2014). "Initiating and Sustaining Action: Experiences Building Resilience to Climate Change in Asian Cities," *Urban Climate*, vol. 7, pp. 47–63.

Khosla, P., and Masaud, A. (2010). "Cities, Climate Change, and Gender: A Brief Overview," in Dankelman, I. (ed.), *Gender and Climate Change: An Introduction*, Washington DC, Earthscan.

Khosla, R., and Bhardwaj, A. (2019). "Urbanization in the Time of Climate Change: Examining the Response of Indian Cities," *Wiley Interdisciplinary Reviews: Climate Change*, vol. 10, no. 1, e560.

Köhler, J., Geels, F. W., Kern, F., et al. (2019). "An Agenda for Sustainability Transitions Research: State of the Art and Future Directions," *Environmental Innovation and Societal Transitions*, vol. 31, pp. 1–32.

Langevin, P. (2013). "Équité territoriale : de quoi s'agit-il ?" *Les Notes du Pôlé*. Online: <https://pddtm.hypotheses.org/176> (consulted April 29, 2022).

Laslett, B., and Brenner, J. (1989). "Gender and Social Reproduction: Historical Perspectives," *Annual Review of Sociology*, vol. 15, no. 1, pp. 381–404.

Lieu, J., Sorman, A. H., Johnson, O. W., et al. (2020). "Three Sides to Every Story: Gender Perspectives in Energy Transition Pathways in Canada, Kenya and Spain," *Energy Research & Social Science*, vol. 68, 101550.

Masson-Delmotte, V., Vallet, A., Szopa, S., and Lourtioz, J.-M., (2022). "Aller vers une transition écologique juste," in *Enjeux de la transition écologique*, EDP Sciences, pp. 353–3721.

Demuzere, M. (2010). "The Effects of Gender on Climate Change Knowledge and Concern in the American Public," *Population and Environment*, vol. 32, no. 1, pp. 66–87.

McGill University (2022). "Learn about the Land and Peoples of Tiohtià:ke/ Montreal." Online: <https://www.mcgill.ca/indigenous/land-and-peoples/learn-about-land-and-peoples-tiohtiake-montreal> (consulted April 27, 2022).

Meerow, S. (2019). "A Green Infrastructure Spatial Planning Model for Evaluating Ecosystem Service Tradeoffs and Synergies across Three Coastal Megacities," *Environmental Research Letters*, vol. 14, no. 12.

Nagoda, S., and Nightingale, J. (2017). "Participation and Power in Climate Change Adaptation Policies: Vulnerability 20 in Food Security Programs in Nepal," *World Development*, vol. 100, pp. 85–93.

United Nations (1992). *United Nations Framework Convention on Climate Change* Online: <https://unfccc.int/resource/docs/convkp/conveng.pdf> (consulted April 29, 2022).

United Nations (2015). Adoption of the Paris Agreement, FCCC/CP/2015/L.9, Paris, France. Online: <https://unfccc.int/resource/docs/2015/cop21/eng/l09r01.pdf>.

Norman, J., MacLean, H. L., and Kennedy, C. A. (2006). "Comparing High and Low Residential Density: Life-Cycle Analysis of Energy Use and Greenhouse Gas Emissions," *Journal of Urban Planning and Development*, vol. 132, no. 1, American Society of Civil Engineers, pp. 10–21. DOI: [10.1061/\(ASCE\)0733-9488\(2006\)132:1\(10\)](https://doi.org/10.1061/(ASCE)0733-9488(2006)132:1(10)).

International Labour Organization (2015) *Guidelines for a Just Transition Towards Environmentally Sustainable Economies and Societies for All*. Online: https://www.ilo.org/wcmsp5/groups/public/@ed_emp/@emp_ent/documents/publication/wcms_432859.pdf.

Ouranos (2020). "Adaptation aux changements climatiques : défis et perspectives pour les régions de Montréal et Laval." Online: https://www.mamh.gouv.qc.ca/fileadmin/publications/amenagement_territoire/lutte_contre_changements_climatiques/fiches_syntheses_regionales/FIC_Ouranos_MontrealLaval.pdf.

Ottaviano, G. (2020). "Greentrification: Facing Spatial Justice in Urban Renewals," *ResearchGate*.

Perkins, P. E. (2017). "Canadian Indigenous Female Leadership and Political Agency on Climate Change," in Cohen, M. G. (ed.), *Climate Change and Gender in Rich Countries: Work, Public Policy and Action*, New York, Routledge.

Perkins, P. E., and Peat, J. (2017). *Gender and Climate Justice in Canada: Stories from the Grassroots*, York University. Online: <https://yorkspace.library.yorku.ca/xmlui/handle/10315/37501>.

Ranganathan, M., and Bratman, E. (2021). "From Urban Resilience to Abolitionist Climate Justice in Washington, DC," *Antipode*, vol. 53, no. 1, pp. 115–137.

Montreal Indigenous Community (2019). *Indigenous Ally Toolkit*. Online: https://reseaumtlnetwork.com/wp-content/uploads/2022/12/Ally_March.pdf (consulted April 27, 2022).

Réseau québécois des groupes écologistes, Uqam, service aux collectivités, Relais-femmes, Réseau femmes environnement (1995). "Les impacts différenciés et l'adaptation aux changements climatiques au Québec."

Resurrección, B. P. (2013). "Persistent Women and Environment Linkages in Climate Change and Sustainable Development Agendas," *Women's Studies International Forum*, vol. 40, pp. 33–43. DOI: [10.1016/j.wsif.2013.03.011](https://doi.org/10.1016/j.wsif.2013.03.011).

Ribot, J. (2010). "Vulnerability Does not Fall from the Sky: Toward Multiscale, Pro-Poor Climate Policy," in *Social Dimensions of Climate Change: Equity and Vulnerability in a Warming World*, The World Bank, pp. 47–74. Online: <https://openknowledge.worldbank.org/bitstream/handle/10986/2689/520970PUB0EPI11C010disclosed0Dec091.pdf>.

Rochette, A. (2016). "Climate Change is a Social Justice Issue: The Need for a Gender-Based Analysis of Mitigation and Adaptation Policies in Canada and Québec," *Journal of Environmental Law and Practice*, vol. 29, pp. 383–410.

Rochette, A. (2018a). "Le genre et l'analyse différenciée," in *L'intégration de la dimension de genre dans la lutte et l'adaptation aux changements climatiques au Québec*, Québec, Le Réseau des femmes en environnement. Online: <https://reseaufemmesenvironnement.org/sites/reseaufemmesenvironnement.org/files/u1000/fiche5.pdf> (consulted April 29, 2022).

Rochette, A. (2018b). "Analyses écoféministes des changements climatiques" in *L'intégration de la dimension de genre dans la lutte et l'adaptation aux changements climatiques au Québec*, Québec, Le Réseau des femmes en environnement. Online: <https://reseaufemmesenvironnement.org/sites/reseaufemmesenvironnement.org/files/u1000/fiche6.pdf> (consulted April 29, 2022).

Rochette, A. (2018c). "Les impacts différenciés et l'adaptation aux changements climatiques au Québec," in *L'intégration de la dimension de genre dans la lutte et l'adaptation aux changements climatiques au Québec*, Québec, Le Réseau des femmes en environnement. Online: <https://reseaufemmesenvironnement.org/sites/reseaufemmesenvironnement.org/files/u1000/>

[fiche10.pdf](#) (consulted April 29, 2022).

Rochette, A., Lavigne Le Buis, F., and Gramme, S. (2013). *L'intégration du genre dans la lutte aux changements climatiques au Québec*. Online: <http://www.mediaterre.org/docactu,Sm9lbGxIX1BhbG1pZXJpL2RvY3MvcmFwcG9ydC1maW5hbDlyZXZpc2U=,13.pdf>.

Rodriguez, A., and Alejandra, M. (2017). "We Have to Wake Up, Humankind! Women's Struggles for Survival and Climate and Environmental Justice," *Development*, vol. 60, no. 1, pp. 32–39.

DOI: [10.1057/s41301-017-0126-5](https://doi.org/10.1057/s41301-017-0126-5).

Sellers, S. (2016). *Gender and Climate Change: A Closer Look at Existing Evidence*, Global Gender and Climate Alliance. Online: <https://wedo.org/wp-content/uploads/2016/11/GGCA-RP-FINAL.pdf> (consulted April 29, 2022).

Siguineau, E. (2021). "Sauvez le parc Barclay !" (petition). Online: <https://www.change.org/p/jean-francois-lachance-sauvez-le-parc-barclay> (consulted April 29, 2022).

Smid, M., and Costa, A. C. (2018). "Climate Projections and Downscaling Techniques: A Discussion for Impact Studies in Urban Systems," *International Journal of Urban Sciences*, vol. 22, no. 3, pp. 277–307.

Solomon, D., Singh, C., and Islam, F. (2021). "Examining the Outcomes of Urban Adaptation Interventions on Gender Equality Using SDG 5," *Climate and Development*, vol. 13, no. 9, pp. 1–12.

Steele, W., and Legacy, C. (2017). "Critical Urban Infrastructure," *Urban Policy and Research*, vol. 35, no. 1, pp. 1–6.

Table des groupes de femmes de Montréal (2019). *État des lieux des enjeux de logement vécus par les Montréalaises*, Montréal.

Thomas, A., Cretney, R., and Hayward, B. (2019). "Student Strike 4 Climate: Justice, Emergency and Citizenship," *New Zealand Geographer*, vol. 75, no. 2, pp. 96–100.

Tronto, J. (1993). *Moral Boundaries. A Political Argument for an Ethic of Care*, New York, Routledge, 242 pages.

UN Women (2020). "The Shadow Pandemic: Violence Against Women and Girls and COVID-19," New York. Online: <https://www.unwomen.org/en/digital-library/multimedia/2020/4/infographic-ccovid19-violence-against-women-and-girls> (consulted May 9, 2022).

Vélo Québec (2021). *L'état du vélo à Montréal en 2020*. Online: <https://www.velo.qc.ca/salle-de-presse/etat-du-velo/letat-du-velo-au-quebec-en-2020/> (consulted April 29, 2022).

Verdeil, V. (1998). «L'équité territoriale," in *L'espace géographique*, vol. 27, no. 3, pp. 204–216. DOI: [10.3406/spgeo.1998.1161](https://doi.org/10.3406/spgeo.1998.1161).

Ville de Montréal (forthcoming). *Plan d'urbanisme et de mobilité 2050*. Online: <https://montreal.ca/articles/creer-ensemble-le-plan-durbanisme-et-de-mobilite-2050-15575>.

Ville de Montréal (2015). *Climate Change Adaptation Plan for the Montréal Urban Agglomeration* (in French: *Plan d'adaptation aux changements climatiques de l'agglomération de Montréal*, or PACCAM) Online: http://ville.montreal.qc.ca/pls/portal/docs/page/enviro_fr/media/documents/paccam_2015-2020_lesconstats.pdf.

Ville de Montréal (2017). *Climate Change Adaptation Plan for the Montréal Urban Agglomeration 2015–2020* – Report 2017 Edition.

Ville de Montréal (2020). *Climate Plan 2020–2030*.

Ville de Montréal (2018). *Montréal's Resilient City Strategy*.

Waldron, I.R.G. (2018). "Women on the Frontlines: Grassroots Movements against Environmental Violence in Indigenous and Black Communities in Canada," *Kalfou*, vol. 5, no. 2.

Walker, H. M., Reed, M. G., and Fletcher, A.J. (2021). "Applying Intersectionality to Climate Hazards: A Theoretically Informed Study of Wildfire in Northern Saskatchewan," *Climate Policy*, vol. 21, no. 2, pp. 171–185.

Weiss, C. (2012). *Women and Environmental Justice: A Literature Review*, Australia: Women's Health in the North (WHIN).

Wilby, R. L., and Keenan, R. (2012). "Adapting to Flood Risk under Climate Change," *Progress in Physical Geography*, vol. 36, no. 3, pp. 348–378.

Women's Earth Alliance & Native Youth Sexual Health Network (2016). *Violence on the Land, Violence on our Bodies: Building an Indigenous Response to Environmental Violence*, Ontario. Online: <http://landbodydefense.org/uploads/files/VLVBReportToolkit2016.pdf>.

Zhang, Z., Meerow, S., Newell, J. P., et al. (2019). "Enhancing Landscape Connectivity through Multifunctional Green Infrastructure Corridor Modeling and Design," in *Urban Forestry & Urban Greening*, vol. 38, pp. 305–317.

Appendix 1 / Interview grids

Grid for experts

Question 1

Can you please start by introducing yourself briefly?

Question 2

What major links do you make between the themes of gender and the environment?

Question 3

Does climate change have impacts that are differentiated by gender? If so, what are they?

A What would that look like in an urban setting?

B And in Montréal, specifically?

Question 4

Do you feel that there are gender-differentiated perceptions of climate change and its impacts?

Question 5

Have you noticed any actions being implemented to respond to the gender-differentiated risks and impacts of climate change?

A What would that look like in an urban setting?

Question 6

In your opinion, do the solutions currently being adopted by various institutions have gender-differentiated impacts (e.g. subsidy to buy an electric vehicle)?

A What types of actions/measures/strategies do you think should be adopted to avoid further entrenching gender inequalities?

Question 7

For the City of Montréal, what measures do you think would be relevant? More specifically, in terms of mobilizing the Montréal community? Mobility and urban development?

A Do you have any examples taken from other cities?

Grid for activists

Preamble: The goal of this meeting is to have an open, organic discussion, in which everyone can have a say and bounce ideas off others, by raising their hand on-screen. Our questions to guide the discussion are very open-ended, so don't hesitate to reframe them and answer according to what they suggest to you. Also feel free to address each other if any thoughts or questions for your peers come to mind.

Question 1

To start off the discussion, we'd like everyone to introduce their group, its mission and the profile of the people involved in it.

Question 2

In your activism, do you make any links between feminist battles in the broad sense and environmental justice? If so, what are they?

Question 3

What are the major environmental challenges in Montréal, be it overall or in specific neighbourhoods? Don't hesitate to give specific examples.

A Which groups are most vulnerable to these issues, in your opinion?

B How do these issues specifically impact women? Which women? Give specific examples if you have any in mind.

Question 4

To face the challenges that were just raised (name a few), what actions should be given priority in Montréal, and who should take the initiative (citizens, community groups, the City, etc.)?

Question 5

Imagine that the City has decided to implement some of these actions (name a few), what would make it possible to say they're working?

Question 6

How can we make sure these initiatives or actions leave no one behind? (e.g. think of the fight against climate change from a decolonial and anti-racist perspective)

Grid for women's groups and community organizations

Question 1

Can you please briefly introduce your organization (mission, services and client profile)?

Question 2

What are the main concerns of the women who are clients of your organization?

A Redirect: Is the environment one of your concerns? If so, how is that demonstrated?

Question 3

As an organization, have you developed projects or services related to the environment or climate change (e.g. discussions, mobilizations, collective gardens, collective kitchens, etc.)? If so, please describe them.

A How would you evaluate these projects (ongoing, should be continued, need improvement, positive outcomes, etc.)?

Question 4

What are the greatest environmental challenges facing your neighbourhood, in your opinion (e.g. heat islands, flooding, presence of heavy infrastructure, public transportation, green spaces, food supply, etc.)?

Question 5

What are the major environmental risks that women are exposed to in your neighbourhood?

Question 6

In your neighbourhood, what impacts of environmental issues are you seeing on women's physical and mental health?

Question 7

Have you ever had women seek your support for a disaster-related situation (heat wave, flood, other)? If so, please tell us about it.

A For shelters or conjugal violence organizations: Have you noticed increases in conjugal / intimate partner violence after disasters (floods or heat waves)?

B For the food security group: Have you noticed an increase in food needs after disasters (floods or heat waves)?

Question 8

What do you think would improve living conditions in your neighbourhood?

Appendix 2 / Theoretical bases

The following theoretical bases guided the work leading up to the writing of this opinion paper.

Sexual division of labour

The sexual division of labour refers to the division of tasks and social roles according to gender. Historically, men have been associated with productive work that takes place in the so-called public sphere and that is valued and remunerated. Women are socially assigned to social reproduction work, which is generally unpaid or devalued and takes place primarily in the so-called private sphere. It should be noted that this generic division may vary according to culture and historical period, as well as other factors, including social class. This historical division of labour is a cornerstone of gender inequality and has tangible impacts on the daily lives of men and women.

Ecofeminism

Ecofeminism refers to a whole range of theories of feminism and it looks at the relationship between gender and the environment, establishing interdependencies between the exploitation of the Earth (and its resources) and the oppression of women (Casselot and Lefebvre-Faucher, 2017). This approach also focuses on a whole facet overlooked by formal economic analyses, by valuing the social reproduction work (domestic and care tasks) still largely performed by women. Ecofeminism approaches offer a heuristic framework for thinking about how these systems of domination are embedded, and they highlight the fact that the reasons that have led to the climate crisis are the same ones that have historically subjugated women to patriarchal domination. Ecofeminism is a useful approach “to identify and challenge the structural causes of climate change and social inequalities, and thus aspire to an egalitarian and ecological society” [translation] (Rochette, 2018b).

Territorial equity

The concept of territorial equity highlights the multi-factor, intersectional aspect of vulnerabilities to climate change. It refers to the spatial aspect of social justice, i.e., how inequalities are anchored in territory (Verdeil, 1998). In terms of climate change, this means that it has different impacts depending on local social structures and contexts. Thus, territorial equity is a planning strategy aimed at rectifying situations where there is spatial injustice. At the city level, it invites us to reflect on Montréal's geographical configuration, with a view to ensuring that residents in every part of the city have the same access conditions to a healthy environment, public services (e.g. public transit), private services (e.g. grocery stores), viable and affordable housing, employment and social life (Langevin, 2013). Progress toward territorial equity requires data on the differences between areas of the city and the implementation of public and citizen initiatives to support the development of a healthy environment in the various areas.

Intersectionality

The intersectional approach, as developed by black feminism (Crenshaw, 1989), makes it possible to consider how different systems of oppression (e.g. sexism, racism, classism, ageism) intersect. It emphasizes the interaction between different social markers, relative to given socioeconomic and political conditions. While this opinion paper focuses on the gendered dimension of climate change, gender must be understood as a social construct that is constantly interacting with other social factors, such as ethnicity, class, age and disability, which results in varied situations of vulnerability to the effects of climate change. Understanding these power relations makes it possible to envision a social transformation that takes into account all of the interactions between social and identity components. Some also use the intersectional precarity to refer to how the impacts of climate change interact with other social factors such as sexism, poverty and racism (Ranganathan and Bratman, 2021).

Intersectionality then offers a framework for analyzing the discriminatory social configurations that arise out of interacting structures of domination. The literature review also shows that authors are in agreement about the importance of adopting an intersectional lens when addressing climate change mitigation or adaptation (Walker et al., 2021). This is necessary on the one hand to avoid further deepening social inequalities or overlooking certain segments of the population with specific needs, and, on the other, to create tailored advocacy campaigns and to consider solutions and perspectives offered by people that public institutions typically overlook (Gay-Antaki, 2020).

Climate justice

The concept of climate justice arose from the struggles against environmental racism, and recognizes that racialized populations are disproportionately exposed to environmental harms and risks. In this way, climate justice acknowledges that we are not all equal when it comes to the impacts of climate change. It brings to light the inextricable links between social inequalities and environmental degradation, and it acknowledges that climate change worsens pre-existing social vulnerabilities (IPCC, 2022, ch. 18).

Climate justice implies that the fight against climate change, be it via adaptation or mitigation measures, cannot be done in isolation from the fight for greater social justice. Hence the idea of a just ecological transition

Just ecological transition

The idea of just transition first appeared in the US in the 1980s, as a result of some environmental regulations that led to job losses in highly polluting industries. Later, in the fight against climate change, the term was used by trade unions, NGOs, academics and civil society, among others.

While there is no single definition of a just ecological transition, it can be understood as a “just and equitable process to move toward a post-carbon society and resilient and sustainable development” [translation] (Masson-Delmotte et al., 2021). The concept of a just ecological transition recognizes the existence of several sources of environmental inequalities, for instance, the disproportionate contribution of certain countries or social groups to GHG emissions, or the differentiated impacts of climate change. Ecofeminists, like other political groups, call for a just and feminist transition, in which the necessary economic and societal changes respect all rights, including those of women and Indigenous communities (Rodriguez and Alejandra, 2017). Labour has also contributed to the thinking on just transition by arguing that a “just transition toward a low carbon economy is possible, and can make climate action a driver for sustainable economic growth and social progress” (ITUC, 2010).

According to the IPCC (2022, TS-36, p. 142), implementing such a transition requires a “set of principles, processes and practices that aim to ensure that no people, workers, places, sectors, countries or regions are left behind in the transition from a high-carbon to a low-carbon economy.” Among the actions proposed by the IPCC are “respect and dignity for vulnerable groups, ... the creation of decent jobs, ... [and] fairness in energy access and use...”

Social reproduction and care work

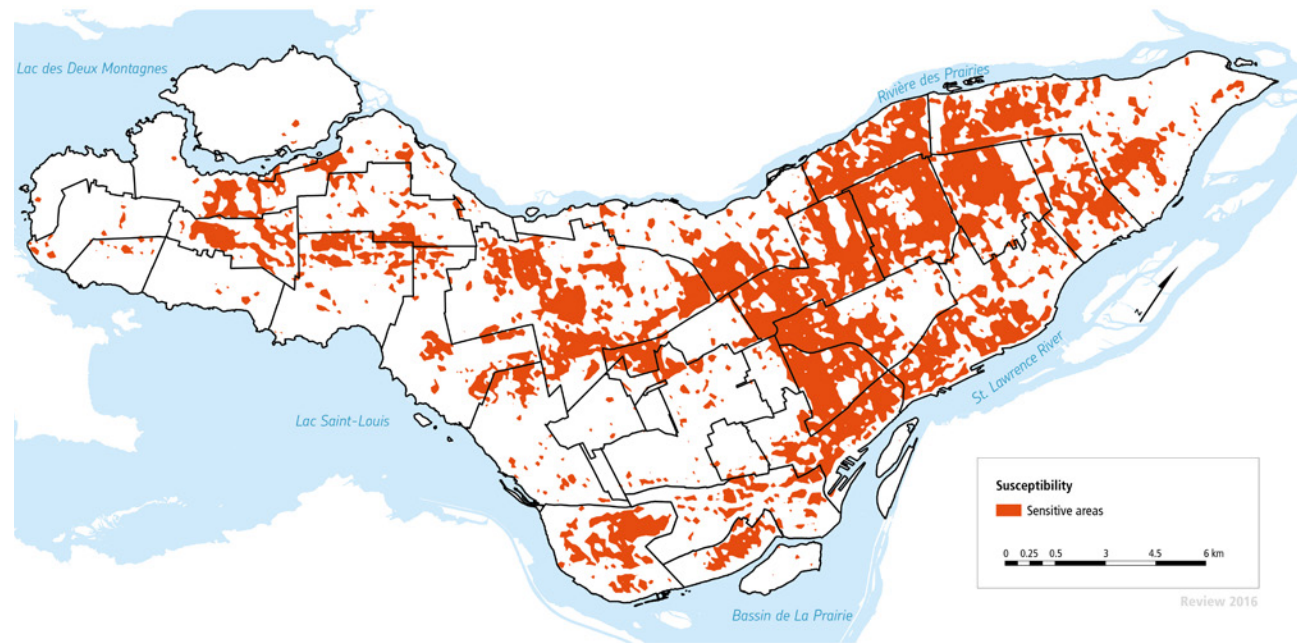
The term “social reproduction” is used to refer to “the activities, attitudes, behaviours and emotions, responsibilities and relationships directly involved in the maintenance of life on a daily basis, and intergenerationally” (Laslett and Brenner, 1989). In the so-called private sphere, this can involve domestic tasks (e.g. cleaning, cooking, making a grocery list, vacuuming) and care work (e.g. providing medical care, consoling a loved one).

The Conseil du statut de la femme du Québec describes care work as any form of work (paid or unpaid) that consists of “meeting others’ needs for care, education, support or assistance” [translation] (Cordeau, 2021). In the public sphere, care work involves jobs in teaching, early childhood education, healthcare, youth protection or community organizations. Such work usually involves emotional work as well as a variety of technical knowledge, psychological competencies and interpersonal skills.

Appendix 3 / Maps¹³

Intra-urban heat islands in the Montréal agglomeration¹⁴

Ville de Montréal (2017). Climate Change Adaptation Plan for the Montréal Urban Agglomeration 2015–2020.



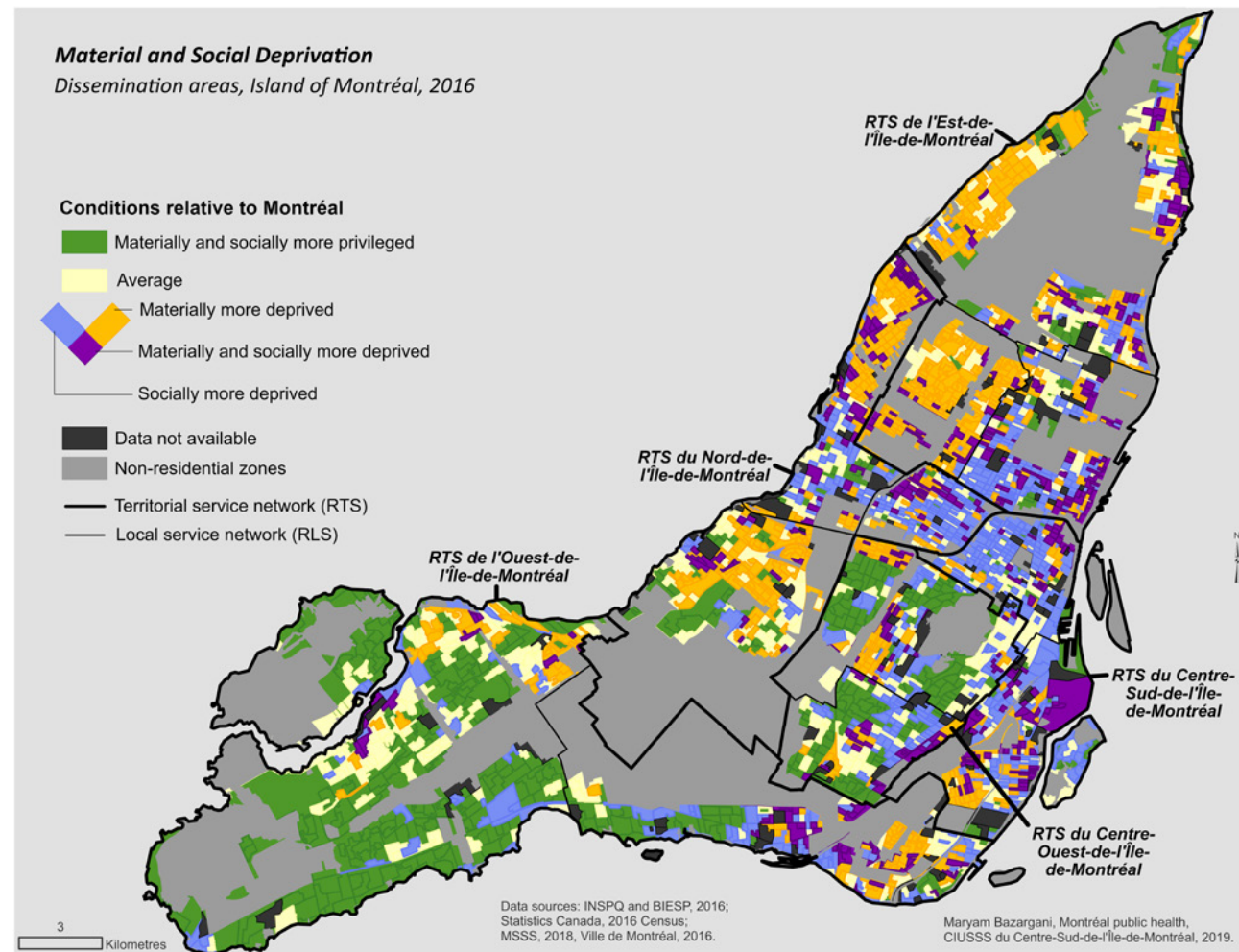
Map of flood-prone areas

Ville de Montréal (2017). Climate Change Adaptation Plan for the Montréal Urban Agglomeration 2015–2020.



Social and material deprivation map¹⁵

Maryam Bazargani (2019). "Indice de défavorisation matérielle et sociale," Direction de la santé publique du CIUSS du Centre-Sud-de-l'Île-de-Montréal, Montréal.



Notes

1- We would like to emphasize that this opinion paper uses gender binarism, though the Conseil des Montréalaises strives to move beyond gender essentialism and recognizes that there is a vast spectrum of gender identities. This paper draws on scientific literature that relies on statistics, in which the binary man-woman categories are predominant even though they are not optimal (McCright, 2010). This is one of the methodological and empirical limitations of the case studies in the literature (Lieu et al., 2020). It nevertheless remains relevant to look into how male and female identities play a role relative to climate change issues, while hoping that future enquiries will be able to go beyond the gender binary.

2- We must also take into consideration the fact that the extractive industry, which contributes greatly to climate change, produces many forms of violence against women, particularly Indigenous women in Canada (NIMMIWG, 2019; Konsomo and Pacheco, 2016).

3- We can presume here that being assigned to reproductive work influences the type of solutions devised by women.

4- The specific problems encountered by women living with a disability were documented in depth in the Conseil des Montréalaises' opinion paper titled *Se loger à Montréal – Avis sur la discrimination des femmes en situation de handicap et le logement*, published in 2019.

5- Given its importance, the CM published an opinion paper entirely focused on this issue in 2009: *Accessibility of Public Transportation, and Its Impact on the Quality of Life of Montréal Women*. Sadly, several of the recommendations made in that paper continue to be relevant.

6- The initial format of the REM project was abandoned in May 2022 and is currently under review at the time of writing.

7- Inventory of greenhouse gas emissions produced by the Montréal community in 2015, *Climate Plan 2020–2030*, p. 37.

8- See the Conseil des Montréalaises' opinion papers on "Women's Safety during the Formula 1 Canadian Grand Prix" (2021) and on "Montréal, a Festive City for all Women" (2017), both available from http://ville.montreal.qc.ca/portal/page?_pageid=6737,60687580&_dad=portal&_schema=PORTAL

9- Due to climate change, heat waves will increase considerably in the coming years. Ouranos (2020) reports that the average number of days in which the temperature goes above 30 °C was 11 per year from 1981 to 2010, but will rise to 41 for 2041 to 2070.

10- While grocery delivery services have improved considerably since the pandemic, shoppers must have an Internet connection and a minimum level of computer literacy to take advantage of them, which is far from being the case for all, and especially for older or less financially stable women. Further, most large food businesses only offer delivery during certain hours.

11- <https://vancouver.ca/files/cov/climate-emergency-action-plan-report-appendix-cewg-summary.pdf>

12- See the site "Feminists for the Right to the City": <https://www.tgfm.org/en/our-publications/99>

13- The maps in this Appendix are taken from the *Climate Change Adaptation Plan for the Montréal Urban Agglomeration 2015–2020 from the City of Montréal*. Online: https://ville.montreal.qc.ca/pls/portal/docs/PAGE/ENVIRO_FR/MEDIA/DOCUMENTS/2017_PACCAM_2015-2020_REPORT.PDF.

14- This map titled, "Vulnerability to climate hazards in the Montréal agglomeration" was updated on the website of the City of Montréal after the research done by the CM for this opinion paper. An interactive version from 2022 is available here: <https://donnees.montreal.ca/ville-de-montreal/ilots-de-chaleur>.

15- Maryam Bazargani (2019). "Indice de défavorisation matérielle et sociale," Direction de la santé publique du CIUSS du Centre-Sud-de-l'Île-de-Montréal, Montréal. Online: https://emis.santemontreal.qc.ca/fileadmin/emis/Sant%C3%A9_des_Montr%C3%A9alais/D%C3%A9terminants/D%C3%A9mographiques/Cartes_d%C3%A9favo_2016_Montr%C3%A9al/Mtl_Defavo_2016_Comb.png

CONSEIL DES MONTRÉALAISES

1550 Metcalfe Street, 14th Floor, Suite 1424

Montréal, Quebec, H3A 1X6

Telephone: 514-868-5809

conseildesmontrealaises@ville.montreal.qc.ca

Conseil 
des **Montréalaises**

