



Case-in-Point 2023

LINKING ENVIRONMENTAL AND HEALTH POLICY

Montréal's ILEAU Initiative

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Abstract

Urban heat islands (UHIs) in cities are becoming a larger public health risk as climate change intensifies. The equitable distribution of tree canopy and other green spaces in cities can go a long way in reducing the risk posed by heat to vulnerable groups. The ILEAU initiative in Montréal (Interventions locales en environnement et aménagement urbain) is a public health program under the province's Climate Adaptation Strategy that supports proponents of projects that reduce

UHIs, support the most vulnerable, increase biodiversity, and have a firm implementation and maintenance plan. Since 2015, the initiative has supported over 100 greening projects in eastern Montréal. Lessons for planning practitioners include the importance of cross-sectoral collaboration, the role of local initiatives, and the necessity of taking a holistic approach to health-related climate policy.

1.0 Background & Context

Climate change is increasing average temperatures, increasing droughts and floods, and causing more extreme heatwaves around the world. The effects of these changes are being felt acutely by those living in cities. This is because of something called the urban heat island (UHI) effect, where concrete and other materials in the built environment absorb heat, making urban areas feel warmer than the surrounding natural environments. Heat waves in Canada are becoming increasingly common and more dangerous. In 2010, more than 280 people died due to extreme heat in Quebec alone (Climate Atlas of Canada, n.d.). Governments are beginning to see extreme heat as a public health risk and trying to plan accordingly.



Figure 1: Finding relief from the heat in a Toronto park (Bernstien, 2022)

The presence of trees can play a large role in reducing heat vulnerability. Unfortunately, the tree canopy of cities is often distributed inequitably, and lower-income individuals and families are more likely to be at risk of suffering due to heat. This has implications for public health. A recent study found that the number of heat-related ambulance calls in Toronto “was nearly 15 times higher in neighbourhoods with a tree canopy

The number of heat related ambulance calls in Toronto “was nearly 15 times higher in neighbourhoods with a tree canopy of less than 5%, compared to neighbourhoods with a tree canopy of more than 70%.” - Bernstien (2022)

of less than five percent, compared to neighbourhoods with a tree canopy of more than 70 percent” (Bernstien, 2022). Urban tree canopies are also increasingly under threat due to disease and invasive species. In order to protect people from extreme heat, cities need to ensure that vulnerable people have access to green space and places to cool off.

The Government of Quebec’s 2013-2020 Climate Adaptation Strategy committed to reducing urban heat islands using financial incentives to help protect the health of vulnerable populations (Canada, 2020). Health-related components of the strategy are implemented by Quebec’s public health agency (Institut national de santé publique de Québec, or INSPQ) using the Green Fund, which supports initiatives to reduce greenhouse gas (GHG) emissions and adapt to climate change. In 2015, INSPQ gave \$1.5 million from this fund to the Conseil régional de l’environnement de Montréal (CRE-Montréal), a non-profit environmental organization. CRE-Montréal has been using this funding to support community-based greening projects across Montréal’s East End, which is an area of the city where the population is lower-income and considered more vulnerable to extreme heat.

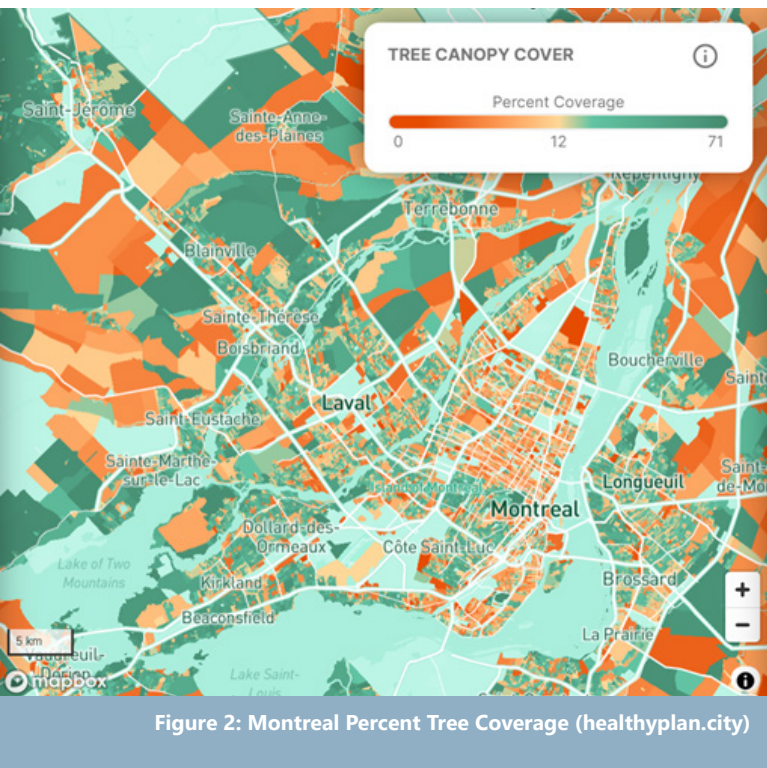


Figure 2: Montreal Percent Tree Coverage (healthyplan.city)

2.0 Facts of the Case

After receiving funding from the provincial Green Fund, CRE-Montréal established “Local Interventions in Environmental and Urban Planning”, or ILEAU (Interventions locales en environnement et aménagement urbain). This initiative partners with public, private, and non-profit organizations to implement UHI-reduction projects across five Montréal boroughs (Canada, 2020). These areas were chosen because they currently have a lack of green space, along with a higher proportion of low-income residents and a shorter-than-average life expectancy.

The goal of the ILEAU initiative is to create an active green corridor in eastern Montréal, improving access to active transportation and green space. CRE-Montréal has worked alongside local university researchers to develop maps based on the ILEAU program’s criteria to help determine where greening projects should be located to maximize cooling benefits. ILEAU has four key criteria that must be met before the initiative will support a project (Canada, 2020):

1. The project must reduce UHIs;
2. The project must support the most vulnerable populations (i.e. children and seniors who live alone);
3. The project must increase biodiversity; and
4. There must be a firm commitment from an organization or business to implement and maintain the project.

Staff at CRE-Montréal work with prospective project proponents to help them develop a fully costed business plan and determine whether they meet the above criteria. They also provide technical support to proponents throughout their projects, including hiring landscape architects and sharing lessons learned from other projects (Canada, 2020).

3.0 Outcomes

Since starting in 2015, ILEAU has supported over 100 greening projects to help reduce UHIs in eastern Montréal (Canada, 2020). These projects have received more than \$1 million in funding from the province of Quebec and have led to the planting of over



Figure 3: Community gardens are a feature of “La Voisinerie”, an ILEAU project (Bernstien, 2022)

30,000 plants and the removal of more than 3,000 square meters of asphalt (Bernstien, 2022). The projects have been wide ranging and have improved green spaces on both public and private properties. For example,

ILEAU supported a project planting nearly 150 trees and shrubs on the grounds of an office building for the Corporation d'Urgences-santé in Saint Léonard. This represented a large improvement in the working environment for employees, while simultaneously reducing the UHI in that area. ILEAU also worked alongside a non-profit organization called Synergie Santé Environnement to plant over 1,700 trees, shrubs, and other perennials outside a seniors' home.



Figure 4: "La Voisinerie" (left) shown next to a parking lot, which used to fill the entire space (Bernstien, 2022)

ILEAU made national news in 2022 for its role in a local greening project called "La Voisinerie". The space is located within a block of midrise apartment buildings on Pelletier Street in North Montréal, where many low-income families live. The park used to be a parking lot that would "radiate heat on summer days" (Bernstien, 2022) and was a known site for drug trafficking and other criminal activity. Neighbours stayed indoors because the space felt uncomfortable and unsafe. Now, thanks to a partnership between ILEAU and local community organization Parole d'excluEs, the asphalt has been replaced with grass, trees, raspberry plants, and a community garden. This created a space that not only improves people's physical health by shielding them from heat, but also benefits their mental health and community connections. The continued construction and expansion of projects like

this one has the potential to significantly reduce heat vulnerability among higher-risk groups in Montréal.

The ILEAU initiative has been so successful that it has had its funding extended by the provincial government and continues to be in operation eight years later. In December 2022, ILEAU had its first regional meeting of partners since before the start of the COVID-19 pandemic. The gathering brought together 32 partners from across Montréal to give progress updates on existing projects, hear about new projects, and discuss prospects for future projects in the 2023-2025 timeframe (ILEAU, 2022). CRE-Montréal's goals for the near future include a call for projects for the redevelopment of parking areas, as well as hosting a summit regarding active transportation and green corridors in Montréal.

4.0 Lessons Learned

The ILEAU initiative has demonstrated several important lessons for planning practice. Firstly, the initiative has shown the importance of collaboration for climate action. The ILEAU initiative has included cooperation between the Province of Quebec, the regional health authority, private businesses, and non-profit organizations. This collaboration has allowed for small, entrepreneurial greening projects to be supported by public funds that might not have otherwise had the resources to get started. Coordinating across different organizations can also increase the complexity of a project, so other cities wanting to replicate ILEAU should be cautious not to let bureaucratic processes unnecessarily hinder their progress.

ILEAU has shown that private businesses can positively contribute to climate action. Nilson Zepada, campaign co-ordinator with ILEAU, says that one of the biggest challenges has been "convincing private businesses that giving up parking spaces for tree canopy is

worth it” (Bernstien, 2022). Private businesses may require external incentives to be motivated into participating in greening projects. It is important for planners involved in these projects to frame the benefits in such a way that they will be appealing to private partners. For example, a business may be concerned about reduced parking if a nearby parking lot is converted into green space, but they may not have thought about the increased foot traffic that the project is likely to bring to the community, which will benefit their business.

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Figure 5: December 2022 meeting of ILEAU partners (ILEAU, 2022)

ILEAU has also demonstrated that UHI-reduction projects can be successfully treated as health policy (Canada, 2022). Health policy and environmental policy have historically been treated as two separate policy spheres. However, it is becoming more and more clear that environmental quality and health are intimately related. Human health is dependent upon the quality of the environment that we live in. This is especially true for more vulnerable groups, including children, the elderly, and people with certain health conditions. The ILEAU initiative is novel in how it has made the connection between access to green space and public health, with the local health authority being in control of implementing health-related climate adaptation strategies. This holistic approach to climate action sets a precedent for other Canadian cities and provinces,

demonstrating that this funding model can produce meaningful change.

This initiative has additionally shown the importance of local interventions for mitigating climate change. Climate action is often considered on a national, international, or global scale. It is true that there need to be global systemic changes in order to reduce GHG emissions and prevent further biodiversity loss. This systemic overhaul is at such a large scale that it is outside of the control of the average person. However, these changes will need to manifest themselves in actions at the local scale. If enough communities make changes on this micro-scale, eventually they will accumulate to have a macro-level impact. ILEAU is a good example of this, as they are targeting local interventions to form a network that will have an impact at the scale of the whole city.

While having strong relationships is crucial for good planning processes, ILEAU has shown that building these partnerships takes time. This means that cities attempting to replicate ILEAU should not expect to see immediate results. CRE-Montréal found that they spent much of their first year of the initiative “meeting with stakeholders and developing communication tools such as ILEAU’s website” (Canada, 2022). This will have to be built into any project timelines. As a result, cities that want to form similar public health greening initiatives should start

bringing together potential collaborators at the earliest opportunity, so that these relationships are in place by the time a funding model is established.

Climate change is becoming an increasingly pressing issue for urban governments and residents. The increased frequency and intensity of heatwaves poses a public health risk to everyone, especially those whose health is more vulnerable. Improving access to green space is a key strategy for reducing urban heat islands and protecting people from heat. The benefits of these projects need to be evenly distributed, so that low-income neighbourhoods have equitable access to green spaces. Reducing inequality overall is also a key factor for reducing vulnerability. The ILEAU initiative provides an example of how to successfully collaborate across sectors to promote climate adaptation and protect public health. Other Canadian cities could explore this model for increasing access to green space and reducing urban heat islands within their communities.

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Figures

Cover Image: "Urban Forest". <https://www.unsplash.com/s/photos/urban-forest>

Figure 1: Bernstien, J. (2023). Cooling Canopy: Unequal access to shade means marginalized neighbourhoods are more vulnerable to heat. Here's how Canadian cities can save lives. <https://newsinteractives.cbc.ca/features/2022/heat-island-solutions/>

Figure 2: HealthyPlan.City. (2023). <https://healthyplan.city/en>

Figures 3-4: Bernstien, J. (2023). Cooling Canopy: Unequal access to shade means marginalized neighbourhoods are more vulnerable to heat. Here's how Canadian cities can save lives. <https://newsinteractives.cbc.ca/features/2022/heat-island-solutions/>

Figure 5: ILEAU. (2022). A unifying moment with our partners. Retrieved from https://ileau-ca.translate.google.com/actualite/2022/un-moment-rassembleur-nos-partenaires?_x_tr_sl=fr&_x_tr_tl=en&_x_tr_hl=en&_x_tr_pto=sc