

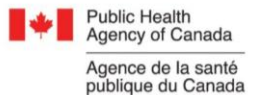


HealthyPlan.City: Mapping Climate Risks and Health Inequities for Local Action

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Managing Director, Canadian Urban Environmental Health Research Consortium (CANUE)*

**ClimateWest 2025 Forum
Saskatoon, SK
June 18, 2025**



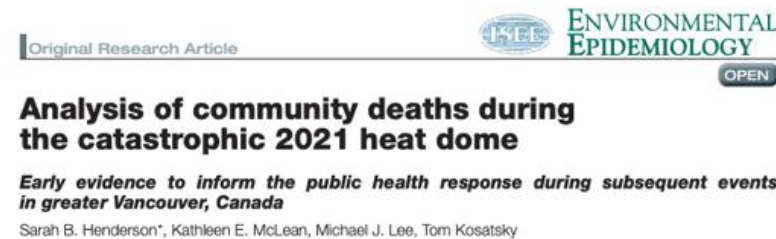
Background: Environmental inequity in Canadian cities



Réduire les vulnérabilités et les inégalités sociales : tous ensemble pour la santé et le bien-être



"There are heat islands in 73% of Montreal's neighbourhoods with the lowest socio-economic status, compared with only 20% in Montréal neighbourhoods with the highest socio-economic status."



"Significantly higher risk of heat-related death in lower socio-economic status and low greenness Vancouver area neighbourhoods"

Background: Recent legislation in Canada



BILL C-226 - National Strategy Respecting Environmental Racism and Environmental Justice Act

“ The Minister must develop a national strategy to promote efforts across Canada to **advance environmental justice and to assess, prevent and address environmental racism.**

Royal Assent: June 20, 2024

Data documents inequities and can accelerate progress towards healthier, more equitable cities.

HealthyPlan.City

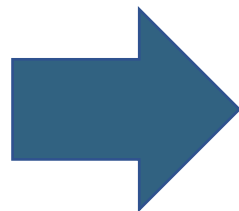


Nationally-standardized
datasets



More info: www.canue.ca

Data holdings: www.canuedata.ca



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TOOLS THAT SUPPORT AN EQUITABLE
AND HEALTHY BUILT ENVIRONMENT



“Democratize” data assembled by CANUE

Supported by:

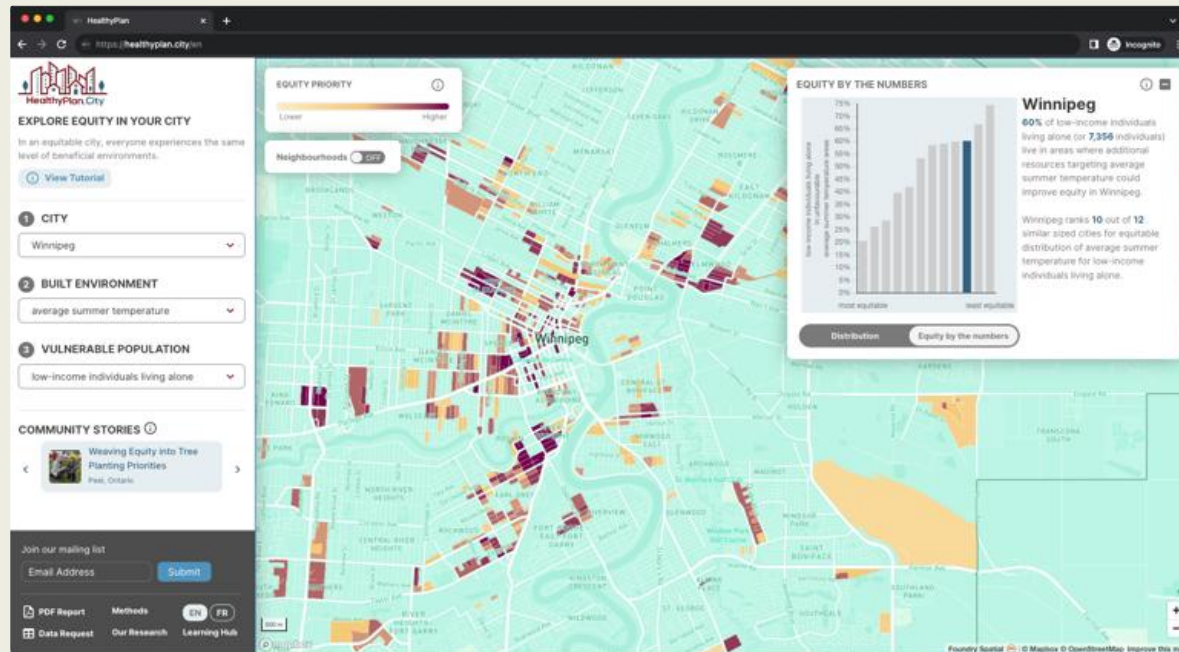


Supported by:



Enhanced Surveillance for Chronic
Disease Program (ESCDP)

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Web-based equity mapping tool:

- 25 demographic and environmental indicators
- >125 Canadian municipalities
- Distribution of individual indicators
- Environment equity analyses
- City and neighborhood-comparisons and rankings

Aims:

- Support equity-focussed public health and urban planning decision-making
- Empower communities and facilitate advocacy

Environmental and demographic data

Urban climate



- **Heat**
- **Tree canopy cover**
- **Flood susceptibility**

Air and noise pollution



- **Air pollution**
- **Noise**

Parks and Recreation



- **Parks**
- **Greenspace provision**
- **Large natural spaces**
- **Recreation and sports**

Community Amenities



- **Transit stops**
- **Retail and services**
- **Heathy food outlets**
- **Education and Culture**

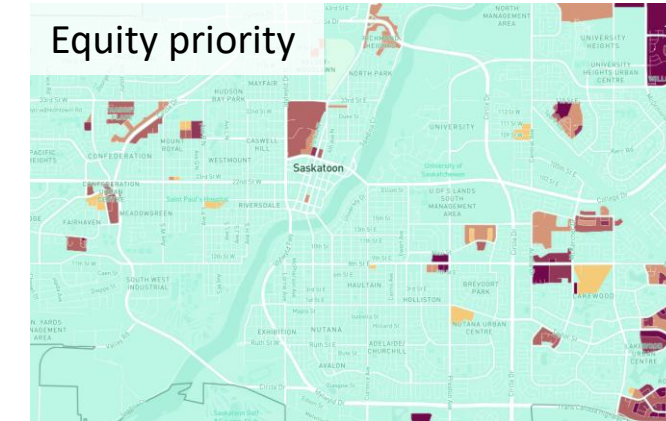
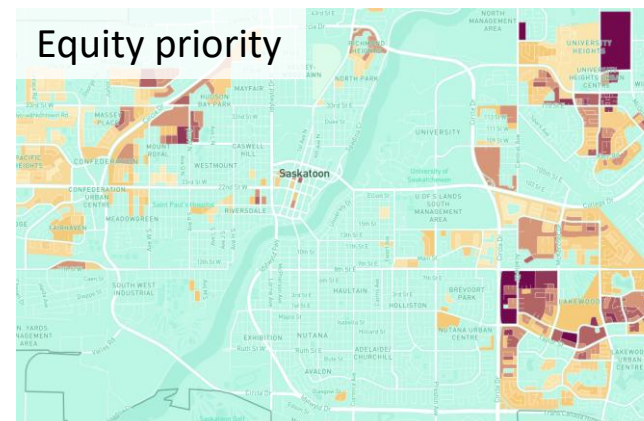
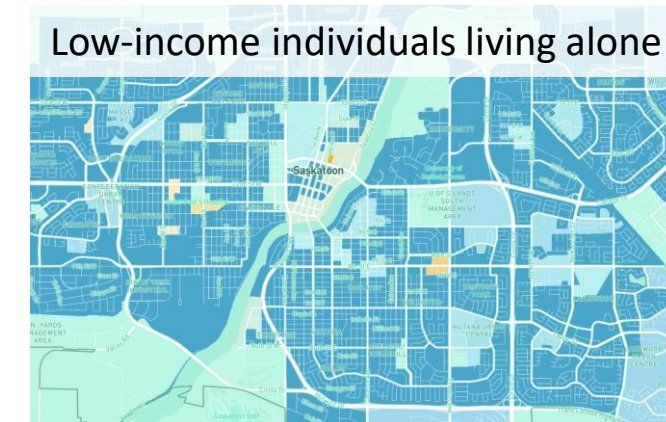
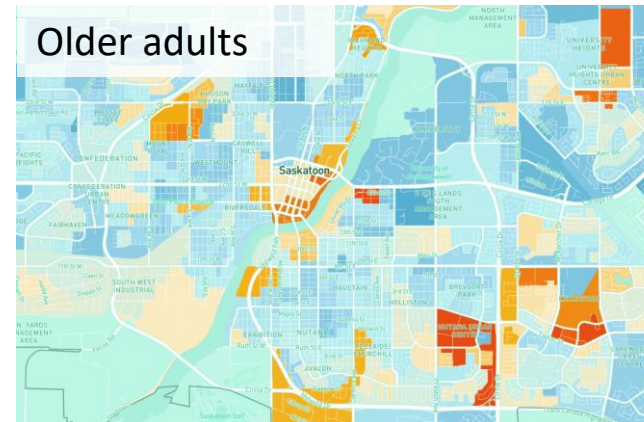
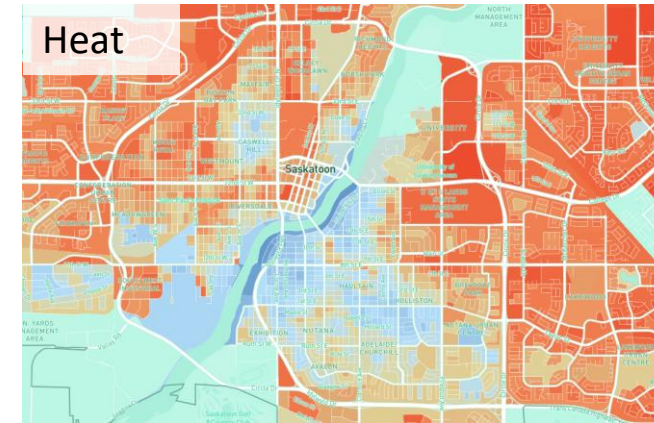
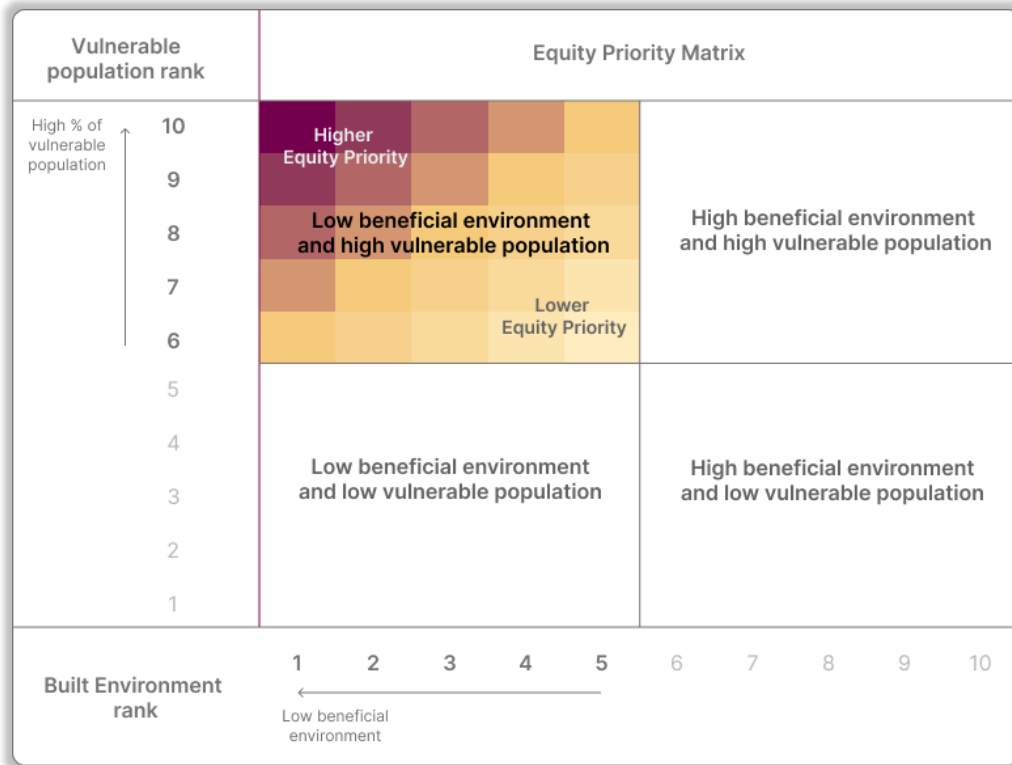
Vulnerable populations



- **Low-income**
- **Children**
- **Older adults**
- **Visible minorities**
- **Individual living alone**
- **Newly-arrived immigrants**
- **First-generation immigrants**
- **Low-income children**
- **Low-income older adults**
- **Low-income visible minorities**
- **Low-income individuals living alone**
- **Low-income newly-arrived immigrants**
- **Low-income first-generation immigrants**

Equity priority maps

Example: Saskatoon heat equity map



- **Equity priority areas** are city blocks with:
 - **Above median** vulnerable population % **AND**
 - **Below median** built environment values
- Darker shades of red show **higher equity priorities**
- Combining different indicators results in **different equity priority maps**

Extreme heat adaptation in Winnipeg

Extreme heat in Winnipeg:

- **Canada's first heat warning of 2025:** Monday May 12th, 2025 = 35 C (normal =19 C)
- **>30 C days:** historically 14 days -> by 2051: 52 days

Tree canopy in Winnipeg:

- **~200,000 American elm trees:**
 - Largest urban elm population in N.A.
 - Dutch Elm Disease: 33,000 elms lost since 2016 due
- **~356,000 Ash trees:**
 - Emerald Ash Borer: first detected in 2017.
 - In other cities - 99 % of untreated ash trees loss within 2 - 10 years.




Winnipeg street before and after Dutch elm disease

Loss of trees is intensifying the urban heat island effect:

- Areas experiencing tree canopy loss = surface temperature increases up to 6°C

Tree canopy cover in Winnipeg



EXPLORE EQUITY IN YOUR CITY

[View Tutorial](#)

1 CITY

Winnipeg

2 BUILT ENVIRONMENT


none

3 VULNERABLE POPULATION

none

COMMUNITY STORIES ⓘ

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Weaving Equity into Tree Planting Priorities

Peel, Ontario

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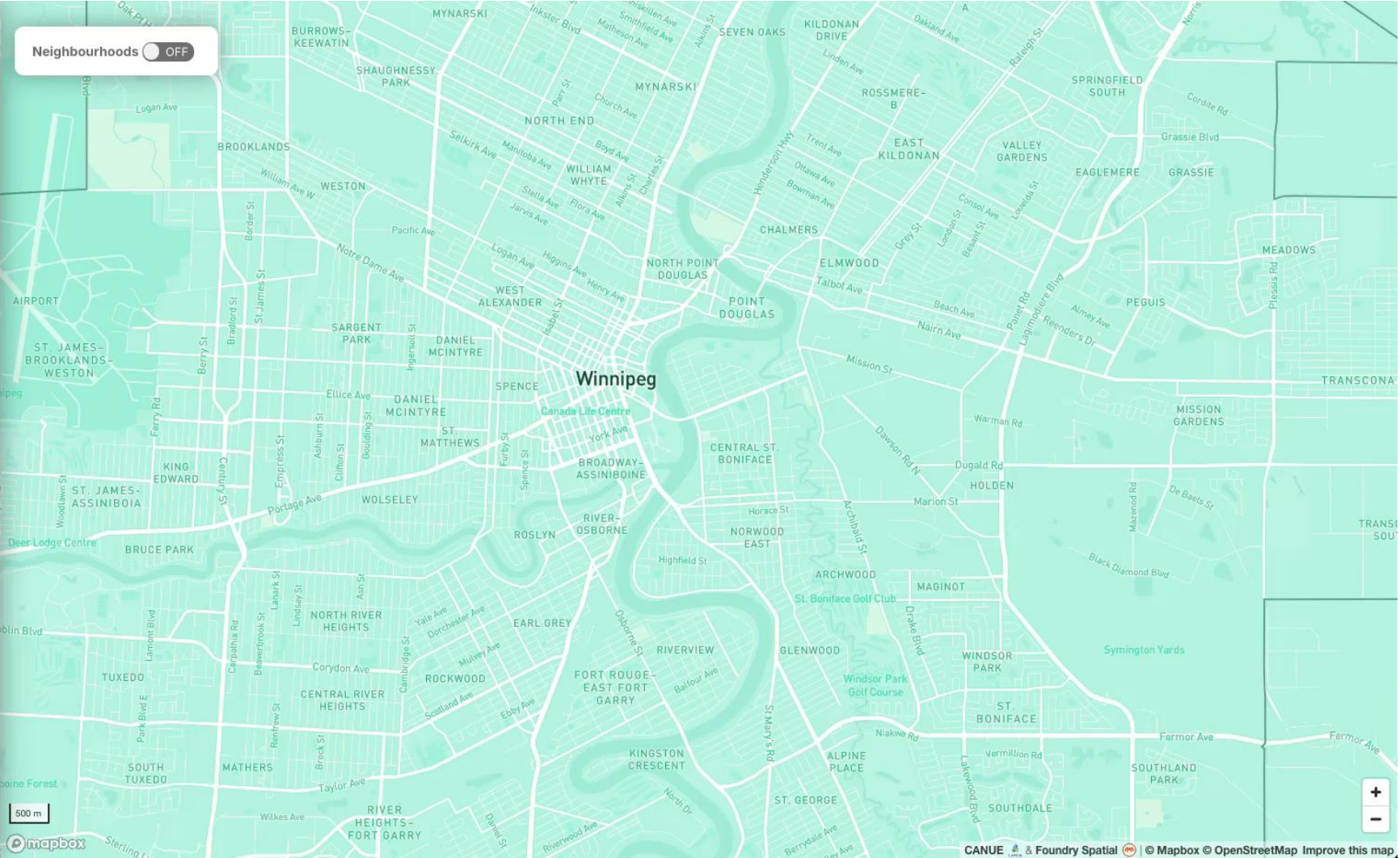
Methods

ENFR

Data Request

Our Research

Learning Hub




Neighbourhoods OFF

500 m


mapbox

CANUE & Foundry Spatial © Mapbox © OpenStreetMap Improve this map



CANUE

Low-income individuals in Winnipeg



EXPLORE EQUITY IN YOUR CITY

[View Tutorial](#)

1 CITY

Winnipeg

2 BUILT ENVIRONMENT


none

3 VULNERABLE POPULATION

none

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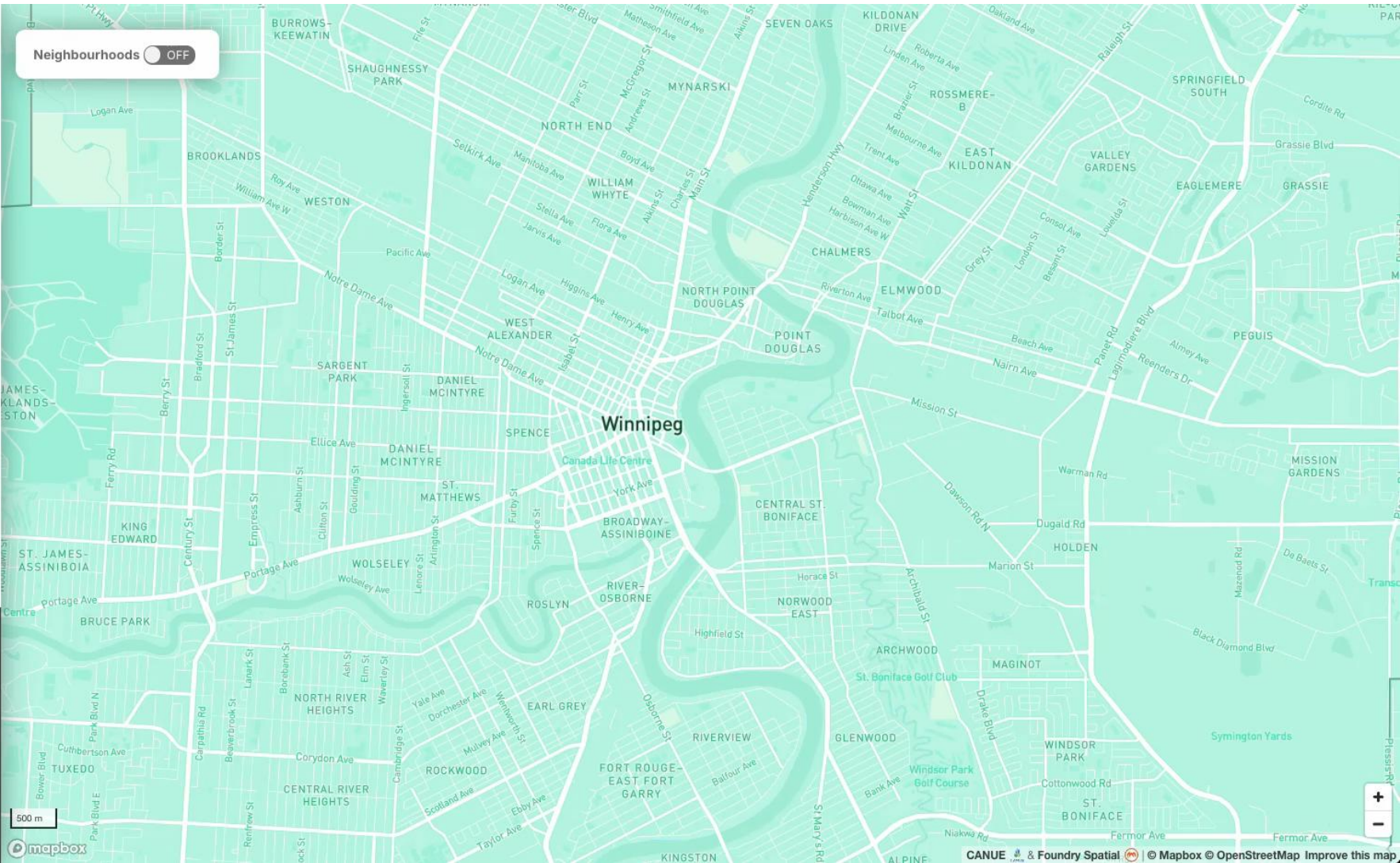
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Data Request

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Neighbourhoods ☐ OFF

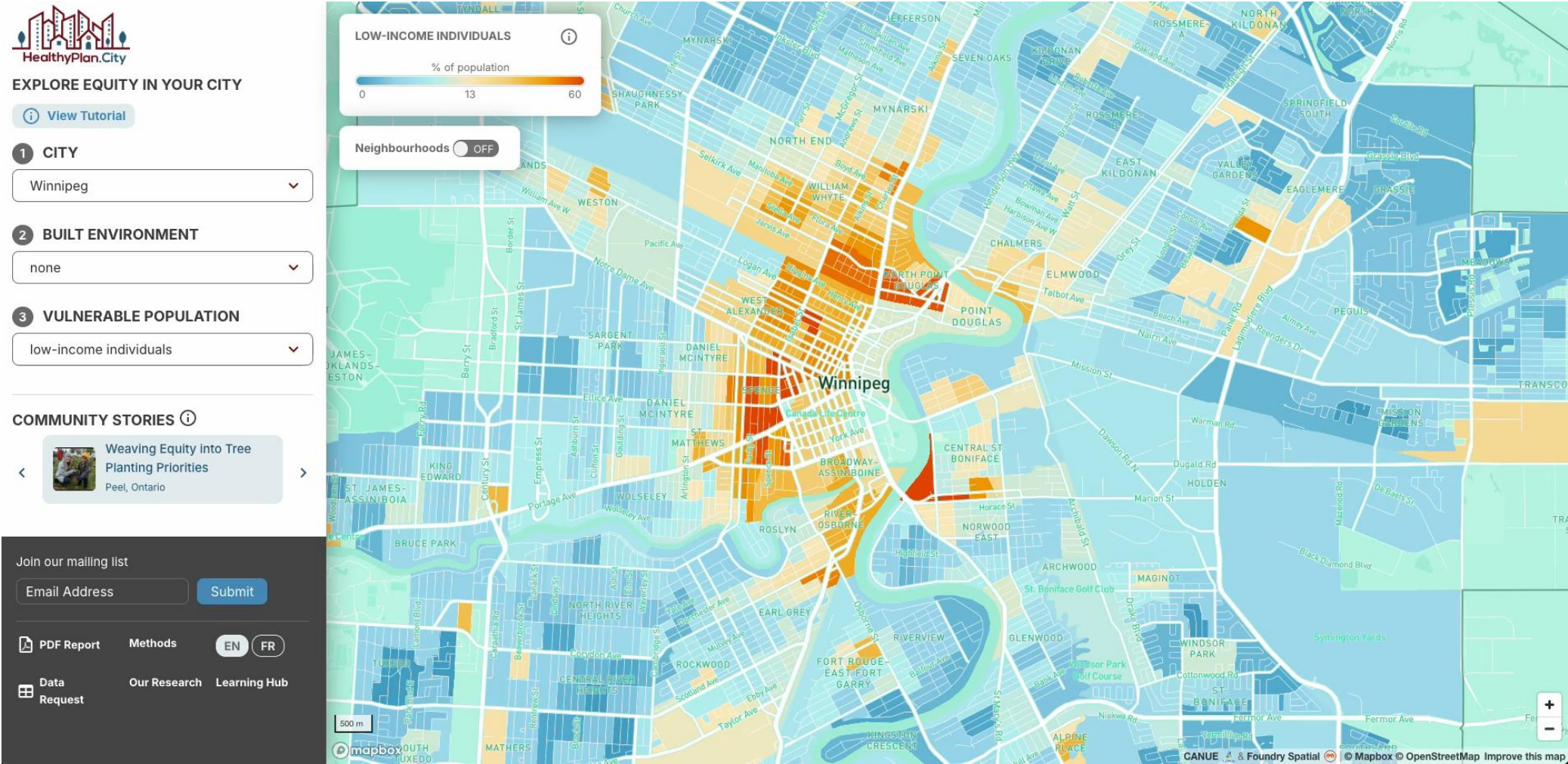


500 m

mapbox

CANUE & Foundry Spatial | © Mapbox © OpenStreetMap Improve this map

Equity priority map: *Tree canopy cover and low-income individual*



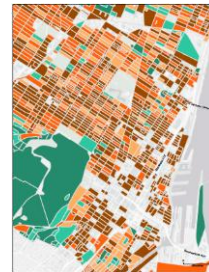
HealthyPlan.City in action

Equity Mapping & Participatory Planning project

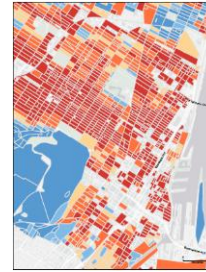


- Supported 11 local organizations across Canada in planning for and implementing equitable green infrastructure projects
- Developed equity maps that show environmental risk factors relative to social risk factors.

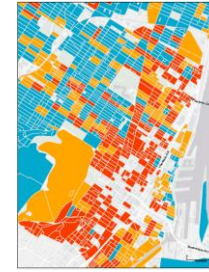
Greenness



Land Surface Temperature

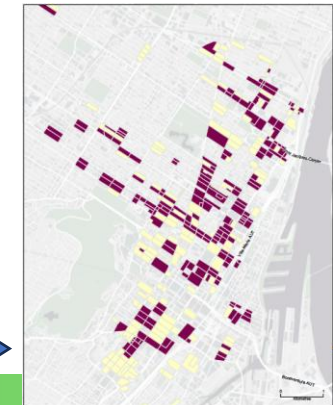


Low-income visual minorities



Higher proportion of low-income visual minorities +

- 1 - Low greenness or high surface temperature
- 2 - Low greenness and high surface temperature



HealthyPlan.City

More information



<https://healthyplan.city/>



Peer-reviewed publication

JOURNALof
URBAN HEALTH

J Urban Health (2024) 101:497–507
<https://doi.org/10.1007/s11524-024-00855-x>

ORIGINAL ARTICLE



HealthyPlan.City: A Web Tool to Support Urban Environmental Equity and Public Health in Canadian Communities

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