

CLIMATE CHANGE: AN EMERGING THREAT TO COMMUNITY SAFETY

May 10, 2022

Felix Munger



CANADIAN MUNICIPAL
NETWORK ON CRIME
PREVENTION

Together for Safer Canadian Cities

RÉSEAU MUNICIPAL
CANADIEN EN PRÉVENTION
DE LA CRIMINALITÉ

Ensemble pour des villes canadiennes plus sécuritaires



@SaferCitiesCA

#ClimateChangeCommunitySafety

Together for Safer Canadian Cities

The Canadian Municipal Network on Crime Prevention (CMNCP)

- The **MISSION** of CMNCP is to build capacity and mobilize Canadian municipalities to prevent and reduce crime and foster community safety and well-being (CSWB).
- The **VISION** of CMNCP is safe, healthy, and inclusive Canadian communities free from crime and violence. We are a Canadian voice of municipally-led approaches to crime prevention.



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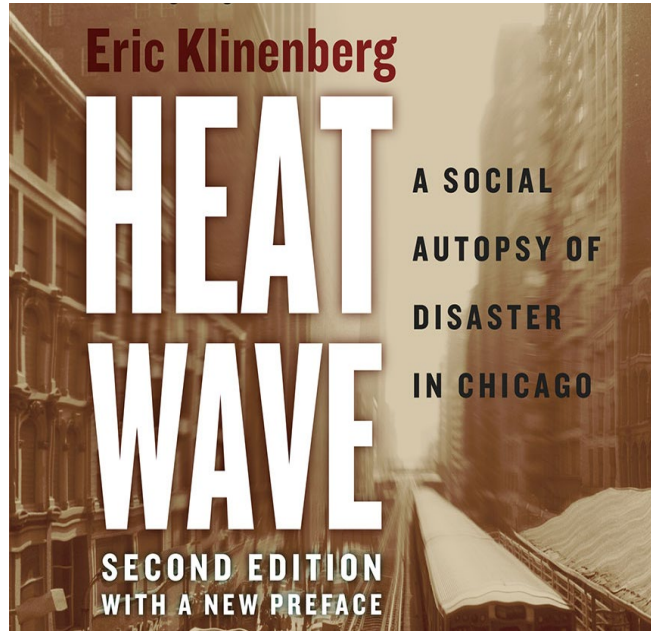


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EXCHANGES, TRAINING, RESEARCH & PUBLICATIONS

- Community Safety & Well-Being
- Preventing Rural Crime
- From Social Challenges to Social Inclusion
- Adverse Childhood Experiences
- Climate Change and Community Safety





Excerpt from Podcast

AGENDA

- Climate Change
 - IPCC Report 2022
- Linking Climate Change and Community Safety
 - Convergence of two very complex issue
 - Conceptual challenges
 - Overview of climate change impact on community safety
- Where to Go From Here
 - Further examination
 - Centre of Collaboration on Climate Change and Community Safety
- Tools

Climate Change

- One of the most complex challenges of our generation.
 - *“To keep global temperatures below 1.5C, 2C or even 2.5C, carbon emissions must peak before 2025.”*
- Wide range of effects → wide range of direct and indirect impacts
- Climate change is called a super-wicked problem.
- This complexity makes it difficult to frame – need to create smaller blocks that can be addressed.

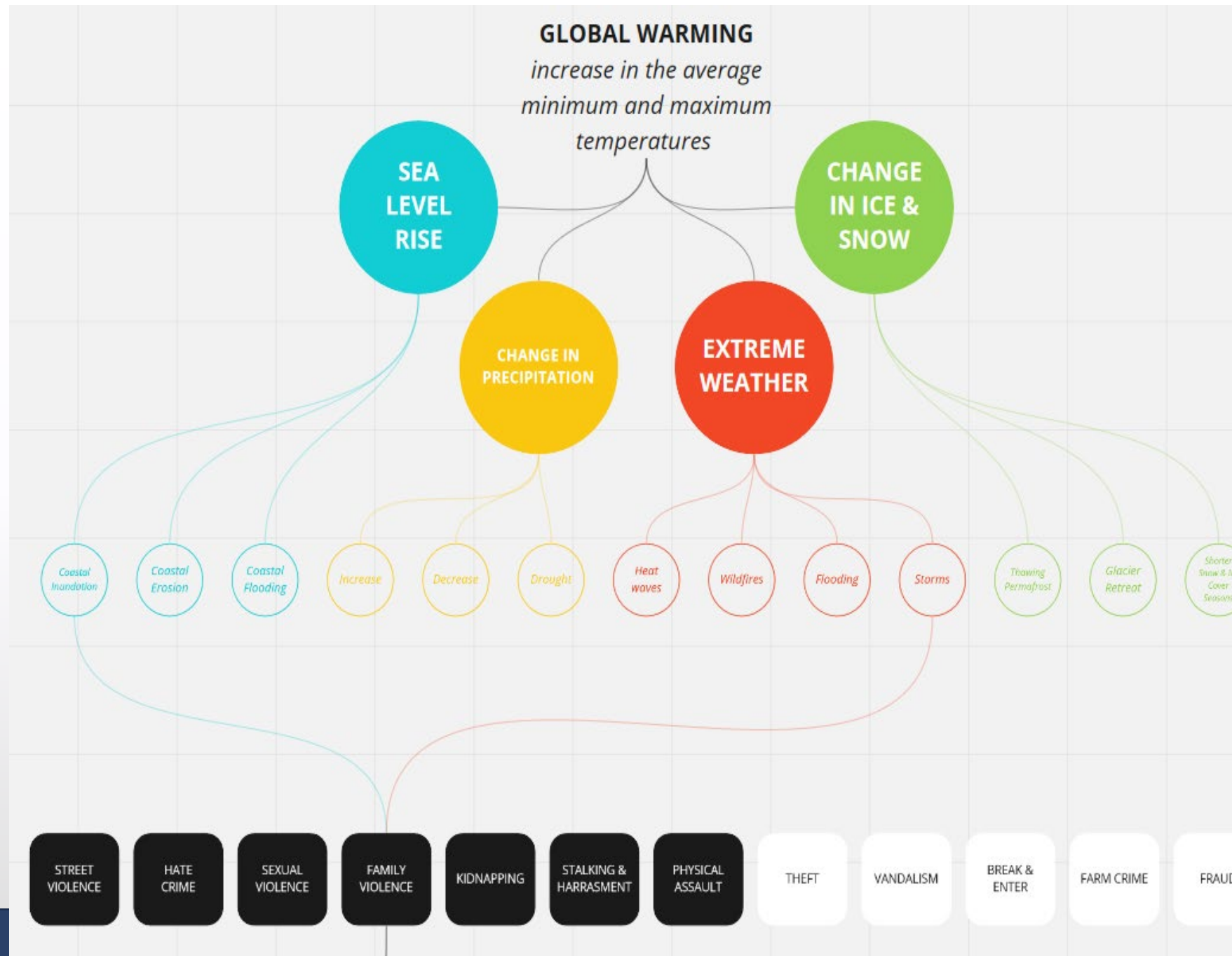


- **What comes to mind if you think about linking climate change and community safety, crime, and violence?**

□ Exploratory investigation into climate change risks and public safety outcomes in a municipal / local context

□ Identify and map potential climate hazards, vulnerabilities, and safety outcomes

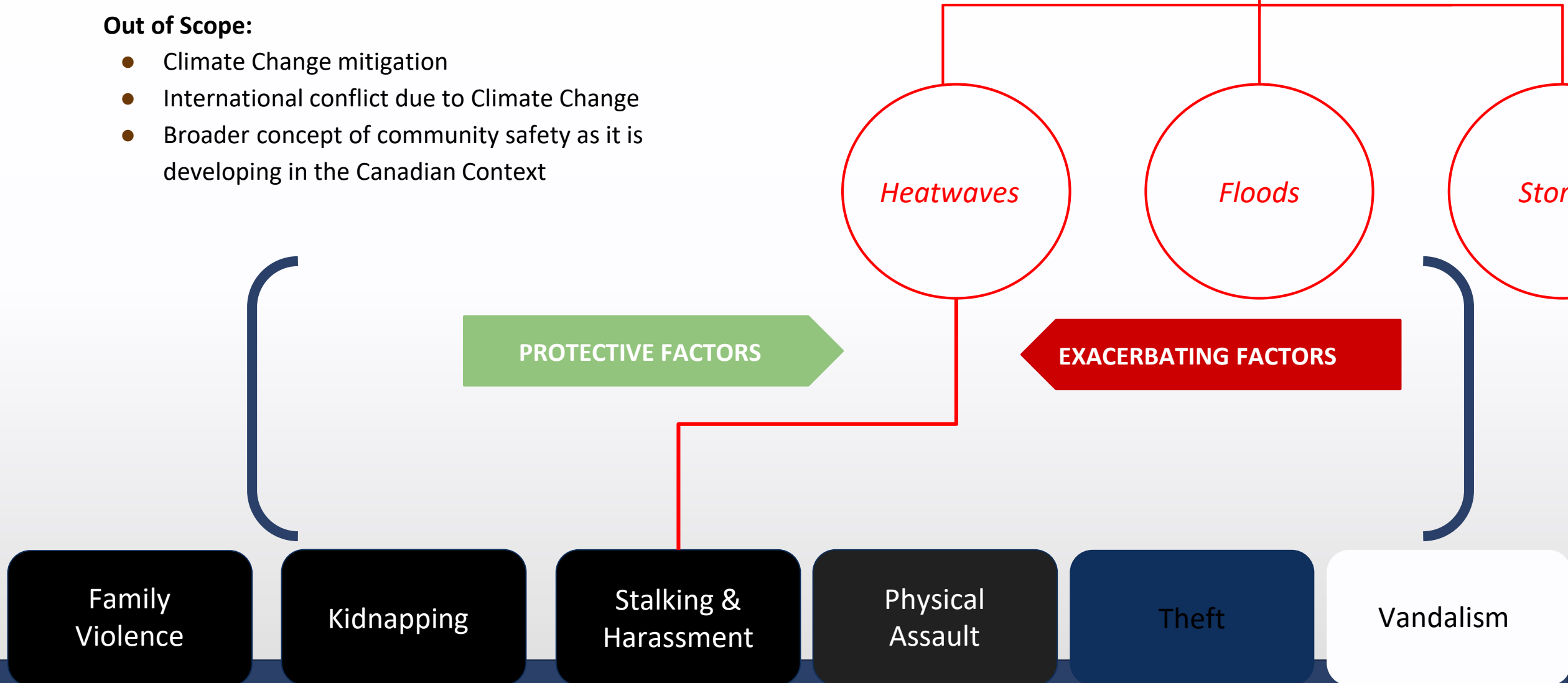
□ Provide a forum for interdisciplinary, stakeholder, and expert collaboration to bring greater attention to the challenge



PROJECT SCOPE

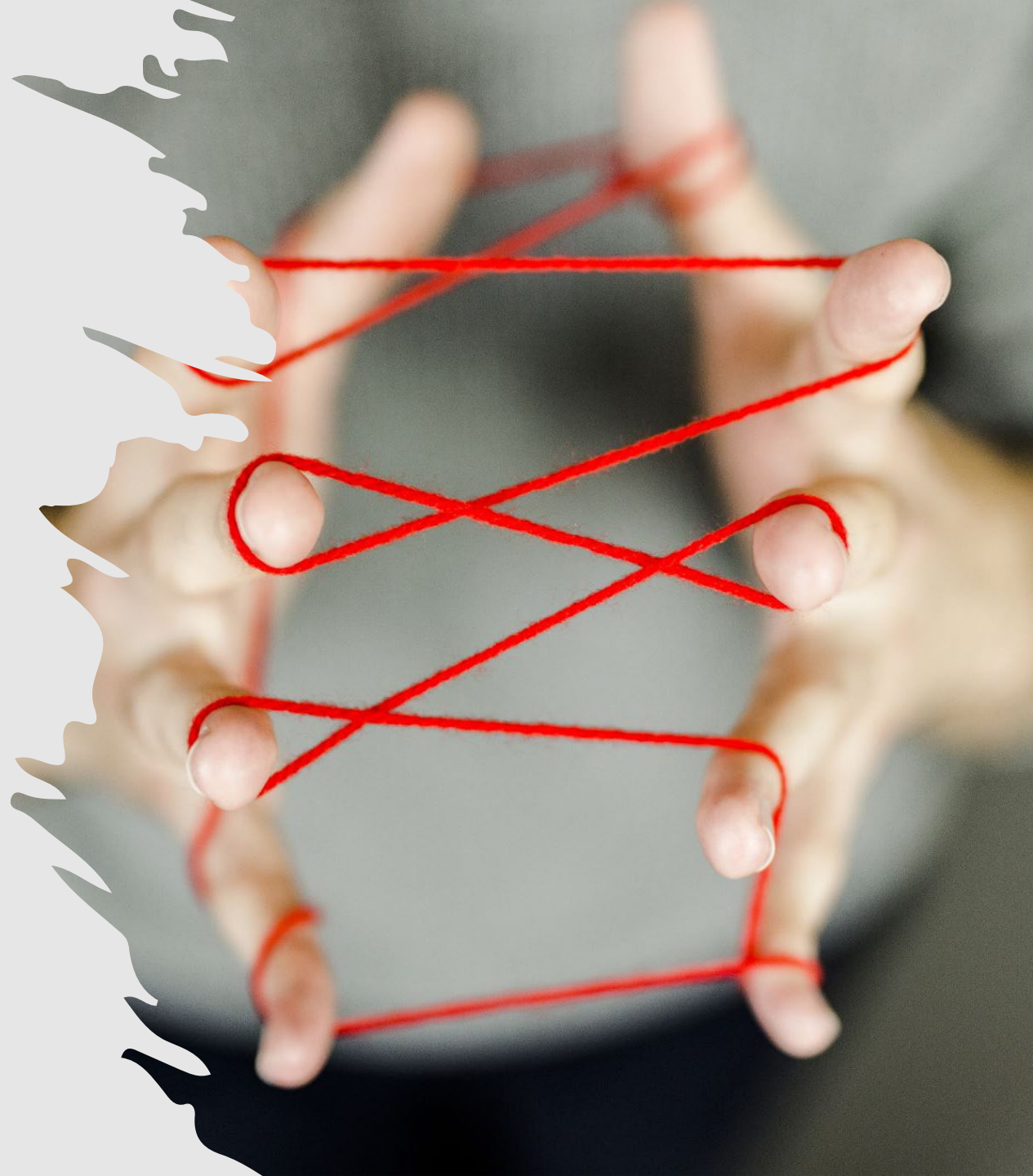
Out of Scope:

- Climate Change mitigation
- International conflict due to Climate Change
- Broader concept of community safety as it is developing in the Canadian Context



Together for Safer Canadian Cities

CONNECTING
CLIMATE
CHANGE AND
COMMUNITY
SAFETY



WHY LINKING CLIMATE CHANGE AND COMMUNITY SAFETY?

- Climate change is called a super-wicked problem
- Similarly, Community Safety is
 - By definition a multi-sectoral concept
 - Complex challenge to frame and address
- Based on our review of literature safety and other documents, there is a blind spot between climate change hazards and community safety.

CLIMATE CHANGE & SAFETY/SECURITY CONNECTION

- Lively conversation of impact at **global security level**
(cross-border)
- Lack of conversations of impact at the **local level**
- Most evidence on heat/pollution and crime/violence

CONCEPTUAL CHALLENGES

- Climate Change can contribute to an increase in crime, violence, and decrease in safety at the local level
- Crime can also contribute to environmental degradation and increase climate change (e.g., illegal dumping, pollution)



CONCEPTUAL FRAMEWORK

Agnew, R. 2011

CLIMATE CHANGE

- Habitat Change
- Negative Health Effects
- Food/Water Shortages
- Loss of Livelihood
- Migration
- Social Conflict



CRIMINOGENIC MECHANISMS

- Increased Strain
- Reduced Control
- Reduced Social Support
- Beliefs/Values Favourable to Crime
- Traits Conducive to Crime
- Opportunities for Crime
- Social Conflict



HIGHER LEVELS OF
INDIVIDUAL, GROUP,
CORPORATE, AND
STATE CRIME

CONCEPTUAL CHALLENGES

- Distinguishing between
 - **Shocks / Disasters**
 - Floods, storms, tornadoes, forest fires
 - Expected to be increasingly greater and more often (time to recover in between?)
 - **Gradual Stressors / Longer-Term Hazards**
 - Droughts, water scarcity, heat islands, pollution, pest infestations
 - Expected to worsen including combinations of heatwaves and droughts
 - Currently ½ of US is experiencing droughts

Robert Muggah, 2021

	Short-Term	Medium-Term	Long-Term
<p>Shocks / Disasters Floods, storms, tornadoes, forest fires</p>	<p>E.g., loss of live/injuries Stress on system Displacements</p> <p>Rising Property Crime</p>	<p>Disease Disruption of basic services Food insecurities Social unrest</p> <p>Intimate partner and domestic violence</p>	<p>Mortality/morbidity Degraded social and physical infrastructure Increased mistrust and polarization Increased inequity</p> <p>Increased crime associated with physiological / neurological changes</p>
<p>Gradual Stressors / Longer-Term Hazards Droughts, water scarcity, heat islands, pollution, pest infestations</p>	<p>Increase mortality/morbidity Competition over services Evacuations/relocations</p> <p>Intimate partner and domestic violence</p>	<p>Disruption to food security</p> <p>Riots and social unrest Increased criminality to substitute or survive</p>	<p>Mortality/morbidity associated with cardiovascular diseases</p> <p>Heightened aggression of at-risk / exposed populations</p> <p>Dr. Robert Muggah</p>

EXAMPLE: HEAT & VIOLENCE

- Temperature And Assault - New Zealand (2015)
 - Study reports on the relationship between temperature and assaults in NZ.
 - Data: police and hospitalizations
 - Geographical, seasonal, and irregular daily variation in temperature were all **positively related to the incidence of assault**
 - **1 °C increase in temperature = 1.5% increase in recorded assaults**
- Climate Change And Interpersonal Violence (2016)
 - Study estimates the predicted impact of climate change on levels of violence
 - Sample: 57 countries (western and non-western)
 - Multilevel regression to examine if warmer temperatures are associated with higher levels of homicide.
 - **Each 1 °C increase in temperature = 6% increase in homicides**

CLIMATE CHANGE AND GENDER-BASED VIOLENCE

- During first 6 months of COVID-19, 20% increase in femicide
- Floods, wildfires, etc. create a “eerie silence” for GBV services, women’s shelters, and crisis lines followed by a surge and increase in the complexity of presented needs
- Indigenous women are already at highest risk and rates for GBV. Climate change related crisis will put them at the highest risk as they are more likely to live in rural, remote and northern areas
- Women with disabilities also at very high risks – often not considered in community-wide responses to crisis
- “agencies responsible for responding to community-wide crises, including environmental disasters, are ill-equipped to account for the wide range of individual needs resulting from multiple and complex systemic barriers”

Project Findings

**Increased strain
on livelihoods**

**Increased social
conflict**

**Weakened
social supports**

**Reduced social
control**

**Creation of
conditions /
opportunities
for crime**

INCREASED STRAIN ON LIVELIHOODS

- Increase in family violence, sexual violence
- Increase in self-harm / suicide
- Potential collective violence

Project
Findings

REDUCED SOCIAL CONTROL

- Sweeping powers may be used against marginalized communities
- Criminalized survival mechanisms

for crime

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INCREASED SOCIAL CONFLICT



World Business Markets Breakingviews Video More

CORONAVIRUS MARCH 9, 2020 / 1:07 PM / UPDATED 2 YEARS AGO

Religious figures blame LGBT+ people for coronavirus

By Hugo Greenhalgh

3 MIN READ



LONDON (Thomson Reuters Foundation) - Hurricane Katrina. The New Zealand earthquake. Even the Spanish economy.

Over the years, LGBT+ people have been blamed for disasters both natural and man-made, and now they stand accused of being responsible for the coronavirus epidemic.

Several U.S. religious figures and an influential Israeli rabbi have suggested the emergence of the virus is divine retribution for same-sex activity, which they see as sinful.

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(LGBTQ youth)
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Increased strain on livelihoods

Increased social conflict

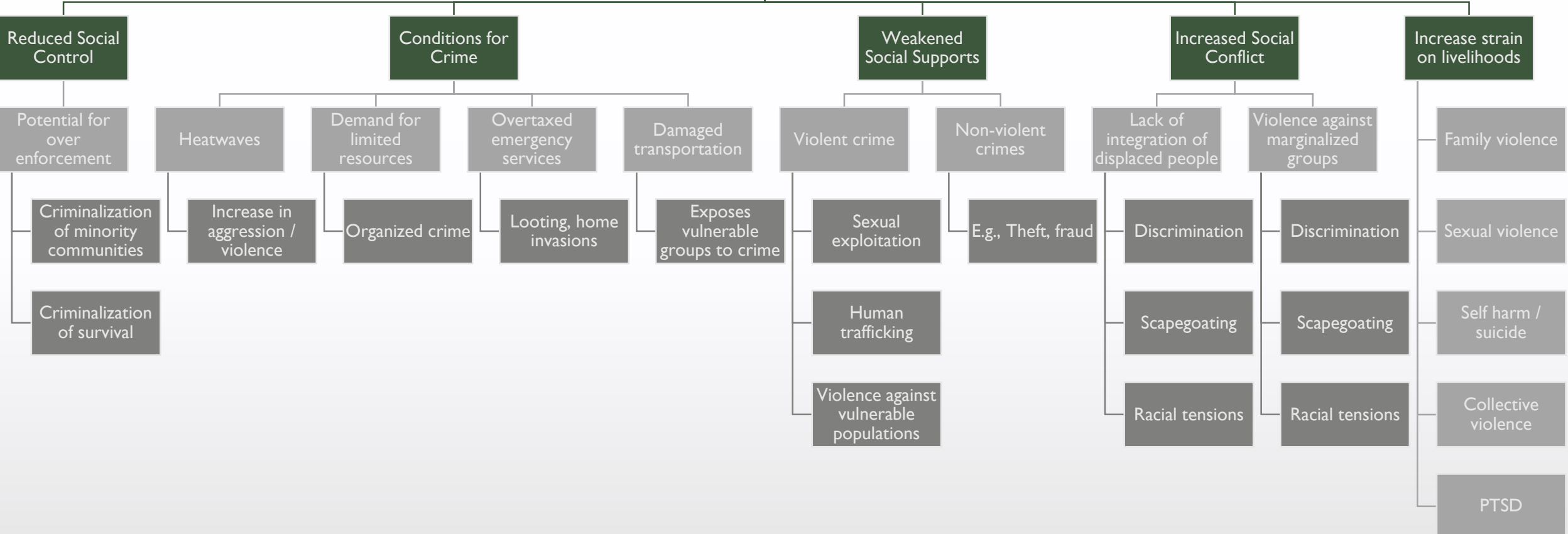
CREATION OF CONDITIONS / OPPORTUNITIES FOR CRIME

- Expose vulnerable groups
- Looting, home invasions, B&Es
- Organized crime
- Increase aggression and violence

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Climate Change



Key Takeaways

1. Expect similar events due to climate change (i.e., pandemics / disasters) in the future
2. Prepare, prepare, prepare



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SSHRC  CRSH

Social Sciences and Humanities Research Council
Conseil de recherches en sciences humaines

LAURIER 
Inspiring Lives!





- **What are your main concerns?**
 1. **Knowing what climate change related risks your community has?**
 2. **Understanding the link between those climate change risks and issues of safety?**
 3. **Recognition by colleagues of the link between climate change and safety?**
 4. **Connection between those working in climate change and your work or vice versa?**
 5. **Other?**

WHY SHOULD WE CARE?

- Canada increase of average temperatures of approximately 1.7°C
- Northern Canada saw an increase of 2.3°C
- Droughts
 - Prairies 2021
- Wildfires
 - British Columbia and Ontario 2021 (Lytton British Columbia)
- Heatwaves
 - June / July 2021 Western North America

IRREVERSIBLE EXTREME HEAT: PROTECTING CANADIANS AND COMMUNITIES FROM A LETHAL FUTURE

Supported by:

Joanna Eyquem PGeo.
ENV SP. CWEM. CEaw.

Blair Feltmate PhD.

April 2022

Executive Summary

Urban areas are the hot spots of global warming. Extreme heat, alongside flooding and wildfire, is a key risk to the health and well-being of Canadians. The situation is growing more dangerous, driven by irreversible climate change—Canada is warming, on average, at twice the global rate.¹ **Urgent action is required NOW to manage risk and avoid worsening impacts – and ultimately FATALITIES – resulting from rising heat.**

Extremely hot temperatures and heat waves can be deadly and have a severe impact on health, infrastructure and services, the natural world, and ultimately, the economy. **Not all Canadians will be affected in the same way, and those most vulnerable will require additional support.**

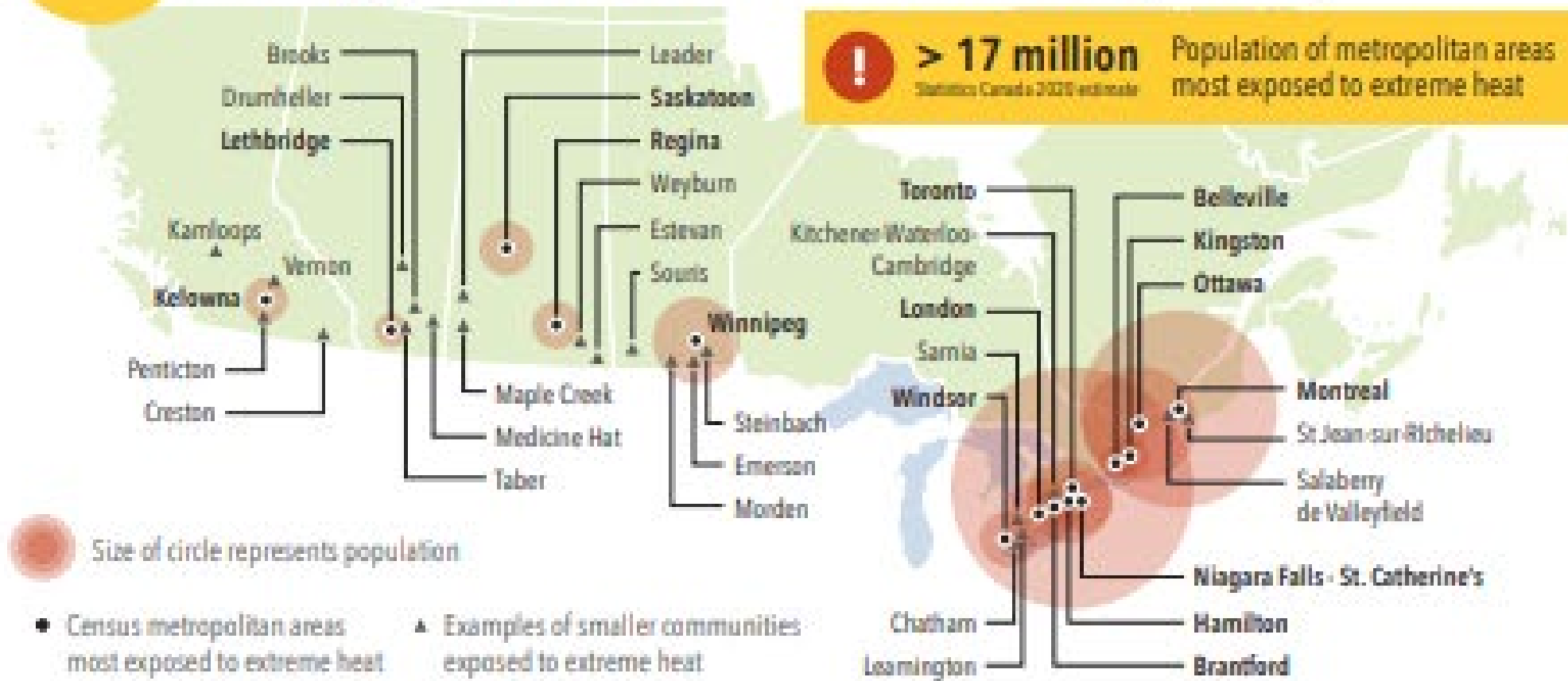
Table 4. Metropolitan areas and smaller communities projected to be most exposed to extreme heat, 2051-2080

Geographic Area	Provinces	Metropolitan Areas identified in the Top 10 lists	Smaller Communities (examples)
Low-lying areas from the West Coast to the Rocky Mountains	British Columbia	Kelowna	Kamloops Penticton Vernon Creston
Prairies of southern Canada along	Alberta	Lethbridge	Medicine Hat Taber Drumheller Brooks
	Saskatchewan	Regina Saskatoon	Estevan Maple Creek Weyburn

Risk

Millions of Canadians live in the metropolitan areas and smaller communities where projected extreme heat indicators are most severe (2051-2080).

> 17 million
Population of metropolitan areas most exposed to extreme heat
Statistics Canada's 2025 estimate



areas
at





- **WHAT DO YOU THINK NEEDS TO BE DONE?**

Recommendations



CLARITY OF LINKS



PRACTICE



RIGHTS AND
EQUITY LENS

WHERE TO NEXT?

- **Immediate**
 - Increase awareness among communities and all levels of government
- **Medium-Term**
 - National/International Strategy and Community of Practice
 - Create opportunities to share evidence and practice among safety practitioners
 - Bridge those working on climate change adaptation plans with those working on community safety
- **Long-Term**
 - National/International Centre of Collaboration on Climate Change and Community Safety



TOOLS

TOOL

- Website with some information, documents, podcast, and videos

- <http://safercities.ca/climatechange/>

Home About CMNCP Upcoming Events Community Safety Evidence Current Research & Projects Contact

CLIMATE CHANGE AND COMMUNITY SAFETY

Many Canadian communities are increasingly becoming vulnerable to risks associated with climate change. While adaptation strategies and frameworks have benefited from consultations with experts in various fields, security and safety experts have largely been excluded from these discussions. Research on the link between climate change and public safety is scarce, with little focus on the Canadian context. Existing research suggests that acute hazards and long-term stressors have exacerbated the effects of climate change on violence and safety/security, which threaten to overwhelm policing, emergency, and social welfare responses.

Starting in 2021, CMNCP is investigating how the lack of emergency preparedness undermines community safety and reveals safety blind spots.

To learn more, see below.

Upcoming Events

SPEAKER SERIES - Climate Change: An Emerging Threat To Community Safety

Cities and their inhabitants are highly vulnerable to safety risks associated with climate change due to their high population density along with their large volume of government services and economic and social infrastructure. Additionally, many smaller, northern, and rural communities will struggle with climate change-related community safety challenges as they disproportionately experience its effects. Unfortunately, most local adaptation efforts have excluded community safety practitioners and experts in their development, and therefore overlook the need for approaches to prevent and address community safety challenges related to climate change.

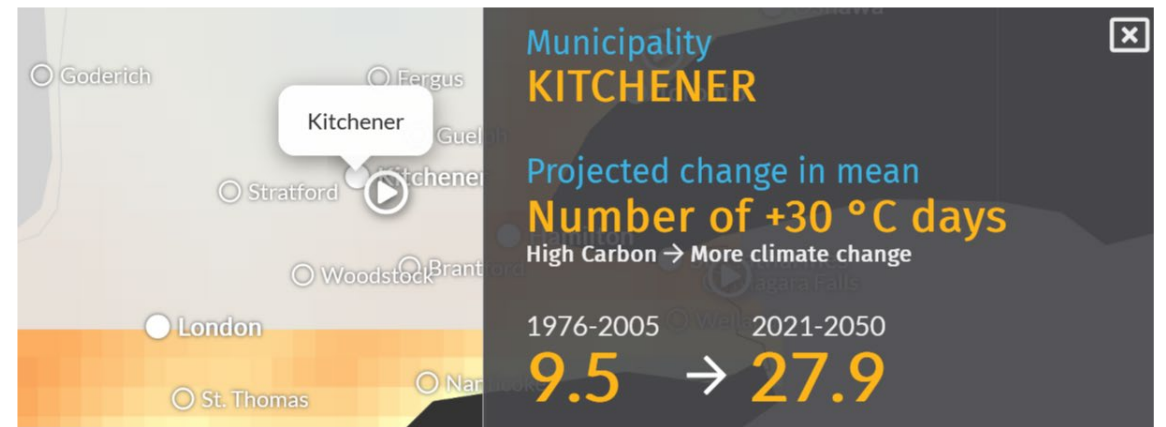
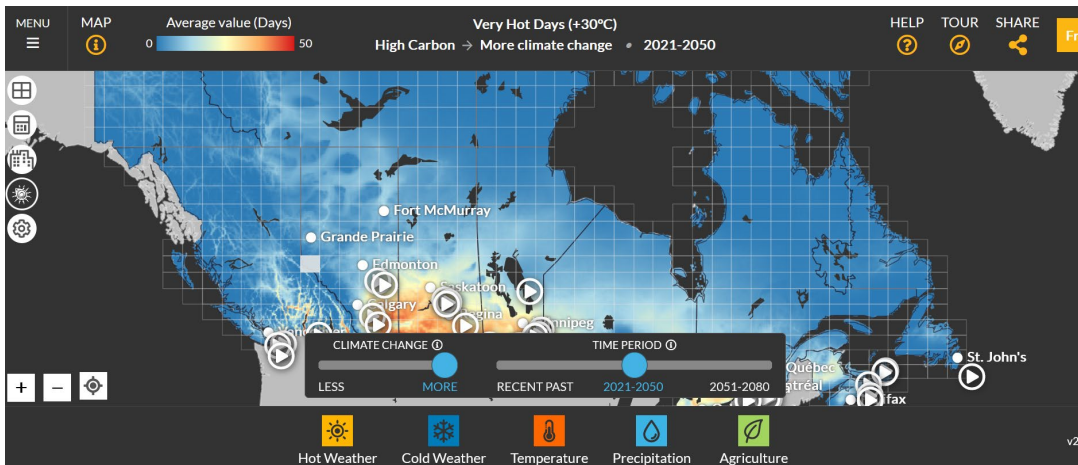
TOOLS

- **Climate change 2022 – Impacts, adaptation and vulnerability: Summary for Policy Makers**
 - https://www.ipcc.ch/report/ar6/wg2/downloads/report/IPCC_AR6_WGII_SummaryForPolicymakers.pdf
- **Climate change 2022 – Mitigation of Climate Change: Summary for Policy Makers**
 - https://report.ipcc.ch/ar6wg3/pdf/IPCC_AR6_WGIII_SummaryForPolicymakers.pdf
- **Indigenous Climate Hub**
 - <https://indigenousclimatehub.ca/>
- **Climate Change Action Map and Story Map - to learn more about climate change in the Inuvialuit Settlement Region and see how one group of Inuit people are responding to climate change**
 - <https://climateactionmap.inuvialuit.com/>

TOOL



- Combines climate science, mapping, and storytelling together with Indigenous Knowledges and community-based research and video to inspire awareness and action.
- Great mapping for heat, cold, temperature, rain



- <https://climateatlas.ca/>



Question?