Canadian Centre for
Safer Communities

Centre canadien pour des
communautés plus sûres

Climate Change, Community Safety, and the Prevention of Violence

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> *"We're entering a crucial time in our history. In coming decades we'll come upon one critical junction after another in rapid succession. The choices we make and the paths we choose at each junction will be irreversible"*
>
> *Thomas Homer-Dixon (2006)*

Introduction

For decades, scientists and environmental activists have warned that the global environment is deteriorating rapidly, thus jeopardizing the ability of future generations to sustain themselves.

Climate change is predicted to create unevenly distributed and complex problems for the world and humanity, including:

- Extreme climate events (e.g., hurricanes, heat waves, floods);
- Social changes (e.g., displacements of millions of people);
- Geopolitical impacts (e.g., climate and resource wars).

The World Economic Forum (2024, p. 8) notes "extreme weather events" as the second most significant short-term global risk . **In the long term, various environmental crises comprise the top four most severe global risks** (World Economic Forum, 2024).

Emerging research finds that **climate change is also a contributor to violence**; therefore, its impacts should be considered in prevention approaches. As will be discussed in the following pages, climate change is predicted to usher in a series of events that will breed substantial new environmental, safety, and security challenges. And while there have been discussions aimed at addressing climate change and its threat to safety on an international level (e.g., climate wars, climate refugees), little attention has been paid to its impact at the local level.

This topic summary will outline three interlinked challenges: the climate change crisis, violence in Canada, and the preparation deficit.

The Climate Crisis

According to Copernicus (2026), 2023-2025 were the three hottest years on record, reaching a yearly average of 1.6°C above pre-industrial levels in 2024. Global warming rates also appear to have accelerated significantly over the past decade, relative to previous decades (Foster and Rahmstorf, 2026). As such, "current trajectories of global warming mean that at least one 'climate tipping point' (or the threshold at which long-term, potentially irreversible and self-perpetuating change to a planetary system occurs) could be passed within the next 10 years" (World Economic Forum, 2024, p. 42).

Rising global temperatures have negative consequences (Climate Atlas of Canada, n.d.a; CBC, 2021) such as:

- Rising sea levels across the globe, which increases the threat of floods;
- Melting glacial and mountain ice, which changes river flows and freshwater provision;
- Weather pattern disruptions;
- More frequent, intense, and longer heatwaves that produce wildfires and droughts, impacting food supply; More frequent and intense extreme weather events like hurricanes.

Constituting the tenth most important global risks in the short and long term (World Economic Forum, 2024), water and air pollution have also become severe threats. Now found on the ocean floor, microplastic particles are consumed by fish and subsequently journey up the food chain. This means that many pollutants eventually make their way into people's bodies, including toxic heavy metals like mercury (Black et al., 2022). Similarly, 90–95% of the population now breathes outdoor air polluted beyond levels deemed safe by the World Health Organization (Black et al., 2022).

Climate change is driven by the increase of heat-trapping gases in the atmosphere, which are largely attributable to human activities including burning fossil fuels, deforestation, industrialisation, and consumerism (Kamal Uddin, 2017). The rapidly growing human population also contributes to the climate crisis. In 1950, the global population was about 2.5 billion; however, by 2020, humanity had multiplied to over 7.7 billion (Black et al., 2022). This ongoing population growth has increased the demand for natural resources and has, by extension, created a strain on the environment (Black et al., 2022). For instance, mass deforestation has caused soil to deteriorate, disturbed the water cycle, and affected weather patterns, changes which have led to an unprecedented loss of biodiversity (Cochard, 2011).

If humans accelerate climate change, the responsibility for and the consequences of this crisis are not distributed equally. Fossil fuel companies are responsible for 70% of the world's greenhouse gas emissions (Hyman, 2020). Whereas the richest 10% of the population is responsible for 50% of emissions, the poorest 50% account for only 10% of emissions (Colón, 2022). And although all countries contribute to climate degradation, "the responsibility of the North is comparatively greater than that of the South" (Kamal Uddin, 2017, p. 113). As such, humans – especially in the global North – have a negative impact on Earth's resources, many of which are needed for our continued survival. In turn, this disproportionately harms marginalized communities (Johnson et al., 2022).

Violence in Canada

In Canada, the Crime Severity Index* tracks the number and severity of police-reported crimes, relative to the population in a given area. On a national level, the Non-Violent Crime Severity Index has been trending downward since 1998 (Statistics Canda, 2025c). Although the Violent Crime Severity Index (VCSI) dipped for a few years, it has since returned to levels comparable to 1998 (Statistics Canada, 2025c).

The prevalence and severity of violent crime vary across the country. Since 2015, the VCSI has consistently been significantly higher in the Territories relative to the national average, while it remained higher than the national average in the Prairies (Statistics Canada, 2025d). As for municipalities, in 2024, Thunder Bay registered the highest VCSI value, at 206, while Barrie registered the lowest at 58 (Statistics Canada, 2025a). Thunder Bay's VCSI value was more than twice the national average, in addition to being the highest VCSI for Canadian municipalities over a four-year period (Statistics Canada, 2025a). Looking at specific types of crime, Toronto was the municipality reporting the most homicides between 2020 and 2024, while accounting for 17% of all Canadian homicides in 2024 (Statistics Canada, 2025b).

**It is important to recognize that in smaller communities, even a single serious crime can significantly increase the Crime Severity Index, potentially creating the impression of a sharp rise in crime despite being a one-off incident, thereby limiting the reliability of comparisons with larger jurisdictions.*

Furthermore, traditional definitions of violence focus primarily on homicide rates and casualties of war, often overlooking intersectionality as well as other significant forms of violence (True, 2015). While homicide and war casualty rates are declining, this is not necessarily the case when considering gender, race, nor gender-based violence (True, 2015; Statistics Canada, 2025c). For example, in 2023 and 2024, nearly one third of homicide victims were racialized, while Indigenous Peoples have consistently been overrepresented in homicide victim statistics since 2014 (Statistics Canada, 2025c). Whereas national homicide rates decreased for two consecutive years, there were more women victims in 2024 relative to 2023, and most of these women were Indigenous (Statistics Canada, 2025c). Additionally, 42% of women were killed by an intimate partner, up 10% from 2023 (Statistics Canada, 2025c).

It is also worth noting that gender-based violence (GBV) and intimate partner violence (IPV) tend to be underreported (True, 2015). As such, official GBV and IPV rates provide limited insight into the actual prevalence of these forms of violence. According to True (2015), growing rates of GBV and IPV highlight that:

- Violence remains an issue and it is as much a local risk as a global one;
- Responses to violence must consider its many forms, drivers, and obstacles to reporting.

Overall, official data indicates that violence remains relatively stable on a national level; however, there appears to be regional variation, as well as differences when considering types of violent crime. Some populations also seem to be victimized more than others.

What happens when climate change and violence converge?

A Converging Crisis:

Climate Change as a Risk Multiplier

Climate change is projected to have dire consequences for our planet, such as food and water shortages as well as habitat and home-loss (Agnew, 2012). Climate change is also a risk multiplier and is likely to increasingly impact factors that contribute to community safety (Black et al., 2022).

1

Impact on violence

By-products of climate change like inequality and the sudden loss of livelihood are believed to motivate terrorism and other forms of violence (Plante et al. 2017). According to Thomas and Wolff (2023), "temperature volatility is significantly associated with the incidence of violence". Further, research demonstrates an increase in intimate partner violence following extreme weather events and an increase in violent behavior during periods of higher temperatures (van Daalen et al., 2022). Additionally, following a flood in southern Alberta in 2013, sexual assault-related visits to emergency departments tripled (Sahni et al., 2016).

2

Impact on mental health

Studies show that in communities experiencing extreme weather events, residents report increased levels of fear and stress. As more extreme weather incidents continue to occur due to climate change, Canadians' stress levels are likely to increase (Climate Atlas of Canada, n.d.b).

3

Impact on factors that contribute to violence

Researchers have found that the effects of climate change on agricultural sectors have contributed to increased rates of intimate partner violence (Munala et al., 2023), proposing a connection between social and psychological pressure and the loss of income. In turn, this is likely to severely impact rural communities.

4

Impact on social polarization

Climate change and related issues can also contribute to greater social polarization due to climate scepticism and related movements (Falkenberg et al., 2022). For example, in communities that rely heavily on the fossil fuel industry for employment opportunities, conflict may arise among those who want to reduce the reliance on fossil fuels to aid in the fight against climate change and those who resist these efforts to maintain the current labor structure.

5

Impact on community systems

Responding to climate change-related events will require resources that could have been invested in other areas, such as healthcare or the criminal-legal system (Agnew, 2012).

6

Impact on resources

The unsustainable use of resources, climate change/environmental degradation, and violence all exist within a cyclical relationship where each exacerbates the other. While, historically, humanity has not tended to address large-scale issues effectively, we can examine other catastrophes such as the COVID-19 pandemic to identify valuable learning experiences and to inform future actions in response to the climate-violence/safety crisis (Black et al., 2022).

7

Impact on marginalized populations

Climate change intersects with and can exacerbate social, gender, economic, and environmental injustices, while responses to climate change may also lead to injustice (Colón, 2022). For example, municipal interventions meant to promote climate resilience may have detrimental consequences on marginalized populations. Anguelovski and collaborators (2019) note that green infrastructure and urban greening projects can displace low-income, migrant, and racialized residents and lead to climate gentrification.

8

Impact on Indigenous communities

Climate change has disproportionate effects on Indigenous and Northern rural communities. Due to global warming, there has already been a noticeable reduction in the amount of time winter roads can be open (Hori et al., 2018; Mullan et al., 2021). Specifically, Moosonee and Kapuskasing roads are expected to be greatly impacted by 2050 (Hori et al. 2018). Consequently, transporting resources to people in Northern Canada is likely to become increasingly more difficult and expensive.

The Preparation Deficit

According to Schwartz (2019, p. 50), "local governments have emerged as important players in climate change governance", by addressing vulnerabilities to the consequences of climate change, and through mitigation measures like achieving renewable energy or reducing greenhouse gas emissions. Local governments are also the first responders to events precipitated by climate change, such as floods, droughts, landslides, wildfires, heatwaves, water shortages, and more.

However, communities tend to favor hazard-based responses to climate change over risk management, despite mounting evidence that the former is unsustainable and the latter has the potential for long-term benefits (Henstra and Thistlethwaite, 2017). This disconnect is particularly problematic because effective risk management requires communities to share the responsibility and costs for risk reduction with other levels of government and non-government actors (Henstra and Thistlethwaite, 2017).

Furthermore, communities often lack the knowledge or tools needed to address intersections between the climate crisis and safety/violence. According to Black and collaborators (2022), what makes this complex challenge even more concerning is that governments do not tend to:

- Adequately prevent climate change through mitigation;
- Increase safety by addressing the root causes and risk factors of violence;
- Recognize and address the interlinkages between climate change and local safety/security and violence.

The Preparation Deficit

Covid-19 Case Study

COVID-19 highlights governments' inability to effectively cooperate and commit to long-term solutions to address the pandemic on a global scale. The World Health Organization's COVAX initiative aimed to create equitable access of COVID-19 vaccines to participating countries, yet there has been a lack of serious contributions as nations overwhelmingly chose to compete rather than collaborate with this initiative (Black et al., 2022). In many cases, world leaders even argued over vaccines, denied the pandemic's severity, and spread misinformation about cures (Black et al., 2022). This case highlights that responses to the climate-violence/safety crisis should be based on evidence and cooperation. Critically, it also suggests that truly effective responses will likely depend on the efforts and leadership of local communities and organizations.

Conclusion

Findings suggest that climate change compounds violence and poses a threat to community safety. As such, we issue the following recommendations for addressing the converging crisis at the local level. Responses should:

1

Be based on data and evidence

Responses to the climate-violence/safety crisis should be rooted in research and effectively implemented across general populations. Additionally, they should include both quantitative and qualitative elements to address issues such as disproportionate impacts and underreporting. Considering traditional knowledge and Indigenous approaches to climate adaptation (Johnson et al., 2022) is also a promising avenue.

2

Reduce social polarization to prevent violence

The climate crisis is expected to result in growing outbreaks of infectious diseases (Black et al., 2022). Considering the social polarization that emerged in response to the COVID-19 pandemic, we recommend that communities prepare for the health and social impacts of future outbreaks. Opposing views on these issues may increase social polarization within communities and therefore, steps should be taken to prevent division from escalating into violence.

3

Address root causes and focus on long-term solutions

Future approaches should recognize that climate change and violence are generational problems that require similarly measured solutions.

4

Be collaborative

Addressing this crisis requires high levels of collaboration between all orders of government and communities. We recommend that national governments, provincial/territorial governments, and communities approach the climate–violence crisis in a cohesive way (e.g., all adopting a risk management approach).

5

Protect the most vulnerable members of society

Around the globe, marginalized communities disproportionately experience negative impacts from the climate–violence crisis. As a result, we recommend long-term, collaborative approaches which include these voices and communities as a core component of planning and preparedness efforts.

6

Research, educate, and inform

We recommend that governments, institutions, and organizations continue to conduct research and critically evaluate approaches to community safety. These findings should be disseminated through education and other means to ensure that sustainable solutions to the climate–violence crisis are developed and implemented.

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The Canadian Centre for Safer Communities (CCFSC), formerly known as the Canadian Municipal Network on Crime Prevention, brings together urban, rural, and Indigenous communities across Canada to foster community safety and well-being (CSWB) through training, research, and knowledge exchange. We are a membership-based not-for-profit organization representing over 100 communities and approximately 50% of the national population.

For more information visit https://ccfsc-cccs.ca/

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