Deloitte.

In pursuit of climate change resilience and response

How the security and justice sector can prepare for disrupted operations, increased threats, and strained services

To say the security and justice sector has been dealing with a period of great challenge is an understatement. Racism and discrimination have been at the forefront of dialogue surrounding the need for police reform. Global unrest is forcing huge numbers of people to relocate as refugees and immigrants. Courts are facing growing backlogs. The aging population has implications for everything from workforce demographics to victimization trends.

There's more. Mental health has become the backdrop for many of the issues that occupy the attention of the sector. First responders and military personnel are experiencing mental health struggles at a higher rate

than the rest of the population. And while new technology can drive efficiencies—from our courts to our borders—shortages of skilled workers are making it tougher to meet demands. Meanwhile, the dwindling trust and confidence in policing must be addressed.[1]

All these factors and more are contributing to an urgent need to respond and evolve. In the first two parts of our article series on the future of security and justice, we discussed some of the pressures the sector is facing, including the need to create a more equitable justice system, to be human-centred in dealing with

communities, to foster a new era of community safety and well-being, to take a systems-based approach to root causes of crime, and to renew focus on the "service" in police service.

Yet another pressure with profound ramifications for this sector is climate change. Transcending all industries and society as a whole, its effects are showing up with increasing magnitude and frequency. Climate change is the focus of this third and final part of our series.

Moving beyond traditional thinking

Those who work within and support the sector have many reasons to elevate climate in their conversations, operate more sustainably, and plan differently. The impacts of climate change have consequences on operations, demand for services, and threat levels. That's true for police and other security services, emergency responders, the courts, and corrections.

Federal entities such as Environment and Climate Change Canada and the Department of National Defence, provincial ministries, major municipalities, and Crown corporations like Via Rail and BC Transit, among countless others, are taking action with clear targets and outcomes.

Still, while there are use cases for important green initiatives (some of which we will address in this article), overall the sector

proactively invest in greening initiatives, such as digitizing forms or greening fleet vehicles. Where organizations reside on this spectrum of risk acuity will drive different behaviours.

It's important that all security and justice organizations embed climate change action in their decision-making, regardless of their core mandate or the acuity of their risk. The reality is that it connects to the various mandates in this sector in very real ways. And there's a great risk in failing to understand that link and to act and react appropriately.

A long-standing roadblock is the belief that the sector lacks a central mandate to address climate change. That's shifting. While climate change work is often about environmental protection, it's also a broader security and social justice issue. It has repercussions far beyond environmental preservation or degradation, touching on everything from community safety and border security to access to justice and the rehabilitation of offenders.

These two broad dimensions—the urgency to operate more sustainably and the need to view climate change as a driver of demand on services—challenge the sector's traditional thinking.

This is a global issue. Everyone plays a part in the problem and the solution. Planning efforts cannot be viewed as the sole responsibility of the traditionally climate change-focused organizations. It's imperative that all industries, all sectors, and all levels of government take up the challenge to understand the potential impacts on their operations and their role in the crisis.

Reaching net-zero emissions is possible. But only if all organizations, regardless of their raison d'être, operate more sustainably and plan for how climate change might affect their work. For the security and justice sector, that means everywhere from national public safety and security agencies through to local community safety services.

These bodies and the people who comprise them want to make a positive impact on society. They share values around making a difference, being a force for good, and ensuring protection—values that can also be used to propel action on climate change and decisions about responding to its effects.

There are organizations in the sector, such as national security agencies in the United States, that are beginning to address climate change in their operations.[2] Across public sector organizations, we've seen commitments to reduce their carbon footprints by altering the ways they work.

is not yet prioritizing the mitigation of climate change impacts in its planning and preparation. Many local agencies and other organizations haven't even taken steps to evaluate the extent to which they add to the risks within their own domains. This is partly due to the ways in which climate risk is categorized and understood with respect to how it directly or indirectly affects the core mandate and operations of sector agencies. This perception needs to evolve and expand if the sector is to be both prepared and resilient moving forward.

There's also the question of whether an agency needs to reactively drive investment to quickly adapt to climate risks or
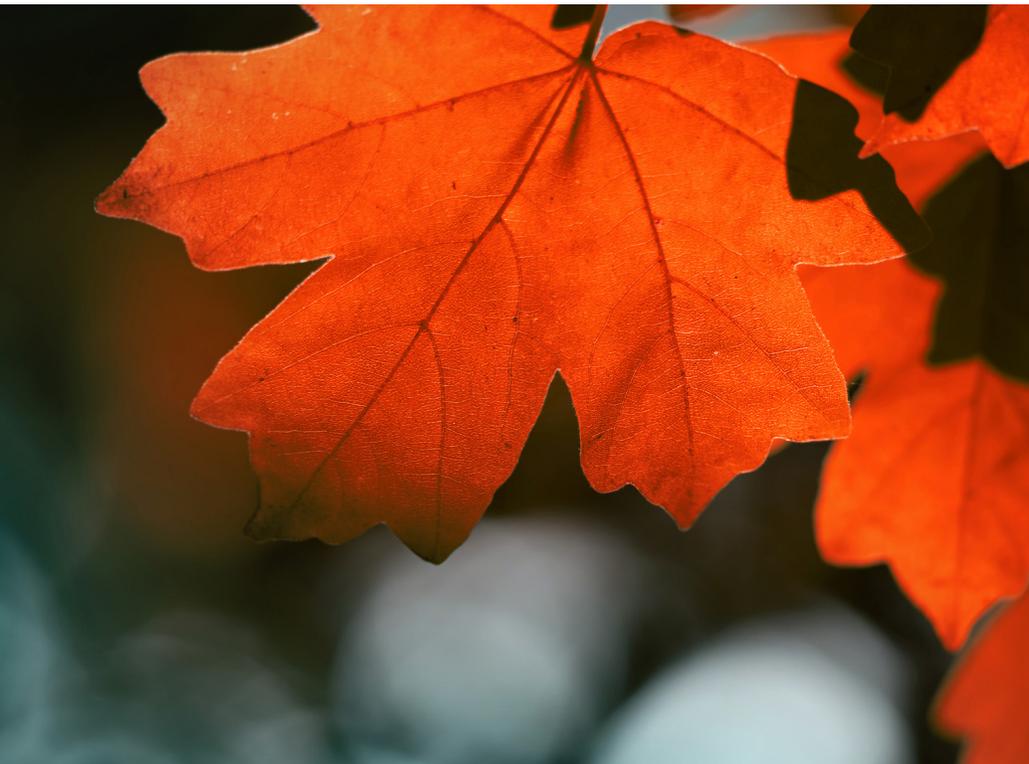
Reducing carbon footprints

Climate change is one of the most significant threats to our social and economic well-being—to our very way of life. A report from Deloitte's Centre for Sustainability and Climate Action and figures from Deloitte's Global Turning Point Report indicate that if left unchecked, it could cost the global economy US$178 trillion over the next 50 years. Creating a low-carbon future demands extensive efforts across all sectors and all geographies (with more of a burden on countries with the highest emissions).

The security and justice sector has no less of a responsibility than any other to prioritize and engage in green efforts. It can start with everyday practices. Justice Canada has been active in waste diversion and electronic trials, embedding environmental considerations in procurement, and launching a public transit card project that encourages staff to take less carbon-intensive transportation to work.[3] The department understands that environmental sustainability contributes to its ability to achieve its strategic outcomes. Ensuring legal and business excellence depends in part on innovation and accountability, including the responsible management of resources.

Across the sector, agencies are responding by using more renewable energy, increasing their digital strategies, greening their supply chains and fleets, and retrofitting how they light, heat, and cool their buildings. In the United Kingdom, for example, just two projects to install high-efficiency lighting in prisons will save the Ministry of Justice around £336,000 and 351 tonnes of CO_2 every year.[4]

Here in Canada, several police services are looking to electrify their fleets:

• Ontario's Peel Regional Police, one of the first to implement fully marked hybrid vehicles for patrol in 2020, announced that it had delivered its first electric police vehicles in April 2022.[5]

• In Nova Scotia, the Town of Bridgewater approved the purchase of a Tesla Model 3 as its first electric police vehicle, scheduled to enter service in the summer of 2022.[6]

• In Quebec, the city and the police service of Repentigny launched a six-month pilot project to test the province's first all-electric vehicles specially designed for policing. Beyond the environmental benefits, the interior ergonomics of the cars were completely redesigned—with input from workplace health and safety experts as well as police officers—to provide a better working environment for the officers, who spend considerable time in their vehicles.[7]

Some agencies go further. In Cincinnati, one police district became the first in the United States to run a net-zero-station.[8] The Leadership in Energy and Environmental Design (LEED) Platinum-certified building includes 40 geothermal wells, a 330-kilowatt solar panel system, and high-tech energy zones for system optimization. It was even the subject of a film called *Blue Goes Green* that aired on PBS in 2019.[9]

All these efforts tackle one aspect of sustainability. Every part of the sector can think differently about the interplay between its reason for being and its role in sustainability, and then incorporate green initiatives into its core practices.

For example, a paper in the *British Journal of Criminology* explains how many correctional facilities are providing inmates with environmental literacy and training to prepare for re-entry into society.[10] It can include raising their understanding of the green economy and offering opportunities for green-collar work, such as solar panel installation.

Other green prison programs provide nature-based therapy, through gardening, landscaping, cultivating plants, and learning about environmental stewardship.[11] These programs have even been connected to lower recidivism rates.

These initiatives are a good start, but new and better ways of addressing the challenge are still urgently needed. The unique potential consequences of climate change on community safety and security require space at the forefront of all operational planning efforts.

Linking climate change and safety

Security and justice organizations need to think differently about the potential effects of climate change on their operations and on demands for their services. For some, the impacts are acute. That's part of risk management and planning. And to one degree or another, the risks exist for all facets of the sector. That's why a shift in mindset is so important.

Perception may be what drives the pace of action and investment. Regardless of the real or perceived acuity of risk, however, the risks themselves should elevate climate change into a critical aspect of strategic and operational planning. They should be viewed as issues that demand attention, investment, and engagement—and as opportunities to be seized throughout the sector.

Three areas stand out for attention from a security and justice perspective:

1 Emergency management

The World Meteorological Organization notes that the number of disasters has increased by a factor of five over a 50-year period, driven in part by climate change. Over that period, there has been an average of one disaster that kills 115 people and causes US$202 million in losses every day.[12]

While we know this is a global crisis, the impacts have very real local implications, directly involving and affecting security and justice agencies.

Consider what happened in British Columbia in the fall of 2021. Heavy rains caused severe flooding in parts of the province. Emergency responders had difficulty reaching communities due to the floods and mudslides, which destroyed many roads and bridges. Towns were cut off, and thousands of people were stranded. Access to highways and to Canada's largest port was affected, disrupting supply chains. In all, five people were killed and the insured damage alone was $675 million—the costliest weather event in the province's history.

Such events have multiple security implications, from the risk to personal safety to the disruption of major transportation arteries. Municipal police are left to facilitate search and rescue missions, manage evacuations, and maintain public safety and security, above and beyond their day-to-day mandate to preserve the safety of the communities they serve.

The BC floods were a natural disaster. Still, the particular weather event that caused them has been linked to climate change. With weather incidents that were expected once in 50 years or once in 100 years now happening routinely, agencies will have to revise their emergency management plans to factor in the likely effects of climate change.

2 Crime

The health effects of climate change are well known: heat-related morbidity and mortality, respiratory diseases from wildfire smoke, water-borne infectious diseases following a drought or flood, and death or injury due to storms or flooding, to name a few.

What has received far less attention is the potential adverse effects of high ambient temperatures on interpersonal violence, which has both acute and long-term impacts. Recent findings indicate the urgency:

- A US study of seven cities found that every 5°C rise in daily mean temperature was associated with a 4% to 5% increase in sex offences in the following eight days.[13] A study in Japan showed that ambulance transports due to assault increased in line with a rise in daily temperatures.[14]

- In Canada, the average annual temperature has increased by 1.7°C since 1948 (about double the global rate) and by 2.3°C in Northern Canada (triple the global rate).[15] Climate change in the north brings special risks (see next page), and overall hotter temperatures could be considered a crime risk.

- One research paper suggested that the United States could experience an additional 22,000 murders, 1.2 million aggravated assaults, and two to three million simple assaults because of climate change by the end of this century.[16]

The horrifying nature of these projections—and the human and financial cost for the community, first responders, and security and justice agencies—is a clear call for the sector's agencies and providers to take their seats at the climate response table.

According to the Association for Psychological Science, "when people get uncomfortably hot, their tempers, irritability, and likelihood of physical aggression and violence increase."[17] That affects police officers too. One study looked at a firearms training simulation for the Dutch police. Officers were divided into two rooms, one at a comfortable temperature (21°C) and one set hot (27°C). A life-size scenario played out on a screen: after a burglar alarm was triggered, a suspect was seen brandishing a crowbar. In comparison with the police

in the comfortable room, officers in the hot room were more likely to perceive the suspect as aggressive, consider the person a threat, and draw their firearm from its holster, highlighting the "contributing role that temperature plays in escalating minor disputes into full-blown assaults or homicides."

Those are just some of the possible impacts. Policing, public safety, and justice bodies can identify a host of others—such as skirting strict environmental regulations, fraud within the greenhouse-gas offset markets, and potential domestic conflict over energy policies[18]—that could be categorized under climate change risks that drive demand for services.

3 People displaced by climate change

Droughts, floods, cyclones, endangered water and food supplies, and other events like them can create unrest, amplify conflicts, spur mass migration, and lead to destabilization. The UN Refugee Agency reports that extreme weather is already causing an average of more than 20 million people to leave their homes every year and that some of them may be "in need of international protection."[19]

While the UN Human Rights Council reports that many people forced from their homes due to the effects of climate change do not fit the current definition of "refugee," it recognizes that this gap needs to be addressed, calling them "the world's forgotten victims."[20] At an international level, the response to people displaced by climate change will require a novel approach. How we define and refer to them will influence how state and non-state actors respond to and support them.

Canada is likely to be viewed as a safe haven. Are we ready? We'll need a nuanced approach that also protects our own security and responds to the effects of climate change within our borders.

More than one billion people are at risk of being displaced by 2050 due to environmental change, conflict, and civil unrest, according to projections by the

Institute for Economics & Peace.[21] By 2040, 5.4 billion people (more than half of the world's projected population) will live in countries experiencing high or extreme water stress, and 3.5 billion people (up from two billion today) could suffer from food insecurity by 2050.

The justice sector will play a key role in assisting these vulnerable populations. That includes providing legal guidance, support, and protection for people displaced by climate change and spurring international discussions on their rights. Other security agencies will be pressed to help meet their needs for physical safety, shelter, and services.

While climate change could lead to an international refugee crisis, it also poses the risk of serious disruption here at home. Every region faces vulnerabilities: coastal flooding in Atlantic Canada; damages to infrastructure in Central Canada; and wildfires, floods, and droughts in Western Canada.

Displacement is a risk in Canada too. During the BC floods, 15,000 people had to leave their homes. Some populations are at special risk; climate change is depleting food sources, driving up the cost of imported food, disrupting traditional animal habitats, negatively affecting health, and threatening the financial security of Indigenous peoples.[22] Melting ice and overflowing riverbanks have already caused at least the temporary displacement of some Indigenous communities.

A recent Deloitte report on living up to Canada's commitments on climate and Indigenous reconciliation emphasized that "engagement with Indigenous peoples must be at the core of Canada's journey to net-zero." The report quoted the UN Department of Economic and Social Affairs: "Climate change exacerbates the difficulties already faced by Indigenous communities, including political and economic marginalization, loss of land and resources, human rights violations, discrimination and unemployment."

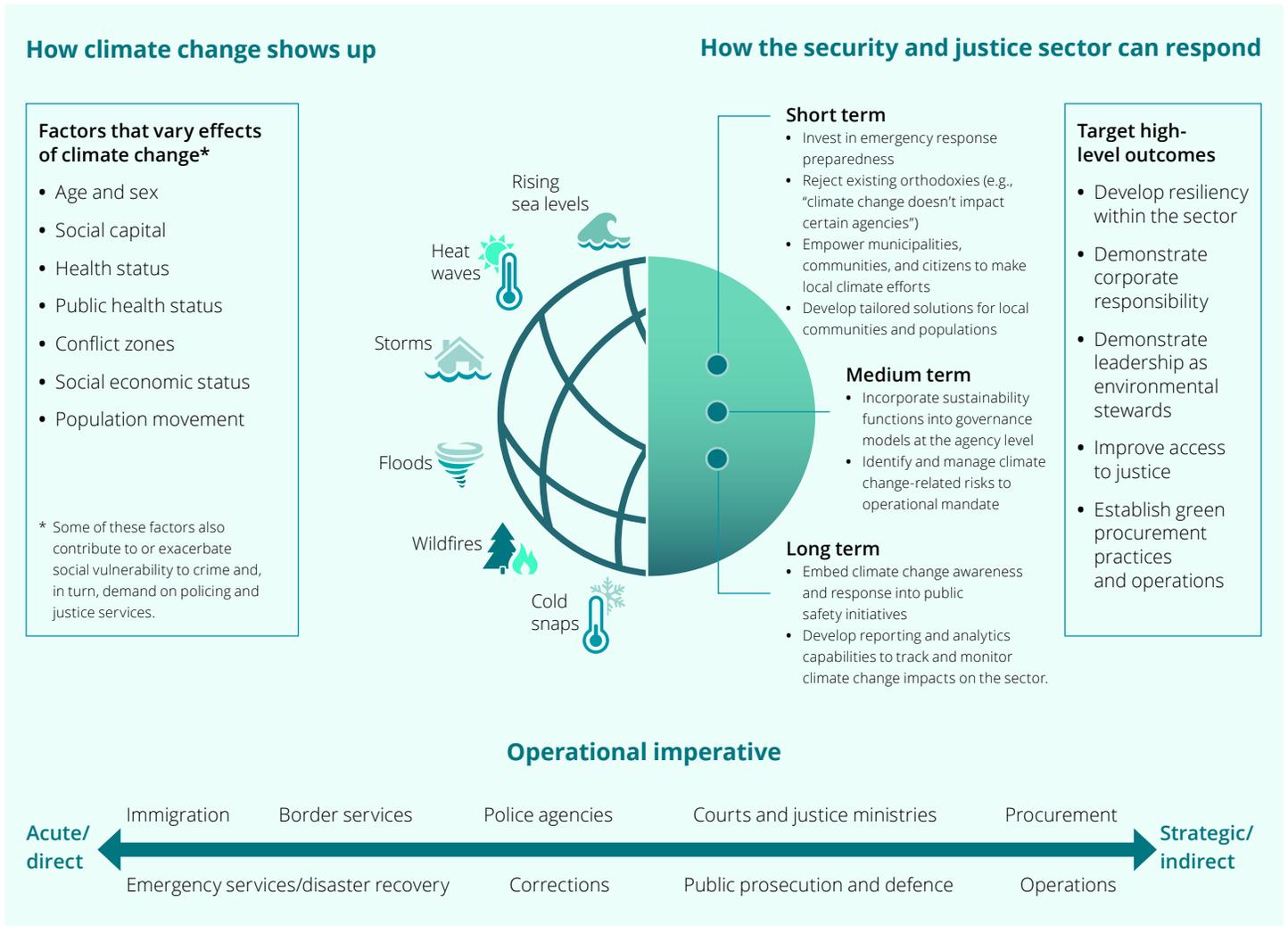## Melting ice and over-flowing riverbanks have already caused at least the temporary displacement of some Indigenous communities.

Conceptual framework

The impacts of climate change will both directly and indirectly influence the pace and magnitude at which security and justice agencies must respond, by formally embedding climate change action in their strategic and operational planning. As stewards responsible for upholding public safety, the security and justice sector has an obligation to mitigate these impacts and foster organizational and community resiliency. Thinking through the possible effects on its core operations should already be a top priority.

How climate change shows up

Factors that vary effects of climate change*

- Age and sex
- Social capital
- Health status
- Public health status
- Conflict zones
- Social economic status
- Population movement

* Some of these factors also contribute to or exacerbate social vulnerability to crime and, in turn, demand on policing and justice services.

Rising sea levels

Heat waves

Storms

Floods

Wildfires

Cold snaps

How the security and justice sector can respond

Short term
- Invest in emergency response preparedness
- Reject existing orthodoxies (e.g., "climate change doesn't impact certain agencies")
- Empower municipalities, communities, and citizens to make local climate efforts
- Develop tailored solutions for local communities and populations

Medium term
- Incorporate sustainability functions into governance models at the agency level
- Identify and manage climate change-related risks to operational mandate

Long term
- Embed climate change awareness and response into public safety initiatives
- Develop reporting and analytics capabilities to track and monitor climate change impacts on the sector.

Target high-level outcomes

- Develop resiliency within the sector
- Demonstrate corporate responsibility
- Demonstrate leadership as environmental stewards
- Improve access to justice
- Establish green procurement practices and operations

Operational imperative

Acute/direct	Immigration	Border services	Police agencies	Courts and justice ministries	Procurement	Strategic/indirect
	Emergency services/disaster recovery		Corrections	Public prosecution and defence	Operations	

Security and justice agencies play a major role in helping to build resilient communities. That's true overall, in terms of perceived safety and access to supports and services, and with respect to climate change.

Improving organizational and community resilience

Hazardous climate-related events and disturbances are becoming the norm. Part of climate resilience is the ability to anticipate, prepare for, respond to, cope with, and recover from them. An agency's infrastructure and programs will determine how resilient it—and the communities it serves—will be to such events.

Public Safety Canada's *Emergency Management Strategy* identifies two key facets to resilience: an interconnected, dynamic system to provide supports, and a focus on how to mobilize capacities, assets, and capabilities to reduce vulnerability and risk.[23]

Many populations face systemic barriers too, with asymmetrical vulnerabilities across Canada. There are communities at risk because of their geography (increased likelihood of disasters), remote location, and lack of access to emergency services, including some Indigenous communities, as noted earlier.

We already know that equity-seeking communities often engage with the justice system in disproportionate numbers due to several socio-economic factors. The impacts of climate change can have the same effect: harms are felt unevenly. For communities that already confront obstacles that prevent them from thriving in times of calm, the inequities can be magnified in times of emergency.

Over the course of one week in 1995, extreme temperatures killed more than 700 people in Chicago, a disproportionate number of whom were from racialized communities. A book about that fatal week called out the widening cracks in the social foundations of cities and warned that climate change is a major challenge for urban centres.[24]

There can't just be a blanket approach to funding and supports, as some communities will require more resources than others. To underscore the extent of inequities, US research shows that predominantly white communities actually saw an *increase in average wealth* after natural disasters due to generous reinvestment initiatives, while predominantly minority communities experienced a wealth decrease.[25]

In part two of this series, focused on next-era community safety and well-being, we noted that several circumstances can contribute to the likelihood of being the perpetrator or victim of a crime, including poverty, unemployment, mental suffering, addiction, and homelessness. Climate change is an additional risk that can exacerbate the vulnerability of the people facing these circumstances.

Some communities are experimenting with resilience hubs—neighbourhood centres that offer culturally sensitive, multilingual services, space, and programming for community-building efforts to increase resilience when emergencies occur.[26] These hubs often also provide a safe place for temporary shelter and relief during days of extreme heat or operate as distribution centres after disaster events.

It's never been more important for security and justice agencies to assist community members in adapting to emergent shocks, to be ready to absorb the impacts of disruption, and to learn from the experience for the next time. That will take education on the risks to individuals, businesses, and the community, the ability to proactively address them, and the resources to bounce back.

New thinking and actions for progress

Police services and other security agencies, emergency responders, the courts, and correctional services all make a positive difference. Taking action on climate change—broadly and consistently—is another opportunity for them to do so.

What gets in the way? Local governments often have limited funds to proactively spend on climate issues. Budgetary constraints often mean funds are prioritized for other issues. Still, preparation can slash the cost of recovery. Studies show that every dollar spent to mitigate climate-related risks saves four times that in recovery costs.[27]

The disruption of policy cycles and a lack of expertise are other barriers. Climate change initiatives are often funded and implemented across multiple administrations, making them vulnerable to political interests.

If the sector's agencies lack the right data or knowledge, they won't be well-positioned to respond to climate disasters. In these cases, it can be beneficial to tap into the technical expertise of third-party firms to support resilience planning efforts.

Climate and safety are independent but also interdependent issues. Climate change should be a constant thread in discussions about planning, investments, operations, and collaboration for all agencies—for their sake, that of those they serve, and the governments they operate under.

Without the proper attention, the risks to our communities, safety, and access to justice services are just too high. Every entity can do its part to mitigate the risks and seize the opportunities.

Climate change should be a constant thread in discussions about planning, investments, operations, and collaboration for all agencies—for their sake, that of those they serve, and the governments they operate under.

Nine considerations for spurring progress:

1 **Invest in emergency response preparedness** by defining best practices, ensuring effective and resilient supply chains, and preparing communities to respond to events.

2 **Reject orthodoxies** that separate climate initiatives from the central mission of security and justice agencies. Orthodoxies are pervasive beliefs that often go unstated and unchallenged. They shape behaviours, choices, and strategies. They also create blind spots. Challenging them can surface opportunities for growth and innovation in the public sector. While combatting climate change isn't the fundamental purpose of the security and justice sector, its efforts directly and indirectly contribute to public safety. So, it's logical and appropriate to embed awareness and response in public safety initiatives. Climate-forward government agencies are those that align climate action goals with their mission.

3 **Empower municipalities, communities, and citizens** to make climate a local priority—it's not just a global issue.

4 **Develop tailored solutions for local populations**, including community safety planning and operations.

5 **Develop new governance models** that are adaptable to the scale and complexity of the challenge so that agencies are better connected with each other and to bring transparency and visibility to collective climate change efforts. Incorporate sustainability functions into governance models at the agency level. Resilient communities are also networked communities. Use outside experts as needed to assist in this journey.

6 **Identify and increase the understanding of climate change impacts on existing processes and infrastructure, and then manage those risks** to mitigate harm to the sector and the communities it serves. Match actions to the scale of the risk so that any response is prioritized, all-encompassing, and considers all potential scenarios. Identify the risks of inaction.

7 **Apply an equity lens** to all actions to combat the disproportionate effects felt by vulnerable populations and to ensure solutions are responsive to community needs. Work in partnership with various stakeholder groups, including equity-seeking communities and non-governmental organizations, to increase community resilience and investments in climate change.

8 **Develop and flex data collection and analysis muscles** to better understand the effects of climate change, particularly at the local level (on crime patterns, public safety, etc.), and hold organizations accountable. While there is more data on climate impacts for matters related to national security, emergency management, and disaster and recovery planning, there's a relative vacuum of data on safety and security impacts at the local level. Learn from trends that can lead to replicable best practices.

9 **Embed and elevate climate change awareness as a strategic imperative** by including climate issues in operational discussions and making meaningful performance targets part of strategic and operational planning. It should be a critical consideration in all decision-making.

For the security and justice sector, climate change is a clear risk

Climate change affects the missions of agencies and their operational landscape. It raises threats and increases demand for services across the continuum, from everyday crime, border security, and emergencies to legal support, adjudication, and offender rehabilitation and reintegration. It has intrinsic effects on infrastructure (buildings, roads, etc.), transportation (supply chains), communications, and energy supplies. And it brings consequences that can endanger civil, political, economic, and social rights, including the rights to life, access to safe food and water, health, security, shelter, and culture.

The sector has many ways to combat and account for the effects of climate change—in its operational decisions and as a catalyst to preparedness and planning. Doing so fits with the duty of all security and justice agencies: to be stewards responsible for upholding public safety and contributing to social well-being.

This is part three of a three-part article series on what the future of security and justice could look like for Canada and how we can get there. Read part one, In pursuit of equitable access to justice, and part two, In pursuit of next-era community safety and well-being.

Endnotes

1. Dyna Ibrahim, "Public perceptions of the police in Canada's provinces, 2019," Statistics Canada, November 25, 2020.

2. Briefing Room, "Fact Sheet: Prioritizing Climate in Foreign Policy and National Security," The White House, October 21, 2021.

3. Government of Canada, "Justice Sustainable Development Strategy 2020 to 2023," executive summary, February 28, 2022.

4. Gov.uk, "GFSL delivers on carbon reduction targets in English prisons," press release, January 25, 2021.

5. Peel Regional Police, "Peel Regional Police Set to Deploy it's First Electric Vehicle," April 22, 2022.

6. Mehanaz Yakub, "Police in Quebec and Nova Scotia look to electrify by adding a Ford Mustang Mach-E and Tesla Model 3 into their fleets this summer," Electric Autonomy, 17 February 2022.

7. Cision, "City of Repentigny and its police department (SPVR) announce a pilot project for Quebec's first all-electric emergency response patrol cars and thoughts on a new visual identity," Newswire, February 12, 2022.

8. Randy A. Simes, "Cincinnati's Bold Net-Zero Energy Police District Headquarters," UrbanCincy, March 28, 2016.

9. Cincinatti Leeds the Nation, Blue Goes Green: Net Zero Police Station, 2017.

10. Rob White and Hannah Graham, "Greening Justice: Examining the Interfaces of Criminal, Social and Ecological Justice," *The British Journal of Criminology*, Volume 55, Issue 5, September 2015.

11. Sander van der Linden PhD, "The Rise of Green Prison Programs: How Exposure to Nature is Reducing Crime," *Psychology Today*, August 16, 2015.

12. World Meteorological Society, "Weather-related disasters increase over past 50 years, causing more damage but fewer deaths," press release, August 31, 2021.

13. Rahini Mahendran, Rongbin Xu, Shanshan Li, and Yuming Guo, "Interpersonal violence associated with hot weather," *The Lancet*, September 2021.

14. Rahini Mahendran, "Interpersonal violence associated with hot weather."

15. Canadian Centre for Climate Services, "Changes in temperature," Government of Canada, April 8, 2019.

16. Matthew Ranson, "Crime, weather, and climate change," *Journal of Environmental Economic and Management*, Volume 67, Issue 3, May 2014.

17. Courtney Plante and Craig A. Anderson, "Global Warming and Violent Behavior," Association for Psychological Science, January 31, 2017.

18. Wilfrid Greaves, "Climate change and security in Canada," International Journal: Canada's Journal of Global Policy Analysis, Volume 76, Issue 2, July 7, 2021.

19. UNHCR, the UN Refugee Agency, "Climate change and disaster displacement," *Environment, Disasters and Climate Change.*

20. United Nations Human Rights, Office of the High Commissioner, "Intolerable tide' of people displaced by climate change: UN expert, June 23, 2022.

21. Institute for Economic and Peace, "Over one billion people at threat of being displaced by 2050 due to environmental change," September 9, 2020.

22. Human Rights Watch, "Canada: Climate Crisis Toll on First Nations' Food Supply," October 21, 2020; National Collaborating Centre for Indigenous Health (NCCIH), "Climate Change and Indigenous Peoples in Canada: Health Impacts," 2022; Mark Blackburn, "Indigenous communities to be hit with 'ecological grief, loss of land and traditional knowledge' because of climate crisis," *APTN News*, February 11, 2022.

23. Public Safety Canada, "Emergency Management Strategy for Canada: Toward a Resilient 2030," 2019.

24. Eric Klinenberg, *Heat Wave: A Social Autopsy of Disaster in Chicago*, University of Chicago Press, May 2015.

25. Aneesh Patnaik, Jiahn Son, Alice Feng, and Crystal Ade, "Racial disparities and climate change," Princeton Student Climate Initiative, August 15, 2020.

26. Bethany Rogerson and Mimi Majumdar, "Narayan Resilience Hubs Can Help Communities Thrive—and Better Weather Disasters," The Pew Charitable Trusts, June 22, 2020.

27. Eileen Gallagher, "How Business Can Help Build Climate Resilience Today," BSR, September 14, 2017.

Contacts

Authors

Lauren Jackson
National Security & Justice Leader
Partner, Consulting
laurenjackson@deloitte.ca
416-775-8638

Mieka Buckley-Pearson
Director, Financial Advisory
mbuckleypearson@deloitte.ca
416-770-5189

Contributors

Karen Lamola
Senior Consultant
Public Sector Transformation

Emma Rose Bonanno
Manager
Public Sector Transformation

Lucia Nalbandian
Consultant
Public Sector Transformation

About Deloitte

Deloitte provides audit and assurance, consulting, financial advisory, risk advisory, tax, and related services to public and private clients spanning multiple industries. Deloitte serves four out of five Fortune Global 500® companies through a globally connected network of member firms in more than 150 countries and territories bringing world-class capabilities, insights, and service to address clients' most complex business challenges. Deloitte LLP, an Ontario limited liability partnership, is the Canadian member firm of Deloitte Touche Tohmatsu Limited. Deloitte refers to one or more of Deloitte Touche Tohmatsu Limited, a UK private company limited by guarantee, and its network of member firms, each of which is a legally separate and independent entity. Please see www.deloitte.com/about for a detailed description of the legal structure of Deloitte Touche Tohmatsu Limited and its member firms.

Our global Purpose is making an impact that matters. At Deloitte Canada, that translates into building a better future by accelerating and expanding access to knowledge. We believe we can achieve this Purpose by living our Shared Values to lead the way, serve with integrity, take care of each other, foster inclusion, and collaborate for measurable impact.

To learn more about Deloitte's approximately 330,000 professionals, over 11,000 of whom are part of the Canadian firm, please connect with us on LinkedIn, Twitter, Instagram, or Facebook.