RCMP
Environmental Scan

2023

Royal Canadian Mounted Police | Gendarmerie royale du Canada

Canada

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Executive Summary

Executive Summary

The Royal Canadian Mounted Police (RCMP), like police agencies around the world, operates in a rapidly evolving environment. New threats are constantly emerging and shifting, and public expectations and scrutiny are increasing. The capacity and capability gaps between police and criminals are widening — particularly in the digital realm. Responding and adapting to the pace of change in the external environment requires organizational agility and the ability to work in new ways with both traditional and non-traditional partners. A heightened awareness at all levels of the organization of the broader trends impacting community safety will enable the RCMP to proactively position the organization to meet the evolving needs of governments and communities alike. This will require cultural sensitivity, empathy, and a deep understanding of the complex social and economic factors that contribute to crime and social unrest.

This environmental scan examines key external factors that the organization must be aware of to adapt its strategies and operations and ensure that it continues to effectively serve and protect Canadians. A deep understanding of these dynamic factors will help shape the RCMP's capabilities going forward, and provide input into strategic planning and corporate risk management.

The environmental scan was conducted using a PESTLE analysis framework, with the findings summarized in the following pages and the details found in subsequent chapters.

Political

Political stakes have never been higher as the world emerges from forced slumber into a manufactured chaos caused by inaction — both voluntary and involuntary.
The challenges facing politicians, domestically and globally, are at critical levels and require bold collective action.

The pandemic effectively shut down the world and the full social and political consequences remain to be seen. In the early days, the pandemic highlighted the need for countries to work together to combat global challenges. However, as the reality of the pandemic took effect it sparked debates about the role of nationalism versus globalization in global politics. Some countries turned inward, focusing on protecting their own citizens and closing borders, while others emphasized the need for international cooperation and solidarity. Some have used the pandemic as an excuse to clamp down on civil liberties and increase government control. This has led to concerns about the erosion of democracy and the rise of authoritarianism in some parts of the world.

Debates about the future of global leadership and the role of emerging powers in shaping global politics has led to increased divisiveness globally, with politicians and people alike using differences of opinion to separate groups rather than trying to find commonality to unify groups. The differences are being amplified in echo chambers and are creating mistrust in public institutions.

At home, Arctic sovereignty is a rising issue with the potential for new economic development in conflict with limited infrastructure. Regionalism is straining the relationships between the provinces and the federal government, and is revealing rips in the social fabric.

Economic

The economy has many indicators providing contradicting perspectives. Higher than normal inflation is causing affordability issues for many, yet the labour market continues to grow with low unemployment rates and increasing salaries.

The impacts of the pandemic shutdowns are still being felt around the world. While global supply chains have almost returned to normal, the inability to match supply to demand drove prices up and caused significant inflation around the world. Large economies are raising interest rates to tame inflation, which when combined with other geopolitical impacts, is having the effect of bringing many countries close to recession.

Canada's economic response to the pandemic provided relief to many, however persistently high inflation, slowing economic growth and poor productivity mean Canada is still facing the threat of a recession. Rising interest rates in the United States will also impact the Canadian economy by devaluing the Canadian dollar and causing further affordability concerns. Despite this, the labour market is strong with low unemployment and high demand for employees particularly in the construction, manufacturing, and accommodation and food service sectors.

Socio-Cultural

Society is fragmenting into smaller communities based on common interests and backgrounds, increasing social polarization. Demographics are creating further divides based on age and wealth, amplifying the effects of the political and economic trends. Population diversity and mental health crises will require sensitivity to cultural differences and training to ensure bias-free interactions with police.

Distrust for public institutions is growing around the world, caused by disinformation spreading widely on both traditional and social media, and by the difficulty in correcting the disinformation. Democracies around the world are under threat from large-scale movements and citizen protests. Political unrest and environmental events are creating massive waves of irregular migration.

Canada's demographics are changing, with more people moving to smaller cities and rural areas with a resulting hollowing out of urban cores.

Canada's population is also aging, and increasingly reliant on immigrants to maintain population levels. Canada remains a relatively affluent country, but the pandemic revealed stresses in health care and mental health support. While traditionally seen as a progressive country, Canada has recently seen social divisions that will be difficult to overcome, reconciliation efforts with Indigenous peoples remain challenging, and hate crimes continue to rise.

Technology

Digital technologies are transforming the way citizens interact with the world around them, with each other, and with the RCMP. The interconnected nature of communications and digital provides new avenues for criminals to exploit, while making policing and recovering the proceeds of crime more challenging.

Advances in technology such as the metaverse are full of promise, but a lack of standards and interoperability are limiting their adoption in the broader population. Additionally, a lack of skilled resources is an ongoing concern. Data management and digital literacy skills are now considered baseline skills and are in high demand. Privacy by design is set to become an international standard, yet data privacy concerns continue to be raised about the data collected by most new technology, including autonomous vehicles and smart homes, with many saying existing data protections are insufficient. There are concerns about the ethics of using data in artificial intelligence systems for fear of embedding bias. Cybersecurity continues to be an under-resourced field, both in money and people, while criminals are exploring new cyber avenues to exploit.

Legal

Existing legal frameworks are becoming increasingly irrelevant to meet the requirements of digital economies, where trade in data continues to grow and the era of machine knowledge capital is beginning. Governments are playing catch-up with new legislation but may be trying to replicate what worked in a legacy world rather than the new digital world.

There is a renewed focus on increased accountability and transparency in policing and public service. There are new calls for increased safety through firearms regulation, new identification requirements, and new restrictions on interim release orders. Human rights legislation is also a priority, with medical assistance in dying, human trafficking, and organ trafficking all being highlighted.

Canada is also trying to catch up to the digital reality, with new rules about content, cyber security, and the use of artificial intelligence, as well as new protections for consumer and personal information privacy.

Crime is increasingly happening in the cyber realm, where traditional jurisdictions and boundaries do not exist.

Environment

Climate change will have significant implications for policing, requiring the RCMP to adapt and respond to a range of challenges related to natural disasters, civil unrest, crime patterns, and resource allocation.

Climate change has grown to be one of the most significant threats to environmental sustainability. Public awareness of and involvement in this crisis has manifested in protests around the world, while parts of the globe navigate environmental disasters, record heat waves, melting ice caps, flooding, and extensive forest fires.

Climate change will have significant implications for policing in Canada and internationally, requiring the RCMP to adapt and respond to a range of challenges related to natural disasters, civil unrest, crime patterns, and resource allocation.

As climate change continues to cause extreme weather events, the RCMP may have to respond to more frequent natural disaster emergencies such as evacuating residents, managing traffic, and aiding affected communities.

Climate change can exacerbate social and economic inequalities, leading to an increased risk of civil unrest. As people struggle to adapt to the changing climate and its impacts, police may face more frequent protests, demonstrations, and other forms of civil disobedience. This can require significant resources to manage, as well as a careful balancing of the right to freedom of expression and the need to maintain public safety.

Changes in crime patterns can also be expected; for example, an increase in property crime as people become more vulnerable to the impacts of extreme weather events.

Lastly, there will be an increased demand for human and financial resources as the impacts of climate change become more severe.

02 **Introduction**

Overview

The Royal Canadian Mounted Police (RCMP), like police agencies around the world, operates in a rapidly evolving environment. New threats are constantly emerging and shifting, and public expectations and scrutiny are increasing. The capacity and capability gaps between police and criminals are widening — particularly in the digital realm. Responding and adapting to the pace of change in the external environment requires organizational agility and the ability to work in new ways with both traditional and non-traditional partners. A heightened awareness at all levels of the organization of the broader trends impacting community safety will enable the RCMP to proactively position the organization to meet the evolving needs of governments and communities alike.

This will require cultural sensitivity, empathy, and a deep understanding of the complex social and economic factors that contribute to crime and social unrest.

The pandemic revealed divisions across Canada economically, politically, and socially. The role the RCMP plays in the face of these divisions continues to evolve, placing pressure on the RCMP to adapt its workforce, its capabilities, and its infrastructure. The RCMP's ability to adapt will have a direct bearing on public confidence and trust.

Since the RCMP has a mandate to deliver law enforcement at international, federal, provincial, and municipal levels, any changes to the threat environment at even the local and regional levels have the potential to impact the RCMP's ability to protect Canada's population. Understanding the external environment improves the RCMP's ability to work with local, Indigenous, national, and international law enforcement partners. This environmental scan provides a view of the external forces that will shape the RCMP's capabilities going forward, and is an important input into strategic planning and corporate risk evaluation. Further analysis of this environmental scan will allow the RCMP to identify impacted groups and optimize services accordingly.

Polycrisis

Some trends will have impacts beyond their theme, amplifying the magnitude of the impacts and accelerating the rate of change. For example, climate change is causing economic hardship, forcing technological change, and changing populations due to migration.

A new term, "polycrisis", describes the complex and interrelated crises that the world faces today.[1] It refers to a combination of multiple crises that interact with and exacerbate each other, leading to a potentially catastrophic outcome. They include environmental degradation, climate change, economic inequality, political instability, and social unrest, among others.

The concept of polycrisis is changing how risks need to be evaluated, as few people have a detailed understanding of how systemic risks might impact others. They cannot be solved independently but rather they are interconnected and require a systemic and holistic approach to address them effectively. It will be crucial for the RCMP to understand these second- and third-order impacts as it uses the results of this environmental scan for strategic planning.

03 Political

Overview

The pandemic effectively shut down the world and the full social and political consequences remain to be seen. In the early days, the pandemic highlighted the need for countries to work together to combat global challenges. However, as the reality of the pandemic took effect it sparked debates about the role of nationalism versus globalization in global politics. Some countries turned inward, focusing on protecting their own citizens and closing borders, while others emphasized the need for international cooperation and solidarity. Some have used the pandemic as an excuse to clamp down on civil liberties and increase government control. This has led to concerns about the erosion of democracy and the rise of authoritarianism in some parts of the world.

Debates about the future of global leadership and the role of emerging powers in shaping global politics has led to increased divisiveness globally, with politicians and people alike using differences of opinion to separate groups rather than trying to find commonality to unify groups. The differences are being amplified in echo chambers and are creating mistrust in public institutions.

Internationally, the war in Ukraine has had significant geopolitical impacts and has re-introduced the threat of nuclear war. The relationships between traditional larger powers are being tested, with allegations of foreign interference being levied at many countries, including Canada.

At home, Arctic sovereignty is a rising issue with the potential for new economic development in conflict with limited infrastructure. Regionalism is straining the relationships between the provinces and the federal government, and is revealing rips in the social fabric.

War in Ukraine

Russia invaded Ukraine in February 2022 and unleashed a storm of geopolitical impacts:

- Russia has threatened nuclear war if they don't win a conventional war. Russia has the most nuclear warheads of any country.[1, 2]

- In October 2022, Russia withdrew from a UN-brokered deal that would allow Ukraine to ship grain exports through the Black Sea, further exacerbating an ongoing food crisis in countries in East Africa which are still nearing famine.[3] In March 2023, Russia agreed to extend the grain deal for another 60 days instead of the proposed 120 days.[4]

- Russia cut natural gas exports to Europe by 80% between May and October 2022. The resulting shortfall in Europe's energy needs caused energy trade patterns to shift and a worldwide increase in prices which have since stabilized.[5]

- In May 2022, Sweden and Finland applied for membership in the North Atlantic Treaty Organization (NATO).[6] Finland became an official member on April 4, and there are calls to extend European Union membership to Ukraine in addition to Sweden.

- Several countries including Canada have been supplying Ukraine with missiles, artillery, and drones, and have committed to sending battlefield tanks before spring 2023.[7]

- The European Union has decided to provide Ukraine with 70 Russian-made fighter jets and Slovakia has also handed over the first four MiG-29 fighter jets out of 13 decommissioned aircraft it had promised to Ukraine.[8, 9]

- In March 2023, Canada sent eight Leopard 2 tanks from its own military inventory to Poland and has deployed soldiers there to train Ukrainian soldiers on the Leopards.[10]

International Relations

Canada's relationships with other countries has been marked by a decline with traditional larger powers and an increased focus on smaller powers:

- Russia is prepared to respond to the expansion of NATO and the "collective West" by increasing military operations.[11]

- China's relations with the US[12] and Canada continue to deteriorate. In its Indo-Pacific Strategy Canada describes China as an "increasingly disruptive global power" and indicated that it was "investing in deepening our understanding of how China thinks, operates and plans, and how it exerts influence in the region and around the world".[13]

- Canada's Indo-Pacific Strategy details a decade of plans for investment and partnerships in the region including a commitment to spend C$2.3 billion over five years.[14]

- There are concerns that a Chinese balloon was used to gather intelligence on military and other high-priority targets after it crossed the US and briefly entered Canadian airspace in February 2023. Another balloon was involved in the same kind of incident in Latin America and the Caribbean.[15]

- North Korea is demonstrating aggression by drawing attention to its missiles which have the potential to reach North America.[16] In addition, it has revealed small nuclear warheads which it says can be fitted on to short-range missiles capable of hitting South Korea.[17]

- Canada is engaging with countries in the Caribbean in 2023, pledging $12.3 million in new humanitarian assistance for Haiti, $10 million for the International Office on Migration to support migrants in the region, and promised another $44.8 million to respond to the Caribbean's climate crisis.[18, 19]

International Relations

- Canada is increasing engagement in Africa, pledging over $37 million to fund projects to support African Union priorities and discussing peace and democracy, sustainable development, and economic cooperation.[20]

- In December 2022, the US signed a Memorandum of Understanding to explore the expansion of the US African trade relationship — causing some to comment that Canada is falling behind its peer in the region.[21]
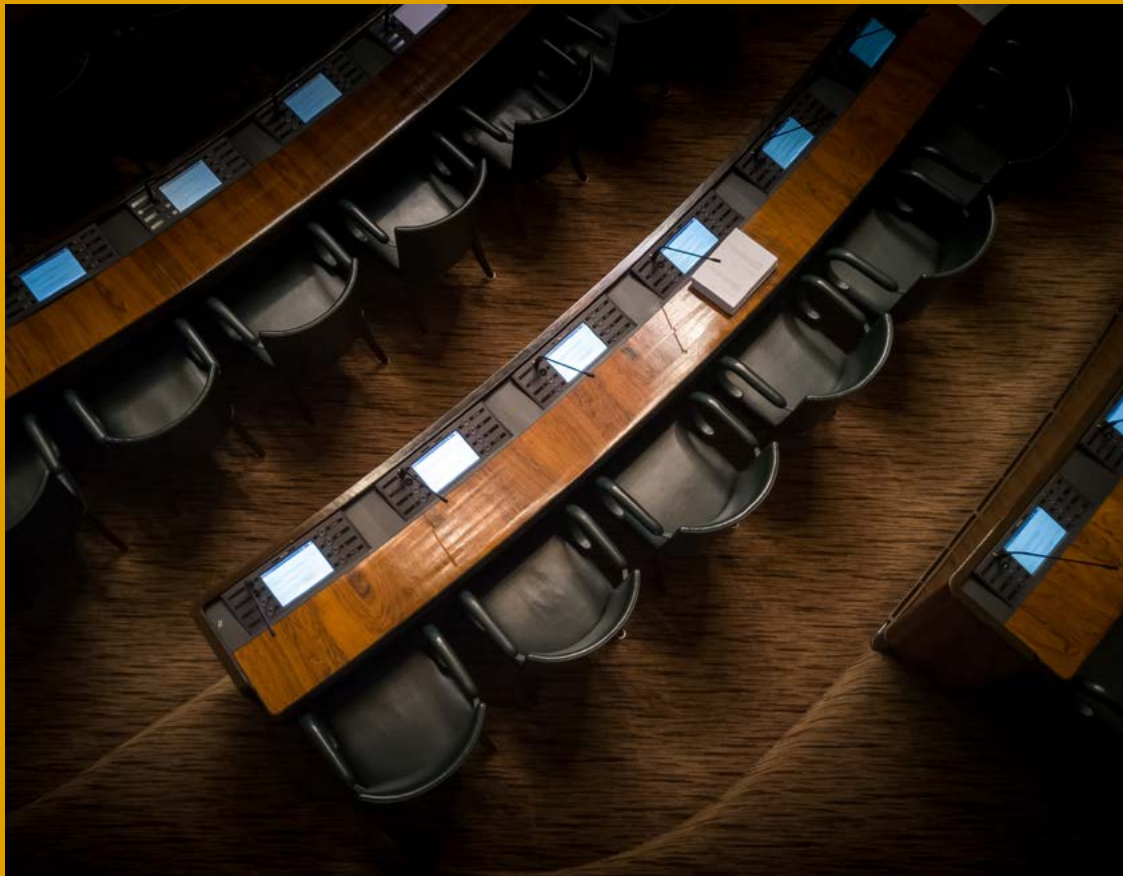
Trade Wars and Tariffs

Trade wars and other trade disputes are impacting global relationships:

- The trade relationships between the European Union and China are being tested as the European Union is seeking hearings with the World Trade Organization.[22]

- An ongoing technology and trade war between the US and China continues through freeze-thaw cycles.[23]

- Canada has banned products from Chinese company Huawei in 5G network infrastructure over privacy and security concerns.[24]

- The US has announced its *Inflation Reduction Act* with a priority on investing in green energy projects. This has protectionist clauses that don't impact Canada but do impact trade agreements with Europe.[25]

- Canada and Mexico successfully challenged the US' interpretation of content rules for cars under the US-Mexico-Canada free trade agreement.[26]

- Canada and India concluded the fourth round of negotiations on an Early Progress Trade Agreement on September 26, 2022, bringing both parties closer to a much-awaited Canada-India Comprehensive Economic Partnership Agreement.[27]

- Canada has applied economic sanctions on individuals and entities from Russia, Ukraine, Belarus, Iran, and Myanmar.[28]

- In December 2022, the new Federal Action Plan to Strengthen Internal Trade was announced which outlines a strategy to accelerate efforts to remove inter-provincial trade barriers.[29]
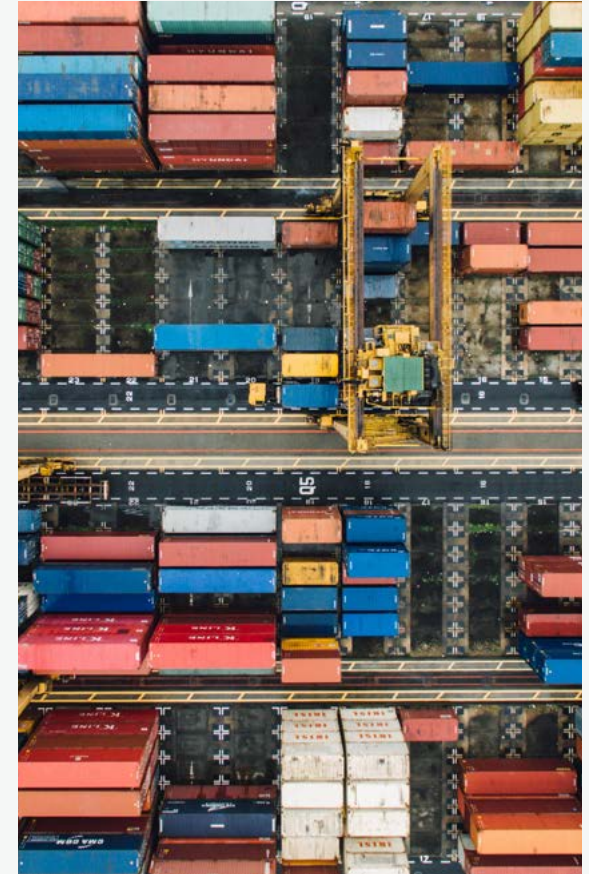
Shifting Alliances

Countries are building new relationships based on evolving priorities as well as changing realities:

- The US is trying to increase its influence in Africa through the US Strategy Toward Sub-Saharan Africa,[30] while reducing the influence of China and Russia in the region.[31]

- The war in Ukraine has increased the influence of Eastern European countries such as Poland within the European Union and NATO, while traditional powerhouses France and Germany are losing moral influence.[32]

- At least 30 countries have imposed various forms of sanctions on Russia. Consequently, Russia has increased its trade with China by 31%.[33]

- North Korea and Russia appear to be resurrecting a Cold War alliance, potentially contributing munitions to Russia's military in Ukraine and providing labourers.[34]

- Several countries have expressed interest in joining the BRICS (Brazil, Russia, India, China and South Africa) group of nations. The next summit will be held in South Africa in August 2023 and discussions will include creating a new form of currency.[35, 36]

- Canada has proposed a blueprint for a new global trade regime including trading with our friends, being inclusive of like-minded governments ("friend-shoring"), and breaking with autocrats. This would reduce the dependence on Chinese manufacturing and Russian energy.[37]

- Canada is seeking to improve relations with India by increasing trade, increasing foreign direct investment, and addressing criticisms of treatment of Indian students in Canada.[38]

Active Undermining of Democracy

Divisiveness is increasing globally, with politicians and people alike using differences of opinion to separate groups rather than trying to find commonality to unify groups. The differences are being amplified in echo chambers, and creating mistrust in public institutions.

Democracy has been under threat around the world:

- In Canada, the Freedom Convoy tried to impede the government by occupying downtown Ottawa and staging protests at the borders with the US in Alberta and Windsor.[39]

- Ontario has passed "strong mayor" legislation that allows the mayors of its two largest cities Toronto and Ottawa to pass bills with only one-third support of the city council, something that is not available in any other western democracy.[40]

- In the US, several states passed legislation to restrict voting,[41] while barely half of Americans trusted the integrity of elections.[42]

- In Hong Kong, electoral changes meant that only "patriots" could run as candidates resulting in a boycott of the election and the lowest voter turnout ever.[43]

- Political upheaval in Peru has resulted in protests, crackdowns, and 60 deaths.[44]

- Gangs in Haiti have blockaded parts of the country, creating a humanitarian crisis.[45]

- Coups and power grabs are becoming more common, as governments in Myanmar, Sudan, Guinea, Chad, Mali, and Tunisia were impacted.[46]

Active Undermining of Democracy

Undermining the rules of law
Politicians and governments have weakened judicial independence and sought impunity for corruption.

"Democracy has been under threat around the world" [47]

Perverting elections
Baseless fraud claims, opaque financing, and manipulation of electoral rules have undercut public faith in democratic balloting.
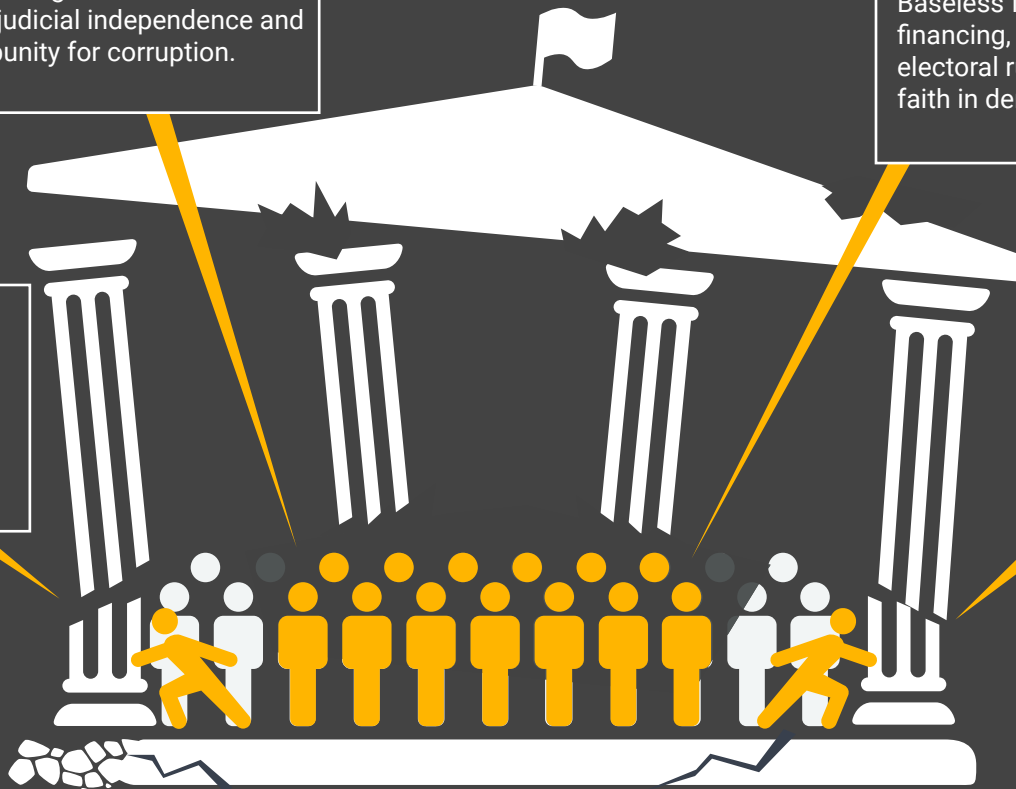
Attacking media freedom
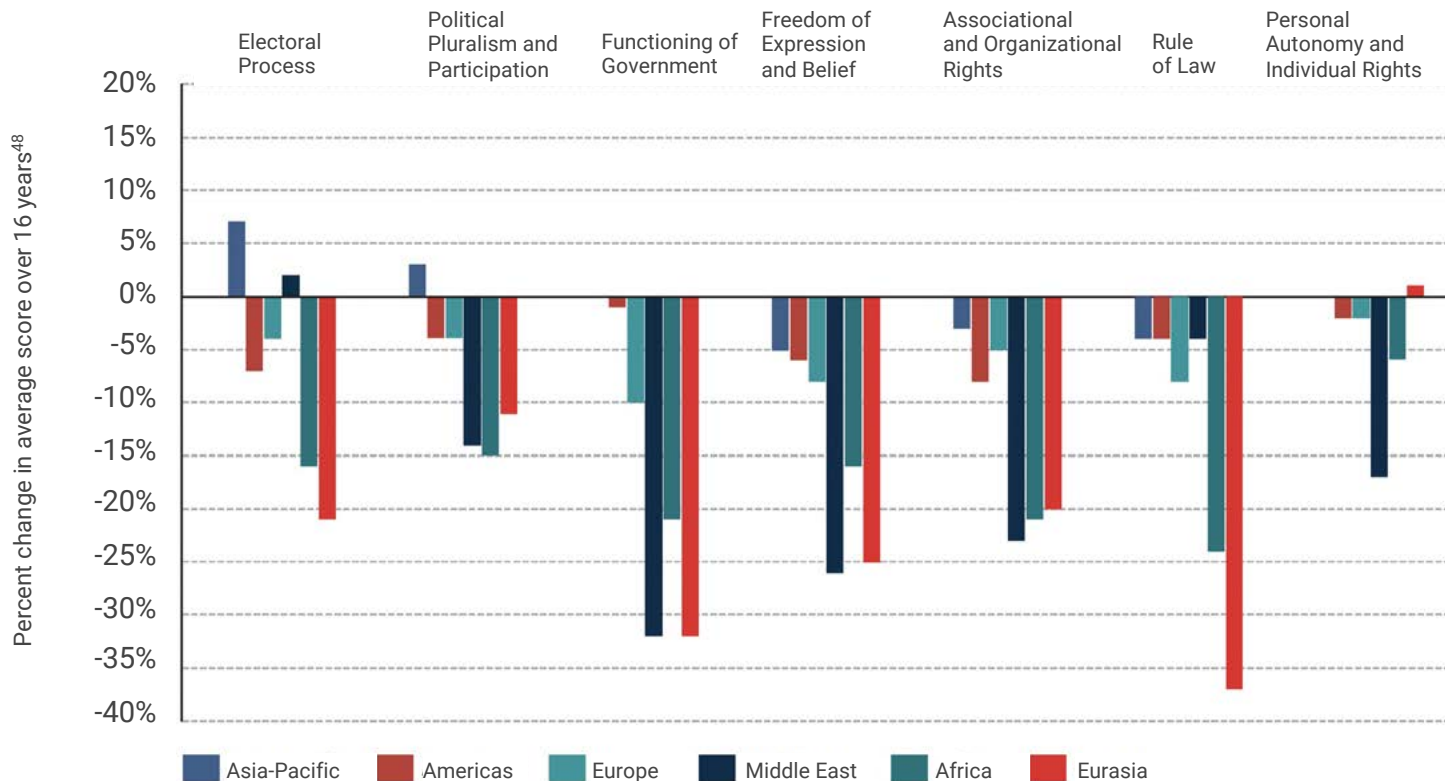Independent media have suffered from attacks on journalists and blocks on access to information.

Discrimination and mistreatment of migrants
Marginalized communities face discrimination in a variety of areas, from political participation to asylum rights.

Active Undermining of Democracy

Global Competition for Critical Minerals

"The nature of global resource competition is changing — and quite rapidly. New developments seem to surface every week as countries around the world scramble to create secure supply chains for critical minerals, which are central inputs in our green energy technologies, digital economy, defense systems, and more."[49]

- Canada is seeking to build more resilient global supply chains for critical minerals including lithium, cadmium, nickel, cobalt, graphite, and zinc.[50]

- The European defence industry is reliant on rare earth metals that are mined in China and are then shipped to Europe through Russia despite international sanctions.[51]

- Several countries, including the US and Canada, have expressed concern that China might corner key parts of the critical minerals industry and use this control to drive its growing market share in industries like electric vehicles.[52]

- Canada ordered three Chinese companies to divest their investments in Canadian critical minerals, citing national security.[53]

- Norway recently discovered significant amounts of minerals in its seabed, including several that are on Europe's list of critical minerals.[54]

- There are increasing concerns that mining operations for critical minerals will have negative impacts on the environment and on traditional ways of life for Indigenous peoples.[55] For example, the new plans in Quebec for lithium mines will drain two lakes on traditional hunting grounds impacting wetlands and cutting trees that will heavily impact Cree trap lines where trapping is still a way of life.

Foreign Interference

"

We live in an era of a deteriorating global security situation, where the norms, behaviours, and relationships that have underpinned the rules-based international order are at risk from highly capable hostile actors. Simply put, Canada and its allies confront a multidimensional threat environment that undermines democracy and its institutions, which are under attack by adversaries who seek to establish an order based on authoritarianism."

"Message from the Chief of the Defence Staff", General Wayne Eyre, February 2023

The Canadian Security Intelligence Service continues to observe steady — and in some cases increasing — foreign interference activity by state actors.

- Activities within or relating to Canada that are detrimental to the interests of Canada and are clandestine or deceptive, or involve a threat to any person, constitute foreign interference.[56]

- Foreign interference directed at democratic institutions and processes can be effective ways for foreign states to achieve their immediate, medium or long-term strategic objectives. These activities can pose serious threats to Canadians both inside and outside Canada, and threaten Canada's prosperity, strategic interests, social fabric, and national security.

- Foreign states and their proxies use human intelligence operations, state-sponsored or community media, cyber-tools, and social media in their attempts to covertly influence, intimidate, manipulate, interfere, corrupt or discredit individuals, organizations and governments to further the interests of that foreign state.

- Targets of foreign interference include political, economic, defence, security, foreign policy, and community issues.

Foreign Interference

Instances of foreign interference are increasing globally:

- North Korea has used social media and cyber tools to influence politics in South Korea in the hopes of getting pro-North Korea candidates in positions of power.[57]

- Russia has allegedly plotted to overthrow the pro-Europe government of Moldova[58] and has targeted Canadian Armed Forces members for a misinformation campaign.[59]

- Russia has covertly donated $300 million to foreign political parties in more than two dozen countries since 2014.[60]

- China's foreign influence activities have accelerated under Chinese President Xi Jinping[61] and it has increased its influence in media and society by running state-backed television news[62] and state-backed police stations in Canada and internationally.[63]

- China allegedly distributed funds to candidates in the 2019 federal election in Canada and placed foreign agents into Member of Parliament offices and the Trudeau government has announced multiple investigations.[64, 65]

Arctic Sovereignty

"The strategic importance of the Arctic has been increasing, due to climate change and the opening of Arctic waters, as well as the wealth of resources the Arctic holds. This heightened interest is not only from Russia, but other world powers like China, the US and other Arctic nations. It is paramount northerners are involved in decisions that impact the North."[66]

- Canada's surveillance capabilities are aging and incapable of detecting modern weapons, and there aren't enough personnel to monitor and maintain equipment.[67] There are significant gaps in its ability to detect ships transiting through the Arctic, limiting the ability to monitor for security threats as well as environmental threats such as oil spills.[68]

- Canada considers the Northwest Passage to be territorial waters, while other countries, including the US and parts of Europe, consider it to be an international waterway.[69]

- Countries in the Arctic including Canada have submitted claims to the seabed in the hopes of obtaining exclusive rights to exploit resources on or under the seabed. Canada's claim now reaches in several places all the way to Russia's exclusive economic zone.[70]

- Russia has invested heavily in increasing its military presence in the Arctic and conducted a joint exercise with China in the Bering Sea in September 2022.[71]

- Russia is also suspected of damaging the Nord Stream gas pipeline in the Baltic Sea as well as underwater data cables in Norway and the Faroe Islands.[72]

- Russia's behaviour in Ukraine raises flags for the security of the Arctic due to the vital role it plays in Russia's nuclear deterrent capabilities.[73]

Arctic Sovereignty

Addressing the Challenges in Canada's North:

- Communities in Canada's North often don't have the infrastructure, supports, or services to safely grow and prosper. Canada has recognized this and has committed $18 billion in funds over the next five years to address infrastructure gaps. The Government of Canada is also investing $4.3 billion over 4 years, starting in 2021 to 2022 for the Indigenous Community Infrastructure Fund.[74]

- In June 2022, Canada announced a $38.6 billion plan to modernize the North American Aerospace Defense Command (NORAD) over the next two decades in order "to deter acts of aggression against North America, to respond to aerospace threats quickly and decisively when required, and to provide maritime warning consistent with the NORAD Agreement."[75]

Return of Canadian Regionalism

The relationships between different levels of government are increasingly adversarial with few willing to make compromises:

- Saskatchewan has launched the *Saskatchewan First Act* to create a tribunal that would calculate the harm and costs of federal policy that could be used in future court cases against the federal government.[76]

- Alberta has passed the *Alberta Sovereignty Within a United Canada Act* that could allow the province to ignore federal laws, while critics indicate that it is likely unconstitutional.[77]

- The Federation of Sovereign Indigenous Nations complain that the *Alberta Sovereignty Act* and the *Saskatchewan First Act* infringes on their treaty rights.[78]

- Some provinces continue to download costs for services to cities, creating budget problems and increasing tensions.[79]

- Tensions between the federal government and provincial governments about irregular migration will likely continue despite changes to expand the Safe Third Country Agreement.[80]

Politics of Division

The ability to agree to disagree is being lost, with civil discourse being replaced by rhetoric:

- Canadians are becoming divided, with some saying issues involving the pandemic and politics have led them to reduce contact with friends or family. About three out of every four respondents said they believe society has become more polarized. The survey reports that identity politics that have been taking hold in the US are taking hold in Canada.[81]

- The Freedom Convoy demonstrated three deep-seated divisions in Canada — "status threat, tribalism, and a lack of loser's consent" — which combined with the isolating effect of the pandemic and by the anonymity of social media has made individuals less-inclined or able to engage with people who share opposing views.[82]

- Some are concerned that the media and political parties are framing complex issues and discussions along binary lines, increasing polarization.[83]

- Canadians were equally divided over whether the country can be accurately described as having a "good system of government" — 42% do, 45% do not — and 37% of Canadians feel that there is no room for political compromise.[84]
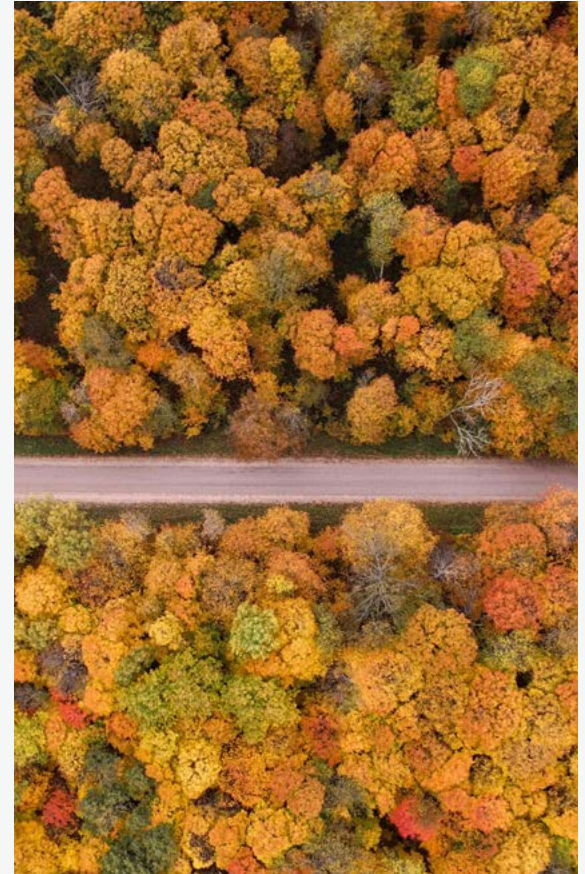
Hate, Extremism and Terrorism

The Global Terrorism Index 2023, a report published in March 2023 by the Institute for Economics and Peace that ranks 163 countries according to the impact of terrorism, reveals that in 2022:[85]

- Declining terrorism in the West has been met with intensified attacks in other regions.

- Terrorism thrives in countries with poor ecologies and climate induced shocks such as the Sahel, a semiarid region of western and north-central Africa extending from Senegal eastward to Sudan.

- Attacks have become deadlier with the lethality rising by 26% — the first rise in lethality in five years.

- Terrorism deaths in Afghanistan have declined by 9%, which is attributed to the Taliban's transition from terror group to state actor in 2021. Elsewhere in the world, terrorism deaths increased by 4%.

- The Islamic State and its affiliates was once again the world's deadliest terrorist group — for the eighth consecutive year — with attacks in 21 countries.

- The Sahel is the most impacted region, representing 43% of global terrorism deaths, 7% more than in 2021.

- Deaths from attacks by unknown Jihadists globally are eight times higher in 2022 than in 2017, representing 32% of all terrorism deaths and 18 times higher in the Sahel.

- Drone technology and its use continues to rapidly evolve, especially with groups such as Islamic State, Boko Haram and Houthis.

- The Proud Boys and 12 other extremist groups were designated terrorist entities in Canada, bringing the total to 73.[86]

- Canada has created a Terrorist Entity Listing that allows the public to identify a group or individual as being associated with terrorism. Being on the list means property can be subject to seizure/restraining and/or forfeiture. As well, banks have reporting requirements with respect to property. This provides tools to equip citizens to assess online information for misinformation, and create partnerships with community organizations, academics, and all levels of government.

- In 2022, Canada announced funding to Tech Against Terrorism toward a Terrorist Content Analytics Platform to automate the detection, notification, and analysis of verified terrorist content.[87]

Hate, Extremism and Terrorism

The threat landscape surrounding religiously, politically or ideologically motivated violent extremism continues to evolve and is increasingly changing in a borderless online space. Violent extremist propaganda continues to flourish in this global landscape and cannot be defined by a single coordinated narrative.[88]

Ideologically Motivated Violent Extremism (IMVE) is defined as a range of grievances and ideas from across the ideological spectrum and includes:

Xenophobic violence
(racially-motivated
and ethno-nationalist violence) such as white supremacy

Anti-authority violence
(anti-government/law enforcement, anarchist violence)

Gender-driven violence
(violent misogyny including Incel anti-2SLGBTQI+-violence)

Hate, Extremism and Terrorism

Ideologically Motivated Violent Extremism is increasing globally and continues to evolve as the motivations become more complex.

- Canadian ideologically motivated violent extremists have killed 25 people and wounded 41 others in Canada since 2014 — more than religiously motivated violent extremism or politically motivated violent extremism.[89]

A Report of the Standing Committee on Public Safety and National Security on "The Rise of Ideologically Motivated Violent Extremism in Canada" in June 2022 revealed: [90]

- As least 300 Canadian groups with far-right views have emerged since 2015, with a large number persisting over time.

- The demographics of ideologically-motivated adherents is changing, with an increase in middle-aged and older adults.

- The theme narratives IMVE influencers use to recruit and radicalize to violence draw on a long list of opposition and hatred and adapt to current events and regional peculiarities. For example, Quebec-based IMVE groups like La Meute, which prior to the pandemic had been weakened by factionalism, were revitalized through their embrace of an anti-public health measures narrative.

- Periods of crises are conducive to radicalization and the emergence of extremism because they exacerbate certain vulnerability factors such as social isolation, fear of the unknown and anxiety stemming from the pandemic.

Hate, Extremism and Terrorism

In 2022, the Conference of Defence Associations Institute brought together four experts to discuss the rise of ideologically motivated violent extremism in Canada:[91]

- Push factors for radicalization — such as socioeconomic instability, polarization, and political distrust — all increased during the pandemic.

- Trends suggest that more women are gravitating towards far-right movements in Canada.

- Events such as the Freedom Convoy demonstrated the capacity of the far-right to mobilize and exploit populist sentiment. The far-right is not organized into a direct hierarchy, making it difficult for law enforcement to target potential perpetrators of violence. It is a social movement with individuals from multiple backgrounds and levels of grievances.

The Organization for the Prevention of Violence's report on "Hate, Extremism, and Terrorism in Alberta, Canada, and Beyond. The Shift from 2019 to 2022" identified several key trends across Canada:[92]

- Rising xenophobic hate and extremism reflected in a national rise in police-reported hate crimes over the last 5 years. The June 2021 vehicle ramming in London, Ontario, which targeted a Muslim family is an example of this increase.

- This trend in xenophobic extremism favours lone actors rather than group-based activities, which makes the prevention of violence more difficult.

- Fueled in part by the pandemic, there has been a rise in popularity and spread of anti-authority extremist ideologies. While this brand of extremism was previously uncommon, and uniquely the purview of

Canadian ideological groups like the Freemen on the Land, this form of extremism is now espoused by a variety of individuals, gurus, and loosely connected groups, who are driven by a host of motivations and conspiracies.

- The proliferation of conspiracy theories like QAnon and the great replacement.

- Conspiracies have been increasingly adopted by various hate-motivated extremist groups and actors, including anti-authority and xenophobic extremists, lending the potential for individuals who espouse conspiracy theories to drift into extremist ideologies.

Implications

As a result of the trends in the political space, the RCMP may see increased demand for:

1. Border policing and surveillance between ports of entry, including in the remote north.

2. The provision of training and aid to other countries.

3. Enforcement of economic sanctions such as asset seizure.

These political trends may also impact how the RCMP delivers its services:

1. Requirements to support the rule of law may result in increased scrutiny on RCMP employees and applicants to ensure that they do not support anti-democratic positions or violate codes of ethics.

2. Requirements to monitor changes in the international security scene will require secure and timely information sharing with domestic and international partners.

The ongoing shifts in the political realm may impact the types of resources the RCMP needs to deliver policing, as well as the skills those resources need:

1. Increased requests for international support will require resources with liaison skills, foreign language skills, and diplomacy.

2. All RCMP employees, both front-line policing and support staff, will need Gender-based Analysis Plus (GBA Plus) training to enhance their competencies to apply key GBA Plus concepts and develop responsive, barrier-free, and inclusive policies, programs, and initiatives. To complement GBA Plus training, anti-bias training is also required to help employees learn to recognize explicit and implicit bias.

3. Increased demand for federal policing may require shifting resources, and the use of civilian investigators.

04 Economic

Overview

The impacts of the pandemic shutdowns are still being felt around the world. While global supply chains have almost returned to normal, the inability to match supply to demand drove prices up and caused significant inflation around the world. Large economies are raising interest rates to tame inflation, which when combined with other geopolitical impacts, is having the effect of bringing many countries close to recession.

Canada's economic response to the pandemic provided relief to many, however persistently high inflation, slowing economic growth and poor productivity mean Canada is still facing the threat of a recession.

Rising interest rates in the US will also impact the Canadian economy by devaluing the Canadian dollar and causing further affordability concerns. Despite this, the labour market is strong with low unemployment and high demand for employees particularly in the construction, manufacturing, and accommodation and food service sectors.

Labour Market

The global labour market is demonstrating low unemployment levels and high participation levels, making it a worker-driven environment:

- The technology industry has seen layoffs from highly-visible companies such as Amazon, Google, and Meta. Despite large numbers of layoffs, they represent a small fraction of total employment in the industry.[1]

- In Europe, unemployment has largely been stable at 5.9% across the European Union based on data from the second to third quarter of 2022.[2]

- Across Asia, unemployment in 2022 was roughly 5.2%, but the labour force participation rate was only 59%.[3]

- In Australia, unemployment in January 2023 remained stable at 3.5%, although the participation rate decreased.[4]

- In the US, unemployment in February 2023 sat at 3.4%, and there were job gains in hospitality, health care, and professional and business services.[5]

Labour Market

In Canada:

- The unemployment rate held steady at 5% in January 2023. More than 320,000 jobs have been added since September 2022.[6]

- The January 2023 unemployment rate was 5.1% for men and 4.8% for women.[7]

- The January 2023 participation rate was 69.7% for men and 61.8% for women.[8]

- The January 2023 participation rate varied by racial background. The participation rate for White people was 60.1%, 66% for visible minorities overall, 59.8% for Indigenous peoples and 66.3% for Black people.[9, 10]

- Several industries saw growth in employment including trade, health care, and educational services. Transportation and warehousing saw a decrease in employment.

- High numbers of job vacancies persist in a number of industries including health care and social assistance, accommodation and food services, construction, manufacturing, and professional scientific and technical services.[11]

Affordability

Globally, inflation has been increasing:

9.9%

Across Europe, inflation in September 2022 was at 9.9% with several countries being much higher.[12] The increase in inflation is primarily due to rising energy costs — which have increased 40% compared to 2021 — and higher food prices.[13]

3%

Increases in inflation across Asia are driven primarily by rising food and energy prices. The Asian sub-regions have varying inflation rates, as high as 13.5% in Central Asia, and as low as 3% in East Asia.[14]

7.3%

In Australia, inflation is at 7.3%, driven by high freight costs, supply constraints, and elevated demand.[15] In sub-Saharan Africa, median inflation is at 9%, driven primarily by global commodity prices, swings in exchange rates, and global supply chain disruptions.[16] Inflation was at 6% in the Caribbean and in smaller South America economies, primarily due to rising energy and food prices.[17]

1.6 Billion People

Shortages of land, lending, labour, and materials are some of the factors fuelling a global housing crisis which could impact 1.6 billion people by 2025.[18]
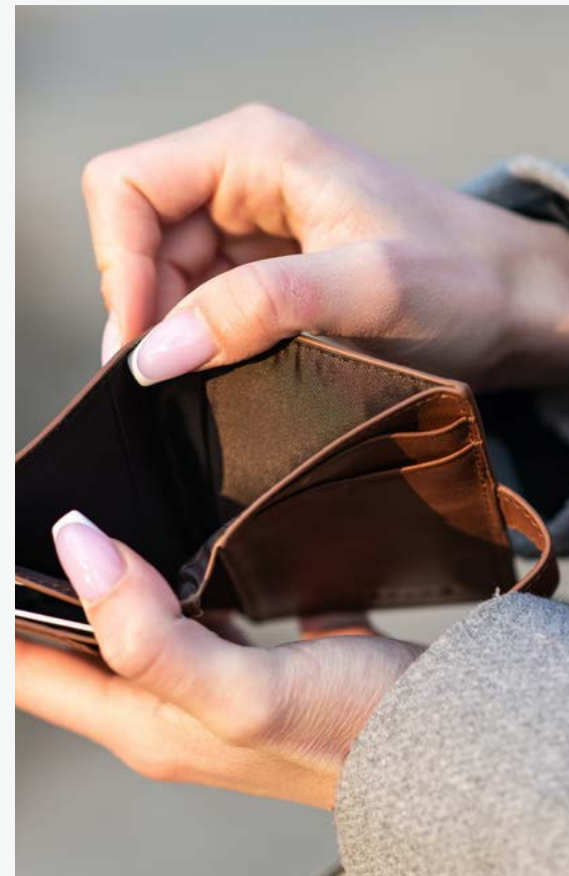
Affordability

Many Canadians are finding affordability a new challenge:

8.1%

Inflation reached 8.1% in June 2022 before falling to 6.9% in September 2022, both figures well above the Bank of Canada's 3% target.

5.2%

A tight job market is resulting in higher salaries, but inflation is still outpacing salary growth. From July 2021 to July 2022, average wages increased by 5.2%, while the average price of consumer goods increased by 7.6%.[19]

5.29%

Interest rates are rising to tame inflation, which is also increasing the cost of variable rate mortgages and home equity lines of credit. The most popular type of mortgage, the 5-year fixed, is advertised at 5.29% (October 2022), compared to a 15-year rolling average of 3.25%.[20]

2x

Economists expect the debt service ratio of low-income Canadians to rise at twice the speed of high-income households through 2023.[21]

3.4%

Supply of housing of all kinds is below the level of demand, raising rents. The average rental vacancy rate across Canada is just 3.4%,[22] and the average cost of a 2-bedroom apartment has increased to $1,167[23] resulting in 1 in 10 households in "core housing need."[24]

Homelessness

Indigenous peoples living off-reserve and women are more likely to experience homelessness.[25] Homelessness and vagrancy rates may increase as well as the number of evictions.

Affordability

Many Canadians are finding affordability a new challenge:

11.2%

The cost of food purchased from stores increased 11.2% in 2022 compared with 2021, including an increase of 7.6% for meat, 9.7% for dairy, and 11.8% for fresh vegetables.[26]

15%

An increasing number of Canadian households are relying on food banks with the number of visits to food banks increasing 15% since March 2021 and 35% since March 2019.[27]

37%

Canadian businesses are also impacted as the number of insolvencies increased 37% in 2022.[28]

Vulnerability

Statistics Canada reported that the people in the bottom income quintile were especially vulnerable in the current economic situation.[29] More common in the bottom quintile are women; the young and old; single parents; separated, divorced and widowed individuals; people with lower education; Indigenous peoples and recent immigrants.

13%

Average credit card balances increased 13% in 2022 compared to 2021 with more people not paying off their balances each month. Additionally, delinquencies are rising from their lows in 2021 and are nearing pre-pandemic levels.[30]

Energy Prices

Energy prices increased around the world in 2022 due to a variety of factors including seasonal demand, carbon prices, transition to renewable energy, and changing export patterns due to geopolitical strife in Europe:[31]

- In Europe, household electricity prices increased in almost all European Union member states in 2022 for an average of €0.2525 per kWh.[32] Similarly, natural gas prices also increased to an average of €0.0861 per kWh.[33]

- In Asia, liquid natural gas prices have increased dramatically as supply shifts to Europe, resulting in prices that are four times higher than the five-year average.[34]

- In Australia, electricity prices in the third quarter of 2022 were the second highest in the last five years behind only the second quarter of 2022. Despite reduced gas prices in August and September, the gas prices remained high historically.[35]

In Canada, energy prices are generally higher in 2022 compared to 2021:

- Electricity prices across Canada ranged from 7.39 to 17.39 ¢/kWh in 2021,[36] but rose to a range of 7.59 to 19.94 ¢/kWh in 2022.[37]

- Natural gas prices reached a peak in the summer of 2022, but have since returned to levels near those of 2021.[38]

- Heating oil prices have come down from their highs in early 2022, but are still higher than they were in 2021.[39]

- Atlantic Canadians spend the most on energy. Many in the Territories live off-grid and rely on expensive diesel generators.[40]

- Newfoundland and Labrador, New Brunswick and Quebec rely heavily on electricity; Ontario, Manitoba, Saskatchewan, Alberta and British Columbia rely on natural gas; and Nova Scotia and Prince Edward Island rely on other fuels, mostly heating oil.[41]

A number of countries are implementing programs to create more domestic renewable energy in the long-term, such as Japan's Green Transformation, the *US' Inflation Reduction Act*, as well as the REPowerEU program in the European Union.[42]

Productivity

Productivity is a measure of how efficiently businesses use their labour and capital to create outputs in the form of products and services. Productivity increases when more outputs are created with the same resources.

Canada's productivity in 2021 lagged its peers:[43]

- Canada spends less on research and development (1.6% of GDP) than its peers (OECD average: 2.7% of GDP).[44]

- Canadians hold fewer patents (661) than people of other nationalities (OECD total 44,700).[45]

- Canada has more restrictive foreign direct investment rules than its OECD peers.[46]

% Growth in GDP per capita and labour productivity, 2021
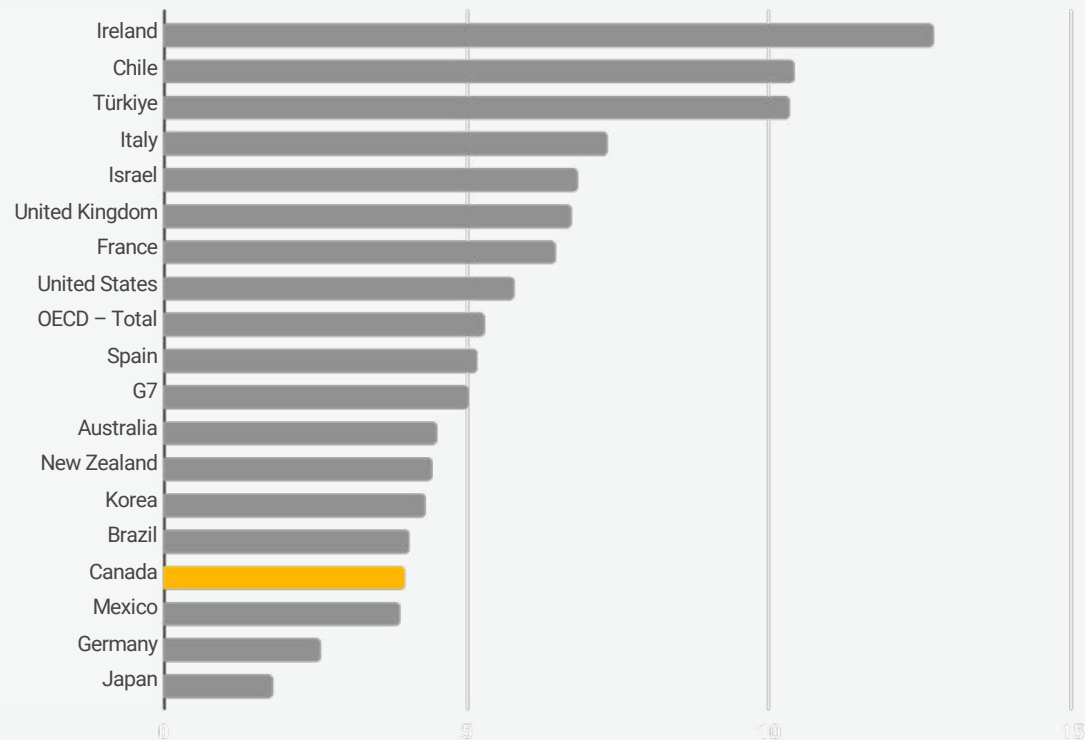
Productivity

Canada's productivity has been impacted by the pandemic and is only now starting to recover:

- Productivity marginally increased in the second quarter of 2022, after seven consecutive quarters of decrease. Productivity is still 1.3% below pre-pandemic levels.[47]

- Unit labour costs are outpacing productivity, with worker compensation 12% higher than pre-pandemic levels.[48]

- Investment in productivity-enhancing assets is still below pre-pandemic levels including machinery and equipment at 4% below pre-pandemic levels, and research and development at 8% below pre-pandemic levels.[49]

Increases in productivity have been responsible for much of Canada's GDP per capita growth, improving living standards. However, to sustain those improvements in living standards, Canada will need higher productivity as the labour force ages and many workers retire.

- One in five companies plan to increase spending on digital technologies in the next 12 months.[50]

- 10% of manufacturing businesses and 9% of professional and scientific businesses plan to increase R&D spending in the next 12 months.[51]

"

As we emerge from the COVID-19 pandemic, Canada has the opportunity to make long overdue gains in productivity. In the years ahead, business investment decisions will determine the path of Canada's productivity growth."

**Tiff Macklem
Governor of the Bank of Canada, February 9, 2022, at the Canadian Chamber of Commerce[52]**

Recession

The possibility of recession is looming over much of the world:

- China's growth is projected to slow[53] and possibly shrink this year, and youth unemployment and bankruptcies are increasing.[54]

- The United Kingdom's GDP is expected to shrink in 2023 as consumer spending drops and businesses reduce investments.[55]

- The European Union is expected to enter recession in 2023 as inflation remains high and the impacts of war in Ukraine continue to be felt. In particular, Germany's economy is expected to contract as high energy prices force factories to curb production.[56]

- In the US, growth is expected to slow but a recession may be avoided.[57]

- The growth in Latin America is expected to slow in 2023 as higher interest rates reduce commodity prices and tourism prospects weaken.[58]

- In March 2023, the Conference Board of Canada noted a 94% chance of Canada falling into a recession within the next 12 months.[59]

- A recent study shows that recently arrived immigrants are more negatively affected during times of recession compared to those born in Canada.[60]

Predicted % Real GDP Growth 2023[61]
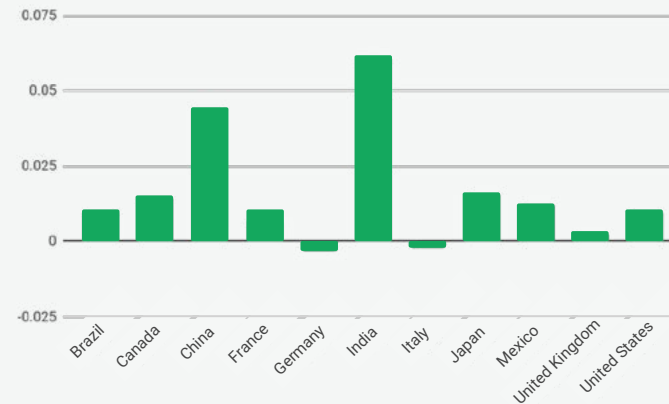
- In Canada, GDP growth was stronger than expected in Q3, but is expected to stall through the first half of 2023 as both domestic consumption and housing market activity decline.[62]

Emerging and developing countries are facing a multi-year period of slow growth driven by heavy debt burdens and weak investment as global capital is absorbed by advanced economies faced with extremely high government debt levels and rising interest rates. Weakness in growth and business investment will compound the already-devastating reversals in education, health, poverty, and infrastructure and the increasing demands from climate change.

David Malpass, World Bank Group President, January 2023[63]

Supply Chain

During the height of the pandemic, lockdowns meant that supply (such as manufacturing and logistics) was unable to keep up with unexpected demand. This disparity resulted in higher prices and contributed to inflation. While there are signs that demand is slowing, the shocks to global supply chains are still being felt:

- In September 2022, air freight as measured in cargo tonne-kilometres fell 10.6% compared to September 2021, but continued to track at near pre-pandemic levels (-3.6%).[64]

- In the US, rail freight was down 2.5% in November 2022 compared to the same week in 2021.[65] The cost to ship freight from China to the US has dropped below $4,000 from its high of $20,000 in 2021.[66] Dwell times — the time spent at the terminal before shipping via rail or truck — are decreasing, but are still higher than pre-pandemic levels and there has been an increase in the number of cancelled trips.[67]

- In Europe, volumes of sea freight have nearly recovered to pre-pandemic levels.[68] Road freight increased by 6.5% in 2021 compared to 2020.[69] Rail freight also increased 8.7% in 2021 compared to 2022.[70]

- In Australia, a train derailment and flooding effectively shut down east-west rail freight in November 2022 and a strike by maritime workers impacted freight.[71]

Supply Chain

Within Canada:

- Dwell times at ports are higher than targets, with Vancouver at 4.9 days in October 2022,[72] Montreal at 5.5 days,[73] and Halifax at 6.5 days.[74] Anchor dwell times are also high, resulting in additional delays.

- Volume of freight shipped by rail increased 1.9% in August 2022 to 31 million tonnes,[75] while the cost of shipping freight by rail increased 15.7% between October 2021 and October 2022. [76]

- The cost of shipping freight by truck increased by 29% between June 2021 and June 2022. [77]

- The industrial capacity utilization rate — the ratio of an industry's actual output to its estimated potential output — for manufacturing fell to 77.4% in September 2022 from its high earlier in 2022, but was still higher than in September 2021. Increases in aerospace products were offset by losses in petroleum and coal products.[78]

- The national availability rate for industrial space (such as warehouses) was 1.5% in the third quarter of 2022, and rental rates increased by nearly 30% in 2022.[79]

- Job vacancies in supply chain roles are high, with 49,785 job vacancies in transportation and warehousing, and another 85,870 vacancies in manufacturing in the second quarter of 2022.[80]

To address these challenges:

- Businesses are increasing inventories. Total inventory levels increased in 15 of 21 industries in September 2022, up 1.3% to $122 billion. This increase is reflected in raw materials, goods-in-process, and finished products.[81]

- One in 20 businesses plan to relocate supply chain activities to Canada over the next year, while a similar number plan to relocate activities outside Canada.[82]

Implications

Most of the world's economies are in or near recession, thanks to slowing growth, war in Ukraine, a lingering pandemic, high inflation and rising interest rates.

Canada will face similar challenges. As a result of the trends in the economic space, RCMP activities may be impacted by the following changes:

1. Increases in income inequality may increase long-standing public health and social problems such as drug abuse, anti-social behaviour and mental health conditions.

2. Increased pressure from the trifecta of homelessness, addiction, and mental health.

3. Increased volume of financial crimes and theft.

There may also be an impact on how the RCMP delivers its services:

1. Supply chain issues may limit the availability of critical equipment, making it more difficult to acquire in a timely manner.

2. Persistently high inflation increases the prices of equipment and administrative items, and the cost of salaries.

3. Fluctuating and high energy prices increase the cost to operate detachments, as well as make planning and budgeting more difficult.

4. A tight labour market may make it more difficult to recruit into the RCMP. A more targeted marketing approach is currently being used for regular member recruiting, however all categories are struggling with vacancies and additional measures may be required.

The uncertainty caused by the conflicting economic indicators will require strong skills in cost management, budgeting, scenario testing, and negotiation.

For the RCMP, key focus areas in the future will include:

1. Increasing communications and partnerships with community support organizations to better serve individuals who experience economic vulnerability.

2. Building resiliency in supply chains for critical equipment and assets to maintain access and stabilize price fluctuations.

3. Invest in infrastructure improvements to reduce energy usage and increase sustainability.

05 Socio-cultural

Overview

Society is fragmenting into smaller communities based on common interests and backgrounds, increasing social polarization. Globally, demographics are creating further divides based on age and wealth, amplifying the effects of the political and economic trends. Population diversity and mental health crises will require sensitivity to cultural differences and training to ensure bias-free interactions with police.

Distrust for public institutions is growing around the world, caused by disinformation spreading widely on both traditional and social media, and by the difficulty in correcting the disinformation. Democracies around the world are under threat from large-scale movements and citizen protests. Political unrest and environmental events are creating massive waves of irregular migration.

Canada's demographics are also changing, with more people moving to smaller cities and rural areas with a resulting hollowing out of urban cores. Canada's population is also aging, and increasingly reliant on newcomers to maintain population levels. Canada remains a relatively affluent country, but the pandemic revealed stresses in health care and mental health support. While traditionally seen as a progressive country, Canada has recently seen social divisions that will be difficult to overcome, reconciliation efforts with Indigenous peoples remain challenging, and hate crimes continue to rise.

Global Demographics (Overview)

Despite hitting 8 billion people, the global population is aging as life expectancy increases and fertility rates fall:[1]

77.2

Life expectancy is expected to reach 77.2 years by 2050.

2.3 to 2.1

Fertility rate was 2.3 children per woman in 2021 and projected to fall to 2.1 children per woman by 2050.

771 Million

In 2022 there were 771 million people aged 65 years or over globally, 3 times more than the amount in 1980.

Canada's population is also aging:

21.8%

21.8% of persons of working age are aged 55 to 64, the highest percentage in the history of the Canadian census.

6 Times

In comparison with the younger population, the number of people aged 65 years or over grew 6 times faster than children aged 0 to 14.

Immigration

Immigration, not childbirth, is driving Canada's population growth.[2]

1.43

Canada experienced the lowest number of births since 2007, with a fertility rate of just 1.43 children per woman in 2021; much lower than the "no-migration population replacement level of 2.1 children per woman."[3, 4]

9.4%

Canada's Indigenous population grew 9.4% from 2016 to 2021 and is younger than the other Canadian population groups.[5]

Canadian Demographics (Age Pyramid)

Age pyramid of the Canadian population (2021)[6]
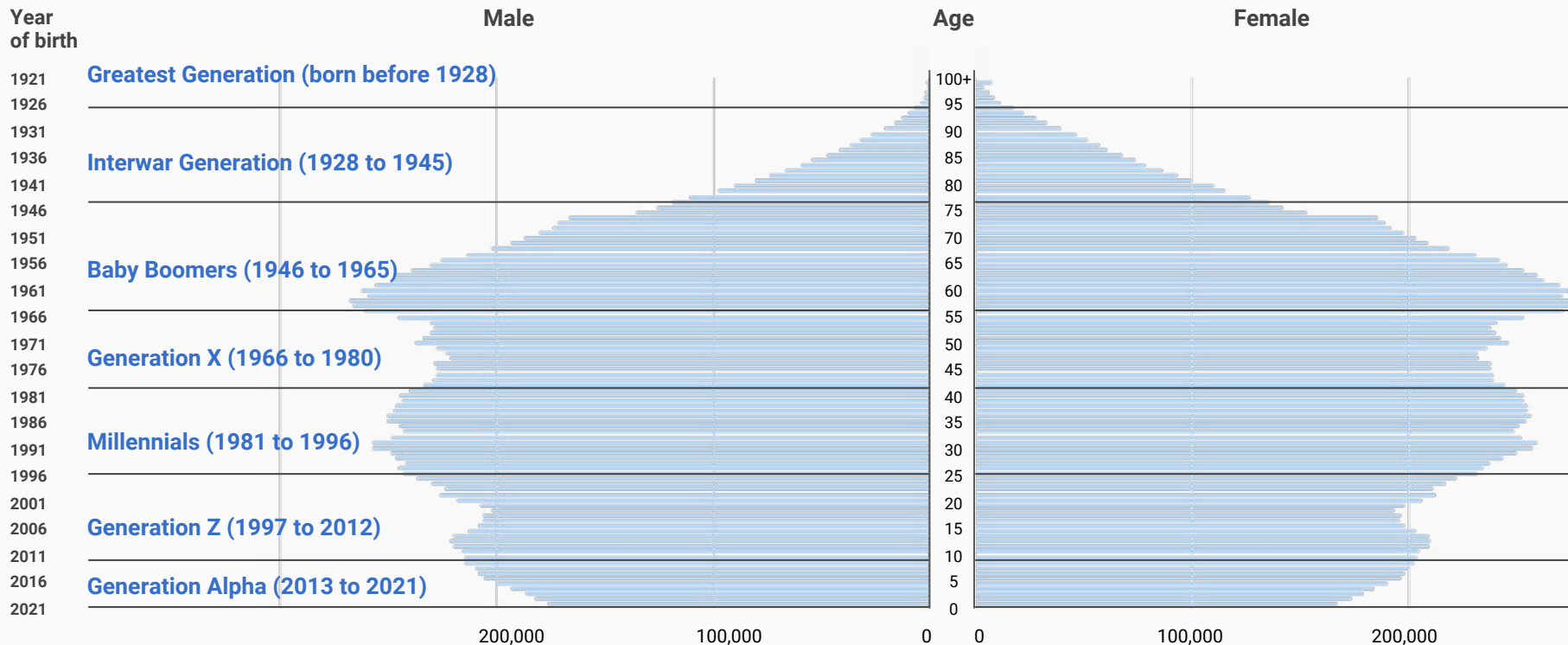
Canadian Demographics (People Nearing Retirement)

People nearing retirement outnumber people old enough to enter the labour market[7]
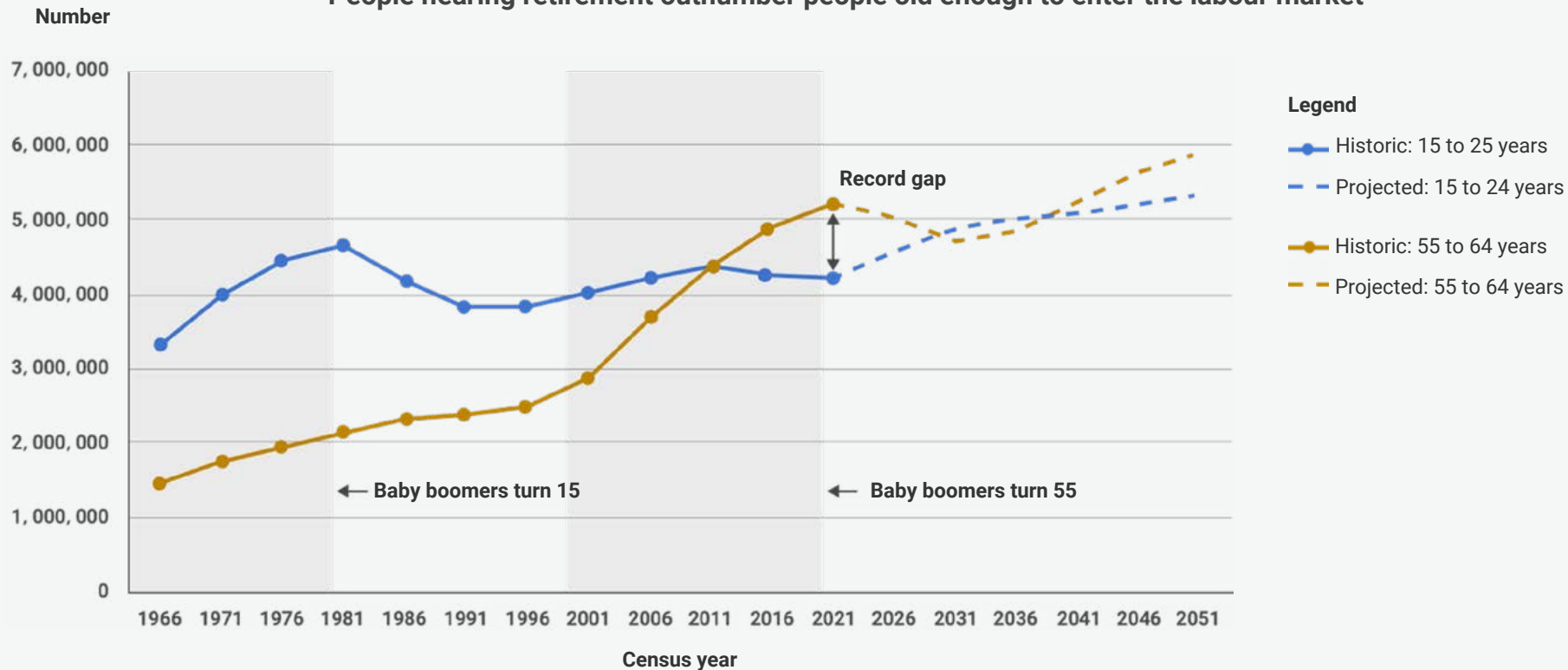
Canadian Demographics (Population)

23%
of population are immigrants or permanent residents[10]

Top 3 destinations for immigrants[11]

Ontario	**54%**
British Columbia	**17%**
Quebec	**14%**

36,991,981
Total population[8]

41.9 Years
Average age[9]

33.6 Years
Average age of the Indigenous population[13]

5%
Proportion of population that are Indigenous[12]

Demographics (Immigrants)

Birth of recent immigrants, 2021[14]

Other	42%
India	18%
Philippines	11%
China	9%
Syria	5%
Nigeria	3%
United States	3%
Pakistan	3%
France	2%
Iran	2%
United Kingdom	2%

Immigrants by admission category, 2021[15]

Other immigrants
3%

Refugees
16%

Immigrants sponsored by family
20%

Economic immigrants
61%
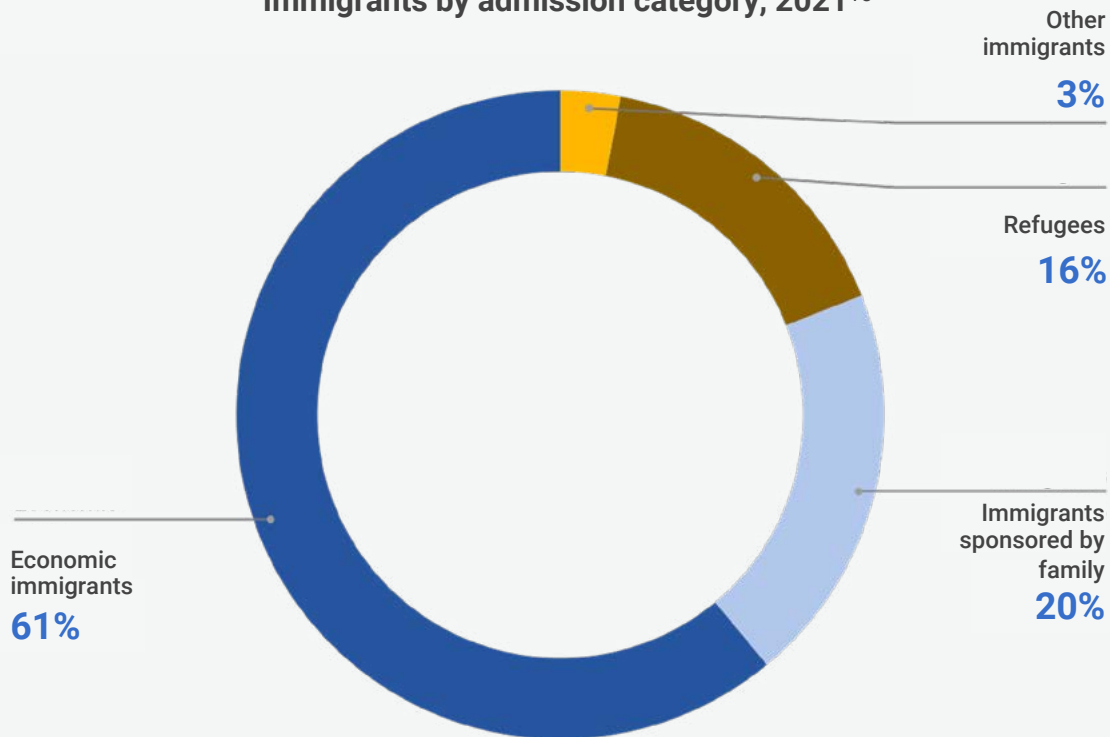
Canadian Demographics (Language)

12%

of population speak a language other than English or French at home[16]

188,900

Population with an Indigenous mother tongue[17]

9,033,185

Population with a non-official language as mother tongue

8.9%

Workers using both English and French at work on a regular basis[19]

36,991,981

Total population[1]

18%

Bilingualism rate (English-French)[18]

Education attainment of population aged 15 and over[20]

None	**16.2%**
High school	**26.7%**
Diploma	**30.5%**
Bachelor's Degree	**17.5%**
Master + Doctorate's Degree	**6.6%**

Canadian Demographics (Income)
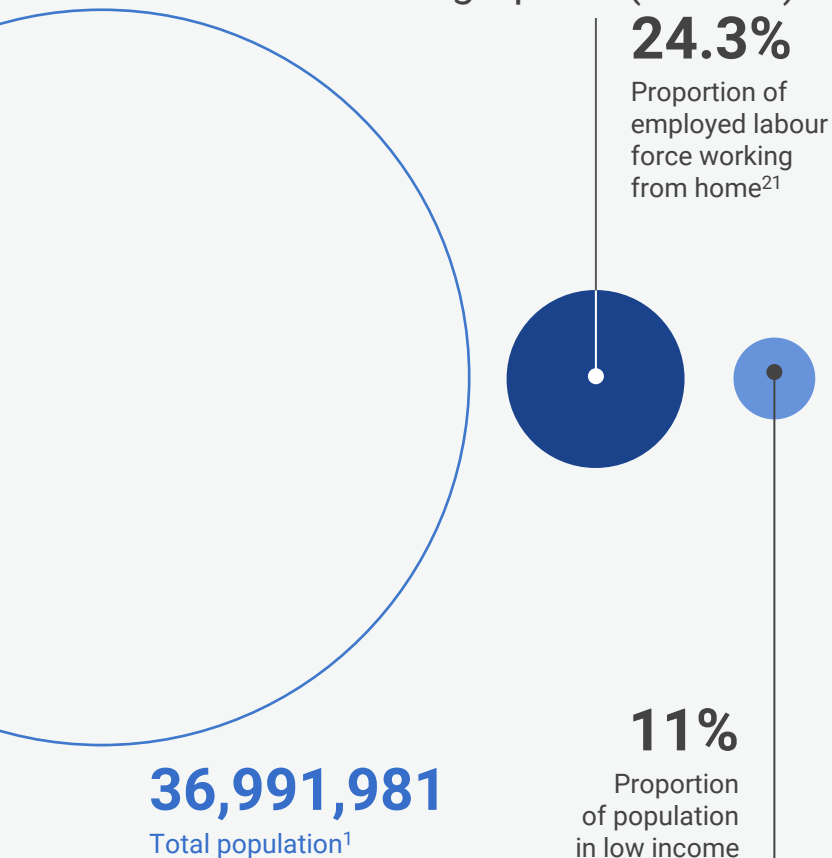
Distribution of households by household after-tax income, Canada, 2020

24.3%

Proportion of employed labour force working from home[21]

36,991,981

Total population[1]

11%

Proportion of population in low income

$200,000 or more
4.8%

$125,000 to $199,999
15.3%

$100,000 to $124,999
11.7%

$60,000 to $99,999
28.8%

Under $30,000
13.5%

$30,000 to $59,999
25.8%
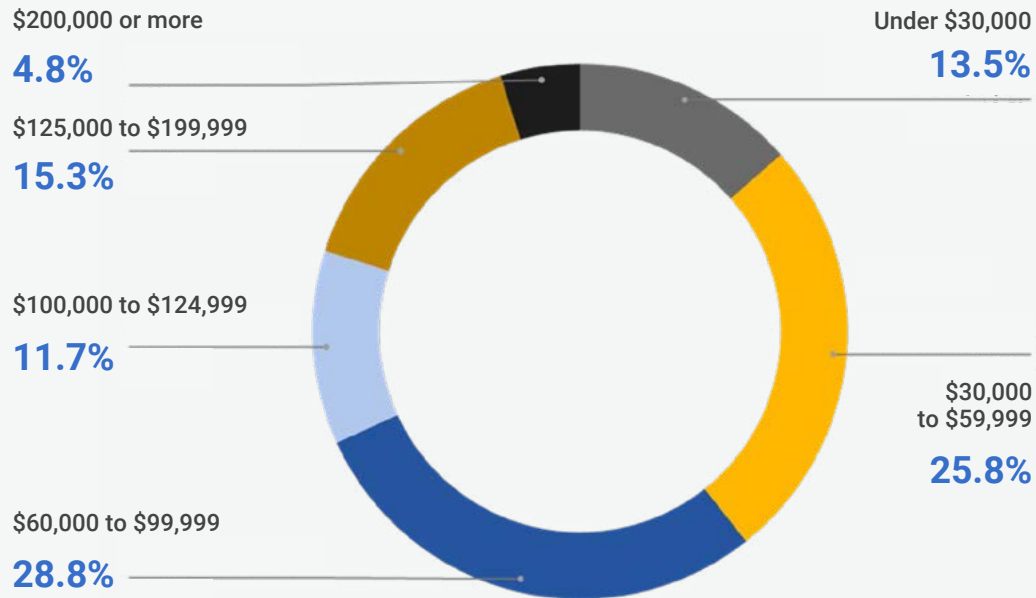
$73,000

Median after-tax household income[22]

23%

Proportion of employed women in science, engineering, mathematics occupations

14,355

Number of people employed in data scientist occupations

Canadian Demographics (Housing)

73%
of Canadians lived in **a large urban centre**[23]

36,991,981
Total population[1]

66.5%
Proportion of population that own a home[24]

2.9%
Proportion of households that are multigenerational[26]

29.3%
Proportion of households that are one-person[28]

20.9%
Proportion of households that spend more than 30% on shelter costs[25]

16.4%
Proportion of households that are one-parent families[27]

10.1%
Households in core housing need

Distrust in Government and Societal Institutions

People are increasingly distrustful of government and societal institutions globally:[29]

- Trust in media fell to only 42% of respondents in Canada, with francophones more likely to trust news sources than anglophones.[30]

- Less than 40% of surveyed Canadians trusted their government, and more than half found that political parties divided rather than unified people.[31]

- Less than half of respondents indicated that they could trust official government accounts of events.[32]

- Only a third of respondents believed that they could trust most people, with two-thirds saying that "you can't be too careful when dealing with people."[33]

- 1 in 4 respondents indicated that they had less trust in their government to manage their long-term wellbeing since the onset of the pandemic.[34]

- There is less polarization in Canada compared to the US.[35]

Decline of Journalism

Despite government support programs, Canadian media continue to face challenges:[36]

- National news outlets continue to cut staff.[37]

- Local news outlets struggle to get staff and maintain profitability.[38]

- The independence of newsrooms was called into question after the high-profile contract termination of a national TV news anchor.[39]

- The number of hours spent listening to radio declined 19% since the start of the pandemic.[40]

- Canadians aged 18-34 are the least likely to trust traditional news outlets, relying instead on alternative media such as podcasts, social media and online news sources.[41]

- An increasing number of Canadians aged 55+ (23%) report reading more online news.[42]

Misinformation and Disinformation

The rise of misinformation and disinformation causes harm in a variety of contexts:

- People are lured into trying alternative medicine that purport to cure cancer or other diseases.[43]

- Anti-vaccine movements saw an upswing in popularity during the pandemic, and have created new ways to avoid social media content moderation.[44]

- Industry trade groups and associations spread disinformation on climate change and try to greenwash their business practices.[45]

- Misinformation about voting locations and times aim to disrupt the democratic process, while politicians selectively edit soundbites to score points against their opponents.[46]

The spread of disinformation is growing because of the popularity of social media and the ability to share posts easily and widely, while it is difficult to correct false information.[47]

Misinformation refers to false information that is not intended to cause harm.

Disinformation refers to false information that is intended to manipulate, cause damage, or guide people, organizations and countries in the wrong direction.

Malinformation refers to information that stems from the truth but is often exaggerated in a way that misleads and causes potential harm.[48]

Access to Internet

Canadians are increasingly reliant on access to the Internet to obtain services like health care and education, to operate a business, or for entertainment:

- Overall 94% of Canadians have access to broadband Internet. However, there is a divide with 95% within and 88% outside of census metropolitan areas having broadband access.[49]

- 2.39 million people in Canada (6.2% of the population) were not online at the beginning of 2023.[50] People living with a disability, the unemployed, Indigenous peoples, and those living outside a census metropolitan area were all less likely to use the Internet.[51]

- One-third of Canadian businesses had e-commerce sales in 2021.[52]

- Nearly 92% of Canada's total Internet user base used at least one social media platform.[53]

Uses of Internet[54]	% Canadians
Instant messaging	76%
Social networking	71%
Online voice / video calls	64%
Streaming tv / movies	83%
Online video games	35%

Social Movements

Broad-based calls for social change, with emphasis on issues of social justice and social inclusion, continue to abound. As a means of bringing change, social justice movements have increased, supporting various causes and communities. This has highlighted tensions between social justice movements and policing institutions:

- Hundreds of unmarked graves were found at former government-funded and church-run residential schools in the provinces of British Columbia and Saskatchewan.[55]

- Issues of violence against Indigenous peoples and communities persist. [56]

- Indigenous youth, including the Idle No More movement, have been working on public education and non-violent direct action; providing resources developed by Indigenous land protectors, academics, and community members.[57]

- The 2SLGBTQI+ community has concerns about historical police involvement in anti-2SLGBTQI+ events, and is calling for apologies and reconciliation.[58]

- Black people have and continue to experience various forms of racism, discrimination, and unfair treatment in Canada, many of which are specific to the criminal justice system.[59]

- Black Lives Matter — Canada is working towards "…a future where Black people living within and across colonial borders on stolen land are no longer denied their humanity"; calls to defund the police are attempting to increase public health and social support services to prioritize non-violent solutions to social problems.[60, 61]

- A recent report from the House of Commons provided recommendations to address issues of systemic racism in Policing.[62]

The RCMP has received funding to address systemic racism within the organization.[63]

- An increasing amount of information on climate change issues in recent years is raising awareness and triggering a climate-related international movement.[64]

- The relationships between many of these issues and policing in Canada have been recognized by the federal government; areas of reform within the RCMP have been identified.[65]

- There is a growing movement within sporting communities calling for culture change aimed at stopping abuse of athletes.[66] Canada's national women's soccer team are fighting for pay equity with the men's team, as well as the same level of programs and support.[67]

Calls for Policing Changes

There are increasing calls for changes in the way police are governed, police budgets, and how they engage with their communities:

- Police budgets continue to grow, while spending on other items that may reduce the requirements for police intervention (such as social services and social housing) have not.[68]

- First Nations have long called for reform to how First Nations police services are funded and have advocated for federal legislation that recognizes First Nations policing as an essential service.[69]

- Police shootings increased by nearly 25% in 2022 across Canada.[70] Researchers, community groups, and civil liberty groups are trying to track deaths caused by police shootings.[71]

- The number of police officers killed in Canada while on duty is "unprecedented". Nine police officers were killed — eight in the line of duty — in six months.[72]

- Some jurisdictions are investigating moving away from contracting the RCMP to provide police services, in the hopes that it could make policing more responsive to local communities and work more efficiently with other provincial and local services with responsibilities for health, education, housing and social services.[73, 74, 75]

- Only 51% of Canadians trust the RCMP, and only a third believe that the RCMP treats visible minorities and Indigenous peoples fairly.[76]

- Four of Canada's largest police associations are pushing for action amid what they call a "growing wave of violence against police and the communities they serve to protect." [77]

- Police independence, is seen as a cornerstone of democratic governance and the protection of citizens' rights and freedoms in Canada. It helps ensure that law enforcement agencies operate in the best interests of the public, without fear or favour and with the highest standards of professionalism and integrity. While assertions were made that there was political interference in the police investigation of the mass shooting event in Nova Scotia,[78] the final report concluded that this was not the case.[79]

- The final report from the Mass Casualty Commission made several recommendations that call for fundamental reforms of policing in Canada.[80]

Rising Inequality and Social Fragmentation

Inequality is a social determinant of crime. Inequalities are growing in Canada and around the world due to a fluctuating economic, social, health, and political landscapes:

- The top 10% of Canadians earn 13 times more than the bottom 50%. The top 1% have 25% of the total wealth, while the bottom 50% only have 5.8%.[81]

- The poverty rate decreased to 8.1%. The poverty rate was higher in urban areas. Indigenous and non-binary persons were more likely to experience poverty.[82]

- The pandemic drove a sharp rise in child labour worldwide, as 'risky' goods bought by Canadians increased.[83]

- The rising cost of shelter disproportionately impacted racialized groups, who faced higher unemployment rates during the pandemic.[84]

- In a study of Canadian force incidents and strip searches, Black people, Latinx, and Persons of Middle Eastern descent were overrepresented in police enforcement encounters.[85]

- 6.2 million Canadians live with a disability, with many living in poverty, working in unstable jobs, and having lower average incomes.[86]

- As of July 2022, 111 First Nations communities across the country were affected by drinking water advisories, infringing on a basic human right.[87]

- Discrimination was more common among the Indigenous population than among populations who are both non-Indigenous and non-visible minority — 44% of First Nations people, 24% of Metis and 29% of Inuit have experienced discrimination in the past 5 years.[88]

- More than 6 out of 10 Indigenous women reported experiencing physical or sexual assault at some point in their lifetime, with 83 percent of Indigenous women who identify as lesbian, bisexual, or transgender had experienced intimate partner abuse.[89]

- Black people in Ontario spend longer in custody than white people while awaiting trial, and Indigenous peoples are denied bail more frequently than other accused people.[90]

Social Inclusion

The past few years have brought on renewed calls by the public for enhanced social inclusion of equity-seeking communities:

- Few police forces reflect the demographics of the community they police. [91]

- 61% of Indigenous respondents and 79% of Black respondents indicated that prioritizing the hiring of racialized police officers would be a good measure.[92]

- Few minority groups agree that police in schools make them feel safer, or address problems with bullying, drugs, weapons, and vandalism.[93]

- Indigenous peoples, other racialized people and women and are underrepresented in senior level and leadership positions within the justice and policing system, the result of systemic discrimination and a factor in its perpetuation.[94, 95]

- The Government of Canada has renewed its commitment to equity, justice, diversity and inclusion in its 2021 Speech from the Throne.[96]

Equity, Diversity, Inclusion

There is a growing awareness of the need to take deliberate action to be more equitable, diverse and inclusive (EDI) to address the complex, urgent, and evolving priorities related to anti-racism, gender equality, accessibility, equity and inclusion, and to balance respect for diverse identities with competing priorities, differing experiences within and across employee groups and communities.

- A lack of diversity can hamper recruitment efforts, while increasing EDI efforts may help increase employee retention.[97]

- Companies with pro-diversity policies are more resilient and profitable, as the diversity brings different viewpoints into decision making.[98]

- The first federal 2SLGBTQI+ Action Plan was launched to continue building a more inclusive future, with pride.[99]

Equity, Diversity, Inclusion

The most common predictors of barriers for the 4 Canadian designated groups are:

Barrier	Women	Visible Minorities	Persons with Disability	Indigenous Peoples
Lower earnings	✓	✓	✓	✓
Domestic and home care obligations	✓	✓	✓	✓
Under-representation in management and executive positions	Not Applicable	✓	✓	✓
Hiring and retention challenges	✓	✓	✓	✓
Limited career advancement	✓	✓	✓	✓
Social stigma	Not Applicable	✓	✓	✓

New statistics on policing personnel were reported by Statistics Canada in 2022:[100]

- The number of women police officers increased by 273 in 2022, but still only account for 23% of all police officers.

- "Women accounted for 69% of civilian employees, 36% of special constables, and 27% of recruits."

- 8% of police officers were racialized and only 4% were Indigenous.

Reconciliation

There has been limited progress towards reconciliation with Indigenous peoples:

- Only 14% of the Truth and Reconciliation Commission's Calls to Action have been completed as of December 2022. Another 27% are either not started or stalled.[101] The 2022 Status Update on Reconciliation estimates that at the current rate it will take "42 years, or until 2065, to complete all the calls to action".[102]

- Additionally, there is disagreement between the government, journalists, and various Indigenous groups on which and how many calls to action have been completed.

- The Canadian government stated that the Pope's apology doesn't fully address all the harms done to Indigenous peoples, namely sexual abuses, a view supported by many residential school survivors.[103]

- The work to locate unmarked graves at former residential school sites and inform families of their child's burial location (Call to Action 74) continues[104] but there are significant challenges. Many burial sites lack grave markers, are in areas where they cannot be protected from issues like development, or are on privately owned land where landowners do not want to grant access.[105]

- There are concerns that non-Indigenous Canadians don't understand or appreciate the importance of the National Day for Truth and Reconciliation.[106] There has been a concerning increase in Residential School denialism with both the National Post and the New York Post posting articles questioning the devastating impact of residential schools and giving a platform to denialists calling it a hoax.[107]

Calls to Action (C2A) Completed[108]

Organization	Number out of the 94 C2A Completed	Number of the 76 GoC C2A Completed
CBC	13	8
Yellowhead Institute	13	8
Indigenous Watchdog	11	7
Federal Government	17	17

Reconciliation

- Progress has also been slow on the 231 Calls for Justice. In January 2023, Crown-Indigenous Relations appointed a ministerial special representative to "provide advice and recommendation to create an Indigenous and human rights ombudsman". This would progress Call for Justice 1.7, which calls for the establishment of an ombudsperson and a tribunal.[109]

- There are concerns that police are not doing enough to search for the bodies of missing and presumed murdered Indigenous women.[110]

- First Nations, Inuit, and Metis people are disproportionally represented in the prison population, resulting in calls for Indigenous-run justice systems.[111]

- Racialized women, particularly Indigenous women, comprise the fastest growing prison population in Canada.[112]

"

Perhaps, though, the ongoing failure of Canada to keep its promises when it comes to the Calls to Action highlights the limits of "reconciliation" as a framework for meaningful and lasting change. And we have to wonder: should we just abandon 'reconciliation' altogether?"[113]

Dr. Eva Jewell, Deshkan Ziibiing Anishinaabekwe (Chippewas of the Thames First Nation)

Hate Crimes

Hate-based crimes are a rising concern globally:

- In Australia, a new inquiry will look into suspected hate crime deaths involving 2SLGBTQI+ people going back decades.[114]

- Europe is seeking to expand its definition of hate speech to increase the ability to address the increase in hate speech.[115]

- In the US, hate crimes have continued to rise with one data sample from 52 major cities showing a 30% increase in 2021.[116] The FBI reported 7,074 single-bias incidents involving 8,753 victims in 2021.[117]

- In Canada, hate crimes have increased by 72% between 2019 and 2021, particularly those targeting religion (+67%), sexual orientation (+64%), and race or ethnicity (+6%).[118, 119]

327 TGEU Trans Murder Monitoring (TMM)[120] — Global Numbers

trans and gender-diverse people have been reported murdered between October 2012 and September 2022

65%

of those whose race is reported were Black, Brown, or part of another racialised group

48%

of those whose occupation is reported were sex workers

95%

of those killed globally were trans women or femmes

36%

of those killed in Europe were migrants

36%

murdered in the streets

27%

murdered in their own residence

Human Rights

Human rights are under threat globally:

- Surveillance is prevalent in China, with the government using facial recognition and a national ID database to track people's movements around the city and limit their ability to protest.[121]

- Bahrain has jailed demonstrators and outlawed opposition parties from presenting candidates in elections.[122]

- Belarus is cracking down on media freedom, calling an independent news organization an "extremist formation".[123]

- Zimbabwe is cracking down on free expression and raising concerns that upcoming elections won't be credible, free, or fair.[124]

Despite strong protections granted by the Charter of Rights and Freedoms, Canada is not immune to rights abuses:

- Canada has been chastised for its practice of immigration detention, which has no time limit and also is frequently criticized as arbitrary and unnecessary.[125]

- Canada continues to use solitary confinement in prisons in violation of the Charter of Human Rights, and solitary confinement is disproportionately used on Black people, Indigenous peoples, and people with mental illness.[126]

- On April 28, 2022, the number of incarcerated Indigenous women reached 50% (298 Indigenous and 298 non-Indigenous women in federal custody) of the prison population. In addition, of the women in maximum security, nearly 65% of them are Indigenous.[127]

- Quebec's Bill C-21 religious symbols ban is being challenged in court. Opponents to the Bill claim that it violates a constitutional gender equality guarantee.[128]

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Gender Inequality

- In Canada, women perform over 60% of unpaid labour in the home.[135] Lack of access to child care disproportionately impacts women's participation in the workforce. As women are more likely to be the primary caregiver, they may also be more likely to work part time, or take parental or caregiving leave.

- The gender pay gap continues to be a significant issue in Canada and is worse for women who face additional barriers, including racialized women, Indigenous women, and women with disabilities.[136] As of 2022, Canada ranks 25 in the World Economic Forum's 2022 listing of 146 countries.[137]

- The Pink Tax, the practice of charging women more than men for the same products and services,[138] is a continuing issue in Canada. A 2021 study found that women pay 50% more on hygiene products than men, up from 43% in 2016.[139]

- CBC *Marketplace* found examples of the pink tax on drugs, hygiene products, children's clothing, and toys at several major stores in Canada.[140]

89 Cents

What women working full-time and part-time make for every dollar men make

59.3%

Percentage of white men's earnings that racialized women make, on average

16%

Percentage of women and gender diverse people with a physical disability who report being fairly paid compared to their peers

267.6 Years

To close the economic gender gap worldwide, if trends continue

Gender Inequality

Sexual and reproductive rights means being able to make your own decisions about your body; get accurate information about these issues; access sexual and reproductive health services including contraception; choose if, when and who to marry; decide if you want to have children and how many. It also means that society should be free from all forms of sexual violence, including sexual assault, female genital mutilation, forced pregnancy, forced abortion and forced sterilization.

Some countries are using the criminal law to restrict sexual and reproductive rights:

- The US removed a constitutional right to abortion, resulting in many states making abortion illegal.[141] Police are using digital breadcrumbs to find evidence to prosecute women for abortion.[142]

- Indonesia has passed a law banning extramarital sex, which applies to locals and foreigners living in the country as well as visiting tourists. The new law would also prevent unmarried couples from living together.[143]

- Scotland has passed a bill to make it easier for someone to legally change their gender, but the UK government may prevent the bill from receiving Royal Assent.[144]

- Spain has expanded abortion and transgender rights and introduced paid menstrual leave.[145]

- More than 3 million girls and women are at risk of female genital mutilation annually, mostly in western, eastern, and north-eastern regions of Africa, as well as some countries in the Middle East and Asia.[146]

In Canada, progress is being made but some challenges remain:

- British Columbia is making prescription contraception free to all residents starting in April 2023.[147]

- Despite abortion being legal, access to abortions is uneven, with most clinics being in large urban areas and only 1 in 6 hospitals offering services.[148]

- There continue to be barriers for transgender and gender diverse people in accessing appropriate health care[149] and legal services during and after transition.[150]

- Indigenous women have faced substantial barriers including forced and coerced sterilizations, lack of maternal health care in their communities, and child apprehension by the government.[151]

Irregular Migration

The world is seeing the largest number of "forcibly displaced people" with an estimated 103 million people.[152]

- The UK saw more than 40,000 migrants crossing the Channel in small boats in 2022.[153]

- Europe saw around 330,000 irregular border crossing in 2022, in addition to nearly 13 million Ukrainian refugees.[154]

- In the second-largest external-displacement crisis in the world, Venezuelans are migrating to other South American countries.[155]

- Causes of forced migration include invasion, conflict, war and gender-based violence, political situation, repressions and regime restrictions ecological devastation, poverty and hunger. 2SLGBTQI+ people face heighted vulnerability and persecution due to their sexual orientation which has also led to forced migration.

"

Gender influences reasons for migrating, who migrates and to where, how people migrate and the networks they use, opportunities and resources available at destinations, and relations with the country of origin. Risks, vulnerabilities and needs are also shaped in large part by one's gender, and often vary drastically for different groups. The roles, expectations, relationships and power dynamics associated with being a man, woman, boy or girl, and whether one identifies as lesbian, gay, bisexual, transgender and/or intersex (2SLGBTQI+), significantly affect all aspects of the migration process, and can also be affected in new ways by migration."

International Organization for Migration, UN Migration[156]

52%

originate from just three countries: Syrian Arab Republic, Ukraine and Afghanistan

38%

are hosted in five countries: Turkey, Islamic Republic, Colombia, Germany, Pakistan

36.5 Million

are children

Irregular Migration

- Canada has not had to share as much of the burden as other countries.[157] Despite this, services to support refugees and asylum seekers are overburdened.[158]

- The backlog of temporary residence applications has grown to nearly 1.3 million in the wake of a number of international emergencies.[159]

- Unaccompanied minors have arrived in Canada with little to no tracking of their ongoing welfare.[160]

- Canada and the US announced plans to expand the Safe Third Country Agreement across the entire land border, including internal waterways, and effectively closing a loophole which allowed migrants arriving in Canada from the US between official ports of entry to make asylum claims.[161, 162]

- While an agreement has been reached between Canada and the US regarding asylum seekers attempting to cross into Canada at Roxham Road, Quebec, migrants are still trying to enter Canada via this land crossing.[163]

Human Trafficking and Human Smuggling

Human trafficking, also referred to as trafficking in persons, involves the recruitment, transportation or harbouring of persons for the purpose of exploitation, generally for sexual exploitation or forced labour. It is a complex, far-reaching and highly-gendered crime, one which disproportionately affects women and girls. Human traffickers exploit human vulnerabilities created by poverty, sexism, racism, wage inequality, and a lack of education, social supports, and employment opportunities.

Human trafficking and smuggling are underreported and victims are often punished by the legal system:

- Advocates argue that victims of human trafficking who have been moved across a border should be protected from deportation.[164]

- Some groups are attempting to differentiate sex trafficking, which involves force or coercion, from voluntary sex work, claiming that combining the two results in inflated and misleading statistics and information.[165]

- A new forum was launched by community organizations and the RCMP to better understand trafficking of Inuit women and create mechanisms to stop it.[166]

- Indigenous victims of human trafficking often don't go to the police and the authorities are not always properly trained to understand the realities of exploited Indigenous women.[167]

- Several regions are creating roadmaps to local services to provide to victims and survivors of human trafficking.[168]

- Technology is providing traffickers with new approaches. At the same time, technology is being used to help prevent human trafficking.[169]

- While the number of police-reported incidents of human trafficking increases every year, the number of human trafficking related convictions remains relatively low.[170]

- Human smuggling operations prey on people's dreams[171] and are a problem globally.[172]

Outbreaks, Epidemics and Pandemics

There are concerns that another pandemic could be inevitable and would cause significant strain on the present public health system:[173]

- There is potential for a black market in engineered pathogens from synthetic DNA, which could cause catastrophic harm.[174]

- Starting in May 2022, an outbreak of Monkeypox spread to regions where it is not endemic, including Canada.[175]

- There are concerns that the global avian flu crisis could spread to humans and create another pandemic.[176]

- A drug resistant fungus called Candida auris, experienced a 200% increase from 2019 to 2021 and has spread across the US. It is of greatest concern to the elderly and those with weakened immune systems.[177]

The World Health Organization has also identified priority fungal pathogens to monitor.[178]

- As the permafrost melts in the Arctic, viruses that have been lying dormant for tens of thousands of years could endanger animal and human health.[179]

- Available treatment options are limited as new drugs take a long time to come to market, and antibiotic resistance to existing drugs is increasing.[180]

Health Care

The primary factors that shape the health of Canadians are not medical treatments or lifestyle choices but rather the living conditions they experience. These conditions are the social determinants of health and they disproportionately impact some communities and populations. Health is largely shaped by income distribution, working conditions, the health and social services we receive and the ability to obtain quality education, food, and housing among other factors.[181]

Canada's health care system is at a breaking point:

- Six million Canadians are without a family doctor and over a third of those people have been searching for a family doctor for over a year.[182] Younger people are disproportionately affected with 31% of people under the age of 35 saying they do not have a family doctor.[183]

- The Canadian Medical Association stated that the percentage of students entering into family medicine has fallen 7% between 2015 and 2021. With 2,400 family doctor positions posted in December 2021, there were only 1,400 graduates starting family practices that year.[184]

- Physicians are experiencing high levels of burnout and are considering reducing their clinical work[185], while nurses also report high levels of burnout.[186]

- Job vacancies in health care settings have increased dramatically, primarily in hospitals and residential care facilities.[187]

- Lack of staff have forced some hospitals to close units such as emergency rooms on temporary and periodic basis.[188]

- It is estimated that 600,000 fewer surgeries and treatments being performed since the beginning of the pandemic, creating a backlog for some types of surgeries that still exists.[189]

- Delays in offloading patients at hospitals are creating "Level 0" incidents, times when there are no ambulances available to respond to calls.[190]

> " We're facing the 'perfect storm' — we've been thrown a virus that is crippled our healthcare system and while we've managed to get ahold of it in many ways, what we have not [is] coming to grips with is the sheer attrition of nurses and healthcare team members."
>
> **David Carr, physician and professor of emergency medicine at University of Toronto**[191]

Mental Health

The pandemic revealed cracks in Canada's mental health care services:

- Levels of anxiety and depression are significantly higher than pre-pandemic, and one-fifth of Canadians have accessed mental health care support since the pandemic began.[192]

- The levels of eating disorders increased 60% compared to pre-pandemic levels, and hospitalizations for young women with eating disorders also increased by 60%.[193]

- Canadians trying to access mental health services face long wait times and limited affordable options.[194]

- Accessing culturally responsive care is difficult because of stigma, lack of awareness, affordability, and lack of same-culture therapists.[195]

Opioid Crisis

Drugs such as opioids continue to cause harm to Canadians:

- Drug poisoning deaths increased 91% during the first two years of the pandemic.[196]

- Young- to middle-aged males were most likely to be hospitalized or die from opioid-related overdoses.[197]

- Provinces across Canada are pursuing different approaches to handling addiction. In BC, they have passed legislation to pilot the decriminalization of small amounts of certain illicit drugs, while in Alberta the focus is on increasing access to treatment.[198]

Working Life

The pandemic shifted work patterns for many businesses, industries, and workers:

- Some companies instituted permanent remote work arrangements, while others are implementing hybrid work arrangements.[199]

- Some businesses are unhappy with remote work claiming it hinders collaboration and creativity and are calling employees back into the office.[200]

- Employees in hybrid or remote-work arrangements appreciate the flexibility and improved work-life balance, while employers save on real estate and are able to hire the best employees from across the globe.[201]

- Hybrid work arrangements reduce the number of people in commercial areas during the work week, particularly on Mondays and Fridays.[202]

- There is increased research into a four-day workweek, although not all businesses will benefit.[203]

- Trends known as the "great resignation" and "quiet quitting" have impacted the relationships between employers and employees. While both stem from issues with the workplace such as compensation and flexible work arrangements, quiet quitters — those who stay with the organization and no longer perform tasks that are over and above their core duties — may be an increased challenge to manage.[204, 205]

- "Quiet hiring" — internal talent mobility to better meet the organization's objectives — is on the rise.[206]

- Companies and workers alike enjoy the flexibility that contracting provides.[207]

Implications

As a result of the trends in the socio-cultural space, the RCMP activities may be impacted by the following:

1. Increased hate crimes and discrimination cases, as well as a potential increase in personal attacks such as libel and infringement.

2. Increased anxiety created from the differences between personal economic concerns and societal fears may lead to increased legal and illegal protest and civil unrest.

3. Increased reluctance to report crimes due to lack of trust and a lack of language skills from some communities.

4. Reduced demand for police presence in commercial areas as a result of hybrid work patterns.

5. Increased level of accountability to the public through improved reporting and clearer accounting of costs.

Implications

These socio-cultural trends may also impact how the RCMP delivers its services:

1. Increased health budgets may place additional strain on provincial and municipal budgets, possibly resulting in less money for policing. Alternatively, under-resourced health care (such as paramedics) may result in longer wait times at accident and crime scenes.

2. Under-resourced social services may increase calls for service in underserved communities, and will require increased collaboration with existing social services for social supports such as safe injection centres, resilience hubs, and warming centres.

3. New channels for service delivery, such as women-focused detachments that focus on gender-based crime, or foreign language terminals for immigrants who don't have strong English or French language skills.

4. Requirements to improve diversity to better match the communities being policed will require focused recruitment efforts in underrepresented communities.

Implications

The ongoing shifts in the socio-cultural realm may impact the types of resources the RCMP needs, the skills employees will need, and the RCMP governance and policy infrastructure:

1. Increased requirements for health and safety in front-line policing such as personal protective equipment and non-lethal options.

2. Under-resourced social services may result in an increased need for the RCMP to respond to mental distress calls, which will require training in de-escalation techniques, as well as skills in recognizing mental distress and working with community partners.

3. Better awareness of the scope, scale and sensitivities around human trafficking could help improve consistency of prosecutions.

4. Increased demand for countering misinformation and disinformation will require not only media-savvy but also public relations and research skills.

5. As Canada's demographics continue to shift there will be an increased need for foreign language skills.

6. Employees will also require significant training in recognizing bias and a willingness to change policies that perpetuate discrimination and racism.

7. The concern that the RCMP is not a supportive employer may result in new or updated policies to address systemic barriers such as backfilling for those on parental leave, family leave, schedule flexibility, social and housing supports, and improved access to child care.

8. Hybrid work will change real property requirements, IT infrastructure, and work policies.

9. Changes may be needed to posting policies to improve the work-life balance of officers and to keep officers working with the communities they represent.

06 Technology
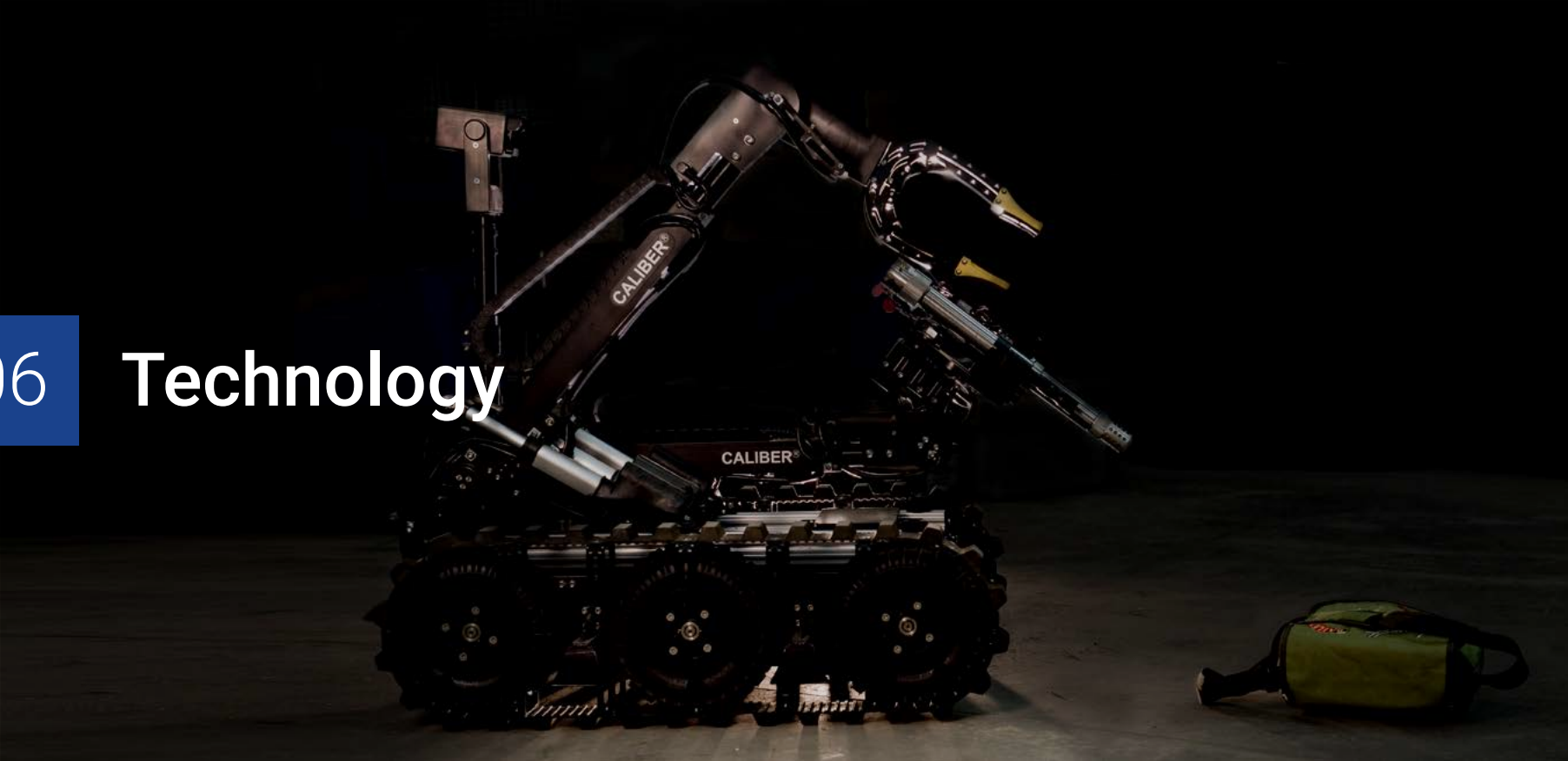
Overview

Digital technologies are transforming the way citizens interact with the world around them, with each other, and with the RCMP. Rapid advances in technology have led to significant changes in criminal behaviour and new types of crime. These changes require innovations in the approach to policing. The interconnected nature of communications and digital provides new avenues for criminals to exploit, while making policing and recovering the proceeds of crime more challenging.

Advances in technology such as the metaverse are full of promise, but a lack of standards and interoperability are limiting their adoption in the broader population. Additionally, a lack of skilled resources is an ongoing concern. Data management and digital literacy skills are now considered baseline skills and are in high demand. Privacy by design is set to become an international standard, yet data privacy concerns continue to be raised about the data collected by most new technology, including autonomous vehicles and smart homes, with many saying existing data protections are insufficient. There are concerns about the ethics of using data in artificial intelligence systems for fear of embedding bias. Cybersecurity continues to be an under-resourced field, both in money and people, while criminals are exploring new cyber avenues to exploit.

Digital technologies are electronic tools, devices, systems, and resources which generate, store or process data. Digital tools include social media, mobile phones, online games, and multimedia.[1]

Data Management

Data is the foundation upon which all digital services and approaches are built. Without proper data governance and good data quality, the effectiveness of digital services is reduced and trust may be lost.

The value of data also makes it attractive to criminal organizations and hostile foreign governments, making it a target of theft.

- The Organisation for Economic Co-operation and Development adopted the Recommendation on Enhancing Access to and Sharing of Data in 2021 to improve the sharing and use of data while protecting the rights of individuals.[2]

Data Management

- The European Commission proposed the *Interoperable Europe Act* in 2022 to promote cross-border interoperability, which includes the concept of regulatory sandboxes of personal data to balance data access with data protection.[3]

- In the US, a national network of "fusion centres" has been established to provide intelligence and threat-related information to partners including law enforcement, public safety, public health, and emergency response.[4]

- In Canada, standards are being developed for data governance, automated decision systems, digital trust and identity, connected cities, cyber security, artificial intelligence, and autonomous vehicles. Standards can be proposed by any party to the Digital Governance Standards Institute where, upon approval, proposals will be developed and published as a national standard.[5, 6]

- The Government of Canada has banned TikTok from government devices over data security concerns, following similar bans in the US and by the European Commission.[7]

"

Meaningful control of data – who can access it, how it can be used, and even the ability to correct or delete it — grants individuals and organizations real agency and increases trust and participation in the digital ecosystem."

The Honourable Colin Deacon Senator for Nova Scotia[8]

Privacy

"

Canada will not reap the benefits of the digital revolution unless citizens have confidence that their privacy is protected and their data is not being misused. Building this foundation of trust requires a policy framework that ensures high levels of data protection."

Business Council of Canada[9]

Products and services are not always designed with the protection of user and consumer data in mind, resulting in several common data privacy and protection issues including:

- Activity tracking using cookies or pixels installed on devices and websites to track what websites are visited and other metadata such as time, browser, and device.[10] These features focus on convenience over security of user data. The majority of users are not familiar with the practices and precautions that keep sensitive data organized, safe, and secure from theft.

- Location tracking using GPS, signal tracking or WiFi tracking on devices or in cars that indicate where individuals are going.[11] For example, there have been multiple instances of Apple AirTags being used to track people without their consent.[12]

- Policies that allow for data reselling through data brokers or other third parties, resulting in data on individuals being shared widely beyond its original destination and purpose.[13] Frequently, this is designed to harvest and sell information for profit.

- Allowing customers to see the data of other customers.[14]

Privacy

These common issues can result in a number of opportunities to exploit data, such as identity theft, social engineering, corporate espionage, and cyberattacks. As a result, there are increasing numbers of calls for greater transparency about data.

- The European Union is proposing new regulations on the use of artificial intelligence, in part prohibiting the use of facial recognition and other biometrics. However, the European Union is also implementing a new Entry/Exit System for non-European Union nationals that will collect biometrics and has ignored the potential abuses and limitations it imposes on human rights in its impact assessment.[15]

- Privacy commissioners in Canada have released guidance for police agencies in the use of facial recognition following public concerns related to the RCMP's use of this technology and the risks to privacy.[16]

- Legislators and national security advisors are raising concerns about the data governance of autonomous vehicles built by China, and the potential that the vehicles will be used to spy on sensitive areas such as military facilities.[17]

- Reed Elsevier LexisNexis and Thomson Reuters are just two examples of data brokers with large footprints in society. Some governments and public safety organizations are relying on information provided by data brokers to make policy decisions, and the people impacted have little recourse.[18]

- Retailers are regularly sharing purchase information with third parties such as Facebook without the customer's consent.[19]

- Increasingly, data is being acquired through mergers and acquisitions that results in an even greater collection and use of data (for example, Rogers/Shaw and Amazon/iRobot). Privacy advocated have expressed concerns about the amount of personal data collected and how it could be used.[20]

- Online platforms and games are under notice after Epic Games was fined $275 million for failing to protect the privacy of teenagers in its games[21] and TikTok is under investigation.[22]

- The International Organization for Standardization is adopting Privacy by Design as a standard in 2023. Known as ISO 31700, it will include 30 requirements and guidance on establishing privacy controls, conducting privacy risks assessments, and more.[23]

Digital Literacy

Digital transformation of all sectors is happening globally, driving a need for workers with digital skills. Digital skills can be defined as a range of abilities to use digital devices, communication applications, and networks to access and manage information. However, the digital divide — "the gap between those who have access to technology, the internet, and digital literacy training and those who do not "– is disproportionately preventing a portion of the population from obtaining those skills and fully participating.

- The most in-demand technical skills are in advanced digital capabilities, including data analysis, cybersecurity, and cloud computing.[25]

- According to one 2022 survey, 70% of respondents do not feel ready to operate in a digital-first world, but only 14% are involved in digital skills learning and training.[26]

- Two in five (40%) Canadian businesses are experiencing difficulty recruiting and retaining skilled employees in 2022, with 60% of those businesses finding that it is more challenging now than it was a year ago.[27]

- Upskilling the current workforce could unlock a boost to global GDP of $5 trillion by 2030,[28] but Canada lacks an approach for lifelong learning where common barriers preventing participation in training include being too busy at work, family responsibilities, and cost of training.[29]

- Digital inequality is increasing along with the pace of technological advancement, with the pandemic widening that gap. Among those affected are: school children who do not have access to the internet at home but are assigned work requiring access; workers without digital skills, access to the internet, or technology; residents who cannot access the increasing number of government and medical services offered online.[30]

Open Government

Open government promotes transparency, integrity, accountability, and stakeholder participation.

- Canada has been a member of the Open Government Partnership since 2011 and released a new action plan with five new commitments to increase open government.[32]

- Canada compares well to other OECD nations on a number of dimensions of civic space, [33] including civic freedoms, media freedoms, and access to information.

- A number of provinces (including Alberta[34] and British Columbia[35]) and cities (including Edmonton[36] and Guelph[37]) also make their data available.

The dimensions of civic space[31]

* CSO stands for Civil Society Organization

Civic Freedoms
- Access to information
- Freedom of association assembly and expression
- Activist, whistleblower protection

Citizen/CSO* Participation
- Institutionalized mechanisms
- Citizen-led initiatives
- Funding
- Innovations
- Inclusion of marginalized groups

Civic Space

Protection promotion

Policies, laws, institutions and practices

Media & Digital Rights & Freedoms
- Independent media
- Free and open internet
- Privacy (online/offline)
- Data protection
- Emerging technology respecting civil liberties

CSO*-Enabling Environment
- Funding and access to income
- Tax incentives
- Capacity development
- Law administrative burden

Cybersecurity

People and businesses are increasingly turning to online platforms to transact and to maintain relationships. Protecting those transactions from cybercrime is becoming an increasingly important for public safety:

- Technology offers consumers convenience but can also come with significant cybersecurity risks that are often overlooked by both consumers and developers. Internet of Things devices (such as Google Home, Amazon Echo, doorbell cameras, and smart thermostats) are vulnerable to cyberattacks and could allow varying levels of access to personal data, connected networks, and the home.[38, 39]

- According to one survey, cybersecurity was the number one factor adversely impacting the ability of organizations to meet their goals.[40]

- In the US, there are new proposals to require technology companies to offer products that are "secure by design" and "secure by default", with companies being held liable if their products prove to be insecure.[41]

- Few companies have a mature zero-trust program, one which verifies each request as though it originates from an open network,[42] despite significant interest and investment. By 2026, it is expected that zero-trust measures will only block half of all cyber attacks.[43]

- The findings from the 2022 Canadian Internet Registration Authority Cybersecurity Survey found that 22% of organizations in Canada reported being the victim of a successful ransomware attack, up from 17% in 2021. This included the private sector, municipalities, universities, schoolboards, and hospitals.[44]

- Canadian businesses that were impacted by a cybersecurity incident spent a total of $600 million to recover in 2021, an increase of around $200 million from the 2019 total. In addition, business that were impacted spent more on preventing and detecting incidents and were more likely to employ cyber security employees.[45]

Cybersecurity

Common IoT(Internet of Things) Device Vulnerabilities to Watch Out for[39]

Insecure Components

Outdated components or components that contain vulnerabilities

Unnecessary Open Ports

Unused open ports in some devices can allow hackers to exploit vulnerable services

Insufficient Logging Mechanisms

Lack of logging mechanism in devices makes it easier to hide malicious activities

Inadequate Privacy Protection and Encryption

Poor data management capabilities and lack of encryption on shared data

Lack of Automatic Patch Management

Devices lack automated patch mechanism and integrity checks that can prevent malicious modification on patches

Hardcoded Passwords

Passwords cannot be changed

Digital Identity

Digital identity is a set of electronically captured and stored attributes and credentials that uniquely identify an individual.[46] Digital identity can provide a cost-effective means to establishing identity during the delivery of digital services.

- While many countries have implemented digital identity, adoption remains low in most countries[47] as people express privacy concerns with how identity data will be used.[48, 49]

- Many digital identity implementations have used centralized models or federated models, which gives service providers control of the data. A new model known as self-sovereign identity is gaining traction. This model gives users control of their identity data through use of blockchain technology.[50]

- Within Canada, most provinces and territories have either launched or are investigating digital identity products and services.[51] Additionally, Canada has joined the Digital Identity Working Group, made up of digital identity specialists from eight Digital Government Exchange member states across the world, to develop mutually recognized and interoperable digital identity systems.[52]

- Canada announced in 2022 that it would begin work on creating a unified digital identity program that would be implemented at the national level and integrate with the pre-existing provincial/territorial platforms. This would replace the siloed and distinct processes to manage user permissions, access, and data with one digital identity used to access Canadian services.[53]

- Any cyber security compromise of a unified digital identity would have significant impacts on the population and businesses.[54] Canada has been considering this in the development of its program and plan to utilize "an information-centric security model that is supported by a trusted digital identity."

Crypto / Blockchain

The instability and related uncertainty surrounding cryptocurrency use and their associated markets has resulted in turmoil recently, with exchanges filing for bankruptcy[55] or being investigated for money laundering,[56] and with the environmental impacts of crypto mining, where cryptocurrency transactions are verified and added to a ledger.[57] Despite these concerns and volatility in prices, cryptocurrencies will persist:

- Digital currencies (such as central bank digital currencies) are being investigated globally, with several countries having already implemented them as alternatives to cash.[58]

- Blockchain and cryptocurrency are considered vital to the continued development of the metaverse, with crypto as the currency of the virtual world, and blockchain potentially facilitating the interoperability of metaverse platforms.[59]

"

The blockchain is an incorruptible digital ledger of economic transactions that can be programmed to record not just financial transactions but virtually everything of value."
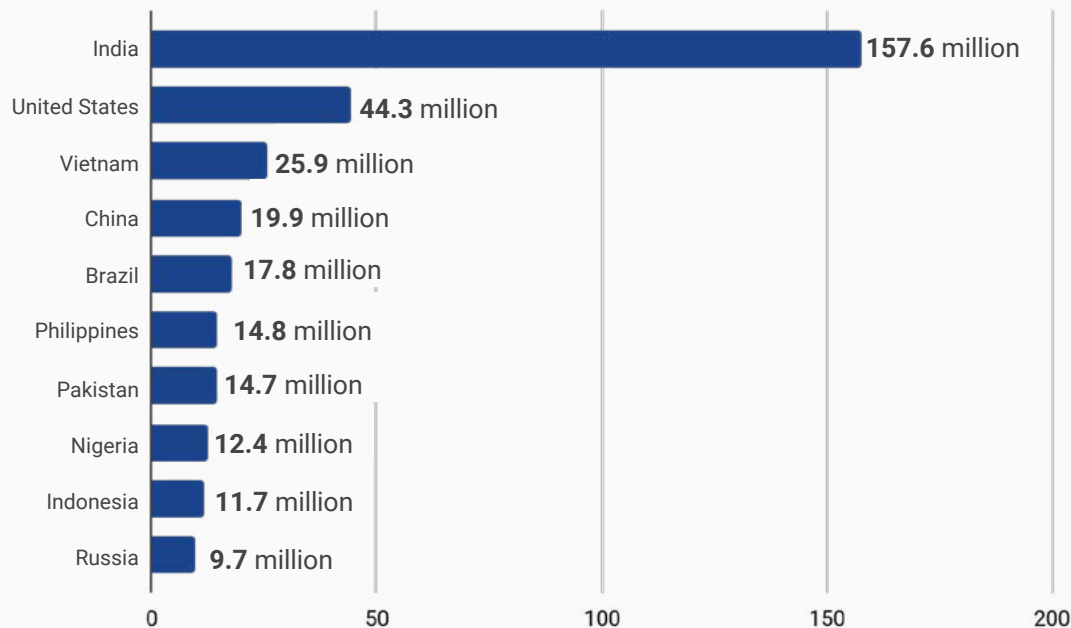
**Don & Alex Tapscott,
authors Blockchain Revolution (2016)**[60]

Crypto / Blockchain

- The number of cryptocurrency transactions continues to increase, as does the number of users,[61] with 420 million global crypto users as of 2023 and around 200,000 Bitcoin transactions daily as of November 2022. Of these users, men are twice as likely to invest in cryptocurrency with 16% men investing compared to 7% of women.[62]

- The number of companies that accept cryptocurrencies, such as Bitcoin, for payments are increasing.[63]

- Some countries, such as El Salvador,[64] are using cryptocurrencies as a means to generate investment and reduce the number of "unbanked" people.

Number of Crypto Owners by Country 2023

Country	Millions
India	157.6 million
United States	44.3 million
Vietnam	25.9 million
China	19.9 million
Brazil	17.8 million
Philippines	14.8 million
Pakistan	14.7 million
Nigeria	12.4 million
Indonesia	11.7 million
Russia	9.7 million

Digital Twin

A digital twin is a digital representation of a physical object, process, service, or environment. When used in combination with real world and real-time data, the twin behaves and resembles its real-world counterpart, creating simulations to predict how something will perform when changes occur.[65]

- The benefits of things like a manufacturing twin include reduced time to market, improved product quality, and reduced waste.[66]

- Applications of digital twins include: improving treatment of patients in health care by creating replicas to simulate human organs and cells; improving employee safety in manufacturing and infrastructure maintenance; improving safety and navigation for autonomous vehicles;[67] and providing greater access to public services.[68]

- Digital twins also have the potential to provide greater opportunities to people with mobility issues through physical avatars. The DAWN café in Tokyo utilizes robot waiters that are remotely controlled by workers from their homes and hospitals. The waiter, through their system, can see and communicate with customers, and control their robot to wait tables.[69, 70]

- According to one survey, 70% of senior technology executives are exploring and investing in digital twins.[71]

- Challenges which limit implementation of digital twins include: a lack of the right computing skills; data integration with suppliers and/or clients; and, cybersecurity.[72]
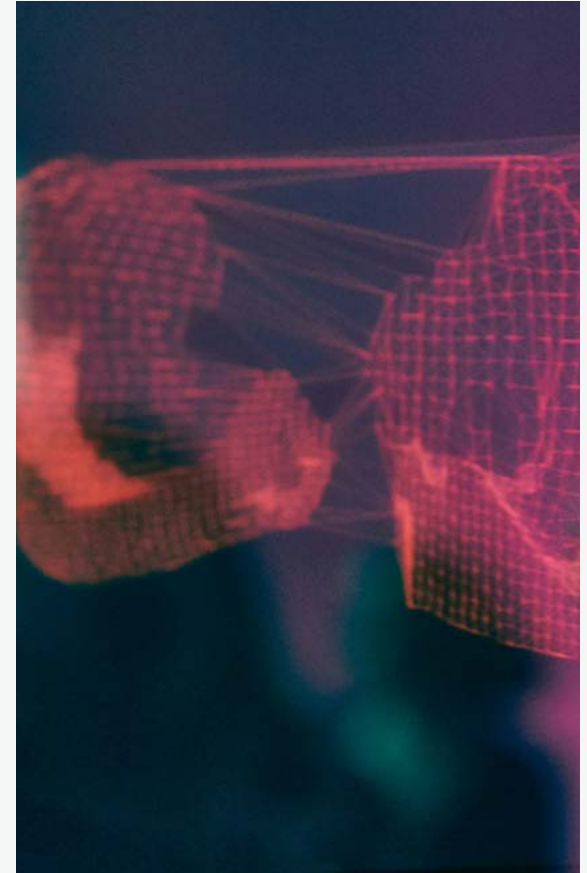
Metaverse

The term Metaverse is used to describe a combination of virtual reality and mixed reality worlds accessed using a browser or headset.[73] The Metaverse currently has over 400 million monthly users worldwide. Fifty-one percent of the users of metaverse virtual worlds are aged 13 or under, 83.5% are under 18.[74] Despite all the hype and investment, significant hurdles to achieving the creators' vision of the metaverse remain:

- Instead of a single shared virtual space, the current metaverse is actually a multiverse with limited interoperability between universes.[75]

- There are significant security and privacy concerns including data rights and ownership, user-to-user privacy, extensive data collection.[76]

- Incidents of harassment, assault, and exploitation of minors have already occurred in the metaverse, raising the questions "whose responsibility is it to make sure users are comfortable?"[77]

- How people will interact with the metaverse is subject to both technological and accessibility limitations.[78] Many currently interact with the metaverse through smartphones or computers, but to create the immersive experience being sold by developers, a headset for virtual or augmented reality is required.[79]

The term metaverse is frequently used to refer to many different types of enhanced online and immersive environments.[80]

- It is estimated that more than $120 billion was invested in developing the metaverse space in 2022, and that the value of the metaverse could reach $5 trillion by 2030.[81]

- Current metaverse worlds include Decentraland and Sandbox where virtual land is sold to businesses and virtual buildings, and worlds where people can hang out and attend concerts such as Fortnite.[82]

- The Metaverse Standards Forum[83] was founded to develop open standards that will allow online universes to connect and create the metaverse.[84]

Augmented Reality

Augmented reality (AR) enhances a user's experience by overlaying visual, auditory or other sensory information onto the real world, using smartphones, tablets or wearables such as glasses.

- Augmented reality has applications in a variety of industries — including manufacturing, healthcare, and retail — for purposes such as training, performance tracking, and collaboration.[85]

- The US Army has a project to implement augmented reality as a situational awareness tool to improve decision making and target engagement.[86]

- The potential benefits for policing are many including: increased real-time data for front-line police officers; increased situational awareness; real-time access to intelligence and data;[87] and improved scenario training.

- Further development of the technology is required before law enforcement applications become a reality. Reducing the weight and size of AR devices, improved outdoor tracking and reporting, more user-friendly input, and seamless integration of sensors are among the areas requiring development.[88]

- According to the Forrester's Consumer Benchmark Survey 2022, while Canadians may be aware of extended reality options, only 25% use them and even fewer are comfortable using them.[89]

Web 3.0

Interest has been increasing in Web 3.0, which is billed as the "Read-Write-Own" version of the web (in contrast to Web 1.0 "Read-only" and Web 2.0 "Read-Write").[90] This version is based on decentralization, privacy, and anonymity, with the intent to give control of the internet and personal data to the users rather than big corporations.[91] At its core, Web 3.0 intends to incorporate decentralization, token-based economies and blockchain.

Some of the emerging implementations of Web 3.0 include:

- Decentralized Finance, a method of peer-to-peer financial systems that use blockchain concepts to remove the need for banks and payment processors.

- Non-Fungible Tokens which are digital assets managed through blockchain. While mostly used for art, other potential uses include verifying intellectual property and authenticating documents.

- Decentralized Autonomous Organizations that provide a democratized management system for businesses and communities based on a blockchain.[92]

Despite the increase in interest, there have been many criticisms of Web 3.0 including that it is not as decentralized as depicted, that the technology is not as developed, and adoption is much less than developers would have people believe.[93] Additionally, a number of scams and Ponzi schemes are circulating, partly due to the current lack of consumer protection.[94]
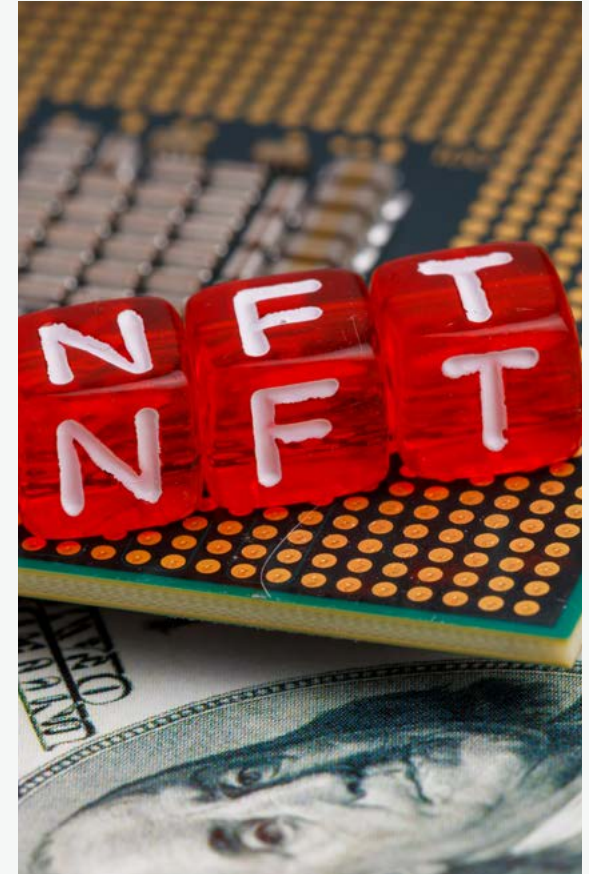
Quantum Computing

Quantum computing uses quantum theory in its operations and is thought to have the potential to solve complex problems faster than current computers.

- Recognizing its potential, Canada has released a national Quantum Strategy with the goal of making Canada a world leader in quantum computing.[95]

- Since quantum computing will break existing encryption methods, new quantum-resistant cryptographic algorithms were announced to protect data.[96] There are fears that sensitive data could be harvested now to be decrypted later once quantum computing becomes viable.[97]

- Current quantum computers are limited. Due to the unstable nature of qubits (the basic unit of information in a quantum computer)[98], they must be kept in super-cooled environments and therefore are very expensive. People with the skills to work with quantum computers are also in short supply.[99]
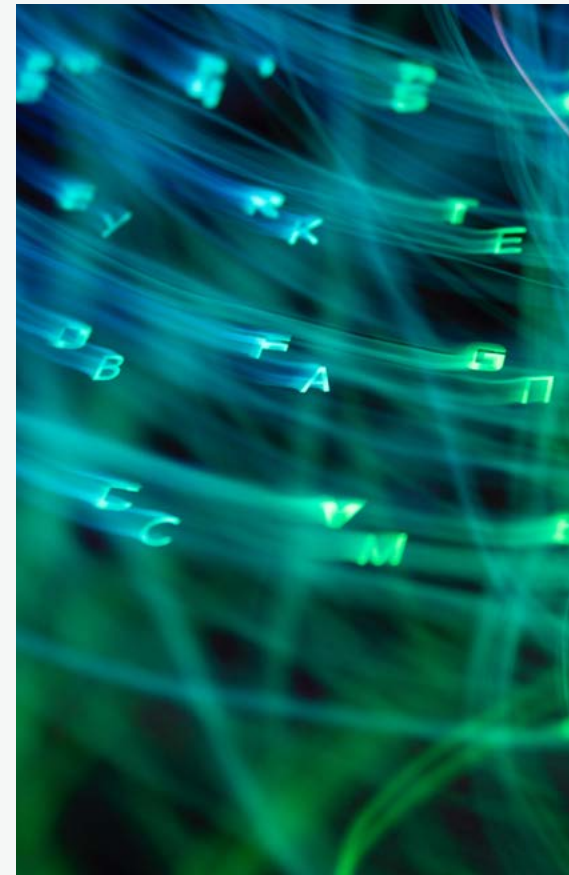
Quantum Effort Worldwide[100]

North America

US National Quantum Initiative	$1.2b
Canada	**$1.1b (CA$1.37b)**

Australia

Australia	$98.5m (AU$130m)
New Zealand	$36.75m

Europe

Germany	$3.1 b (2.6b €)
France	$2.2 b (1.8b €)
United Kingdom	$1.3b (£1b)
European Quantum Flagship	$1.1b (1b €)
Netherlands	$904m (765m €)
Russia	$663m (₽50b)
Sweden	$160m (SEK1.6 b)
Austria	$127m (107m €)
Denmark	$34m (DKK230)
Spain	$67m (60m €)
Finland	$27m (24m €)
Hungary	$11m (HUF3.5b)

Asia

China	$15b
India	$1b (₹73b)
Taiwan	$282m (NT$8b)
Japan	$700m (¥80b)
Israel	$380m (1.2₪ b)
Singapore	$109m (S$150m)
South Korea	$40m (₩44.5b)
Thailand	$6m (฿200m)
Qatar	$10m

Global effort 2022: $30b (estimate)

Additive Manufacturing

Additive manufacturing, often called 3D printing, is the process of creating an object by building it one layer at a time.

- The number of "ghost guns", guns that are unserialized and untraceable that can be bought and assembled at home[101], made by 3D printing is increasing according to a number of Canadian police services.[102]

- Researchers have identified a way to use sound waves to trigger printing, opening the possibility for printing in hard-to-reach places such as printing medical devices under the skin of a patient or a replacement part inside an engine.[103]

- According to one study, 72% of respondents already used 3D printing in manufacturing, either internally or outsourced.[104]

Artificial Intelligence

Artificial intelligence (AI) systems and tools are exploding in capability, popularity, and use, but concerns over the lack of transparency in their algorithms and how they are trained remain:

- AI systems are often programmed/trained with datasets that lack quality control and can be faulty or biased.[105]

- A number of police organizations in the US have stopped using predictive policing programs over concerns of bias and claims of ineffectiveness.[106]

- ChatGPT mimics human responses to submitted questions, but can also be used to generate malicious code, highlighting the need to better understand less innocuous uses.[107]

- AI used in hiring processes fail to reduce bias and improve diversity as intended.

Tested AI systems could not be trained to remove gender and race from the hiring process and were likely to miss quality candidates due to incomplete or inaccurate data.[108]

- NewsGPT, a news site that reports entirely AI-generated news, claims to be completely bias-free due to its lack of human reporters. However, there are also no human fact-checkers and no mention of where facts and figures have originated.[109] American media website CNET, has been experimenting with AI-generated articles since November 2022 with editorial staff reviewing and fact-checking the articles produced. However, they have had to issue corrections.[110]

- AI is being used to generate images, avatars, and music based on style and text prompts, but many artists claim their work was used to train the AI without their permission.[111]

Despite these issues, AI continues to prove beneficial in multiple areas.

- AI is predicted to achieve an ability to translate natural language text on par with humans by 2030, according to one group.[112]

- Using AI for daily processes and analysis saves businesses, governments, and individuals time and money. AI is used to send auto-reply emails, analyse trends, provide customer service support, conduct contact tracing, and track patient vitals.[113]

Autonomous Vehicles

Autonomous vehicles are able to operate independently without human intervention and include driverless cars and drones.

- First responders are using drones for situational awareness,[114] but also to deliver care such as cardiac defibrillators.[115]

- Scientists are using drones to perform research[116] and monitor changes in the environment.[117]

- Drones are being used to smuggle contraband, such as cellphones into prisons,[118] as well as for smuggling drugs and people, such as the victims of sex trafficking, across borders.[119]

- Drone use in modern warfare is increasing due to the variety of their uses, capabilities, and ease of deployment.[120] Concerns also persist as to the ethics of impersonal remote warfare.

The technology for autonomous cars exists, but safety concerns remain. Uneven application of regulations is viewed as a barrier to adoption with many locations placing limitations on where autonomous vehicles can operate.[121]

- Two companies were granted licences to test fully autonomous driverless vehicles in Beijing. Meanwhile over a million driverless taxi rides were provided in Wuhan and Chongqing.[122]

- In Japan, the government has a target of launching level-4 autonomous transit services in 40 areas by 2025, with the first pilot expected to start in April 2023. Autonomous vehicles are categorized between levels 1 and 5, with level-4 being those vehicles that are fully capable of "driving without human intervention on a designated route". [123]

- Robotaxi services are being offered by fully driverless vehicles in some cities in the US, such as San Francisco and Phoenix.[124]

Robotics

Robots continue to increase in sophistication and in their application:

- After initially approving the use of robots for deadly force by arming them with explosives that resulted in protests, San Francisco has put a temporary ban in place while the issue is studied further.[125]

- Robots are being used in medical care, including surgeries[126] and complex patient care.[127]

- Robots are being used to deliver food to customers, but there are concerns that they are a hazard for people with mobility or vision issues, seniors, and children on sidewalks, but also with the idea that they can carry other items such as explosives. This has led to them being banned in some cities.[128]

- Research continues into the creation of robots that are aware of and reactive to their environments, rather than just pre-programmed.[129]

- It has been suggested that robots could be used to issue speeding tickets, perform other traffic stop duties, detect criminals, and prevent fraud. To date, they have been utilized by law enforcement to defuse or safely detonate explosives, conduct surveillance, and patrol.[130]

- Robot process automation may have peaked, with organizations choosing other methods to increase automation.[131]

Other Science and Technology Advances

- The adoption of smart home devices is increasing, with 15% of households across the world predicted to have a smart home device installed by 2023.[132] However, they come at a cost to privacy.[133] The makers of smart speakers and smart home assistants such as Siri and Alexa are also struggling to monetize their services.[134]

- The 5G market is expected to be valued at US$19.3 billion in 2023 and is expected to continue to grow quickly through the 2020s.[135]

- Omnichannel customer service enables customers to connect over their preferred channels and move conversations seamlessly from one channel to another.[136] Customers want and expect to access services through social media, text, phone, and email.[137]

- Investigative genetic genealogy using publicly available family tree websites is making solving cold cases increasingly possible[138] There are, however, privacy concerns with this type of application. Use of this resource by the RCMP is currently under review and policy under development.[139]

- Wastewater surveillance is being considered for continued investment based on its success as a public health tool for COVID-19 monitoring.[140, 141]

- After demonstrating success against the pandemic, researchers are investigating using mRNA vaccines for other diseases including cancer.[142]

- Cultivated meat[143] and other fermentation-derived meat have the potential to reduce food insecurity.[144]

- The International System of Units has added new prefixes to describe very small and very large numbers at the request of data scientists and physicists who were struggling to describe items such as data storage with existing prefixes.[145]

Implications

As a result of the trends in the technology space, the RCMP may see the following changes to front-line service and program delivery, and sustained pressure for digital modernization organization-wide:

1. Increased volume of cybercrimes including ransomware, cyberbullying, data theft, and the hacking of devices, which will likely include smart home devices, farm equipment, and cars.

2. Increased volume of digitally-enabled versions of crimes like stalking, harassment, technology-facilitated gender-based violence, online child sexual exploitation, and child luring that take place online in the metaverse and in games. The Canadian Centre for Child Protection recently reported an 815% increase of online sexual luring of Canadian children in five years.[146] These kinds of virtual experiences pose serious questions about the applicability of current legislation, with it being focused on the physical. Additionally, increased difficulty in detecting digitally-enabled crimes.[147]

3. Interface devices (virtual and augmented reality) could prove vulnerable to hacking.

4. Digital identity will become increasingly important in the metaverse and will be an enticing target for identity theft.

5. Increased need for fraud investigators specialized in cryptocurrency and blockchain, as money laundering and financial fraud will increasingly move into the digital world.

6. Increased engagement with national and international partners over jurisdiction of digitally-enabled crimes where the victim and the perpetrator are in different jurisdictions.

7. Increased volume of 3D printed materials, such as "ghost guns", used in crime.

8. Increased difficulty establishing culpability and charging individuals when a driverless vehicle or drone is used to commit the crime, like smuggling across borders.

9. Increased requirements for parallel digital and analog service delivery channels. For example, the RCMP may need to accept digital ID from early adopters while still accepting traditional ID for others.

Implications

The RCMP can leverage technology to enhance service delivery:

1. RCMP data governance and digital strategy, including administrative and operational policy suites, will help ensure the effectiveness and efficiency of the organization's services to Canadians.

2. The RCMP will need to leverage new technology more quickly to keep current systems at the forefront. Systems such as CPIC, PROS and others are outdated and a more rapid evolution of existing systems will be needed to prevent the stagnation of features and capabilities.

3. AI may be used to automate some processes, but algorithmic assessments must be completed, and the results documented, to mitigate potential data bias. Some uses of AI by other police organizations have failed based on bias in the training data.

4. Adoption of many digital technologies requires robust data management practices including improved data integration and interoperability, improved data storage and data pipelines, expanded metadata management, and the appropriate application of data security processes and controls.

5. Open data and the general increase in availability of information in the digital space make it possible to collect more and better intelligence for investigations and prediction of threats. However, the open data must be used ethically to mitigate public concerns about surveillance, profiling, and violations of privacy.

6. Digital twins can be used to model energy usage in vehicles and buildings to prepare for electric fleet vehicles and the electrification of detachments and to simulate new patrol routes to optimize the range of electric vehicles.

Implications

The RCMP can leverage technology to enhance service delivery (continued):

7. The expectations of omnichannel service delivery require a greater focus on data management throughout its lifecycle. In particular, clear data architectures, well-defined data collection to enable high quality data, improved data integration and interoperability, and the resources to support these activities will continue to be important across the RCMP and with partners.

8. Drones and augmented reality can be used to improve situational awareness in operational situations.

9. Virtual reality and augmented reality can be used to improve and increase efficiencies in training.

10. The metaverse can be used to increase collaboration internally and with partners, and provide enhanced training environments.

11. Open data may improve intelligence on threats, but it comes with the expectation that the RCMP will in turn provide greater transparency of its operations by publishing more data to the open data portal. The RCMP has a "duty to protect" some data, but not all data poses a risk if published. There are implications to public trust and confidence in policing activities if open data sharing is not performed properly.

12. The increased bandwidth provided by the adoption of 5G technology has the potential to improve communications in remote areas.

13. The potential impacts to security posed by quantum computing will require updating encryption protocols on internal systems, communications, and data.

Implications

The transition to digital technologies may impact the types of resources the RCMP needs to deliver effective policing, as well as the skills those resources need:

1. All RCMP employees will need some degree of digital skills in areas such as data analysis, the use of cloud-based tools, navigating digital environments, and cybersecurity. Also, all employees will need increase data management skills particularly in data governance, data quality, and privacy.

2. The RCMP will require a robust framework to consider new technologies from privacy, ethical and Gender-based Analysis Plus perspectives in order to prevent unintended impacts on key groups.

3. Cyber investigations will require a different set of skills compared to traditional front-line policing, which may require hiring civilian investigators.[148] The RCMP have already begun recruiting civilian investigators for financial and cybercrime investigations and it is important that this continues. Diversity will be key in this area to obtain the skills and numbers required.

4. The RCMP may consider increasing and expanding its civilian awareness campaigns in order to facilitate cyber resilience among the Canadian population.

5. RCMP could consider semi-autonomous technology in police vehicles. Police officers are frequently distracted by routine tasks while driving, and automating some of the routine vehicle functions, as well as warnings, could enhance officer safety.

6. While investing in technology improvement and digital transformation to provide services that meet the expectations of people who live in Canada, RCMP will need to consider implications for those who are not yet connected, such as the elderly, persons with disabilities, and residents of economically disadvantaged or remote areas.[149]

07 **Legal**

Overview

Existing legal frameworks do not always meet the emerging requirements of digital economies, where trade in data continues to grow.[1] Governments are playing catch-up with new legislation, but may be trying to replicate what worked in the past rather than the new digital world.

There is a renewed focus on increased accountability and transparency in policing and public service. There are new calls for increased personal safety through firearms regulation, new identification requirements, and new restrictions on interim release orders. Human rights legislation is also a priority for Canadians, with medical assistance in dying, human trafficking, and organ trafficking all being highlighted.

Canada is also trying to catch up to the digital reality, with new rules about content, cyber security, and the use of artificial intelligence, as well as new protections for consumer and personal information privacy.

Crime is increasingly happening in the cyber realm, where traditional jurisdictions and boundaries do not exist.

For the RCMP, key focus areas will include: collaborating with national and international partners to develop solutions to jurisdictional issues relating to transnational crime; increasing training in data privacy and data ethics; and increasing transparency.

Proposed Amendments to the *Criminal Code*

The following legislative bills that include amendments to the Criminal Code have been proposed in Canada at the federal level:[2]

- C-20: *An Act establishing the Public Complaints and Review Commission and amending certain Acts and statutory instruments.*

- C-21: *An Act to amend certain Acts and to make certain consequential amendments (firearms).*

- C-23: *Historic Places of Canada Act.*

- C-26: *An Act respecting cyber security, amending the Telecommunications Act and making consequential amendments to other Acts.*

- C-33: *Strengthening the Port System and Railway Safety in Canada Act.*

- C-40: *Miscarriage of Justice Review Commission Act (David and Joyce Milgaard's Law).*

- C-233: *An Act to amend the Criminal Code and the Judges Act (violence against an intimate partner).*

- C-289: *An Act to amend the Criminal Code (identity verification).*

- C-291: *An Act to amend the Criminal Code and to make consequential amendments to other Acts (child sexual abuse and exploitation material).*

- C-295: *An Act to amend the Criminal Code (neglect of vulnerable adults).*

- S-7: *An Act to amend the Customs Act and the Preclearance Act, 2016.*

- S-11: *Federal Law — Civil Law Harmonization Act, No. 4.*

- S-205: *An Act to amend the Criminal Code and to make consequential amendments to another Act (interim release and domestic violence recognizance orders).*

- S-210: *Protecting Young Persons from Exposure to Pornography Act.*

- S-212: *An Act to amend the Criminal Records Act, to make consequential amendments to other Acts and to repeal a regulation.*

- S-213: *An Act to amend the Criminal Code (independence of the judiciary).*

- S-224: *An Act to amend the Criminal Code (trafficking in persons).*

Proposed Amendments to the *Criminal Code*

- S-231: *Increasing the Identification of Criminals Through the Use of DNA Act.*

- S-232: *Health-Centred Approach to Substance Use Act.*

- S-237: *Foreign Influence Registry and Accountability Act.*

- S-238: *An Act to amend the Criminal Code and the Canadian Victims Bill of Rights (information about the victim).*

- S-239: *An Act to amend the Criminal Code (criminal interest rate).*

- S-241: *Jane Goodall Act.*

- S-243: *Enacting Climate Commitments Act.*

- S-248: *An Act to amend the Criminal Code (medical assistance in dying).*

- S-250: *An Act to amend the Criminal Code (sterilization procedures).*

- S-251: *An Act to repeal section 43 of the Criminal Code (Truth and Reconciliation Commission of Canada's call to action number 6).*

- S-256: *Canadian Postal Safety Act.*

The following have recently received Royal Assent:

- C-39: *An Act to amend An Act to amend the Criminal Code (medical assistance in dying).*

- S-4: *An Act to amend the Criminal Code and the Identification of Criminals Act and to make related amendments to other Acts (COVID-19 response and other measures).*

- S-223: *An Act to amend the Criminal Code and the Immigration and Refugee Protection Act (trafficking in human organs).*

Data and Digital

The following legislative bills about data and digital have been proposed in Canada at the federal level[3]:

- C-11: *An Act to amend the Broadcasting Act and to make related and consequential amendments to other Acts,* with the goal to include online streaming as a type of broadcast.

- C-18: *An Act respecting online communications platforms that make news content available to persons in Canada,* with the goal of increasing the fairness of the digital news marketplace and increasing sustainability of Canadian news outlets.

- C-26: *An Act respecting cyber security, amending the Telecommunications Act and making consequential amendments to other Acts,* with the goal of protecting cyber systems and services that are vital to national security or public safety.

- C-27: *An Act to enact the Consumer Privacy Protection Act, the Personal Information and Data Protection Tribunal Act and the Artificial Intelligence and Data Act and to make consequential and related amendments to other Acts,* with the goal of protecting consumer rights while enabling trade in artificial intelligence.

- C-244: *An Act to amend the Copyright Act (diagnosis, maintenance and repair),* with the goal to allow circumvention of technical protection measures for the purpose of maintenance and repair, as part of a "right to repair" movement.

- C-288: *An Act to amend the Telecommunications Act (transparent and accurate broadband services information),* with the goal to make service provider performance data open and comparable.

- C-292: *An Act respecting transparency for online algorithms,* with the goal to prevent adverse discrimination of individuals based on personal information when distributing content.

- S-231: *Increasing the Identification of Criminals Through the Use of DNA Act,* with the goal of increasing the number of individuals whose biometrics are stored in the national DNA Bank.

Provinces and territories within Canada have also proposed or passed legislation about data and digital[4].

The federal government has also directed the Canadian Radio-television and Telecommunications Commission to focus on competition, universal access, and consumer rights[5].

Other Potential Legal Changes

Some countries — including France, Belgium and Ecuador — have made ecocide — "the destruction of the natural environment that is widespread, long-term and severe"[6] — illegal. There is growing pressure on other countries including Canada to enact similar protections. Some are campaigning to have ecocide recognized as a fifth crime by the United Nations International Criminal Court (alongside crimes against humanity, genocide, war crimes, and crimes of aggression).[7]

Responsibility for policing the Siksika reserve, located east of Calgary, Alberta with a population of approximately 7,800,[8] will transition from the RCMP to a First Nations police service over the coming years.[9]

The *Employment Equity Act* Review Task Force will be providing recommendations on how to modernize and improve the employment equity framework to "build a country where every Canadian has a real and fair chance to succeed and contribute to the economy."[10, 11]

As part of the implementation of the *Pay Equity Act*, a review of all Canadian federal job categories is underway.[12]

Crime Statistics (Index) - 2022

Crime Severity Index[13]

-0.3% ▼ **73.7**

Police-reported crime per 100,000 population[14]

0.7% ▲ **5,375**

Change in police-reported hate crimes

▲ **27%**

Change in opioid-related offences

▲ **13%**

Non-violent Crime Severity Index

-2.8% ▼ **66.7**

Youth crime rate

-2.6% ▼ **2,175**

Change in hate crimes targeting religion

▲ **67%**

Change in non-opioid drug offences

-25% ▼ **Ecstasy**

-20% ▼ **Methamphetamine**

-15% ▼ **Cocaine**

Violent Crime Severity Index

5.1% ▲ **92.5**

Homicide rate per 100,000 population

3.0% ▲ **2.06**

Change in hate crimes targeting sexual orientation

▲ **64%**

Rates of impaired driving

▼ **-9%**

Crime Statistics (Homicides)

The numbers of homicides in Canada grew by 3% in 2021:[15]

0.2%

Homicides accounted for less than 0.2% of police-reported violent crime.

23%

23% of homicides were gang-related.

40%

40% of homicides were shootings; nearly half of those were gang-related.

25%

25% of homicide victims were Indigenous, which is disproportionately high compared to stats on other communities.

17%

17% of homicide victims were killed by a spousal or intimate partner; the majority of these victims were women.

The urban-rural divide is evident in crime statistics:

15%

Rural areas account for only 15% of the population of the provinces, but 30% of traffic offences, 24% of violent crime, and 18% of property crimes.[16]

124.1

The Violent Crime Severity Index is higher in rural areas (124.1) than urban areas (85.2).

2x

Intimate partner violence is nearly twice as prevalent in rural areas as it is in urban areas.

Crime Statistics (Human Trafficking)

Human trafficking is a global problem that impacts the most vulnerable.

In Canada:

96%

96% of victims were women and girls, while 80% of accused persons were men and boys.[17]

24%

24% of victims were under the age of 18.

91%

91% of victims knew their accused trafficker, with 33% trafficked by an intimate partner.

552

The number of police-reported incidents of human trafficking decreased slightly from 533 in 2020 to 552 in 2021.

83%

83% of human trafficking incidents were reported in Metropolitan areas.

Crime Statistics (Online Child Sexual Exploitation)

Online child sexual exploitation continues an upward trend:[18]

131

Online child sexual exploitation and abuse had risen from 51 to 131 incidents per 100,000 population in 2020.

77%

Luring a child accounted for 77% of online sexual offences against children.

Percentage of victims girls aged 12 to 17

73%

Percentage of victims girls under 12

13%

Percentage of victims boys aged 12 to 17

11%

Percentage of victims boys under 12

3%

Percentage of victimized by a stranger

39%

Percentage victimized by a casual acquaintance

25%

Percentage of victimized by a friend, family member, or intimate partner

23%

Percentage of people accused that were men and boys

91%

Median age of men and boys accused of online sexual offences against children

24 Years

Median age of men and boys accused of child pornography

29 Years

Crime Statistics (Domestic Violence)

The pandemic increased focus on the issues of family violence and intimate partner violence, due to increased time spent at home with household members, and the closure of some supportive services:[19]

336

Police-reported family violence increased to a rate of 336 victims per 100,000 population. Women and girls represented 69% of family violence victims.

344

Police-reported intimate partner violence increased to a rate of 344 victims per 100,000 population. 8 in 10 victims were women and girls.

22%

Police-reported sexual assaults increased 19% in 2021. Sexual assaults among intimate partners specifically saw a 22% increase in 2021.

19%

Children and youth were 19% of victims of police-reported family violence; 64% of these were girls.

5%

Seniors aged 65 and older represented 5% of police-reported family violence, with women representing 57% of senior victims. There was also an increase in violence rates of 8% in 2021 regardless of gender.

Crime Statistics (Arson)

Arson in 2021:[20]

12%

Rates of arson increased by 12% to 28 incidents per 100,000.

95%

95% were for property arson, the remaining 5% were violent arson.

34%

More than one-third of violent arson incidents involved multiple victims.

73%

Violent arson occurred in private dwelling 73% of the time.

Women & Girls

Victims of violent arson who are women and girls are much more likely to have had a prior relationship with the accused

83%

83% of individuals accused of arson incidents were men and boys.

Crime Statistics (Fraud)

Fraud is on the rise:

Reports of fraud in 2022:[21]

91,190

Victims of fraud in 2022:

57,055

Lost to fraud in 2022:

$531 Million

Top 3 reported types of fraud:[22]

1. **Phishing**
2. **Extortion**
3. **Personal Information Scams**

Top 3 reported victim losses:

1. **Investment scams** (cryptocurrency fraud)
2. **Romance scams**
3. **Spear phishing**

- Fraud schemes including Ponzi schemes, romance scams, and elder fraud are increasing, yet criminal charges are rarely laid and nearly half of charges that are laid get dropped.[23]

- Scammers are taking advantage of the relative newness of cryptocurrencies to fraudulently obtain large sums of money from victims.[24]

Crime Statistics (Conviction)

Conviction rates have reduced over the years:[25]

The overall conviction rate (2016–17)

63%

Men	Women	Unknown
65%	**53%**	**63%**

The overall conviction rate (2020–21)

50%

Men	Women	Unknown
53%	**40%**	**47%**

Black and Indigenous peoples are overrepresented in Canada's criminal justice system, both as victims and as people accused or convicted of crime.[26, 27]

Overrepresentation of Indigenous and Black offenders initially classified as maximum security, April 2018 to December 2021[28]

Admissions: Men	Nbr of Offenders	Mini Security	Med Security	Max Security
White	6,831	36%	58%	6%
Indigenous	3,880	19%	70%	11%
Black	1,134	23%	62%	15%
Arab/West Asian	277	36%	56%	8%
East/Southeast Asian	216	43%	50%	7%
South Asian	186	47%	46%	7%
Latin American	180	38%	56%	6%
Other	943	-	-	-
All Admissions	13,647	30%	61%	9%

Admissions: Women	Nbr of Offenders	Mini Security	Med Security	Max Security
White	549	49%	49%	2%
Indigenous	462	26%	66%	8%
Black	50	74%	26%	0%
Other	109	-	-	-
All Admissions	1170	42%	53%	4%

Organized Crime

Organized crime groups are adapting and diversifying their markets, and expanding their territories with opportunistic relationships nationally and internationally:

- Mortgage crime fraud claims have reached $200 million in only two-and-a-half years, as it becomes a new profit-making venture for organized crime.[29]

- Organized crime groups are moving out of large urban centres into smaller communities.[30]

- Street gangs, normally associated with specific territories, are expanding into the digital environment and verbally attacking rivals resulting in retaliatory online responses and physical violence and shootings. Street gangs are also increasing their involvement in human trafficking.[31]

- Motorcycle gangs and traditional organized crime groups are heavily involved in the illegal drug trade, illegal gaming, sex trafficking, and money laundering.

- Organized crime groups exploit loopholes in medical cannabis misuse to pool licenses and create cannabis production sites that overgrow cannabis plants by the thousands.

- Organized crime groups are involved in the illicit manufacturing of methamphetamine and synthetic opioids across Canada.

- Despite the legalization of single-event sports betting in Canada, organized crime groups are still expected to make money from illegal betting by providing better odds and higher levels of credit.

The numbers of police-reported organized crime continue to fluctuate by crime type in 2021 compared to 2020:[32]

- There was a notable increase in the number of assaults, in particular an 18% increase in sexual assault, and a near doubling of kidnapping and forcible confinements.

- There was a slight increase in human trafficking.

- There was a notable increase in extortion.

- There was a notable decrease in criminal harassment / uttering threats, as well as in break and enters.

- The number of motor vehicle thefts increased threefold, and theft in general increased. Cars are being targeted for theft and put under surveillance using hidden tracking devices.[33]

Transnational Crime

"Transnational organized crime can take many forms and is constantly evolving. The groups and networks involved are fluid, and channels for trafficking one commodity are often used for others. Some of the typical activities carried out by transnational criminal organizations are trafficking in humans, arms, drugs, minerals and wildlife; production and trade of counterfeit goods; fraud and extortion; money laundering and cybercrime."[34]

Crime is increasingly happening across borders, as well as overlapping with organized crime:

- Money laundering and terrorist financing compromise the integrity of the international financial system and are a threat to global safety and security.[35]

- Cross-border trafficking of illicit firearms is increasing, with an estimated three-quarters of illicit handguns that are discovered having been smuggled into Canada from the US.

Examples of Transnational Crime

- Trafficking (drugs, arms, people, other)
- Counterfeiting
- Money Laundering
- Intellectual Property Theft
- Hijacking (land, sea, air)
- Piracy
- Environmental Crime

Transnational Crime

- Non-profit organizations were identified as being at risk of terrorist financing abuse, as they are not monitored for terrorist financing activities or educated about their terrorist financing risks in the same way that registered charities are by the Canada Revenue Agency.[36]

- In 2022, fraud and cybercrime reports amounting to $530 million in victim losses were reported, a 40% increase from $380 million in losses in 2021. This increase in financial loss is not tied to an increase in reporting. The Canadian Anti-Fraud Centre estimates that only 5 to 10% of people report fraud.[37]

- Cross-border drug smuggling continues to be an issue. On February 19, 2023, the Integrated Border Enforcement Team seized approximately 300 kg ($3.6 million) of methamphetamine from a commercial transport vehicle.[38]

- The US and Canada are re-establishing a Cross-Border Crime Forum to improve information sharing and combat transnational crime such as human smuggling.[39]

- In Budget 2023, the federal government revealed plans to amend the *Proceeds of Crime (Money Laundering) and Terrorist Financing Act* and the *Criminal Code* to strengthen Canada's anti-money laundering and anti-terrorist financing framework.[40]

Cybercrime

Cybercrime continues to grow, and its impacts are being felt by businesses of all sizes:

- 18% of Canadian businesses were impacted by cyber incidents in 2021; 37% of business with more than 250 employees reporting being impacted by a cyber incident. Of those impacted, 38% could not identify the perpetrator of a cyber attack.[41]

- 39% of cyber security incidents had no clear motive, while only 7% were to steal money or demand ransom payments.

- Of businesses affected by ransomware attacks, only 18% made a ransom payment. Of those, only 14% used cryptocurrency to make the ransom payment.

- The Canadian Centre for Cyber Security reports that since March 2020 more than 400 health-care organizations in the US and Canada had been bit by a ransomware attack. They also identified state actors China, Russia, Iran, and North Korea as significant sources of these attacks.[42]

- The installation of spyware on mobile devices is increasing, and their design allows data collection of sensitive data such as location, texts, and contacts.[43]

- Cybercriminals have used malware to enact data theft, for motives including cyberwarfare (the deliberate attack of information systems for strategic or military purposes), extortion, financial gain and espionage.[44]

- Critical infrastructure — the processes, systems and services that are essential to the health, safety, and security of Canadians — is increasingly at risk from cyber threat activity, since downtime can be harmful to industrial processes and the customers they serve.[45]

Implications

Updates to the legal framework to adapt to the digital world and changing environmental concerns may cause changes to the following:

1. An increase in different *Criminal Code* applications in different provincial jurisdictions.

2. An increase in transnational crime may require increased cooperative task groups with police from other jurisdictions and different countries.

3. An increase in specialized victim services, for example vulnerable adults and children.

4. An increase in the use of biometrics to identify suspects.

5. An increase in participation in police oversight mechanisms.

The updates to the legal framework may cause the RCMP to change how it delivers services:

1. Increased drug trade may require front-line officers to have drug-overdose counter effect drugs (such as Naloxone) readily available.

2. An increase in rural crime rates may require additional policing resources for rural areas, as well as more resources focused on organized crime.

3. Increased focus on handling persons in distress (mental health or physical health) may require additional training.

Implications

Changes to legal frameworks may require the RCMP to enhance the skills of its employees:

1. The increase in jurisdictional issues presented by transnational crime and cybercrime will require people skilled in navigating laws from multiple countries, as well as liaison and diplomacy skills.

2. The increase in cybercrime will require people with digital and technology skills, to evaluate the implications of the use of technology on policies and jurisdictions.

3. The increase in fraud will require people with finance and accounting skills to track money and cryptocurrency trades.

4. The increase awareness that different victim groups have different needs will require specialized and culturally competent victim support training and strong relationships with community-based organization that support diverse groups of victims and survivors.

5. The increase in the use of digital technology will require specialized training in data privacy and data ethics.

08 Environment

Overview

Climate change has grown to be one of the most significant threats to environmental sustainability. Public awareness of and involvement in this crisis has manifested in protests around the world, while parts of the globe navigate environmental disasters, record heat waves, melting ice caps, flooding, and extensive forest fires.

Climate change will have significant implications for policing in Canada and internationally, requiring the RCMP to adapt and respond to a range of challenges related to natural disasters, civil unrest, crime patterns, and resource allocation.

As climate change continues to cause extreme weather events — such as floods, hurricanes, and forest fires — the RCMP may have to respond to more frequent natural disaster emergencies. This could include evacuating residents, managing traffic, and aiding affected communities.

Furthermore, climate change can exacerbate social and economic inequalities, leading to an increased risk of civil unrest. As people struggle to adapt to the changing climate and its impacts, police may face more frequent protests, demonstrations, and other forms of civil disobedience. This can require significant resources to manage, as well as a careful balancing of the right to freedom of expression and the need to maintain public safety.

Changes in crime patterns can also be expected; for example, an increase in property crime as people become more vulnerable to the impacts of extreme weather events. Lastly, there will be an increased demand for human and financial resources as the impacts of climate change become more severe. The RCMP may need to devote additional resources to responding to emergencies and maintaining public safety. This could strain budgets and lead to difficult decisions about how to allocate limited resources.

Climate Crisis

The effects of human-caused global warming are happening now, are irreversible for people alive today, and will worsen as long as humans add greenhouse gases to the atmosphere.

https://climate.nasa.gov/effects/

- Global temperatures have risen 1.1 degrees Celsius and triggered unprecedented changes to the Earth's climate. Each additional 0.5 degrees Celsius of global temperature rise will cause significant increases in the frequency and severity of heat extremes, heavy rainfall events and regional droughts.[1]

- According to the World Health Organization, climate change is expected to cause approximately 250,000 extra deaths per year between 2030 and 2050 from malnutrition, malaria, diarrhea, and heat stress.[2]

- The United Nation's Emissions Gap Report 2022 states that current national efforts under the Paris Agreement have barely impacted the temperatures we can expect to see at the end of this century, and points to a 2.6 degrees Celsius increase by 2100.[3]

- Negative health effects from air pollution,[4] heat stress,[5] and extreme weather events[6,7] could result in increased trauma and the spread of infectious diseases, malnutrition, water contamination and cardiorespiratory diseases.

- Coastal flooding will disproportionately impact people on river deltas, low-lying islands, and river basins.[8]

- Agricultural disruptions from drought, floods, storms, wildfires, pests, diseases, and infestations will have national impacts resulting in food and water insecurity and prolonged boil water public safety orders.[9]

- In 2022, the Intergovernmental Panel on Climate Change declared: "People's health, lives and livelihoods, as well as property and critical infrastructure, including energy and transportation systems, are being increasingly adversely affected by hazards from heatwaves, storms, drought and flooding as well as slow-onset changes, including sea level rise."[10]

Climate Change Impacts

- In 2010, the United Nations declared that "climate change is inextricably linked to poverty and hunger." In 2015, the World Bank[11] warned that "without urgent action, climate change could push an additional 100 million people into poverty".

- The impacts of the climate crisis are likely to extensively change the patterns of human settlement.[12] Climate induced migration will grow rapidly as displaced migrants search for safer and more economically stable places to live. Climate migrants may experience similar risks as migrants fleeing instability including hate crimes, human trafficking, and various forms of exploitation.[13, 14, 15]

- Scarce resources including freshwater, food, fuel, and land may result in civil war and conflict within and between states. These conflicts will likely trigger forced migration and further exacerbate conflicts as migrants move to areas with scarce resources and pre-existing social divisions.[16, 17]
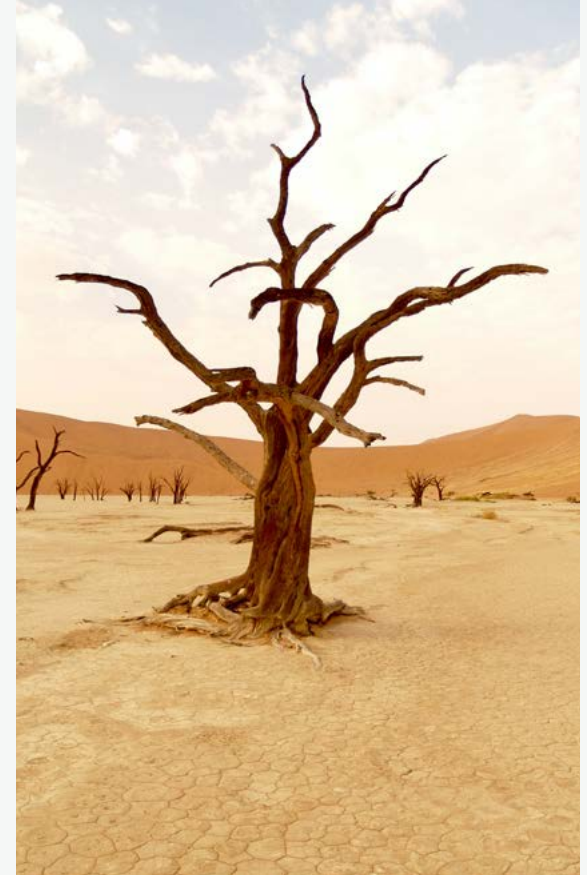
Air Quality

> "
>
> Billions of people still breathe unhealthy air"[18]
>
> **World Health Organization. News Release April 2022**

- Almost the entire global population (99%) breathes air that exceeds the World Health Organization's (WHO) air quality limits and threatens their health. A record number of over 6,000 cities in 117 countries are now monitoring air quality, but the people living in them are still breathing unhealthy levels of fine particulate matter and nitrogen dioxide, with people in low and middle-income countries suffering the highest exposures.

- In the 117 countries monitoring air quality, the air in 17% of cities in high-income countries fall below the WHO's Air Quality Guidelines. In low- and middle-income countries, air quality in less than 1% of the cities complies with WHO recommended thresholds.

- The WHO has highlighted the importance of curbing fossil fuel use and taking other tangible steps to reduce air pollution levels.

- The evidence base for the damage air pollution does to the human body has been growing rapidly and points to significant harm caused by even low levels of many air pollutants.

- 'After surviving a pandemic, it is unacceptable to still have 7 million preventable deaths and countless preventable lost years of good health due to air pollution. That's what we're saying when we look at the mountain of air pollution data, evidence, and solutions available. Yet too many investments are still being sunk into a polluted environment rather than in clean, healthy air', said Dr Maria Neira, WHO Director, Department of Environment, Climate Change and Health.

- The failure of some states to protect infrastructure, ensure adequate food and water supplies, and respond to natural disasters may lead to challenges to state authority and the collapse of some governments.[19]

- Disagreement over how best to respond to climate change may fuel new forms of extremism including the rise of ecological terrorist groups angered by the unequal impact of climate change — for example, developing countries are the biggest polluters, but do not experience the greatest impact and they may limit economic development in undeveloped countries.[20]

10 Devastating Extreme Weather Events in 2022[21]

The world suffered more record-breaking floods, droughts, typhoons, and heatwaves that caused widespread human and economic destruction. Scientists said climate change was largely to blame. Eco-Business — Asia Pacific's largest media and business intelligence organization — looked back at the following 10 extreme weather events in 2022:

1. Floods in Pakistan and South Asia

In Pakistan more than 1,500 people were killed and 33 million displaced following a record-breaking monsoon in June. Countries including India, Bangladesh, and Afghanistan also recorded hundreds of deaths and millions displaced due to flooding around the same period.

2. Heatwave in South and Central Asia

Just two months before the disastrous monsoons listed above, South and Central Asia were hit by an early heatwave that saw the region receive 62 percent less rain than usual in March.

3. Heatwave and Drought in China

From June to August 2022, China experienced its worst heatwave in 60 years with temperatures exceeding 40 degrees Celsius in several provinces. A severe drought dried up rivers including the Yangtze, Asia's longest, and crippled hydropower production. This resulted in power cuts to key industrial areas, disrupting global supply chains for lithium batteries and more. The drought also affected food production in China's largest wheat-producing area, Henan.

4. Heatwave in Europe

In July 2022, Hamburg, Germany recorded more than 40 degrees Celsius for the first time ever and the United Kingdom's highest temperatures in the summer exceeded previous records by 1.6 degrees. Temperatures in Europe soared to between 40 and 43 degrees and the resulting drought caused wildfires to raze forests in countries including France, Greece, Portugal, Slovenia, and Spain — burning over 785,000 hectares or more than double the 317,000-hectare average over the past 15 years.

5. Floods in Malaysia

Malaysia's monsoon rains, which started in December 2021 and continued into 2022, caused the worst flooding in the country's history. In February 2022, around 6,000 people were displaced in Kelantan and Terengganu, states on Peninsular Malaysia's east coast.

10 Devastating Extreme Weather Events in 2022[21]

6. Tropical Storms and Typhoons in the Philippines

In 2022, the Philippines witnessed several strong typhoons including Typhoon Noru and Typhoon Nesat, which caused thousands to flee across the Philippines. But the country's most destructive weather events were tropical storms that caused landslides and floods. In late October, Tropical Storm Nalgae caused deadly landslides and more than 550 flooding incidents across the country.

7. Hurricane Ian in the United States

Hurricane Ian struck the state of Florida at the end of September, causing the region's most deaths by hurricane in almost 90 years. More than 100 lives were lost including five in Cuba. Power and risk modelling service RMS estimated that losses totalled US$100 billion. Around 600,000 homes and businesses went without water and power for days after the hurricane.

8. Sandstorms in the Middle East

Countries in the Middle East including Iran, Iraq, and Syria were hit with sand and dust storms in May that caused more than 1,000 people to be hospitalized for respiratory problems and disrupted flights in and out of several cities. Although sandstorms are not unusual in the region, they have been happening earlier and more frequently, and spreading over a wider area.

9. Drought in the Horn of Africa

In the Horn of Africa — which comprises the countries of Djibouti, Eritrea, Ethiopia, and Somalia, as well as neighbouring Uganda — drought has caused one of the most extreme food crises the continent has ever seen. Drought and famine killed 2,500 people in Uganda and affected eight million in Ethiopia.

10. Extreme Floods in West Africa

In contrast to the lack of rain in several countries, other parts of Africa experienced disastrous floods this year. More than 600 lives were lost and at least 100,000 left homeless in Nigeria due to floods in October. In neighbouring Chad, hundreds of thousands faced flooding in August and again in October as the country experienced its heaviest rainfall in 30 years.

Climate Change in Canada

"

When it comes to the weather, exceptional has become the ordinary. Around the world, once in a lifetime storms are now happening back-to-back. In some cases, weather systems are moving slower than before, leaving more time to wreak havoc. As Canadians continue to experience additional climate warming, the wild weather in 2022 may simply be called 'normal' decades from now. Not something distant or futuristic, but playing out in our backyards, in our communities and in our country. It's real and it's here now."

Environment and Climate Change Canada – Canada's top 10 weather stories of 2022[22]

Urban greenness can be used to measure the condition of an urban environments. In Canada, 2022 data shows that urban greenness has been decreasing:[23]

- 72% of land area of cities and towns were classed as green.

- Urban greenness declined on average by 8% compared to 2000, and decreases were seen in all provinces.

- Large urban population centres dropped to 65% green. Small population centres were 86% green, and medium-sized population centres were 73% green.

News coverage of climate change struggled to compete with the pandemic and political upheaval in 2020, but the realities of the changing climate in the summer of 2021 hit home, with deadly heatwaves and record temperatures that brought wildfires, flash floods, and drought across the country.

The emergencies continued into the autumn in British Columbia, with record rainfalls that forced the evacuation of towns, collapsed highways and destroyed rail lines. The new year began with early snow and extreme cold and continued to set new records throughout Canada. [24, 25]

Top 10 Canadian Weather Events in 2022[22]

1. Furious Fiona Strikes Eastern Canada

Fiona was a large-scale, high-impact storm and likely the most damaging hurricane in Canadian history (September 2022). Tragically, there were three storm-related deaths associated with the storm. Fiona's unusually slow forward speed contributed greatly to the destruction. To date, insurance losses come in at $846 million.

Information courtesy of Environment and Climate Change Canada.

2. Billion-dollar Derecho Rakes across Ontario and Quebec

Just before the May long weekend, two days of intense heat and humidity propelled a hugely powerful line of storms across central Ontario and Quebec, bringing torrential rains, large hail and frequent lightning. However, it was the swath of downburst winds that resulted in the most damage. Meteorologists call this kind of system a derecho — a group of thunderstorms that move in a straight line much like the frontline of advancing soldiers in a battlefield. Tragically, 11 people died in the aftermath, mostly by fallen trees. At least 13 communities declared states of emergency, including the towns of Uxbridge and Clarence-Rockland, east of Ottawa.

3. Manitoba's Drenching Spring

Manitoba has a long history of spring flooding, but in 2022, it came from clusters of back-to-back wet days. People dealt with flood fatigue, stress and burnout amid a disaster that dragged on for eight weeks. The geographic scale of this year's flooding was unprecedented; a result of several high yielding storms, rather than from a single snowmelt or a single storm event like in 1997. While perhaps not the worst in history, the extent and duration of the flood certainly felt historic with flood-related cost estimates nearing $10 million.

Top 10 Canadian Weather Events in 2022[22]

4. Return to Hot and Dry Weather Under the Dome

A sprawling and unusually persistent dome over the western half of North America, often referred to as a sub-tropical Hawaiian high-pressure ridge, was responsible for the long stretch of record-setting heat across both sides of the border. Excessive heat watches and warnings affected millions of North Americans across three provinces, three territories and eight states. While this high-pressure heat dome was less intense than last year's prevailing weather, it lasted several weeks longer. The immense area of dryness across western North American contributed to the Northern Hemisphere drought. Eastern Canada saw a bonus four weeks of summer warmth, with ample sunshine, light winds and little rain between Thanksgiving and Remembrance Day. In November across the East, more than 200 heat records were set and many daytime highs exceeded 20°C.

5. Wildfires on Two Coasts

In mid-July, more than three weeks after summer began, the first major British Columbia wildfire started burning near a place Canadians were only too familiar with: Lytton. On June 29, 2021 after three days of record-breaking Canadian temperature records, 90% of the village tragically burned to the ground. This year's blaze, named the Nohomin Creek Fire, broke out on July 14 just west of Lytton on the other side of the Fraser River.

While 2022's wildfire season was less severe in British Columbia, residents of Newfoundland felt the widespread impacts of the heat-driven event in ways not seen in decades. Parts of central Newfoundland experienced the worst wildfires the province had seen in over 60 years.

6. A Wintery Spring in British Columbia (without the Flood)

Residents of British Columbia were mostly trying to forget 2021. After all, it was the most destructive, disruptive, expensive and deadliest year for weather, ever. They were hoping for an easy winter to start 2022, but instead got early snow and cold. Spring was the next big hope, but it was winter-like weather up to the first day of summer. Ironically, though, there were a few positive outcomes from spring's misery. The cool and wet weather helped reduce the risk of early wildfires across the province. By June 1, the slow start to wildfire season was evident in that only 600 hectares of forestland had been consumed so far, only 5% of the 25-year average. In addition, the cooler-than-normal spring put off an immediate flood threat, by delaying the spring thaw by three or four weeks.

Top 10 Canadian Weather Events in 2022[22]

7. Super Storms Track across the Prairies in July

For the Prairies, June was a month of rain, but July was stormy. At least four powerful and dangerous July thunderstorms raked the region from the Alberta foothills to eastern Manitoba. The storms brought heavy rain, large hail, damaging wind gusts and tornadoes, inflicting millions of dollars in property damages.

8. Montreal Swamped by Humongous Rain System

In September 2022, Montreal saw a different kind of Canadian flood — the urban flood — a phenomenon that is becoming more frequent and more impactful as cities grow and the climate changes.

9. Record Breaking Cold in Time for the Holidays

With such a mild fall in 2021, Western Canadians were not prepared for one of the coldest Christmas-New Year's holiday periods going into the new year of 2022. Late in December 2021, an extremely cold air mass from Siberia descended across most of Northern and Western Canada.

10. Three Weekend January Storms Stress Atlantic Canada

As 2022 began, a trifecta of snow, wind and rain over three weekends created anxiety for residents of Atlantic Canada. The trilogy of storms left a trail of closures, cancellations and power outages on nearly every January weekend, making for a long month of miserable winter weather. Heavy, wet snow and ice knocked down trees, and with them, electricity. At the height of the first storm, 200,000 customers across the Maritimes lost electrical service, with Prince Edward Island facing widespread power outages, especially during the second weekend storm. With three storms arriving in rapid succession, flooding was now a concern too. Heavy rains prompted regional and city governments to issue flood warnings in several low-lying neighbourhoods and kept residents nervously monitoring home sump pumps.

Climate Change Impacts Will Be Uneven

Climate change affects different regions and groups of people in Canada differently, depending on their exposure, sensitivity and adaptive capacity. Climate change poses a "profound, ongoing threat to national security and prosperity, including the possible loss of parts of British Columbia and the Atlantic provinces to rising sea levels. Competition in the Arctic is likely to intensify."[26]

In March 2021, the Province of British Columbia published a report on "Climate Change, Intersectionality, and GBA+ in British Columbia",[27] which drew on findings from a literature review, 21 key interviews with topic experts, and spatial data correlations on sub-populations. An Indigenous Advisory Circle was also convened to review the draft report and provide comments and suggestions. Their findings included:

- "How climate change impacts diverse populations, including those who are marginalized, is not always obvious… a Gender-based Analysis Plus lens [was used] to examine how considerations of sex, gender, race, ethnicity, age, and mental or physical ability (among other identity factors) intersect to influence how different populations in BC are affected by climate change.

- "[E]xisting inequities are amplified by the impacts of climate change, putting marginalized populations at higher risk. Marginalized populations often face multiple, overlapping inequities which can worsen during and after major climate-related events. For example, lower income populations are disproportionately impacted by major climate disruptions, whether this is a wildfire or a flood…if housing, jobs, access to education etc. are impacted."

- "Systemically marginalized communities have typically contributed the least to climate change but are disproportionately negatively impacted by climate-related events…In order for climate change adaptation policies, plans and programs to promote equity, it is necessary to address interacting forms of discrimination, such as racism and poverty."

Climate Change Impacts Will Be Uneven

Canada's North

Canada is warming faster than the world as a whole — at more than twice the global rate — and the Canadian Arctic is warming at about three to four times the global rate.[28, 29]

- "Communities across Northern Canada are witnessing first-hand the devastating impacts a changing climate is having across Arctic ecosystems. Livelihoods, Indigenous culture, social relations, food security, health, well-being and a way of life, which have existed for generations are all being impacted."[30]

- Infrastructure damage from permafrost thaw represents a significant threat to Indigenous communities including community food security, safety, transportation, health, education, employment opportunities, and culture.[31]

- Issues of Arctic sovereignty also becoming more pronounced, as climate changes open the Arctic oceanways to increased navigation, further compounding Canadian security concerns with increased international tensions.

Climate Change Impacts Will Be Uneven

Women and Girls

Climate change has a disproportionate impact on women and girls, especially in developing countries. According to UN Women:

"Gender inequality coupled with the climate crisis is one of the greatest challenges of our time. It poses threats to ways of life, livelihoods, health, safety and security for women and girls around the world."[32]

- Women and girls face increased risks of gender-based violence, such as sexual assault, human trafficking, and child marriage, due to displacement, conflict, and insecurity caused by climate change.[33]

- Women and girls have more responsibilities for collecting water, fuel, and food, which become scarcer and harder to access due to droughts, floods, and deforestation.[34]

- Women and girls have less access to education, health care, land rights, and decision-making power, which limit their ability to adapt to climate change and participate in climate action.[35, 36]

- These impacts also affect their economic opportunities, well-being, and human rights. Therefore, it is important to address gender inequality and empower women and girls as agents of change in the fight against climate change.

Climate Change Impacts Will Be Uneven

Indigenous Communities

Indigenous communities are more likely to experience the adverse effects of climate change in a number of ways:

- Indigenous communities often operate with limited financial resources. Key items (like health and education) are given priority, which results in communities being ill equipped to deal with emergency situations or take preventative measures against extreme weather events. This often results in greater ecosystem and infrastructure damages — along with economic damages sustained throughout the event and the high costs of repairing damages.

- Remote Indigenous communities are at an even greater risk because external emergency responders may be too far to mitigate the impacts of dangerous situations. Warmer temperatures will decrease the access of winter road use for remote and northern communities, which will impact the delivery of supplies like lumber for building and gasoline for vehicles.

- Indigenous cultures and livelihoods — including the transfer and use of Traditional Knowledge also known as Indigenous Knowledge — are threatened by climate change which may result in relocation, evacuation, or death of community members and the loss of Intergenerational Knowledge transfers.[37]

- There are increasing concerns that mining operations for critical minerals will have negative impacts on the environment and on traditional ways of life for Indigenous peoples. For example, the lithium mines in Quebec will drain two lakes on traditional hunting grounds impacting wetlands. Clearing of trees will heavily impact Cree trap lines where trapping is still a way of life.[38]

- Despite these challenges, Indigenous communities are leading the way in innovative health-related climate change adaptation work, using traditional knowledge and novel approaches.

Crime and Climate Change

The short-term effects of weather on crime are well documented and there is growing evidence that climate change will have a significant impact on crime.

- Climate change is a "risk/threat/crisis multiplier".[39, 40]

- There are a number of ways that climate change can affect criminal behaviour. For example, studies suggest there is a direct correlation between increasing temperatures and aggressive behaviour resulting in violent crime.

- "Climate change will increase strain, reduce social control, weaken social support, foster beliefs favorable to crime, contribute to traits conducive to crime, increase certain opportunities for crime, and create social conflict".[41]

- Awareness of the climate-crime relationship is slowly coming into sharper focus, however national, subnational and municipal policy responses are lagging.

- "Evidence suggests that dramatic climate change will generate a substantial increase in crime in many cities — and especially more vulnerable neighborhoods."

Crime and Climate Change

**Conceptualizing the climate-crime connection**[42]

	Short-term	Medium-term	Long-term
Shocks Flood/storm surges; tornadoes; cyclones; forest fires	• Loss of life/injuries — especially vulnerable groups • Stress on health and medical facilities • Evacuations and displacement • Disruption of power grids / services • Rising non-violent property crime	• Disease outbreaks — especially among vulnerable groups • Disruption of basic services • Rising prices for goods and services • Food insecurity and livelihood stress • Supply chain fragmentation • Intimate partner and domestic violence • Social unrest	• Mortality/morbidity due to divested care • Diversion of expenditures from public services • Declining tax revenue and investment • Degraded social and physical infrastructure • Deepening grievances and mistrust • Increasing crime associated behavioral changes • Rising violent crime
Stressors droughts; water scarcity; heat islands; air pollution (GHGs); pest infestations	• Increasing mortality/ morbidity for at-risk groups • Grievances and competition over services • Evacuations and relocations • Disruption to energy grid and drain on basic services • Intimate partner and domestic violence	• Disruption to food security • Rising prices for services and essentials • Increased resort to violent and non-violent criminality to substitute for lost livelihoods; increased risk of social unrest and demonstrations	• Mortality and morbidity associated with cardiovascular diseases • Heightened risk of violent aggression among at-risk / exposed populations

Corporate Crime and Climate Change

The *Canadian Environmental Protection Act 1999* (CEPA) aims to prevent pollution and protect the environment and human health to contribute to sustainable development. Building on the legislative framework introduced under CEPA, the Environmental Enforcement Act was introduced in stages with Stage 3 coming into effect December 2020. The trend has been an increasing number of cases and stiffer penalties, along with new opportunities for organized crime.

- Volkswagen Canada pleaded guilty to 60 offences under CEPA; 58 counts for unlawfully importing vehicles into Canada that did not conform to prescribed vehicle emissions standards and two counts for providing misleading information. It was fined $196.5 million.[43]

- In 2020, an investigation conducted by Environment and Climate Change Canada revealed that 4422236 Canada Inc., owner of the Baltex Building in Montréal, was using a transformer containing polychlorinated biphenyls (carcinogenic chemical compounds used in industrial products and banned in North America in 1977)[44] at a concentration greater than 500 ppm.[45]

- In 2021, Gibson Energy ULC was fined $1.5 million for two counts of violating *the Fisheries Act*, arising from an incident in March 2014 when a leak from the fire suppression system allowed chlorinated water to enter a creek and flow into the North Saskatchewan River at a sufficient level to be harmful to fish.[46]
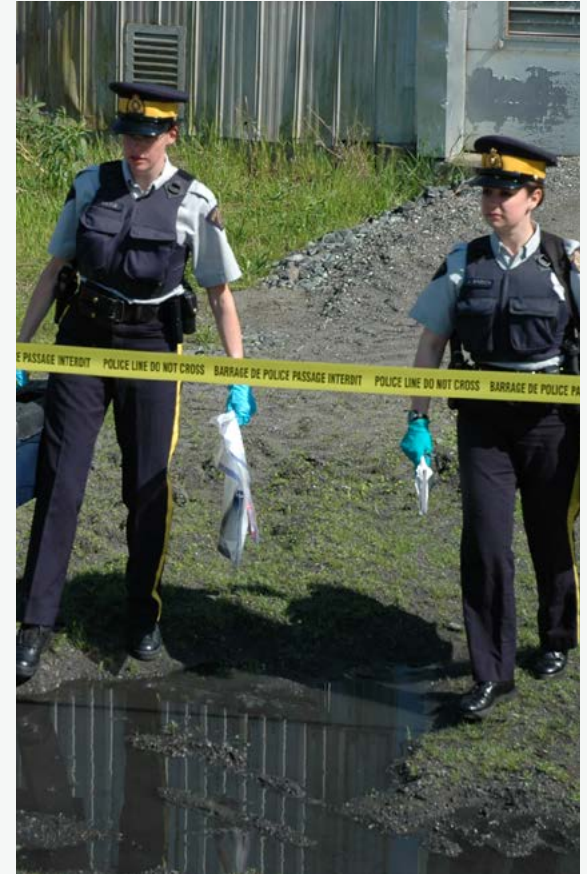
Corporate Crime and Climate Change

As new regulations and stricter controls come into play so do the opportunities for organized crime. The Organized Crime and Corruption Reporting Project, a non-profit investigative news reporting platform for independent media outlets around the world, reports:[47]

- Organized crime poses a continued threat to the environment and often occurs hand in hand with fraud and corruption. According to Interpol Secretary General Jürgen Stock, wildlife and forestry crime is the world's fourth largest illegal trade.

- According to Dr. Paulo Moutinho, an ecologist working in the Amazon who co-founded the Amazon Environmental Research Institute, a large proportion of illegal deforestation, gold mining and land grabbing are directly tied to political corruption. In many cases, gold mining in the Amazon occurs while local political officials turn away, damaging not only on the environment but also Indigenous communities.

- According to the Secretariat of the Convention on International Trade in Endangered Species of Wild Fauna and Flora, transnational organized crime groups are targeting high-value species, corrupting officials, recruiting and arming poachers, creating insecurity, and propelling local communities into poverty.

"

There are new uncertain harms, diverse police capabilities are needed to these uncertain threats, police enroll other actors, for example government and community resources to deal with these harms, police act as facilitators and enablers in community capacity-building; there is mutual dependency between the police and community; and the outcome is that policing is done differently. The responsibility of policing is shared between the community and police. This leads to more anticipatory crime prevention and adaptation of all actors who are enmeshed in and dependent on each other for policing."

Mutongwizo, Blaustein & Shearing 2022

Climate Change Mitigations

Reaching net zero, where the economy either emits no greenhouse gases or offsets its emissions, is a critical step in the global race against climate change. To prevent catastrophic climate change, the international Greenhouse Gas (GHG) Protocol[48] was launched in the late 1990s. It is the global standard for measuring and managing GHG from private and public sector organizations.

The GHG framework considers three sets of emissions: Scope 1, 2 and 3.[49]

Categorizing the different kinds of carbon emissions in this way allows organizations to better understand and measure their operations and, where applicable, their broader value chains.[50]

- **Scope 1** emissions are direct emissions from organization-owned and controlled resources.

- **Scope 2** emissions are indirect emissions from the generation of energy purchased from a utility provider such as electricity, steam, heat and cooling.

- **Scope 3** emissions comprise all emissions that the organization is indirectly responsible for across its value chain including the upstream or downstream emissions released from a product or service. Upstream emissions include business travel, employee commuting, purchase of goods and services. Downstream emissions include the distribution, transportation, processing, and use of sold products.

Scope 3 is nearly always the most significant source of emissions, accounting for more than 70% of their overall carbon footprint. For example, product manufacturers will generate carbon emissions from the extraction, manufacture and processing of the raw materials, through to potential end-user emission generation. Purchasing decisions and product design are part of this category.

"The Renewable Energy Age"

Climate change awareness is shaping the global economy in several ways: governments are building plans to reduce emissions; investors are scrutinizing companies' environmental performance; and consumers are becoming conscious of their carbon footprint. Despite these changes, energy generation and consumption of fossil fuels continues to be one of the biggest contributors to emissions. This has made renewable energy sources vital both for the environment and the global economy.

Renewable energy technologies transform the power of the sun, wind, and heat from the Earth's core into usable forms of energy like heat, electricity, and fuel.[51] Renewable energy creates far lower emissions than burning fossil fuels and is key to addressing the climate crisis.[52]

Climate Change Mitigations

Renewable Energy[53]

Energy Source	Hydro	Wind	Solar	Biomass	Geothermal
% of 2021 Global Electricity Generation	15.3%	6.6%	3.7%	2.3%	<1%
Avg. levelized cost of energy per MWh	$64	$38	$36	$114	$75

Canada's Greening Government Strategy

The objective of the Government of Canada's Greening Government Strategy is to "transition to net-zero carbon and climate-resilient operations, while also reducing environmental impacts beyond carbon, including on waste, water and biodiversity."[54]

Canada's 2030 Emissions Reduction Plan[55] outlines a sector-by-sector path to reach its emissions reduction target of 40% below 2005 levels by 2030 and net-zero emissions by 2050. In the plan the Government of Canada commits to:

- The development of the $150-million Canada Green Buildings Strategy is helping to reduce energy costs for homes and buildings, aiming to drive emissions to net zero by 2050.

- Empowering communities to take climate action by expanding the Low Carbon Economy Fund through a $2.2 billion renewal.

- Additional funding of $400 million for zero-emission vehicles charging stations, in support of the Government's objective of adding 50,000 zero-emission vehicles chargers to Canada's network.

- Reducing carbon pollution from the oil and gas sector and powering the economy with renewable electricity.

- Helping industries develop and adopt clean technology and investing in nature and natural climate.

- Supporting farmers as key partners and maintaining Canada's approach to pricing pollution.

In 2022, regulators in Canada, the US, the United Kingdom, and the European Union took steps to enhance and synchronize environmental, social, and governance reporting standards globally.[56]

The International Sustainability and Standards Board and the International Organization of Securities Commissions expressed support for greater disclosure and encouraged global regulators to adhere to established and reliable frameworks for improvement.

In May 2022, the Office of the Superintendent of Financial Institutions in Canada issued a draft version of "Guideline B-15: Climate Risk Management", which proposed "a prudential framework that is more climate sensitive and recognizes the impact of climate change on managing risk".[57] It also introduces mandatory climate-related financial disclosures aligned with the Task Force on Climate-related Financial Disclosures, which will contribute to public confidence in the Canadian financial system by increasing transparency.

E-waste Generation Continues to Grow

Electronic waste, also known as e-waste, is a serious global concern that has a cascade effect on human health and the environment.[58] "Rapidly advancing technologies, rising consumer demand for electronics, and shorter product life cycles have made electronic waste or e-waste one of the fastest-growing waste streams in the world."[59]

- Each year, about 50 to 60 million tons of e-waste are generated, equivalent to 2-3% of annual global waste. By 2030, annual e-waste production is on track to reach 75 million metric tons.[60]

- E-waste contains toxic materials such as lead, cadmium, and beryllium. When exposed to strong UV radiation or corrosives, toxic materials can be released into the atmosphere, infiltrate the soil, and flow into the water bodies nearby, affecting public health.

- The damage that this amount of waste poses to our health and the environment may exceed the destructive power of all other waste combined.

Recycling e-waste not only prevents toxic substances from entering our bodies and polluting the environment, but the process also reduces the harmful environmental impacts created by the extraction and mining of virgin materials and can be very profitable.

Despite its benefits, e-waste recycling is not widespread:

- Only 17.4% of documented e-waste was recycled in 2019.[61]

- Only 10 out of 60 chemical elements present in e-waste can be recycled through mechanical processing: gold, silver, platinum, cobalt, tin, copper, iron, aluminum, and lead.[62]
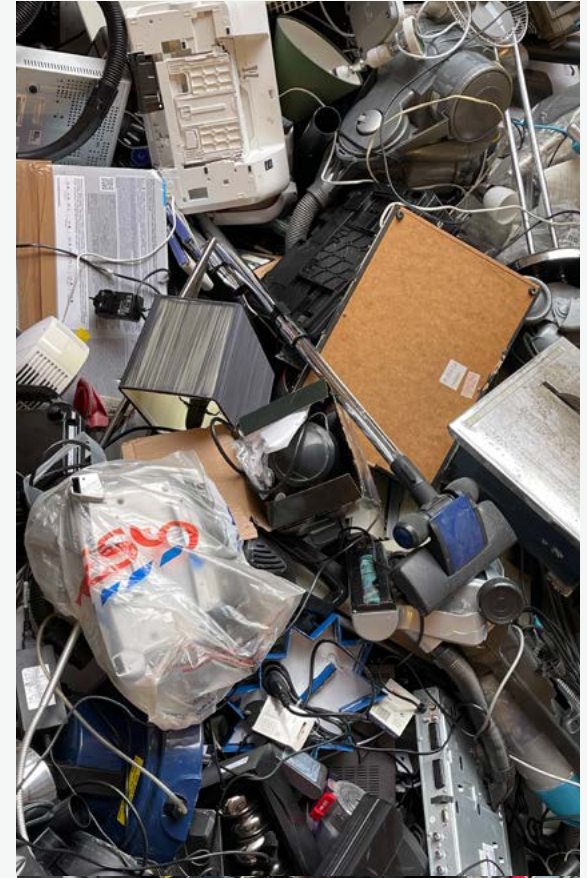
Transitioning Energy Sector

Geopolitical instability, trade tensions, resource nationalism, and other factors are increasing concerns regarding supply reliability of minerals. This is especially true with respect to those required for new and emerging technologies including electric vehicles and wind turbines.

In January 2022, the International Energy Agency concluded:

- Energy transformation in Canada presents both challenges and opportunities given its profile as a major producer, consumer and exporter of energy, and its highly decentralized government system.

- Canada has a number of policy measures in place, including an ambitious carbon pricing scheme, clean fuel regulations, a commitment to phase out unabated coal use by 2030, nuclear plant extensions,

upstream methane regulations, energy efficiency programmes, and measures to decarbonise the transport sector.

- The International Energy Agency also commended Canada on "its efforts to advance a people-centred approach to its clean energy transition, including initiatives to promote diversity and inclusion in clean energy sectors; programs to increase access to clean energy in northern, remote, and Indigenous communities; and actions to enable just transitions for coal workers and their communities."[63]

Some examples and trends in decarbonizing the economy and the energy transition to renewables in Canada:

- Clean energy sources include wind, geothermal, solar, hydro, biomass, and hydrogen. A federal investment of more than

$9.74 million was made to improve access to hydrogen fuels, support product testing, attract investment to Alberta's hydrogen industry, and increase the availability of quality training opportunities to commercialize new technologies.[64] Wind and solar PV (photovoltaic) which were previously considered too expensive are now cost-competitive with natural gas-fired generation.[65]

- Air Products Canada has begun the construction of what is expected to be the largest net-zero hydrogen energy complex in the world. The project will begin with a $1.6 billion net-zero hydrogen production and liquefaction facility expected onstream in 2024. The new facility will capture over 95% of the carbon dioxide from the feedstock natural gas and store it safely back underground. Hydrogen-fueled electricity will offset the remaining five percent of emissions.[66]

Transitioning Energy Sector

- The Climate Change Preparedness in the North Program[67] has invested more than $53 million in 284 projects to support northern communities and organizations and help them adapt to climate change impacts. Projects include: vulnerability and risk assessment of climate change impacts; development of hazard maps and adaptation plans and options; implementation of non-structural and structural measures; and monitoring, evaluation, and reporting.[68]
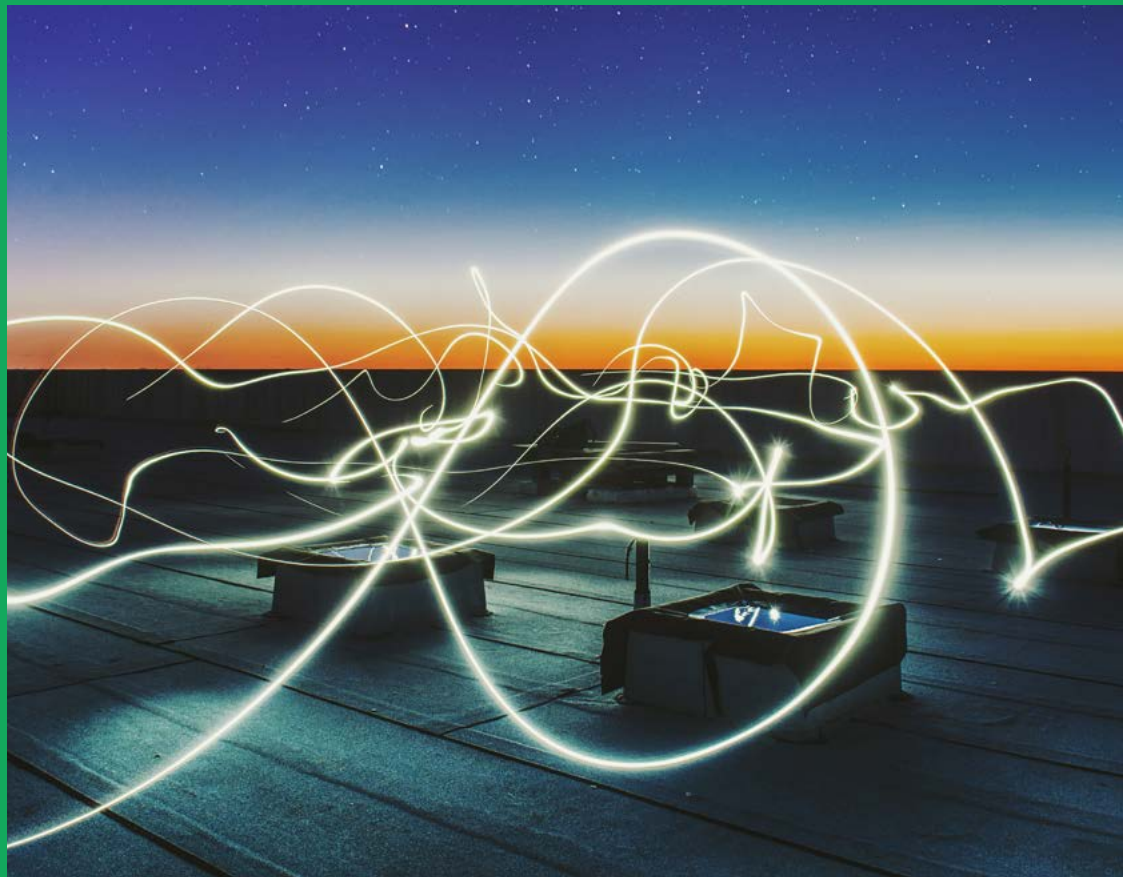
Climate Change Costs in Canada

The Canadian Institute for Climate Choices states that costs of climate change are adding up:[69]

- Climate change is already costing Canada billions of dollars each year.

- Unless governments and businesses act now to prevent and reduce our most critical risks today, these costs will continue to skyrocket.

- We see massive loss and business disruption.

- Scientists say the 2016 Fort McMurray wildfire was 1.5 to 6 times more likely because of climate change.

Our future is uncertain:

- 1.8 million homes in Canada face a very high risk of flooding.

- Without resilience measures coastal property value losses could equal one-half year of regional GDP growth by 2050.

- The 2019 spring floods inundated Ontario, Quebec and New Brunswick for weeks impacting 3,800 businesses.

- The 2013 Southern Alberta floods left 300,000 people unable to work for two weeks resulting in a loss of $601 millon in economic output.

- Permafrost thaw in the Northwest Territories impacts 33 communities and is estimated to cost $1.3 billion over the next 75 years — equal to about 25% of current annual Territorial GDP.

We must reduce our exposure to Climate Risk:

- Cutting our emissions alone won't be enough to shield us from climate impacts already in motion.

- The missing part of the equation is climate adaptation and resilience.

- To fully manage our climate risk and tap into opportunities, Canada must mobilize more capital for resilience before disaster strikes.

What we do now can future-proof our economy and communities:

- Businesses and investors need to assess and reduce their climate risk exposure.

- Governments need to increase investment and coordination to reduce risk and prioritize resilience.

- The public and private sectors need to enhance risk disclosure to improve planning and investment decisions.

Canada's Critical Mineral Rich Regions

Population growth, economic development, and the accelerating pace of technological innovation are driving the demand for natural resources to unprecedented levels. This is especially the case for nonfuel mineral commodities used in emerging and low-carbon technologies, including cobalt in rechargeable batteries, tellurium in certain thin-film solar photovoltaics, and rare earth elements in permanent magnets. It is these and other mineral commodities will be required in greater quantities to fulfill the needs and desires of an increasingly affluent and growing global population.

The Government of Canada's Critical Minerals Strategy aims to "increase the supply of responsibly sourced critical minerals and support the development of domestic and global value chains for the green and digital economy."[70]

- According to a report by the Global Energy Center, a net-zero energy system will be six times more mineral intensive than previous energy models. In addition, an International Energy Agency study stated that demand for these minerals will increase sixfold by 2040 to achieve current targets for net-zero emissions by 2050.[71]

- The North American zero-emission vehicle market could reach $174 billion by 2030 and create more than 220,000 jobs in mining, processing and manufacturing.[72]

- Canada is a world leader in mining and one of the largest producers of minerals and metals.

Valued at $102 billion in 2020, mineral exports accounted for 21% of Canada's total domestic exports.

- Of the 31 minerals Canada has listed as 'critical', six are prioritized for their potential to spur Canadian economic growth and their necessity as inputs for priority supply chains — lithium, graphite, nickel, cobalt, copper, and rare earth elements.

- Canada is the only Western nation that has an abundance of cobalt, graphite, lithium, and nickel, which are essential to creating the batteries and electric vehicles of the future.

" Critical minerals are the foundation on which modern technology is built upon. They're used in a wide range of essential products, from your mobile phone to solar panels to electric vehicle batteries to medical applications. By building critical mineral value chains, we can help supply the world with responsibly sourced products, mitigating the risk of global supply chain disruption."[73]

Climate Change Costs in Canada

Challenges to mineral and metal supply in the Americas

The supply of critical minerals that are either essential to energy transition or deemed important to the domestic economy is seen as high risk. Supply chains suffer from insufficient financing for resources, poor resource governance, and are vulnerable to disruption.[74] As a result, several countries, including Canada, are developing roadmaps to enable the resources sector to supply the growing markets for raw and refined critical minerals.

- "As clean energy technology becomes the latest frontier for geoeconomic rivalry, the security of supply chains for rare earths and critical minerals — essential materials for clean energy — has become a global strategic issue." [75]

- Recent geopolitical events, such as Russia's invasion of Ukraine, highlight the fragility of critical mineral supply and the need for Canada's partners and allies to diversify their sources. By ramping up critical mineral production and strengthening their affiliated value chains, Canada and its trusted international partners can reduce their dependency on high-risk imports in the face of high demand forecasts.

- Several factors can trigger a supply disruption including those that are caused by nature (like earthquakes) and those that are human-made (such as labour strikes and cyberattacks).

Critical Minerals and Links to Crime

As the demand for critical minerals rises, supply deficits may result[76] along with increased corruption and organized crime risks. Unlike the illegal trade in drugs and other illicit goods, natural resources are finite and cannot be replenished in a lab. As such, there is a sense of urgency to combat environmental crime. The presence of a limited number of critical minerals presents an opportunity due to skyrocketing prices on international markets.

- Organized criminal groups are diversifying into the mining sector creating new geographic threats emerging in countries with high criminality scores. Organized crime also threatens the supply chain in the transport, processing, and manufacturing of goods requiring critical minerals.

- The United Nations Office on Drugs and Crime indicates that illegal mining activities are increasingly "conducted by organized criminal groups and spearheaded by illegal mining syndicates."[77]

- The Global Initiative Against Transnational Organized Crime warns that criminal organizations might also be interested in harnessing the increasing prices of such minerals, which could pose a threat to both government and mining companies. Mexico, Brazil, South Africa, China, Peru, Indonesia, Vietnam and India have been identified as exposed to the highest levels of risk.[78, 79]

- In Canada, the theft of catalytic converters is on the rise. In one Southern Ontario district, 29 thefts were reported within a single month. Loose regulations mean that scrapyards do not have to enforce rules requiring them to ensure the catalytic converters were obtained legally.[80] The value lies in the precious metals used to make them — rhodium, palladium and platinum — which can be sold on the black market. In 2021, rhodium was worth about $19,000 an ounce — more than 10 times the value of gold — and palladium for $2,200 an ounce and platinum for $1,300 an ounce.[81]

Implications

The climate crisis is one of the most significant threats to environmental sustainability. In Canada, extreme weather events will continue to impact an increasing number of regions.

The climate crisis has significant implications for law enforcement, both in terms of the challenges it creates and the role that law enforcement can play in addressing it. Here are some examples:

1. **Disaster Response**
An increase in the frequency and severity of natural disasters will require police, fire, and emergency services to work together. The RCMP will increasingly need to respond, including evacuating people from affected areas, providing security and safety measures, and conducting search and rescue operations.

2. **Public Safety**
Increased risks to public safety, such as heatwaves, air pollution, and water scarcity can have significant health impacts. Community safety and law enforcement agencies can play a critical role in educating the public about these risks and ensuring that vulnerable populations are protected.

3. **Resource Allocation**
Increased natural disasters and other climate-related challenges will require additional resources and funding. The RCMP will also need to invest in new technologies and training to address the new challenges posed by climate change.

4. **Environmental Crimes**
Increased crimes related to the climate crisis, such as illegal dumping, wildlife trafficking, and carbon emissions fraud will require collaboration with environmental agencies to investigate and prosecute these crimes.

5. **Whole-of-System Response**
The increasing number and scale of environmental crises, will require greater attention to whole-of-system coordination and response.

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