



UNLOCKING THE FUTURE 5-YEAR HOUSING OUTLOOK CHAPTER 2: CLIMATE CHANGE

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with Intact Centre on Climate Adaptation and Smart
Prosperity Institute • July 2022



Executive Summary

Unlocking the Future: The Climate Chapter is the second chapter of a five-year outlook of Canada's housing market, developed by RE/MAX Canada in collaboration with Kathryn Bakos, Director of Climate Finance and Science at the Intact Centre on Climate Adaptation; and Dr. Mike Moffatt, Senior Director of Policy and Innovation at Smart Prosperity Institute.

The first chapter, The Economic Chapter was developed in collaboration with CIBC and The Conference Board of Canada and examined how the country's housing market might respond to economic scenarios between 2022 and 2027, specifically, interest rate hikes, annual immigration volumes and taxation.

The Climate Chapter examines how the country's housing market might respond to climate change-related scenarios between 2022 and 2027, such as floods, and wildfire, as well as severe storm events. According to the Insurance Bureau of Canada, the estimated trend of the overall costs of catastrophic losses has increased from approximately \$1 billion in 2005 to almost \$2.5 billion in 2021.¹

The impact on current and future homeowners is already being felt through displacement due to catastrophic events, higher insurance premiums and compromised liveability. Although mitigation measures will slow the rate of a changing climate, they will not reverse the impact thus far or prevent future change – which makes the implementation of adaptation measures, at the home and community level, that much more imperative.

Christopher Alexander, President at RE/MAX Canada, suggests that adaptation and mitigation strategies should be integrated into any national housing strategy. “These climatic stresses are increasingly colliding with federal and provincial government housing policies, which aim to significantly increase the country’s housing supply to rectify the chronic lack of inventory. Yet, the need to restore and retain green infrastructure, such as wetlands, and the immediate need to upgrade our hard infrastructure, particularly

sewage systems, coupled with a decline in developable areas due to extreme weather could make these goals difficult to achieve unless these factors are all integrated as one program. In the meantime, giving guidance to homeowners on how to take advantage of programs that already exist, such as the Climate Adaptation Home Rating program, in combination with things such as energy assessment, is important to share throughout the home-buying journey.”

A recent survey conducted by Leger on behalf of RE/MAX Canada found that 61 per cent of Canadians believe real estate is the best long-term investment they can make. Canadians do not see this changing over the next five years. However, when looking ahead to their future in 2027, **57 per cent of Canadians say that a key factor that will impact their housing location is climate change and the potential of weather-related events.**²

THE IMPACT OF MORE FREQUENT EXTREME WEATHER EVENTS

SCENARIO 1: By the end of 2022, governments advance bold and immediate investment and intervention in mitigating losses from extreme weather events.

“The immediate need to allocate a minimum of \$5.3 billion a year to the restoration and modernization of Canada’s green infrastructure, such as wetlands, grasslands and brown infrastructure, including sewage systems, among other initiatives, must become a priority for all levels of government,” says Dr. Mike Moffatt, Senior Director of Policy and Innovation at Smart Prosperity Institute.

As Moffatt notes, while Canada’s three levels of government don’t always “play nice in the sandbox” together, or act in concert expeditiously, some voters with homes, mortgages and rents could increasingly demand robust action. According to RatesDotCa, home insurance premiums rose 140 per cent in Alberta since 2011 and jumped 64 per cent in Ontario.³

The immediate financial risk climate change is having on the housing market is widely visible today, as six per cent—and

CANADA’S TOP 10 HIGHEST LOSS YEARS ON RECORD

(Loss and adjusted expenses in 2020 dollars)

RANK	YEAR	TOTAL LOSS (\$ billion)	NOTABLE SEVERE WEATHER EVENT
1	2016	5.403	Fort McMurray, Alberta, fire
2	2013	3.511	Alberta floods; Greater Toronto Area floods
3	1998	2.562	Quebec ice storm
4	2020	2.297	Fort McMurray, Alberta, flood; Calgary hailstorm
5	2018	2.176	Multiple events: Ontario and Quebec rainstorms and windstorms
6	2021	2.011	Calgary hailstorm; British Columbia floods
7	2011	1.787	Slave Lake, Alberta, fire and windstorm
8	2012	1.495	Calgary rainstorm
9	2019	1.416	Multiple events
10	2005	1.335	Ontario rainstorm

Sources 1983–2007: IBC, PCS Canada, Swiss Re, Deloitte. 2008–2021: CatIQ. ©2022 RE/MAX, LLC. Each Office Independently Owned and Operated. 22_304254

up to 10 per cent—of homes across Canada are already uninsurable for flood risk. Moreover, as we continue to build on floodplains that number will grow according to Kathryn Bakos, Director of Climate Finance and Science at the Intact Centre on Climate Adaptation.

So, where to allocate and invest \$5.3 billion per year, over the next five years, to help better protect current and future homeowners?

Bakos suggests the need to fix and modernize Canada’s aging and depleting hard (or “grey” and “brown”) infrastructure, and prioritize investing in retaining, restoring and rebuilding natural (or “green”) infrastructure. “We have been depleting and destroying our natural infrastructure for decades in the interest of urban development and we must now reverse and correct that damage to ironically protect much of what we’ve built,” she noted.

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Bakos, a climate adaptation researcher and Moffatt, a climate mitigation specialist, both advocate for focused governmental and private-sector investment in the retention and restoration of natural infrastructure such as wetlands, grasslands, forested areas, coastal marshes, dunes, etc. These natural systems are critical defences in a wide variety of extreme weather events, such as powerful rainstorms, and help protect residents and property situated within the respective ecosystems.

The average cost of repairing a home damaged by flooding runs at approximately \$40,000.⁴ This makes preventing the damage in the first place imperative to lowering risk, through measures such as retaining, restoring and rebuilding natural infrastructure and maintaining and modernizing built infrastructure.

Additionally, according to both Bakos and Moffatt, it’s all connected. As extreme weather events impact more communities across Canada and costs continue to rise, the probability that liveability is impacted will increase. Specifically,



200,000 people per year over the next five years are expected to move to Ontario.⁵

Population growth, coupled with climate change and land-use planning issues can all contribute to rising housing prices and limit the areas where people can live.⁶

if residents are being pushed out of certain neighbourhoods because the costs to fix their homes due to extreme weather risk damage has or will become restrictive. All of this could be amplified further through rising immigration levels and increasing demand.

According to Bakos, in parallel with the retention and rejuvenation of natural infrastructure such as wetlands and grasslands, governments at all levels need to invest in building and upgrading more comprehensive sewage run-off such as, sewer separation projects - the practice of separating combined pipe systems into separate sewers for sanitary and storm water flows - all the while distributing home flood protection information to homeowners to guide them on how to lower the risk of basement flooding. In coastal areas, particularly British Columbia, the Canadian Climate Institute says it is important to reinforcing dike infrastructure, with 96 per cent of dikes in the area having been assessed as too low. Although it is important to maintain these, it should not be the only measure taken. Managing vulnerable areas via land use planning and moving individuals out of high-risk areas is more effective in the long-term.⁷

“Right now, approximately six per cent of Canada’s housing market is at risk of a 1-in-100-year flood event and has been classified as essentially uninsurable. That number will only increase as we continue to build homes in floodplains and if we don’t fix our diversified infrastructure,” says Bakos. “Even homes located

outside the floodplains are still at risk of flooding. My rule of thumb is that if you live anywhere where it rains, you are at risk of flooding.”

According to the Leger survey, **25 per cent of Canadians worry that climate change will impact their home/neighbourhood and their home-buying journey over the next five years.**⁸

While governments and society work toward meeting longer-term carbon reduction goals to meet international commitments, these strategic adaptation investments in natural and hard infrastructure must be put into place now, to protect people and property while also mitigating soaring home insurance premiums.

The Government of Canada has committed to developing Canada’s first National Adaptation Strategy in collaboration with provincial, territorial and municipal governments, Indigenous Peoples and other key partners, with a goal to unite decision-makers across Canada, “through shared priorities, cohesive action, and a whole-of-Canada approach to reducing climate change risks.”⁹

However, according to Moffatt, investment needs to flow now and in tandem with any housing strategies to bring equilibrium to the demand and supply side of the market.

Moffatt even suggests that the federal government offer a “safety net” to homeowners who can no longer afford home insurance premiums, in order to protect them from a catastrophic loss—or in some cases, buy properties outright that fall within areas deemed too risky to live. Governments have already instigated buy-back programs in chronic flood zones, such as in Gatineau Quebec.

“It’s been encouraging to see provincial leaders and the federal government prioritize housing to meet the needs of our growing population, all while keeping affordability front and centre, but the lack of clear integration with climate change adaptation and mitigation investments, including addressing mounting insurance stresses, is concerning,” said Alexander.

Government investment in mitigating climate-change risks needs to flow now and in tandem with any housing strategies to bring equilibrium to the demand and supply side of the market.



DISCLOSURE OF PHYSICAL CLIMATE RISK

SCENARIO 2: Governments prioritize updating national flood maps, to help Canadians buying or selling a home assess risk more comprehensively.

While many residential real estate transactions are conditional on a home inspection to assess and confirm the potential risks assumed by the homebuyer, buyers and sellers have no such access to information regarding the property's climatic risk.

“Most of Canada’s flood maps are 20 to 25 years out of date,” says Bakos. “In order to protect the significant investment of homebuyers, we first need the most up-to-date information and then we need to integrate that information into the standard disclosure process when purchasing a home.”

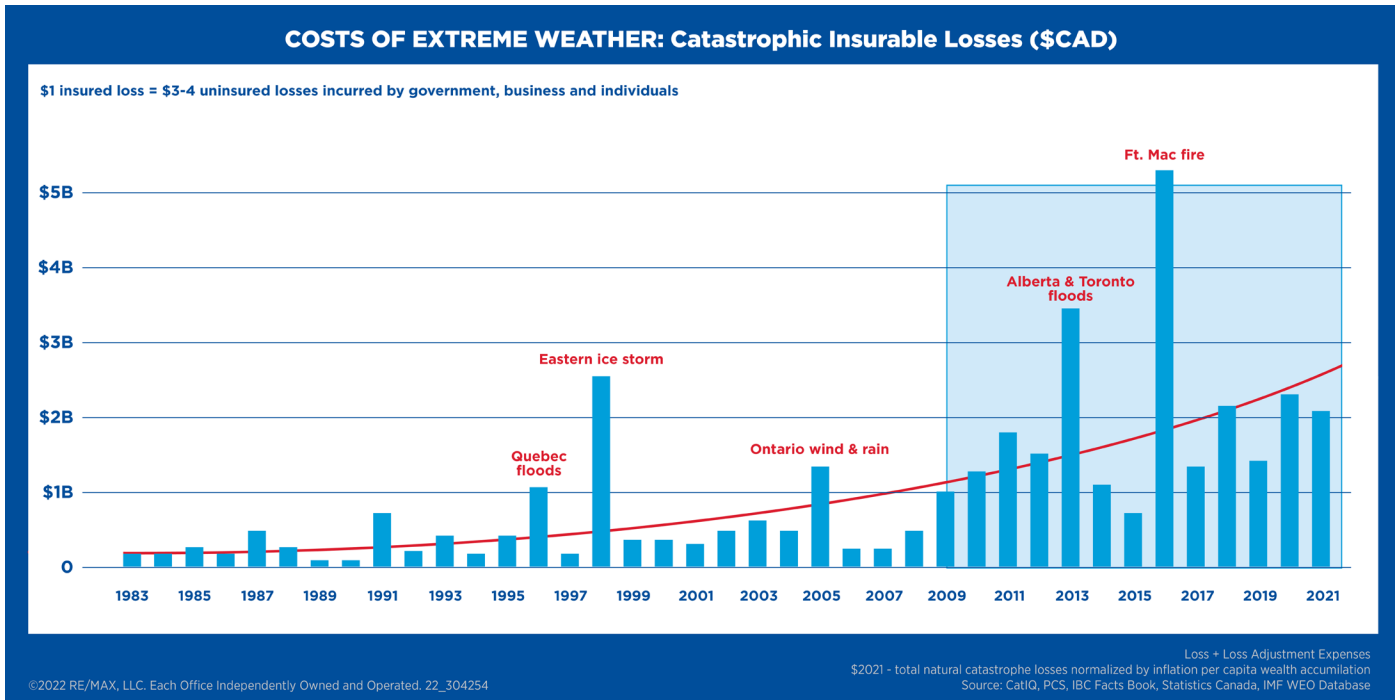
According to Moffatt, this initiative should be government led and then adopted by the real estate industry, once the mapping and data have been updated, to ensure homebuyers have the most complete picture of the risks, or lack thereof, of the property they’re considering purchasing.

According to the Leger survey, **49 per cent of Canadians are worried about the impact that forest fires, flooding and other weather-related events will have on their neighbourhood and community over the next five years.**¹⁰

As reported by The Canadian Institute for Climate Choices, real estate (all types) represents more than 75 per cent of Canada’s produced wealth.¹¹ To protect this wealth from the disruption of climate change, new levels of transparency in buying and selling homes should be considered.

A pan-Canadian study completed by the Intact Centre on Climate Adaptation investigated whether community-level flooding affects Canadian residential real estate (detached, semi-detached and row housing) in respect to average (a) sold price of a house, number of days on the market to sell a house, number of houses listed for sale, and (b) mortgage arrears and deferrals over a 10-year period (2009-2020). The study was conducted within a period of six months before and six months after each catastrophic (major) flood event and used a control situation to isolate for the effects of flooding. Communities that experienced a catastrophic flood between 2009 and 2020, within a six-month post flood time-frame, experienced¹²:

- **8.2 per cent reduction in average sold prices**
- **44.3 per cent decrease in listings**
- **19.8 per cent more time on the market**



Mortgage arrears and deferrals tended to fall within market norms, yet the study did show that loan-to-value would be impacted.

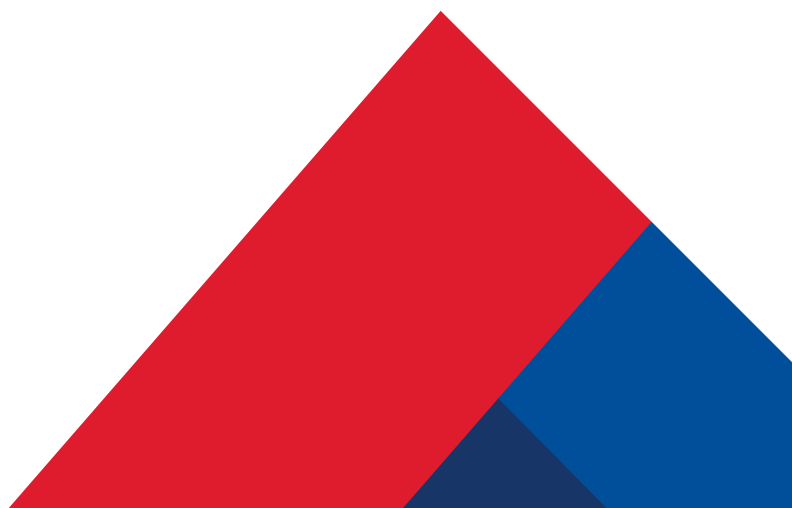
Yet, climate change risk is not a static condition. It's fluid. As climate patterns shift, infrastructure is modernized and other factors come into play, risk exposure may change. Some areas at risk now will move to resilience if adaptation measures are put into place and vice versa.

Nonetheless, should governments take the lead in significantly modernizing Canada's climate risk picture—through flood mapping—the integration of physical climate risk disclosure in real estate transactions, starting with appraisals, would help Canadians better

protect their financial future. Beyond their financial security, the quality of life they derive from their communities would also be continually sustained.

“In principle, adding physical climate risk to the list of disclosures is very logical. It would help residents across Canada identify areas and neighbourhoods of resilience, which could drive additional investment, stronger liveability, lower insurance premiums and a more resilient housing market in those regions,” says Elton Ash, Executive Vice President at RE/MAX Canada. “But for it to work as intended, the information must be current and robust, and adaptation and mitigation investments need to be advancing in lockstep.”

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Report Partners



Dr. Mike Moffatt, Senior Director of Policy and Innovation, Smart Prosperity Institute

Dr. Mike Moffatt is the Senior Director of Policy and Innovation at the Smart Prosperity Institute and an Assistant Professor in the Business, Economics and Public Policy group at Ivey Business School, Western University. Mike's research at SPI focuses on the intersection of regional economic development, building child-friendly, climate-friendly housing and communities, and clean innovation. In 2017, Mike was the Chief Innovation Fellow for the Government of Canada, advising Deputy Ministers on innovation policy and emerging trends. He has also previously held the titles of Director (Interim) of the Lawrence National Centre for Policy and Management, Directory of Policy at Canada 2020, and Chief Economist for the Mowat Centre at the University of Toronto. Mike has worked with politicians and policymakers of all political stripes in several countries to craft more effective public policy.



Kathryn Bakos, Director of Climate Finance and Science at the Intact Centre on Climate Adaptation

As Director, Climate Finance and Science, Kathryn assesses the impact of climate change on specific industry sectors and the broader capital markets. She is developing guidance to help investment professionals integrate climate change and extreme weather risk into forward-looking portfolio analysis to minimize associated risk. By extension, her research will influence companies to adapt to climate change in an effort to minimize risk/exposure.

Kathryn holds an Honours B.Sc in Biological Science, University of Toronto, specializing in Environmental Science and is a candidate for the Master of Environment and Business program at the University of Waterloo. In her previous role, Kathryn worked with an affiliate of Raymond James Financial, where she developed a strong understanding of financial principles and practices. While obtaining the Canadian Securities Course certification, Kathryn initiated and developed a framework for integrating Environmental, Social and Corporate Governance (ESG) factors into investment portfolios. She also led business analysis, and development of advisory and client platforms, across Canada and the United States. Kathryn also spent several years with the Insurance Industry in Canada. Kathryn speaks frequently to professional audiences, and she is a guest lecturer to graduate students at various universities. Kathryn is a member of the Ontario Biodiversity Council and Canadian Association of Farm Advisors, and Director of the Oak Ridges Moraine Land Trust Board of Directors.

About the Unlocking the Future Report

The 2022 RE/MAX Unlocking the Future Report includes insights from RE/MAX Canada partners Smart Prosperity Institute and Intact Centre on Climate Adaptation and is purely hypothetical. Insights were supplemented with research from a Leger consumer survey (details below).

About Leger

Leger is the largest Canadian-owned full-service market research firm. An online survey of 1,633 Canadians was completed between March 4-6 using Leger's online panel. Leger's online panel has approximately 400,000 members nationally and has a retention rate of 90 per cent. A probability sample of the same size would yield a margin of error of +/- 2.43 per cent, 19 times out of 20.

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