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2024 GLOBAL CLIMATE INSURANCE LOSSES

Canada Focus & Global Home Hardening Policy Scorecard

Which countries are keeping insurance affordable by future-proofing homes against climate risk?

Research Compiled By James Riley, Lightspark 2026.

Sources: CatIQ · IBC · Munich Re · Swiss Re · Aon · Brookings · EIOPA · WWF · RBC Economics · Statistics Canada · Mordor Intelligence

EXECUTIVE SUMMARY

The world crossed a threshold in 2024. Climate-driven losses are no longer periodic shocks — they are a permanent, accelerating structural cost. The insurance industry is repricing, retreating, and in some markets, disappearing altogether. The question is no longer whether losses will keep rising. It is whether governments and homeowners will act fast enough to stay insurable.

The scale of the crisis

- Global insured losses hit $137–145B in 2024 — the 3rd most expensive year on record and the 6th consecutive year above $100B.
- Total economic losses reached $318–368B; 57% ($181B) were uninsured — the largest protection gap ever recorded.
- Canada set its own record: $8.55B in insured losses — 12× the 2001–2010 average — driven by four catastrophic events in under 30 days.
- Climate-attributed losses are growing at 6.5% annually versus 4.9% for all insured losses. The gap is widening.

Who is solving it

- Countries with mandatory participation pools and verified home hardening programs are keeping insurance accessible and affordable.
- UK (Flood Re), Australia (Cyclone Pool), and Japan (JER) are Tier A leaders — they link premium discounts directly to verified retrofits.
- France, Spain, and Norway use mandatory national pools to cross-subsidize risk. The EU is building an EIOPA-led framework to scale this continent-wide.
- The common thread: property-level physical data that allows insurers to price risk reductions and pass savings to homeowners.

Canada's urgent gap

- Canada has no national flood pool, no mandatory nat-cat coverage, and no verified hardening-to-premium discount mechanism.
- The National Flood Insurance Program has been promised since 2021 — it is still not operational as of mid-2026.
- Home insurance premiums rose 31% nationally between 2021–2025, and up to 90% in Alberta over 10 years — far exceeding inflation.
- Ottawa proposes 3.9M new homes; ~500,000 would be built in high flood-risk zones without the resilience infrastructure to protect them.

Sources: CatIQ · IBC · Munich Re · Swiss Re · Aon · Brookings · EIOPA · Statistics Canada · C.D. Howe Institute · Mordor Intelligence

CANADA | The affordability crisis — what it means for homeowners

31%
National premium increase 2021–2025 (Stats Canada)

90%
Alberta increase over 10 years

$10K
Hail deductible minimum now common in AB

10%
Canadian households with uninsurable flood risk

$2.4B
Govt disaster relief spent in 2025 alone

Who is hit hardest

High-risk flood zones

1.5 million households face flood risk so severe they cannot access affordable insurance at all. Over 300,000 live in high or very high wildfire risk zones — including nearly 1 in 5 Indigenous reserves.

Prairie homeowners (Alberta / Saskatchewan)

Alberta premiums up 90% over 10 years. After the 2024 Calgary hailstorm, carriers introduced $10,000 mandatory hail deductibles and shifted to actual cash value settlements for roofs — dramatically reducing real-world payout value.

Atlantic Canada

Nova Scotia premiums up 12.12% year-over-year (2025–2026). Newfoundland up 11.1%. Atlantic homeowners face some of the sharpest per-capita increases in the country, driven by flooding and aging housing stock.

Renters and middle-income households

Home insurance cost increases are passed indirectly to renters through rents. For middle-income households, insurance now competes directly with mortgage payments — especially at renewal, where 60% of Canadian mortgages renew by end of 2026.

What it's doing to the market

Insurers are rebalancing away from risk

TD and Definity Financial have both publicly stated they are rebalancing their books away from high cat-risk concentrations. Canada has not yet seen the coverage 'deserts' spreading across the US, but the market is tightening.

Deductibles are structuring in risk transfer

Aviva's mandatory $2,500 water damage deductible (2024) is now spreading industry-wide. Deductibles are effectively transferring the first layer of loss back to homeowners — without giving them tools to reduce that risk.

The gap between insured and economic loss is widening

For every dollar of insured flood loss, there are an estimated two dollars of uninsured damage borne by households and taxpayers. This ratio worsens as private insurers tighten and no public backstop exists.

Mortgage market exposure is growing

OSFI Guideline B-15 requires banks to assess and disclose physical climate risk. As uninsurability rises in high-risk zones, mortgage lenders face collateral risk — potentially rendering uninsured homes un-mortgageable.

Sources: IBC · Statistics Canada · Pembina Institute · Insurance Business Canada · OSFI Guideline B-15 · C.D. Howe Institute · Ratehub

CANADA | Situation brief & key themes

Canada's $8.55B loss year was not a one-off event. It was the culmination of a decade-long acceleration — and a warning that the country's insurance market is approaching a structural breaking point without the policy tools to arrest it.

01

Losses are accelerating, not stabilizing

Seven of Canada's top 10 loss years have occurred in the last decade. The 2024 total of $8.55B is 12× the 2001–2010 annual average of $701M. The P&C industry actually lost money on home insurance in both 2023 and 2024 — a structural signal, not a bad year.

02

Premiums are outpacing inflation everywhere

National home insurance costs rose 31% between 2021–2025 — double the rate of general CPI inflation. Alberta is up 90% over 10 years; Ontario 84%. Deductibles for water damage ($2,500+) and hail ($10,000) are now mandatory at major carriers — costs shifting directly to homeowners.

03

Policy response is real but critically delayed

The National Flood Insurance Program was first promised in 2021 and budgeted in 2023 and 2024. As of June 2026, it remains non-operational. FireSmart ($100M+) is active but not linked to premium discounts. The National Flood Risk Portal is still being built. Canada lacks the institutional plumbing that Tier A countries built a decade ago.

04

The affordability crisis is structural, not cyclical

CD Howe Institute research shows Canadians pay some of the world's highest home insurance premiums, partly because Canada has no disaster risk-sharing framework between insurers and government. Without a pool, a hardening incentive, or a risk portal, the market will keep adjusting prices upward — with no mechanism to reward homeowners who mitigate.

CANADA | Record $8.55B in insured losses — 2024

$8.55B
Total insured losses
All-time Canadian record — CatIQ

12×
vs. 2001–2010 avg
Average was $701M/yr that decade

+38%
vs. prior record
Previous record: $6.2B in 2016

273K+
Total claims filed
50% more than a full-year norm

Four events entered Canada's all-time top-10 list — in under 30 days

2nd costliest ever
Calgary hailstorm
Aug 2024
$3.0B insured
Most expensive hailstorm in Canadian history — $3B in just over one hour across metro Calgary.

3rd costliest ever
Hurricane Debby remnants
Quebec
$2.4B insured
Historic rainfall and flooding across Quebec and Eastern Ontario. Over 100,000 claims.

9th costliest ever
Jasper wildfire
Jul 2024
$1.1B insured
~30% of Jasper townsite destroyed. One of the most damaging wildfire events in Canadian history.

10th costliest ever
Southern Ontario floods
Jul 2024
$990M insured
Severe summer storms, basement flooding across GTA. Combined July–Aug losses: $7B+ in 27 days.

Source: CatIQ · Insurance Bureau of Canada (IBC) · January 2025

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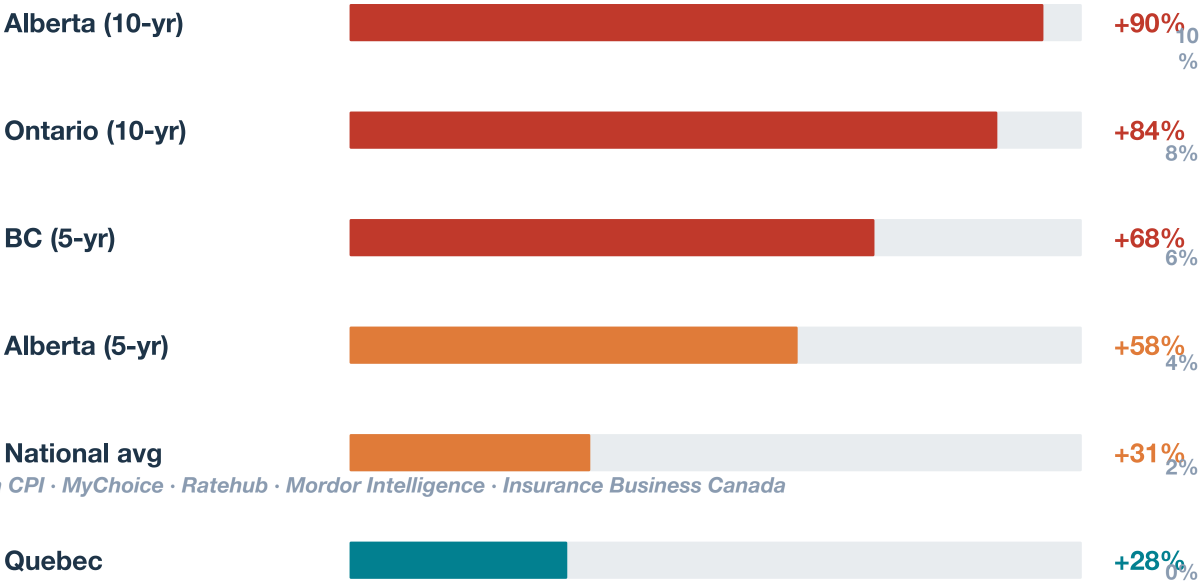
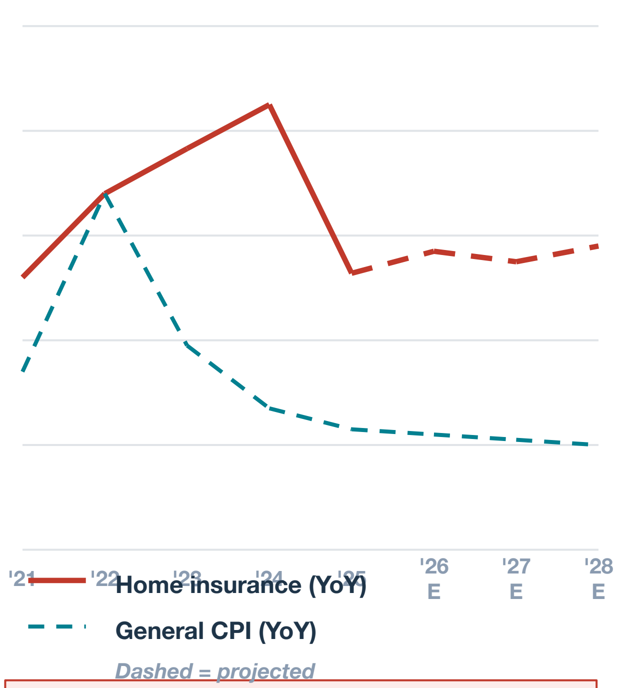
CANADA | Premium surge & deductible hardening — 2021 to 2028

Cumulative premium increases by province (2021–2025)



Canada CPI · MyChoice · Ratehub · Mordor Intelligence · Insurance Business Canada

Year-over-year premium increase vs. CPI (national)



Deductible hardening — what's already in market

Water damage min.	$2,500

Aviva Canada mandatory min. (2024); spreading industry-wide to all water perils

Hail deductible (AB)	$10,000

Now common in Alberta hail belt; some policies shifting to % of insured value

Premium growth rate	5–7% p.a.

Forecast trajectory 2026–2028; far above 2% general CPI inflation

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CANADA | Policy response scorecard — what's working, what's stalled

STALLED

National Flood Insurance Program (NFIP)

Budgets 2021 · 2023 · 2024 · $450M pledged · Target: Apr 2026

Would cover 1.5M high-risk households with standardized, affordable flood coverage through existing home insurance policies. A federal reinsurance entity (CMHC subsidiary) would backstop private insurers. FPT Working Group formed Jan 2025 to finalize design. As of June 2026 — still not operational. BC's Emergency Management Minister: 'The program appears to be stalled.' CD Howe Institute: Canada pays among the world's highest home insurance premiums partly due to absence of a disaster risk-sharing framework.

ACTIVE

FireSmart Program

$100M+ committed federally + provincially in 2025

Community-level wildfire risk reduction — vegetation management, firebreaks, homeowner preparedness kits. Priority in BC, Alberta, and northern Indigenous communities. 52,000 wildfire evacuees registered by Canadian Red Cross in 2025 alone. Program is operational and scaling, but not yet linked to measurable premium discounts for individual homeowners who comply.

PARTIAL

National Flood Risk Portal

$15.3M · 3-year build · Launch target: 2025–26

Public-facing risk index by municipality showing flood risk type and severity. Includes guidance on property-level risk reduction actions. Critical data infrastructure that Canada currently lacks — comparable to EU's EIOPA PROTECT tool proposed in Dec 2025. When live, could enable risk-based incentive programs. Not yet operational; no confirmed live date.

ADVOCACY

IBC 6-Point Action Plan (2025–2026)

Insurance Bureau of Canada · Not yet legislated

(1) Ban new builds in highest-risk floodplains. (2) Require flood-resilient construction where building in flood zones is unavoidable. (3) Invest in modernizing stormwater/wastewater infrastructure. (4) Update building codes for flood and fire resilience. (5) Scale up home retrofit grant programs with measurable premium linkages. (6) Ottawa's proposed 3.9M new homes includes ~500K in high flood risk zones and 200K+ in high wildfire risk zones — IBC calling this out as a critical planning failure.

Sources: IBC · Public Safety Canada · The Narwhal · Policy Options (C.D. Howe) · MyChoice · Pembina Institute

CANADA SCORECARD | Reading the policy landscape

The scorecard on the following slide measures Canada against 11 other countries across five criteria. Here is the evaluative frame:

1
Grants & subsidies
Does the government fund property-level hardening upgrades directly? Roof retrofits, flood barriers, seismic reinforcement.

2
Mandatory programs
Is participation in nat-cat coverage or a risk pool mandatory for all homeowners? Breadth prevents adverse selection and stabilizes premiums.

3
Premium discounts for retrofits
Can a homeowner who hardens their home access a verified, measurable premium reduction? This is the critical missing link in Canada.

4
Regulatory requirements
Are building codes, flood-zone restrictions, and land-use rules enforcing resilience at the point of construction — not after the fact?

5
Risk-prevention mandates
Are municipalities, provinces, or the federal government required to produce and implement adaptation plans — with consequences for inaction?

Canada's verdict: Tier C · No mandatory pool · No premium–hardening linkage · NFIP stalled since 2021 · Highest premiums in the developed world without a risk-sharing framework (CD Howe)

Source: Brookings Institution · IBC · C.D. Howe Institute · Insurance Business Canada

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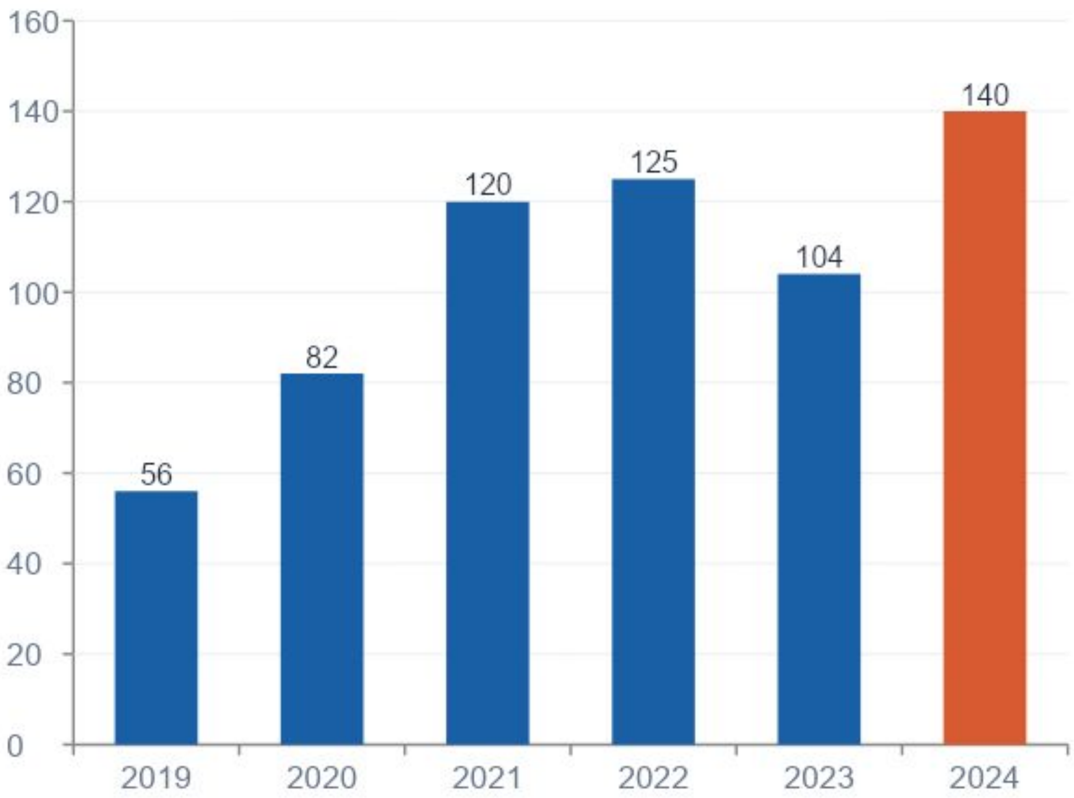
EXECUTIVE SUMMARY | Global picture

$318–368B	**$137–145B**	**$181B**	**78%**
Total global economic losses	Total global insured losses	Protection gap (57% uninsured)	US share of all insured losses

Key Findings

- 2024 was the 9th consecutive year global nat-cat losses exceeded $300B — and the 3rd most expensive year on record for insured losses.
- Severe convective storms drove 41% ($64B) of all insured losses. Hurricanes Helene & Milton alone caused ~$95B in total damage.
- The global protection gap reached $181B — 57% of losses were uninsured, exposing households and governments to enormous fiscal risk.
- Canada shattered its own record with $8.55B in insured losses — 12× the 2001–2010 average, with 4 top-10 events in under 30 days.
- Europe lost $31B to natural disasters, anchored by Spain's Valencia floods — now a catalyst for EU-wide mandatory nat-cat insurance reform.
- Climate-attributed losses are growing 6.5% annually vs. 4.9% for all insured losses — the gap is widening, not narrowing.
- Countries linking insurance affordability directly to verified home hardening programs are demonstrably outperforming those relying on markets alone.

INSURED LOSS TREND | Global 2019–2024



$140B insured

3rd most expensive year ever

6th year > $100B

New normal — not an anomaly

+35% vs 5yr avg

Annual growth trend: 5–7%

60% uninsured

Largest protection gap on record

2024 bar highlighted — highest insured loss year since 2017 (Harvey/Irma/Maria) | Source: Munich Re · Swiss Re · Aon

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COUNTRY SCORECARD | Home Hardening & Insurance Affordability

Tier A — Operational programs   Tier B — Structural pools   Tier C — Emerging

Country	Tier	Key Program(s)	How It Keeps Insurance Affordable
🇬🇧 UK	A	Flood Re + Build Back Better	Up to £10,000 per claim for resilience upgrades. 80% of claimants cut premiums >50%. 265,000+ policies covered.
🇦🇺 Australia	A	Cyclone Pool + ICA Retrofit	Mandatory cyclone pool with premium discounts for verified roof retrofits, window & door upgrades.
🇯🇵 Japan	A	Japan Earthquake Reinsurance	Seismic retrofits earn embedded premium discounts. Govt grants fund upgrades. Near-mandatory participation.
🇫🇷 France	B	CCR (Arundo Re)	State reinsurer; municipalities without risk-prevention plans face higher deductibles — incentivizes local hardening.
🇪🇸 Spain	B	Consorcio de Compensación	Nat-cat coverage mandatory on all property policies. Broad pools keep premiums low; Valencia 2024 accelerating reform.
🇳🇴 Norway	B	Natural Perils Pool	All property insurers must participate. Mandatory breadth stabilizes pricing. Public flood mitigation reinforces resilience.
🇺🇸 USA	B–	IBHS FORTIFIED / State grants	Alabama, SC, Florida: FORTIFIED-standard roof grants. CA ties wildfire hardening to premium incentives. No federal mandate.
🇩🇪 Germany	C	Post-2021 reform proposals	2021 Ahr floods prompted mandatory nat-cat debate — stalled. No national pool yet. Champions EU Global Shield globally.
🇨🇦 Canada	C	NFIP (stalled) + FireSmart	NFIP promised since 2021 — not yet operational. FireSmart $100M+ active. No premium-hardening linkage. Highest premiums in world (CD Howe).

Source: Brookings Institution · EIOPA · IBC · Munich Re · Swiss Re · C.D. Howe Institute

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TIER A LEADERS | UK · Australia · Japan

Countries that operationally link verified home hardening to insurance premium relief

🇬🇧 United Kingdom

Flood Re + Build Back Better

- £10,000 per claim for resilience upgrades
- 265,000+ policies covered
- 80% of claimants cut premiums >50%
- 99% of high-risk homes can now get quotes (vs. <10% before)

How it works:

State reinsurer caps flood premiums for high-risk homes. 'Build Back Better' pays for upgrades (raised sockets, flood doors, waterproof floors) on top of claim repairs. Scheme runs to 2039.

🇦🇺 Australia

Cyclone Reinsurance Pool + ICA

- Mandatory pool — all insurers participate
- Verified roof retrofits earn premium discounts
- Window & door upgrades covered
- ICA called for $20B+ national resilience fund

How it works:

Mandatory cyclone pool with standardized premium discounts for verified mitigation. Insurance Council of Australia pushing grants for flood, cyclone, and bushfire hardening retrofits.

🇯🇵 Japan

Japan Earthquake Reinsurance (JER)

- Seismic retrofits earn embedded premium discounts
- Govt grants fund earthquake hardening
- Near-mandatory participation
- Premium discounts for earthquake-resistant construction

How it works:

Earthquake-resistant construction earns direct premium discounts in the national scheme. Government grants subsidize seismic retrofits. Nearly mandatory participation creates broad, stable risk pools.

EU EMERGING FRAMEWORK | The Regulatory Frontier

Europe is building the institutional architecture — 2024–2025 saw three landmark initiatives:

2024

EIOPA + ECB Proposal

EU-wide public-private reinsurance scheme + EU disaster fund to pool nat-cat risk across all member states. Designed to close protection gaps and directly incentivize local property hardening — filling the role the US has no federal equivalent for.

Dec 2025

EIOPA PROTECT Tool

Free EU-wide tool giving every property owner a natural catastrophe risk score for their building. Shows exactly which retrofits reduce vulnerability and premium costs — the critical 'last mile' link between policy and household action.

2025

Italy Mandatory Nat-Cat

Italy launched mandatory nat-cat insurance for all businesses — a first for Southern Europe. Demonstrates the trend toward mandated coverage spreading beyond Northern European nations. Residential next.

Ongoing

Spain Post-Valencia Reform

October 2024 Valencia floods killed 200+. Political momentum now building for upgraded resilience requirements, stricter flood-zone building rules, and expanded Consorcio coverage — a real-time policy response to a major event.

The missing ingredient everywhere: property-level physical data connecting building characteristics to risk pricing.

GLOBAL ANALYSIS | What the data shows

The following slides present the global picture in four layers:

01

Insured loss trend — 2019 to 2024

Six years of global insured nat-cat losses showing the step-change from the 2021 inflection point onward. 2024's $140B marked the 6th consecutive year above $100B — the new structural baseline.

Key driver: severe convective storms ($64B, 41% of total). 2024 bar highlighted in red.

02

Country scorecard — 12 nations ranked

A tiered assessment of which countries are operationally linking verified home hardening to insurance premium relief (Tier A), which have structural pools but weaker incentives (Tier B), and which are still catching up (Tier C including Canada).

Scoring covers: grants/subsidies · mandatory programs · premium discounts · regulatory requirements.

03

Tier A leaders — UK, Australia, Japan deep dive

Three countries that have built functioning feedback loops between property-level hardening verification and measurable premium reduction. Each operates a different model; all share one asset: granular property data.

UK Flood Re · Australia Cyclone Pool · Japan Earthquake Reinsurance (JER).

04

EU emerging framework

Europe is constructing the institutional architecture for a continent-wide approach: EIOPA + ECB public-private reinsurance proposal, the PROTECT risk-score tool, Italy's mandatory nat-cat rollout, and Spain's post-Valencia reform momentum.

The missing ingredient everywhere: property-level physical data connecting building characteristics to risk pricing.

Followed by: Conclusions & Implications · Appendix: Sources & References

CONCLUSIONS & IMPLICATIONS

01 The $181B protection gap is a policy failure, not a market failure

Countries with **mandatory** participation pools and verified hardening incentives keep premiums affordable. The gap grows where governments leave it to markets. Canada exemplifies this — no pool, no premium linkage, world's highest premiums (CD Howe).

02 Home hardening is the highest-ROI intervention

UK data shows £1 spent on flood defence saves £7 in claims. Verified retrofits (FORTIFIED roofs, flood doors, seismic upgrades) directly reduce loss ratios — and **premiums follow**. Canada has the programs in name (FireSmart) but not in pricing mechanics.

03 Property data infrastructure is the missing link

Tier A programs succeed because they can verify hardening at the property level, price the risk reduction, and pass savings to homeowners. Without granular property data, incentive programs cannot function at scale.

04 Canada is exposed — and the window is closing fast

$8.55B in 2024, $2.4B in 2025. NFIP stalled since 2021. Premiums up 31% nationally (2021–25), up 90% in Alberta over 10 years. Ottawa plans 3.9M new homes — 500K in high flood zones. The structural intervention Canada needs already exists in 10 other countries.

See appendix for full source references

APPENDIX | Sources & References

LOSS DATA

CatIQ (Jan 2025). Canadian insured losses total CAD $8.5B in 2024. catiq.com

IBC (Jan 2025). 2024 shatters record for costliest year — $8.5 billion. ibc.ca

Munich Re (Jan 2025). Global disaster losses 2024 at $320B. munichre.com

Aon (Jan 2025). 2025 Climate and Catastrophe Insight report. aon.com

Swiss Re Institute (2025). sigma 1/2025: insured losses on trend to USD 145B in 2025. swissre.com

CANADA — POLICY

Public Safety Canada (2025). Mitigating Disaster Risks — Question Period Notes. canada.ca

IBC (2024). Pre-Budget Consultations — National Flood Insurance Program. ourcommons.ca

The Narwhal (Aug 2025). Will the feds finally approve a flood insurance program? thenarwhal.ca

Brennan, J. (Jul 2025). Ottawa must fund a national flood insurance program. policyoptions.irpp.org

Pembina Institute (Nov 2025). How governments and insurers can lower soaring home insurance costs. pembina.org

RBC Economics (Jun 2025). What costly natural disasters mean for Canada's economy. rbc.com

CANADA — PREMIUMS & DEDUCTIBLES

Statistics Canada. Shelter CPI — home and mortgage insurance rates. statcan.gc.ca

MyChoice Financial (Apr 2026). Home Insurance Outlook 2026 — 4.01% national increase. mychoice.ca

Ratehub (May 2026). How has inflation affected home insurance in Canada? ratehub.ca

Mordor Intelligence (Jan 2026). Canada Home Insurance Market Size & Trends 2031. mordorintelligence.com

Insurance Business Canada (Feb 2026). Canada's home insurance market tightens as climate losses bite. insurancebusinessmag.com

Harvard Western Insurance (Feb 2026). $9.4B Record Claims: Why home insurance is rising in 2026. harvardwestern.com

GLOBAL POLICY — HOME HARDENING

Brookings Institution (Mar 2026). Public natural catastrophe reinsurance: What other countries do. brookings.edu

Brookings Institution (Mar 2026). What incentives are states offering to make houses less vulnerable? brookings.edu

EIOPA (Dec 2025). EIOPA proposes natural catastrophe risk scores — PROTECT tool. eiopa.europa.eu

EIOPA / ECB (Dec 2024). Towards a European system for nat-cat risk management. ecb.europa.eu

Swiss Re Institute (Mar 2026). Adaptation and insurance: strategies to narrow the protection gap. swissre.com

Flood Re (2024). Build Back Better — property flood resilience funding. floodre.co.uk

Insurance Council of Australia (2025). Retrofitting — Building a More Resilient Australia. insurancecouncil.com.au

WWF (Jan 2026). Extreme weather risks push US insurance system to breaking point. worldwildlife.org

Center for American Progress (Mar 2026). Managing the Climate Change-Fueled Property Insurance Crisis. americanprogress.org

NAIC (Aug 2025). First national climate resilience strategy for insurance. naic.org

Green Central Banking (Dec 2024). Increasing climate losses threaten insurance and financial stability. greencentralbanking.com

Earth.org (2025). Escalating climate events reshaping the insurance market. earth.org

All references accessed 2024–2026. Data from third-party sources; figures may vary between reporting agencies due to methodology and inflation adjustments.