



Addressing the Protection Gap

Through Public/Private Partnerships
& Other Mechanisms

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How Do We Define the Protection Gap?

- The term ‘insurance protection gap’ refers to the gap between the insured and actual economic losses caused by large scale catastrophic events.
- Quantifying the uninsured and underinsured losses.
- According to Guy Carpenter, “Underinsurance for natural catastrophe events has increased over time and the resulting economic and insured losses have grown on average by about 5% annually since 1999.”

A Global Look at the Protection Gap by the #'s

Total coverage gap (all lines):

USD 162.5bn

(source: Lloyd's of London, 2019)

The future protection gap is estimated at more than

USD 150bn

p.a. or about 0.25% of global GDP

(source: Swiss Re, 2019)

In 2017, the global catastrophe protection gap was USD 195bn, or approximately 59% of total economic losses of

USD 330bn

(source: Geneva Association, 2018)

70%

of Nat Cat losses globally were uninsured between 1980 and 2017

(source: Geneva Association, 2018)

A Domestic Look at the Protection Gap

According to the NAIC:

Only 1%

of properties outside of flood zones have flood insurance, yet half of US floods occur outside these areas.

Most small businesses do not have flood insurance.

According to [FEMA](#) :

40% go out of business after a disaster

Take up rates of NFIP insurance were:

<1% across the Midwest [\(AM Best\)](#)

Wildfire Losses added up to:

\$20Billion

In 2017 and 2018

Process to Address the Gaps

1 Identify the causes of the Protection Gap

2 Identify where risks can be avoided

3 Identify how risk can be mitigated

4 Identify challenges to implementation

5 Identify how risk can be transferred

1 Identify the Causes of the Protection Gap

- **Consumer behaviour:**
 - “Moral Hazard” – Do not buy coverage due to belief that Government will cover costs of catastrophe event (despite government relief provided generally purely ‘survival’)
 - Studies show that insurance purchases for flood, wildfire etc increase in the immediate year post-event yet, renewals gradually drop in subsequent years in the absence of further disaster events (average of 9 years)
- **Lack of clear consumer education:**
 - Lack of true understanding of the risk & tendency to under-estimate vulnerability to disaster risk
 - According to the Army Corps of Engineers, a home owner in a special flood hazard area has **a 26% percent chance** of experiencing a base flood in a 30-year period, the average length of a mortgage.
 - Solution: Product Development and Consumer Choice: Need better government policies to encourage homeowners and businesses to protect themselves against these risks. More coverage options with better terms are necessary.
 - Lack of clarity around terms of coverage of the policy i.e. belief that a standard homeowner policy covers flood and quake
- **Economic – including affordability:** Clear & consistent barrier to obtaining coverage. Solutions: Provide assistance for policyholders through means-testing and consider risk-based pricing.

Causes of the Protection Gap

As an industry, we need to help people understand their catastrophic event exposures, the potential risks, and their impact so they can make informed decisions. That's why it's imperative for the industry to provide data and tools to agents/brokers to make it easier for them to explain catastrophic event risk to their clients and distribute policies

2 Identify Where Risks Can Be Avoided

- Since 1980, 246 weather-related disasters in the United States caused at least \$1 billion in damages each.
- Damage from there “billion-dollar disasters” together totaled over \$1.6 trillion¹.



Flood



Earthquake



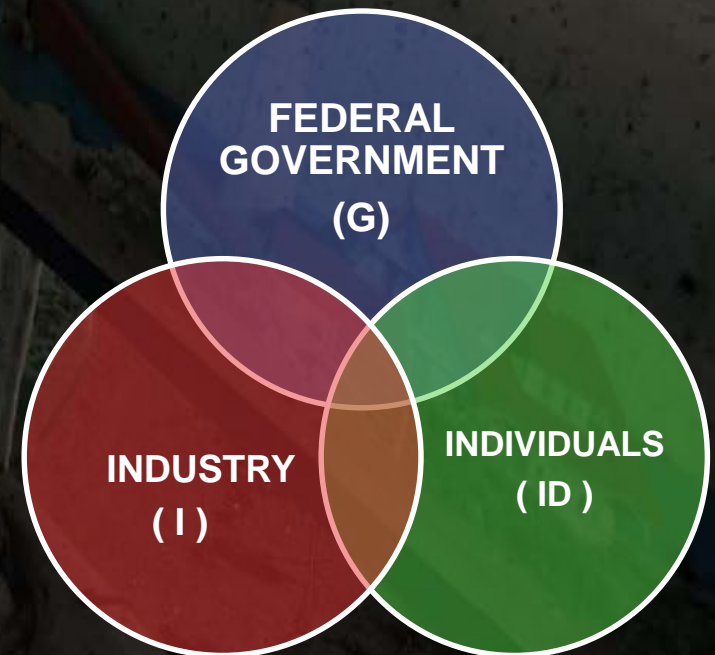
Wildfire



Wind

3 Identify How Risks Can Be Mitigated

- **Adhere to recommendations from the National Mitigation Investment Strategy.**
- **The Investment Strategy's purpose is to increase the nation's resilience to natural hazards through more effective, efficient mitigation investment.**



Goals and Recommendations for Mitigation

Goal 1: Demonstrate How Mitigation Investments Reduce Risk Through Effective Education (G, I & ID)

- Making Risk Mitigation Relevant to Community: This can be achieved by tying mitigation investment to community values.
- Building Community Capacity & Consumer Education: This can be done through education and training resources . Examples include: (i) identify a Chief Resilience Officer, (ii) create and partner with government agencies to develop education materials.
- Develop Universally Accepted Mitigation Measures: This can aid in decision-making for mitigation investment, and may increase the efficacy of Public Private Partnerships, which play a critical role in managing risk.
- Educate Policymakers: Demonstrate that every dollar spent on mitigation and model codes saves several dollars in post-event costs. For example, the Federal Government appropriated nearly \$140 billion nat cat related expenses in 2017 (Approximately 18% 2018 fiscal deficit).

Goal 2: Coordinate Investment in Mitigation to Reduce Risk (G&I)

- Information Sharing, Access and Availability to Risk Information: Create a central repository or website with state/local resources, and share information between government and industry. This will make mitigation strategies more effective. For example, FEMA has begun to share certain flood data with the private sector, however, greater detail and scope is needed to facilitate more private participation in market.
- Alignment of Program Requirements and Incentives: Where possible, the Federal Government and nonfederal partners should align strategies and funding opportunities to prioritize risk-based investments—as noted in the Disaster Recovery and Reform Act of 2018.
- Easier to Access to Mitigation Funding: Where possible, the Federal Government and nonfederal partners should simplify mitigation funding processes, coordinate co-funding, and encourage plan integration.
- Coalition Building: Partner on mitigation and resiliency efforts with relevant bodies.

Goal 3: Financial incentives to implement mitigation measures (G&I)

Incentives may include:

- Direct government subsidies (G)
- Tax Benefits (G)
- Risk-based insurance pricing so that premiums may change to reflect any reduction in risk. (G & I)
- Encourage Fannie Mae, Freddie Mac and their regulators to adjust mortgage rates to facilitate the purchase of appropriate nat cat insurance coverage, including flood. (G)

Goal 4: Make Mitigation Investment Standard Practice (G)

- **Building Codes**: Encourage communities to adopt and enforce up-to-date codes: <https://buildstrongamerica.com>.
- **Zoning**: Develop and enforce land use policies that restrain growth in high-risk areas i.e. (i) Landscaping regulations to mitigate against wildfires and; (ii) Fuel load reductions to reduce wildfires.
- **Critical Infrastructure**: Strengthen critical infrastructure lifelines and consider value of proactive mitigation.
- **Mandated Insurance**: Laws mandating certain types of coverage and at certain thresholds (i.e. flood insurance within certain flood zones).
- **Government Backstop Programs**: These backstops can facilitate private sector insurance solutions likely to include partial coverage options.

Goal 5: Effective Use of Traditional Industry Solutions and Innovative Products to Increase Transparency (I)

- Increase Take-up Rate of Traditional Products: Educate consumers about the effective insurance products readily available in the marketplace. Agent training and increased marketing can increase consumer awareness about their coverage options.
- Innovative Products:
 - Microinsurance
 - Parametrics
 - On-demand Insurance
- New and Enhanced Digital and Mobile Technologies: These technologies help to promote affordability, awareness and product appeal.
- Product Design: Embrace the latest technologies to focus on developing appropriately regionalized models to assess the risk posed by the perils.
- Product Transparency: Homeowners policies should have explicit disclaimers on what is included/non included for specific perils. For example, earthquake and flood coverage not included in most homeowners policies.

4 Identify the Challenges to Implementation

Increased Risk-Based Pricing (reflecting mitigation and/or increased risk) : may exacerbate other issues surrounding take-up of insurance in terms of availability and affordability. Need to find balance between viability & affordability to ensure participation in high risk areas

Data Collection: Needs more specificity including to be sufficiently geo-referenced, with a broad range of indicators such as critical infrastructure, details of claims i.e. recently released FEMA data does not provide high geographic specificity or reflect certain aspects of claims such as the frequency of an event.

Implementation of Hazard Conscious Building Codes: Can be patchy at local level due to limited resources, lack of coordination, lack of active enforcement. Codes and standards may vary within states and regions. Possible Solution: consider minimum uniform standards

Not enough focus on mitigation across all hazard levels and frequency: Solution: need to customise mitigation efforts to account for all possible consequences across all possible hazard levels not just on mitigating extreme events / “1/100 year event”

Proposal of Mandated Insurance: May be unpopular, enforcement can be difficult, may make it less affordable, does not solve areas outside designated areas e.g. NFIP - a house just 1km outside a high hazard flood risk area does not have to purchase flood insurance. Also difficult for communities to know if mitigation efforts required under the NFIP program are being sufficiently enforced.

Mandatory Offering (Such as CEA): Consumers may continue to perceive themselves as not at risk due to lack of education and consumer behaviour, while pricing may be a deterrent leading to further poor take-up rates.

Behavioural Factors: Research suggests that along with peoples’ tendency to under-estimate the risk of low-probability events, people do not tend to purchase against low probability and high-loss events, *even if* this is offered at favourable premiums (Holzheu & Turner, 2017)

5 Identify How risk can be Transferred

According to a paper from the Progressive Policy Institute:

“The expanded use of private risk transfer activities could be a valuable tool for protecting taxpayer dollars. A March 2019 report by the Government Accountability Office (GAO) identified as many as 148 programs providing “federal insurance and other activities that transfer risk or losses from adverse events to the government.”

“...aggregate liability are substantial, and that more agencies should have the authority to consider and, if appropriate, enter into reinsurance agreements or other arrangements that spread some of this risk to willing private actors.

According to the NMIS study:

“There are new and expanded public and market-based financial products and funding approaches available that can better support distributing the cost of mitigation across both the Federal Government and nonfederal partners.”

Options to Transfer or Share Risk (G & I)

- Reinsurance

Encourage the use of traditional reinsurance products. The effectiveness of the NFIP's reinsurance program is just one example of how federal insurance, loan or loan guarantee programs protect taxpayers.

- Environmental impact bonds, pay-for-performance models, and insurance-linked securities reduce risk and deliver returns for investors

For example, risk transfer occurred after Superstorm Sandy when New York City's Metropolitan Transportation Authority issued \$200 million of catastrophe bonds. Catastrophe bonds transferred catastrophic risk from New York City's Metropolitan Transportation Authority to the capital markets³⁹ and provided additional financial protection against storm surge².

- Catastrophe bonds have also transferred risk for earthquakes³ and wind⁴.

The Federal Government and nonfederal partners should consider the costs and benefits of all available financial products to transfer and reduce risk, and promote leading practices in their use.

Sources:

National Mitigation Interments Strategy <https://www.fema.gov/media-library-data/1565706308412-19739d7deeca639415cc76c681cee531/NationalMitigationInvestmentStrategy.pdf>

(1) Billion Dollar Weather and Climate Disasters: Overview,” National Oceanic & Atmospheric Administration (NOAA) National Centers for Environmental Information (July 9, 2018), <https://www.ncdc.noaa.gov/billions/>. This figure does not include the billions of dollars of additional damage caused by less costly weather events.

(2) 39 Federal Insurance Office, U.S. Department of the Treasury, The Breadth and Scope of the Global Reinsurance Market and the Critical Role Such Market Plays in Supporting Insurance in the United States, at p. 39 (December 2014), <https://www.treasury.gov/initiatives/fio/reports-and-notices/Documents/FIO%20-Reinsurance%20Report.pdf> (defining catastrophe bonds and other alternative reinsurance instruments).

(3) Gissing, Andrew (2017) “Disaster Risk Management: Australian Challenges”:
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(4) Holzheu, Thomas & Turner, Ginger (2017), “The Natural Catastrophe Protection Gap: Measurement, Root Causes and Ways of Addressing Underinsurance for Extreme Events”:
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(5) 40 Artemis, Catastrophe Bond and Insurance-Linked Securities Deal Directory: Embarcadero Re Ltd. (Series 2012-2), http://www.artemis.bm/deal_directory/embarcadero-re-ltd-series-2012-2/.

(6) 41 Artemis, Catastrophe Bond and Insurance-Linked Securities Deal Directory: Calypso Capital II Ltd. (Series 2013-1), http://www.artemis.bm/deal_directory/calypso-capital-ii-ltd-series-2013-1/.