



Addressing the Protection Gap

Through Public/Private Partnerships & Other Mechanisms

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How Do We Define the Protection Gap?

The Geneva Association has developed two definitions of the “Insurance Protection Gap:”

1. The difference between total losses and insured losses.
2. The difference between the amount of insurance that is economically beneficial and the amount of insurance actually purchased.

The Subcommittee modified the first definition for the purposes of its work.

The Subcommittee defines the Insurance Protection Gap as “the gap between the insured and actual economic losses caused by large scale catastrophic events.”

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

Total coverage gap (all lines):

USD162.5bn

(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 in 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 Factors and Lack of Clear Consumer Education:**

- “Moral Hazard” – No coverage due to belief that Government will cover all costs post disaster.
- Insurance purchases for natural catastrophes increase in the immediate year post-event yet, but drop in subsequent years absent of further disasters.
- Lack of true understanding of risk and vulnerability. Army Corps of Engineers: homeowner 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.
- Lack of clarity around terms of coverage of the policy.

- **Market and Economic Factors:**

- Policy terms that exclude risks, limit coverage, or impose special deductibles create gaps and should be clearly identifiable.
- Affordability as a clear & consistent barrier to obtaining coverage.

- **Solutions:**

- Provide assistance for policyholders through means-testing and consider risk-based pricing.
- Better public policies and regulations are necessary to encourage homeowners and businesses to protect themselves against these risks. This includes more coverage options with better terms.

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 during the policy binding process.

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 the “billion-dollar disasters” together totaled over \$1.6 trillion.



Flood



Earthquake



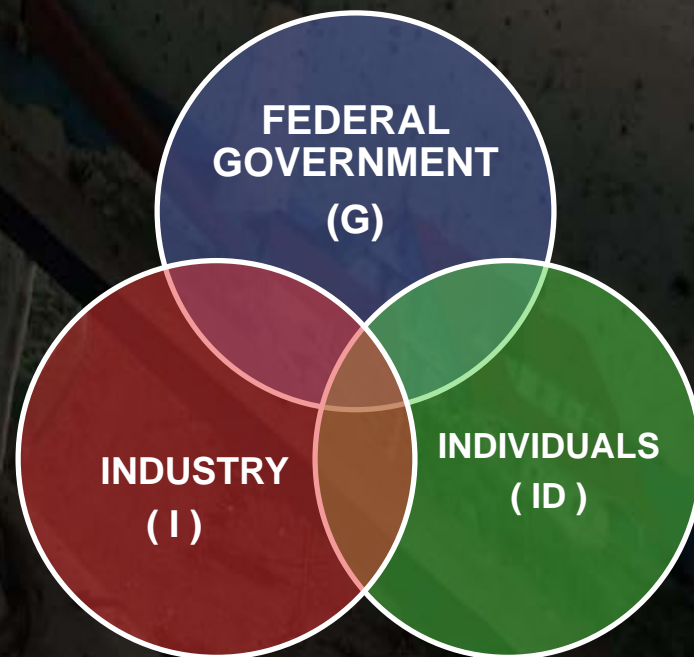
Wildfire



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: Tie mitigation investment to community values.
- Building Community Capacity & Consumer Education: Identify a Chief Resilience Officer to coordinate resilience and sustainability efforts at the local/state/federal level.
- Build Community Support for Resilience Efforts: Facilitate partnerships with public and private organizations to develop resilience educational materials.
- Educate Policymakers: Demonstrate that every dollar spent on mitigation and model codes saves six dollars in post-event costs. For example, the Federal Government appropriated nearly \$140 billion in natural disaster related expenses in 2017 (Approximately 18% 2018 fiscal deficit).
- Identify and Prioritize Mitigation: Identify and promulgate cost effective accepted mitigation measures.
- Product Transparency: Homeowners policies should have explicit disclaimers on what is included/not included for specific perils. For example, earthquake and flood coverage are not included in most homeowners policies and this should be articulated.

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 accessible by government and industry. 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: Align strategies and funding opportunities to prioritize risk-based investments—as noted in the Disaster Recovery and Reform Act of 2018.
- Easier Access to Mitigation Funding: Simplify mitigation funding processes, coordinate co-funding, and encourage plan integration.
- Coalition Building: Partner on mitigation and resiliency efforts with relevant bodies.
- Financial Incentives: Federal Government and non-federal partners will use and expand financial products and approaches for mitigation investment – including funding, incentives, and risk transfer opportunities.

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)
- Provide means-tested financial assistance in the form of mitigation investments to those impacted by a move to risk-based pricing. (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: 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
- Utilising and Investing in Natural Assets: Natural assets tend to be more adaptable and cost-effective than built infrastructure due to their natural resiliency

Utilising and Investing Natural Assets:

“Investing in nature to reduce disaster losses:” Decades of human development have eroded natural assets, contributing to an increase in climate-related risks. Strategically designed ecosystem protection and restoration can significantly mitigate many climate-related disasters.

- Coastal ecosystems can reduce wave energy and inland flooding by providing resistance to water flow. In the US, coastal wetlands helped to mitigate against \$625 million in direct flood damages, resulting in a 16% average reduction in annual flood damage (1)
- Mangroves are very effective at reducing surge heights during fast moving storms. Without mangroves, globally 32% more people would be flooded under 1 in 10 year events and 16% more people would be flooded in 1 in 100 year events (2)
- Temporal wetlands also have high potential for storm surge reduction. Wetlands provide greatest value where they are most extensive (e.g. Maryland) or are in front of the greatest assets; as an example, flood damages avoided in New York during Hurricane Sandy were approximately \$140 million due to the natural mitigation of wetlands. (3)

Recommendations:

- Allocate federal funding for natural infrastructure to protect natural ecosystems and to invest in conservation projects
- Offer tax incentives/fast-track permitting for natural infrastructure projects
- Coordination among governments, ecologists and risk modelling experts to assess natural assets in relation to climate risk reduction and to quantify cost-benefits of natural asset mitigation strategy
- Partner with insurance companies by offering tax credits for development of these natural assets to act as natural barriers to their portfolios
- Carbon Credits: Mangroves and wetlands are some of the greatest sequesters of carbon, and its redevelopment can be enhanced by carbon credits
- Insurance companies can see this as an opportunity to insure natural assets due to value it brings to coastal communities

Potential Challenges:

- Lack of institutional capacity to address and coordinate the multi-stakeholder involvement required from numerous governmental/private sector actors across multiple sectors to implement effective restoration/conservation efforts of natural infrastructure
- Potential lack of technical expertise
- Geographically-specific data may not be readily available or easily collated

Sources:

- (1) UN Environment (2018)
 - (2) Conservation Gateway (2018)
 - 3) Narayan, S. *et al* : The Value of Coastal Wetlands for Flood Damage Reduction (2017)
- Municipal Natural Assets Initiative (2018)

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

- Increase Take-up Rate of Traditional Products: Agent training, increased consumer education 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: Technologies help to promote affordability, awareness and product appeal.
- Product Design: Embrace the latest technologies and develop appropriately regionalized models to assess risks.
- Climate Impact: Coordinate among stakeholders to assess natural in relation to climate risk reduction and quantify cost-benefit of natural asset mitigation.

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.

Behavioral 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 favorable premiums (Holzheu & Turner, 2017)

5 Identify How risk can be Transferred

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. The capital markets provided additional financial protection against storm surge.
- **Catastrophe bonds** have also transferred risk for earthquakes and wind.

A photograph of a flooded residential area. In the foreground, a person wearing a striped shirt and floral shorts is wading through murky floodwater. In the background, several buildings are visible, including one with a severely damaged, tilted roof and another with a yellow facade. The scene is dark and overcast, suggesting a somber and destructive event.

Appendix A: Flood as a Case Study: What are Systemic Issues Constraining the Private Flood Insurance Market?

Recommendations from State Regulators on Flood (NAIC)

- Overhaul NFIP and cease continuous extensions without meaningful reform
- Reforms should include ensuring retention of coverage, i.e. floodplain residents need to keep their policies over time
- Implement federal program to financially aid qualifying households to obtain flood insurance
 - One option is the offering of a means-tested voucher provided by the public sector to those who undertake cost effective mitigation measures
- Reverse FEMA's position that consumers cannot receive a refund for unearned premiums if they cancel a NFIP policy mid-term in favor of a private policy
- Allow private insurance to meet the continuous coverage requirement so policyholders can return to NFIP if they non-renew their private insurance
- Endorse Floodsmart.gov as an efficient and effective resource for consumer education
- Implement and enforce meaningful building codes

Recommendations learned from the Florida Experiment

- Allow greater flexibility as to broker requirements in the surplus line market particularly as to commercial flood policies, i.e., relax the “due diligence” requirements
- Provide an introductory window of time during which private flood insurance rates may be established through an expedited and streamlined rate filing process
- Allow rates to be on an informational basis initially only, enabling insurers to adjust prices in response to new information
- Cease or relax rules requiring insurers providing excess insurance on flood to notify regulators 30 days before writing flood insurance and requiring the filing of a plan of operation and financial projections
- Issue certifications that a policy equals or exceeds coverage provided by NFIP

Other Recommendations

- Educate property owners and potential owners
 - Work with Real Estate data consolidators to have them identify neighborhoods that may have had floods or other significant CATs within last 5 years and post information on data sheets
i.e. Zillow listings
- **Offer flood protection as an endorsement to existing all-risk policies, resulting in participation by homeowners with very low to no flood risk (much like we see with earthquake coverage today)**
- Advocate for more effective building codes
 - The Build Strong Coalition supports the creation of a separate, federal financial incentive for states that adopt and enforce statewide building codes.
 - The Build Strong Coalition supports the creation of a federal financial incentive for states that adopt and enforce statewide building codes. States that do so will be eligible for greater post-event aid.

Sources:

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

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.

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).

Gissing, Andrew (2017) “Disaster Risk Management: Australian Challenges”: <https://apfmag.mdmpublishing.com/disaster-risk-management-australian-challenges/>

Holzheu, Thomas & Turner, Ginger (2017), “The Natural Catastrophe Protection Gap: Measurement, Root Causes and Ways of Addressing Underinsurance for Extreme Events”: https://econpapers.repec.org/article/palgpprii/v_3a43_3ay_3a2018_3ai_3a1_3ad_3a10.1057_5fs41288-017-0075-y.htm

40Artemis, 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/.

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/.