



# Insurers' contributions to disaster reduction

## Overview of findings

The Geneva Association has issued a series of case studies to illustrate the different ways that insurance can form part of the potential contributions to reducing disaster risk. It looks for evidence of systems where the absence of insurance has had a detrimental effect on outcomes for people and businesses. The report calls on governments to work on disaster risk reduction measures and to harness the expertise available in the insurance industry.



***“Whilst mortality losses from disasters are falling, the economic losses from natural catastrophes are rising at an exponential rate.”***

***“The expectation that societies can recuperate from disaster with the help of insurance alone is not realistic. Government regulation is critical.”***

Andrew Maskrey,  
Senior Coordinator for the UNISDR *Global Assessment Report on Disaster Risk Reduction*.

**Report finding: public policy can facilitate insurance's effectiveness or warp the incentives it provides.**

Strict building codes and sensible land-use policies facilitate the contribution of insurance to disaster risk reduction. Without the ability to implement risk-based pricing, insurance is unable to operate effectively and “nudge” behaviour towards more appropriate risk taking.

### Flood facts

- It is not possible to buy flood insurance in the Netherlands because of concerns that the presence of flood insurance would reduce the risk to governments who are responsible for the development of flood defences (Jongejan and Barrieu, 2008).
- According to the UNISDR *Global Assessment Report on Disaster Risk Reduction* (May 2013), in the U.K., the proportion of houses being built in high-flood risk areas has increased since recent legislation banning the practice was introduced.
- In Japan 49% of the population and 75% of total property are located on former river and coastal flood plains (Sato, T., 2006, “Fundamental Characteristics of Flood Risk in Japan's Urban Areas”, in S. Ikeda, T. Fukuzono and T. Sato (eds) *A better integrated management of disaster risks: Toward resilient society to emerging disaster risks in mega-cities*).
- See report section on floods.

## Report finding: Insurance has relevant expertise in risk reduction and claims compensation that injects liquidity into catastrophe- affected markets.

Governments play a fundamental role in the delivery of emergency relief and reconstruction after a disaster, but the overall impact on public finances will greatly depend on the degree of non-life insurance in place. According to Lloyd's and the CEBR, 70% of the economic losses caused by the 2011 floods in Thailand were covered by international insurers.

Not only does insurance provide a private-sector counterparty for governments to share the cost of a catastrophe, global insurance markets allow major risks to be spread internationally, reducing the burden on any one country's domestic market.

*Today's societies are increasingly inter-connected. Superstorm Sandy showed that the most severe impacts and economic costs from a natural catastrophe are not necessarily due to the direct impact of the storm itself, but to the indirect effects through systems and business interruptions, power outages and other knock-on effects. Insurance is a vital counterparty to governments in covering these risks.*



**Click here** to watch the video with Andrew Maskrey



***“Building a culture of prevention is not easy. While the costs of prevention have to be paid in the present, its benefits lie in a distant future. Moreover, the benefits are not tangible; they are the disasters that did NOT happen.”***

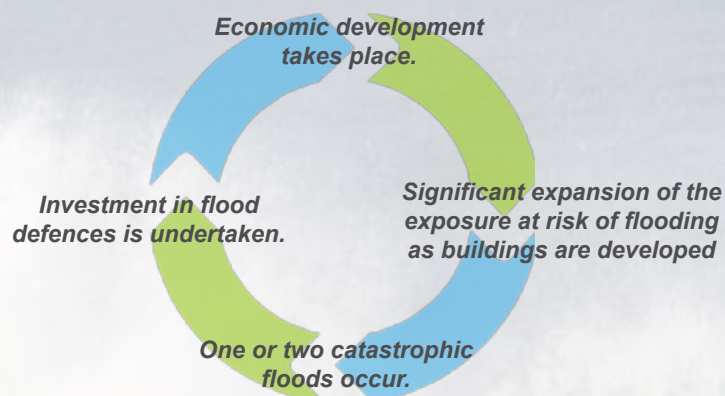
United Nations Secretary General, Kofi Annan, 1999

## Report finding: Risk-based, actuarially sound pricing is an essential mechanism for insurance to mitigate risk.

The National Flood Insurance Programme (NFIP) in the United States subsidises properties built on flood plans prior to the requirement of a specific resilience inducing building code. Participating members pay roughly 40% of the risk-based rate and the tax payer, through the NFIP, picks up the rest. Many of these properties, due to their location, suffer repetitive losses and efforts to make this a viable economic proposition continue. The private sector is unable to compete with public sector subsidies and is unable to become a risk sharing counterparty (see case study 2).



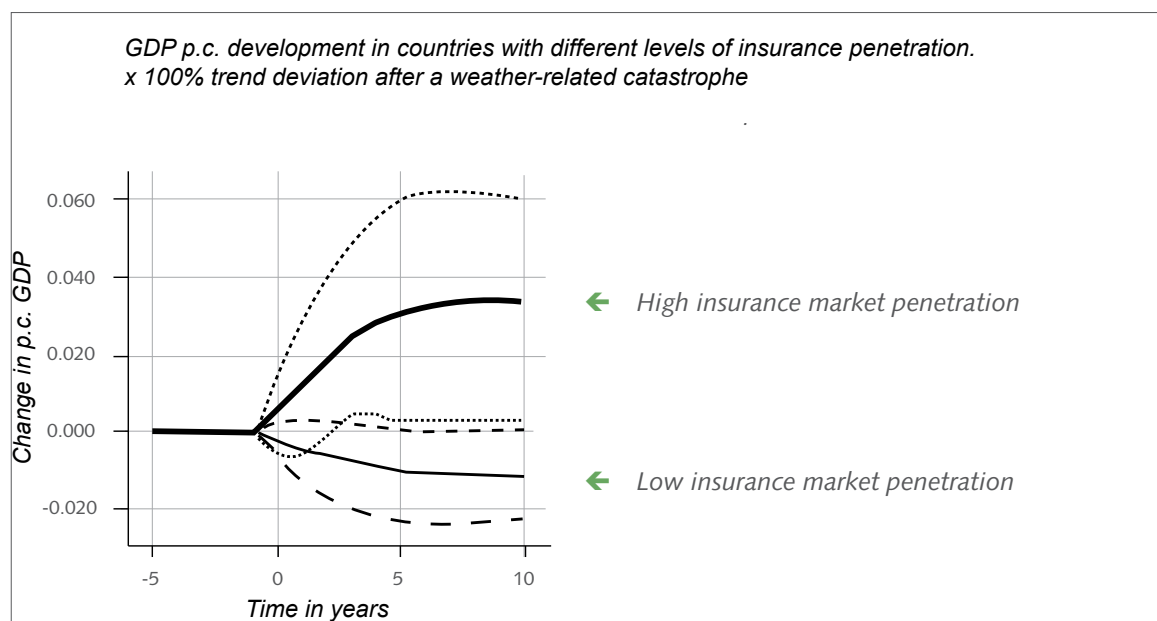
## Developing country conundrum



## Comparing Japan and Haiti

The lower a country's GDP the greater the impact from natural catastrophes. Nowhere was this more evident than in the starkly contrasting human and economic impacts of the earthquakes in Japan and Haiti. Despite the shocking mortality in Japan, the stock of resilient infrastructure and building in the country means that that the same event would have been far worse in any other country, by several orders of magnitude. Indeed according to the Lloyd's **Global Underinsurance Report (2012)**, the Japanese economy had recovered within 12 months of the devastating earthquake and tsunami. Haiti has yet to recover from the earthquake in 2010.

## Comparison of GDP (p.c.) after a weather-related loss event in countries with high and low insurance penetration.

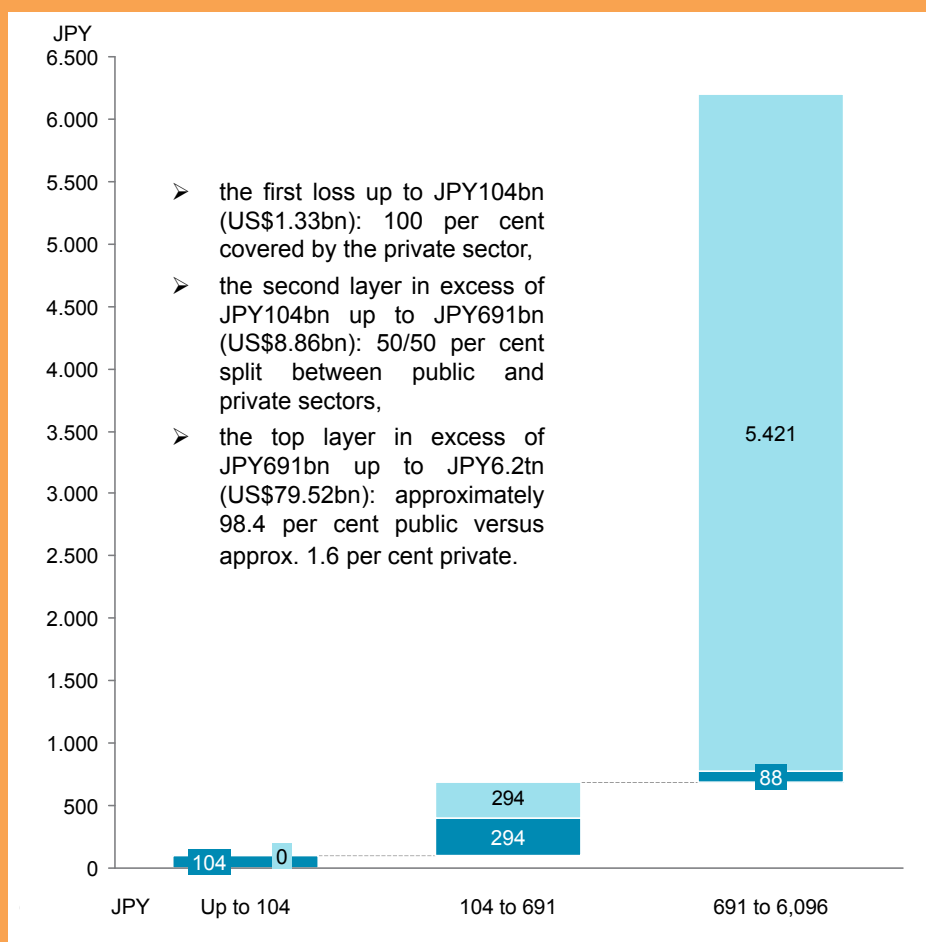


Source: Melecky and Raddatz (2011) *How do governments respond after catastrophes? Natural-disaster shocks and the fiscal stance*, Washington D.C.: World Bank.

This graphic, courtesy of the World Bank (2011) shows the changes in per capita GDP following a disaster and their level of insurance penetration. The results show that higher levels of insurance penetration correlate with positive trends in GDP recovery.

## Public–private cooperation in disaster recovery

Some risk exposures are too great for the insurance industry alone to cover. Japan provides a good example of risk-sharing between insurers and the government. The Residential Earthquake Insurance System sees the government function as a reinsurer. Primary insurers cede 100 per cent of the written earthquake insurance exposure to a special purpose company managed by the leading Japanese non-life insurance companies which retain a portion of the risk and retrocedes the remainder to the member companies and the government. The risk-sharing scheme is detailed in the figure below.



For a copy of the full Geneva Report No 7, *Insurers' contributions to disaster reduction—a series of case studies* [click here](#).

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