



Swiss Re's new *sigma* study reveals that natural catastrophes and man-made disasters in 2009 cost insurers USD 26 billion and society USD 62 billion overall

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Zurich, 16 March 2010 – According to Swiss Re's latest *sigma* study, natural catastrophes and man-made disasters claimed approximately 15 000 lives and cost insurers USD 26 billion in 2009. The overall cost to society was USD 62 billion. Insured losses were below average due to a calm US hurricane season.

On a worldwide basis, natural catastrophes cost insurers USD 22 billion in 2009, while man-made disasters cost an additional USD 4 billion. Insured losses were highest in North America, where they cost insurers over USD 12.7 billion. The death toll was the highest in Asia, where nearly 9 400 of the world's 15 000 catastrophe victims lived. Insured losses in the region were approximately USD 2.4 billion.

Insured losses in 2009 were low

Compared to previous years, 2009 was a low loss year. According to Swiss Re's latest *sigma* study, "Natural catastrophes and man-made disasters in 2009", 133 natural catastrophes and 155 man-made disasters occurred in 2009. Six events each triggered insured losses in excess of USD 1 billion. The costliest event was the European winter storm Klaus, which struck France and Spain in January, and led to insured losses of EUR 2.35 billion (nearly USD 3.4 billion).

Historically, catastrophe losses have been highly volatile, with a strong upward trend. In US dollars, the historic upward trend for global insured losses is around 10%, and is driven by higher income, increasing wealth, a higher value concentration of wealth in loss prone regions and a trend towards more insurance coverage. Global warming and the related higher risk of extreme weather conditions also contribute to the trend.

Thomas Hess, Chief Economist of Swiss Re, commented: “The probability that we see natcat losses as low as those in 2009 is less than 35%. We have already seen significant events in 2010 with winter storm Xynthia in Europe or the earthquakes in Chile and Haiti. The industry is therefore well advised to prepare for much higher losses. Given their high volatility, losses could easily be three to five times what they were in 2009. In 2005, insured losses set a record when they soared to USD 120 billion. I would not be surprised if this record is broken in the not too distant future.”

Secondary perils are important loss sources but receive little attention

Most of the attention in recent years has been mainly focused on the primary perils – ie earthquakes, hurricanes and winter storms. However, many other natural phenomena, referred to as secondary or other perils, can also cause widespread damage to property. The most prominent secondary perils are flooding, landslides, hail storms, tornadoes, winter storms outside Europe, snow and ice storms, droughts and bush fires. In 2009, more than half of the natural catastrophe loss burden was caused by secondary perils.

According to Dr Jens Mehlhorn, co-author of the *sigma* study: “Premiums from primary perils are often used to cross-subsidise losses from secondary perils. The risk is that if premiums deteriorate, they can become insufficient to pay for the sum of losses caused by primary and secondary perils. More advanced probabilistic risk assessment models would help to better gauge and price the risk of secondary perils.”

Earthquakes pose major risks to both developed and developing countries

The massive earthquakes that struck Haiti in January 2010 and Chile in February 2010 are grim reminders of the destructive force of earthquakes. Since 1970, 360 damaging earthquakes have claimed over 1 million lives.

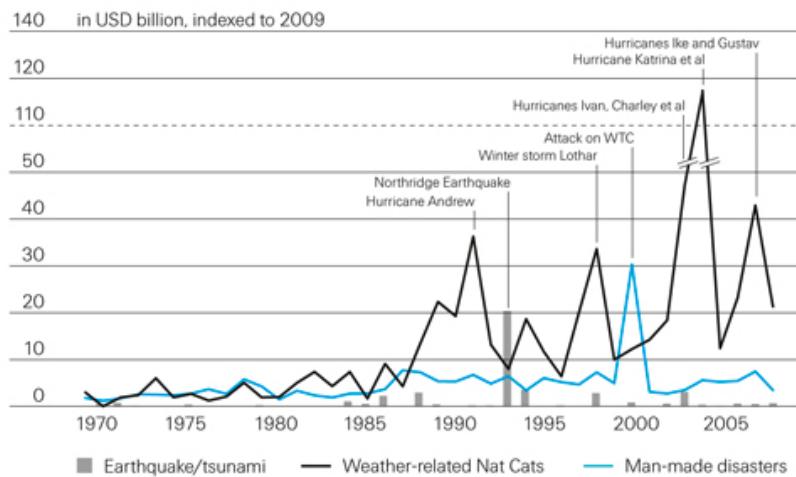
According to Dr Brian Rogers, co-author of the *sigma* study: “The deadliest earthquakes tend to occur in less economically developed countries and in regions that are usually densely populated and prone to earthquakes. These countries typically have low per-capita income and fewer resources for prevention- and post-disaster management.”

Although the death toll is usually higher in developing countries, insured losses are highest in the developed countries due to their wealth.

However, wealthier countries often have advanced prevention measures in place and better infrastructure to limit the consequences of disasters. Economically advanced nations also tend to purchase more insurance cover, which helps to finance the costs of reconstruction.

Less developed economies can also benefit from insurance cover, especially if the public and private sectors – ie (re)insurers, brokers, governments and international agencies - work together. Thomas Hess commented: “By contributing to catastrophe insurance solutions, private insurers and reinsurers can help create more stability in emerging markets, but this is only the beginning.” Governments and reinsurers have successfully teamed up in the past to implement reinsurance and capital market solutions. These solutions have provided significant financial relief when disastrous earthquakes and windstorms occurred as they allocate immediate liquidity to participating governments.

Figure 1:
Insured catastrophe losses 1970–2009



Source: Swiss Re, *sigma* catastrophe database

Table 1:
The most costly insured losses in 2009

Insured losses				
Ranking	(in USD m)	Date (start)	Event	Country
1	3 372	24.01.2009	Winter storm Klaus, winds up to 170 km/h, heavy rain	France, Spain
2	1 350	10.02.2009	Thunderstorms, winds up to 145 km/h, hail	US
3	1 193	23.07.2009	Hail storm Wolfgang, winds up to 130 km/h	Switzerland, Austria, Poland et al
4	1 130	09.04.2009	Tornadoes, storms, winds up to 105 km/h, hail	US
5	1 079	07.02.2009	Victorian bush fires, winds up to 100 km/h	Australia

Source: Swiss Re, *sigma* catastrophe database

Table 2:
Catastrophes with the most fatalities in 2009

Victims (dead and missing)				
Ranking		Date (start)	Event	Country
1	1 195	30.09.2009	Earthquake (M _w 7.6), aftershocks	Indonesia, Indian Ocean
2	930	07.08.2009	Typhoon Morakot/No 8, winds up to 148 km/h; floods	Taiwan, Philippines, China et al
3	854	26.09.2009	Typhoon Ketsana/No 16, winds up to 160 km/h; floods	Philippines, Vietnam, Cambodia et al
4	539	03.10.2009	Typhoon Parma/No 17, winds up to 195 km/h, heavy rain	Philippines, China, Taiwan et al
5	520	01.07.2009	Floods caused by monsoon rain	India

Source: Swiss Re, *sigma* catastrophe database

Table 3:
Definitions and selection criteria for sigma catastrophe statistics

Natural catastrophes	Loss events triggered by natural forces
Man-made disasters	Loss events associated with human activities
Total losses	Losses with a direct economic impact
Insured property claims	Part of total loss covered by property insurance
Minimum selection criteria:	
Total economic losses	USD 85.2m
Or: Insured property claims	Maritime disasters: USD 17.1m
	Aviation: USD 34.3m
	Other losses: USD 42.6m
Or: Casualties	Dead or missing: 20
	Injured: 50
	Homeless: 2 000

Source: Swiss Re, *sigma* catastrophe database

Notes for editors

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How to order this *sigma* study:

The English, German, French and Spanish versions of the *sigma* study No 1/2010, "Natural catastrophes and man-made disasters in 2009: catastrophes claim fewer victims, insured losses fall" are available electronically on Swiss Re's website: www.swissre.com/sigma. The versions in Chinese and Japanese will appear in the near future.

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