Risky cities:

Los Angeles

Los Angeles is a massive economic hub and highly exposed to earthquake risk. Using Swiss Re’s risk models and detailed hazard data available in CatNet®, we have analysed the potential impact of this risk and other natural perils on LA’s metropolitan area. This analysis is part of Swiss Re’s report: “Mind the Risk – a global ranking of cities under threat from natural disasters” which compares the human and economic exposure of 616 cities around the world.
Los Angeles is one of the biggest urban agglomerations on the planet. Its greater metropolitan area is home to almost 18 million people and is the single most densely populated region in the United States. It is the largest seaport in the western hemisphere – 40% of all the containerized goods entering the US pass through LA – and LA County is the nation’s most important manufacturing center.

Given its population density, complex transport infrastructure and crucial economic significance, an earthquake could have untold consequences not only for California but also for the whole country. And the sobering fact is that according to the Southern California Earthquake Center, the probability of a magnitude 6.7 or larger earthquake striking Los Angeles over the next 30 years is 67%.
Human impact
Millions of people potentially affected by natural hazards*

Los Angeles: 16.4
San Francisco: 5.7
New York-Newark: 3.0
Miami: 2.4
Houston: 1.6
Tampa: 1.5
New Orleans: 1.4
San Diego: 1.2
Seattle: 1.1
Montreal: 1.0

Economic impact
Value of working days lost* in absolute terms

Los Angeles
New York-Newark
San Francisco
New Orleans
Miami
Houston
Tampa
Washington-Baltimore
Boston
San Diego

Value of working days lost* relative to national economy

Los Angeles
New York-Newark
San Francisco
Winnipeg
Denver
Toronto
New Orleans
Montreal
Edmonton
Miami

* Combined risk from five perils (earthquake, river flood, storm surge, windstorm and tsunami), comparison with US and Canadian cities

CatNet® map showing the earthquake risk in the Los Angeles metropolitan region (Source: GSHAP)
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**What our cities need**

An important part of resilience is how well an urban community can bounce back from the financial consequences of a disaster such as an earthquake, in other words how rapidly it can mobilize the resources necessary to expedite its economic recovery.

**Global Partnerships – our capability and solutions**

To avoid raising taxes and diverting critical assets when the city and its residents are hurting most, Swiss Re offers risk transfer solutions that can assist with covering the financial burden public entities face. Its risk management experts can also help public authorities prepare for natural disasters more comprehensively than perhaps they have done in the past.

**Indemnity insurance**

can cover damages or losses caused by natural disasters which can range from seismic activity and flood to wind storms. Indemnity insurance provides protection against damage to property or income loss due to interruption to business or services. It is an insurance policy which pays out based on the actual economic losses incurred, up to the limit and duration specified in the insurance contract.

**Parametric insurance**

can cover earthquakes, for example. Unlike traditional insurance, parametric instruments use measured or modelled data like the physical characteristics of a disaster (e.g. the magnitude of an earthquake) to determine payouts. Such a payout model aims to mirror the actual damage on the ground and enables a much more rapid settlement. This is critical for cities that require budgetary liquidity after a catastrophic event. The rapid payout is possible because a lengthy loss adjustment is not required to assess the actual damage on the ground. An earthquake-impacted community can therefore receive rapid cash to help with emergency response, debris removal or other expenses. Parametric deals can be settled in days or weeks. This is compared to the months or years it may take to finally close a conventional indemnity insurance claim or to await financial assistance from the federal government.

**Weather insurance products**

are examples of a parametric insurance cover which protect cities against the impact of adverse weather on their property or their ability to operate as expected. This can be in the form of unusually heavy rain or snow requiring additional resources to respond, extreme temperature, or strong wind which may put strain on city services. Such products are generally based on meteorological data such as daily temperature changes, frost or precipitation. They allow local governments to control the financial risks associated with adverse weather.

**The value of CatNet®**

The CatNet® functions and data facilitate a professional overview and assessment of natural hazard exposure for any location worldwide. This makes CatNet® a valuable tool in preparing local, regional and cross-regional risk profiles.

**Concretely, it**

- provides swift hazard checks for regions you are unfamiliar with
- generates customised maps combined with satellite images
- enables you to import your location data to illustrate risk exposures combined with natural hazard data
- provides country-specific insurance conditions, claims experience and natural disaster loss dimensions