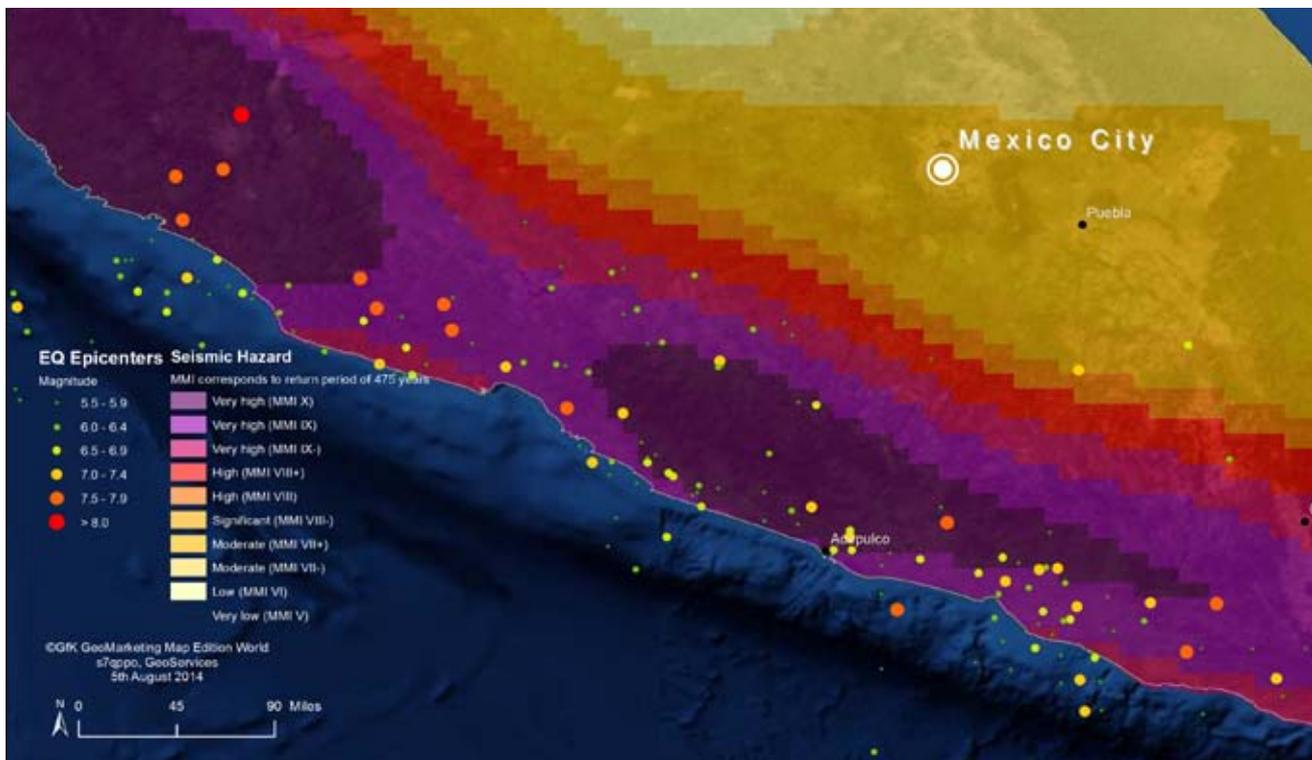


Risky cities:

Mexico City

Mexico City is a massive economic hub and highly exposed both to earthquake and river flood risk. Using Swiss Re's risk models and detailed hazard data available in CatNet, we have analysed the potential impact of these risks and other natural perils on Mexico'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.





CatNet® map showing EQ exposure in the Mexico City metropolitan area

(Source: GSHAP)

Mexico City, a metropolis of around 21 million people is plagued by regular summer flooding which makes life utterly miserable for the city's inhabitants, just one recent example being the inundation caused by Tropical Storm Ernesto in 2012.

The biggest problem the city faces is that it lies in an ancient lake bed and torrential rain often has to be pumped

out rather than drain away on its own. Also, the drainage systems that are in place quickly become clogged with plastic garbage which makes the situation even worse.

And then there is the very real earthquake risk. Mexico City's location in Central America means it sits alongside the Ring of Fire, an area of high seismic and volcanic activity along the Pacific Ocean.

Again as a result of it being built on the muddy sediment of a former lake bed, an earthquake can trigger soil liquefaction which can substantially amplify the impact of seismic activity.



CatNet® map showing flood exposure in the Mexico City metropolitan area

(Source: GSHAP)

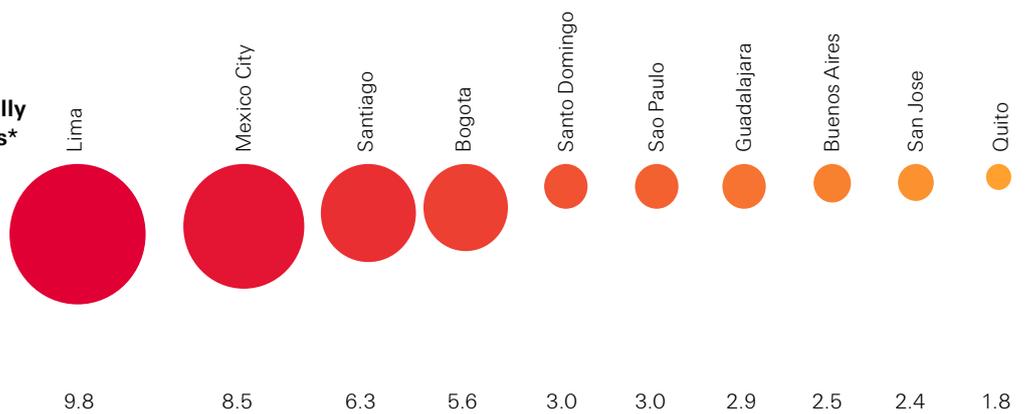
Risky cities: Mexico City in comparison



Large areas of Mexico City are built on the sediment of an ancient lake bed, a fact which amplifies the impact of earthquakes and flooding.

Human impact

Millions of people potentially affected by natural hazards*

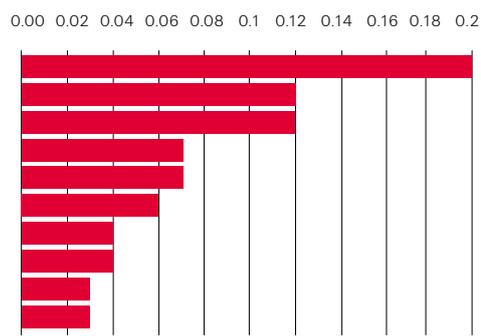


Economic impact

Value of working days lost* in absolute terms



(index 0.0–0.2)

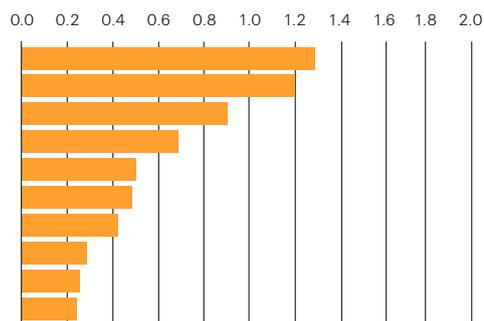


Mexico City
Sao Paulo
Lima
Santiago
Buenos Aires
Bogota
Rio de Janeiro
Caracas
Monterrey
San Jose

Value of working days lost* relative to national economy



(index 0–2)



San Jose
Guayaquil
Lima
Santo Domingo
Havana
Santiago
Panama City
Bogota
Quito
Mexico City

*Combined risk from five perils (earthquake, river flood, storm surge, windstorm and tsunamis), a global comparison based on aggregated numbers.

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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.

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The value of CatNet® www.swissre.com/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