

In September 2017 two huge earthquakes struck Mexico. Damage and losses have been lower than expected due to the implementation of different measures in Mexico City. However, while construction regulations have come to the forefront once again, one of the challenges facing the country is how to educate the population about the benefits of insurance.

Under most measures, Mexico is one of the top ten earthquake prone countries of the world. It is located where five tectonic plates interact - North America, Cocos, Pacific, Rivera, and the Caribbean - and this causes constant movement of the earth in the south and central regions of the country. On average, Mexico reports 40 low intensity earthquakes every day.

Before 2017, the last major earthquake to hit the country was on 19th September 1985 when an 8.1 magnitude earthquake struck Mexico City, causing serious damage to the Greater Mexico City area and it is believed more than 10,000 deaths. In the aftermath of this incident construction regulations in Mexico City were changed, resulting in the construction of buildings that are more resistant to earthquakes.

Twenty two years later, to the day, these new regulations were seriously put to the test. On 19 September 2017 at 1:14 pm local time, a 7.1 magnitude earthquake, with its epicentre in the state of Morelos, struck Mexico city. Fortunately, the similarities between the 1985 and 2017 earthquakes ended there.

Earthquakes in Mexico City are usually considered to be more intense, as the city is built over a dry lake bed and, in general, lacks the bedrock to absorb the impact of the waves. However, this latest earthquake was an intraplate type, so the epicentre was located some 57 kilometers underground, on the Morelos and Puebla state line. Substantial building damage resulted in some 31,000 insurance claims, estimated insurance losses of USD529 million and 370 people were reportedly killed.

As well as the improved building regulations, residents had (at least) a 50 second warning. In 1991 Mexico City and its metropolitan area introduced a system that detects an earthquake and if the magnitude is greater than 5.5 on the Richter scale, a warning system is activated. This gives residents some 50 seconds to react before the earthquake waves impact the City.

Twelve days before the Mexico City earthquake, on 7 September 2017, a much larger earthquake struck the southern states of Tabasco, Chiapas and Oaxaca at 23.49 local time. With its epicentre in the Gulf of Tehuantepec and measuring 8.2 on

the Richter scale, this earthquake caused substantial building damage, particularly in Chiapas and Oaxaca, and generated a tsunami with waves of 1.75 metres above tide level. 1.5 million people were affected, more than 40,000 buildings damaged and 98 people died. Some 7,570 insurance claims have been reported and losses are estimated at USD331 million<sup>1</sup>.

According to Arturo Suaste, Senior Adjuster, Integra Technical Services Mexico "these earthquakes did not result in large and complex claims affecting Energy, Construction or Manufacturing, instead they caused damage to residential, office and retail property with many of the commercial properties belonging to Government entities. This helped to demonstrate the lack of insurance penetration in Mexico."

According to country risk maps, 41% of the territory is exposed to damage from natural disasters, but only 8.6% of households hold residential-type insurance. Insurance regulations in Mexico require Insurance Companies to set up technical reserves, capable of solving any insured eventuality. In the case of the recent earthquakes of the 7 and 19 September, basic protection schemes, specifically housing, were the most affected in the treaty markets, and facultative insurance coverage was considerably lower than expected.

It's clear that post-earthquake damage and deaths have been lower than expected due to the implementation of different measures in Mexico City.

However, as Arturo suggests "while construction regulations have come to the forefront once again, one of the challenges facing the country is how to educate the population about the benefits of insurance coverage. One possibility is the implementation of compulsory homeowner's insurance (in the same vein as automobile insurance) to alleviate the material and personal losses that accompany this type of catastrophic event."

The challenge is to continue improving Mexico's preparedness for a catastrophic event and insurance must be part of that solution.

1 Mexican Insurance and Surety Association (Asociacion Mexicana de Seguros y Fianzas, AMIS)