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Press release

Loss review for the first half of 2016: Storms and earthquakes drive losses up

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Losses caused by natural catastrophes in the first half of 2016 were significantly higher than the corresponding figures for the previous year. In total, losses by the end of June came to US\$ 70bn (previous year US\$ 59bn), of which US\$ 27bn (US\$ 19bn) were insured. The main loss drivers were powerful earthquakes in Japan and Ecuador, storms in Europe and the US, and forest fires in Canada.

Board member Torsten Jeworrek: "These events clearly show the importance of loss prevention, such as protection against flash floods or the construction of earthquake-resistant buildings in high-risk areas. The good news is that improved building codes and a more intelligent approach by emergency services and authorities offer people much better protection than used to be the case."

Natural catastrophe figures for the first half of 2016:

- Overall losses were above the inflation-adjusted average for the last 30 years (US\$ 63bn), but below the average for the last 10 years (US\$ 92bn).
- Insured losses were in line with the inflation-adjusted average for the last 10 years and above the average for the last 30 years (US\$ 15bn).
- 3,800 people lost their lives, significantly fewer than the previous year (21,000) and the averages for the last 10 and 30 years (47,000/28,000).
- The highest losses were caused by two earthquakes on the Japanese island of Kyushu in April (US\$ 25bn, of which US\$ 6bn was insured).
- Of particular note were a series of storms in the US and Europe, massive forest fires in Canada and the complete absence of typhoons in the northwestern Pacific.

"The fading El Niño again showed its teeth with forest fires in Canada caused by the dry conditions and heat, and a series of storms in Texas, bringing billion-dollar losses. The complete absence of tropical cyclones in the northwestern Pacific in the first half of the year is also likely to have been influenced by El Niño. Typhoon Nepartak, which hit China and Taiwan in early July, was the first for a long time", explains Peter Höpfe, Head of Munich Re's Geo Risks Research Unit. "In the third quarter of 2016, the Pacific climate oscillation ENSO is expected to switch to a La Niña phase, which then influences other weather

patterns across the world. For example, La Niña tends to promote the formation of hurricanes in the tropical North Atlantic and a greater number of typhoons in the Philippines.”

Weather events

The Canadian province of Alberta suffered devastating wildfires in early May. The fires were caused by extreme heat and drought and were fanned by strong winds, quickly spreading over thousands of hectares. The town of Fort McMurray (80,000 inhabitants) had to be completely evacuated. Canadian oil-sand output fell by 40%, as production in the region was drastically reduced. Hundreds of homes burned to the ground. Direct losses from these fires totalled US\$ 3.6bn, of which US\$ 2.7bn was insured.

Much of the loss burden in the first half of 2016 can be attributed to heavy storms bringing hail, torrential rain and flash floods, which caused overall losses of over US\$ 20bn in the US and Europe. Around US\$ 12.3bn (US\$ 8.8bn insured) of this was due to series of storms in Texas and neighbouring states. The weather extremes in the southern states of the US are symptomatic of an El Niño phase, where severe storms in those regions are more likely than under neutral or La Niña conditions.

The severe weather in Europe in May and early June was primarily triggered by a persistent low pressure system extending to high atmospheric levels over central Europe. In Germany, the very slow-moving thunderstorms triggered by this phenomenon caused powerful flash floods in many areas. Especially hard hit were parts of southern Germany such as Braunsbach in Baden-Württemberg and Simbach in Bavaria, where small streams were rapidly transformed into raging torrents.

In France, the storms brought floods on the Seine and its tributaries. Hardest hit was the town of Nemours, south of Paris, where the River Loing reached record water levels. Thousands of people had to be evacuated. In Paris, the Louvre and the Musée d'Orsay had to be closed and many artworks moved to higher storeys. However, the river remained at least two metres below the record level of 1910.

On 22 and 23 June, the Netherlands was hit by thunderstorms, bringing hailstones as large as tennis balls. The town of Someren in the province of North Brabant saw enormous losses, especially in agriculture. Countless greenhouses and many entire crops were destroyed. Initial estimates put overall losses at up to €1bn (more than US\$ 1bn). These storms were linked to the highest absolute humidity ever recorded in the Netherlands.

The overall loss from the storms in Europe totalled US\$ 6.1bn (€5.4bn), of which US\$ 3bn (€2.7bn) was insured. Losses in Germany accounted for US\$ 2.8bn (€2.6bn) of overall losses and US\$ 1.3bn (€1.2bn) of insured losses.

“Scientific studies have shown that heavy rainfall has become more frequent in certain regions of Europe over the last few decades. For example, in the period

1951–2010 severe spring rainfall events that used to have a mathematical occurrence probability of once every 20 years have already increased by a factor of 1.7. Climate change is likely to have been partly responsible for this”, explains Höppe.

Earthquakes

Two earthquakes on the southern Japanese island of Kyushu close to the city of Kumamoto brought the biggest losses of the first half of 2016. In the space of just two days, late on 14 April and in the early hours of 16 April, two earthquakes struck (Mw 6.2 and 7.0 respectively), destroying countless buildings and killing 69 people. Tens of thousands had to be temporarily housed in emergency shelters.

Many production facilities in the region were also damaged and had to suspend operations for several weeks. This also severely hampered production at certain car manufacturers, as they were unable to obtain important components. A major manufacturer of smartphone camera modules also had to halt production. The overall loss from the two quakes came to US\$ 25bn, of which only US\$ 5.9bn was insured due to the low insurance density for earthquake risks.

The greatest number of fatalities was caused by an Mw 7.8 earthquake which hit the Pacific coast of Ecuador at almost the same time as the quakes hit Japan. Many buildings were destroyed and shopping mall roofs collapsed. Nearly 700 people were killed. As is so often the case in emerging countries, a relatively small share of the overall loss of US\$ 2.5bn was insured: US\$ 400m.

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