Media Release

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Severe thunderstorms and flooding drive natural disaster losses in the first half of 2024

- Catastrophic flooding, extreme storms, and two earthquakes produce overall losses of roughly US$ 120bn
- Global insured losses, at US$ 62bn, significantly higher than the ten-year average of US$ 37bn
- Number of fatalities in connection with natural disasters down compared to past years
- 68% of overall losses and 76% of insured losses attributable to severe thunderstorms, flooding and forest fires

"Weather-related natural disasters, especially in North America, are prominent once again in the loss statistics for the first half-year. In addition, there has been flooding in regions where it is extremely rare, such as Dubai. It is considered highly likely that climate change plays a part in this trend. Climate change entails evolving risks that everyone – society, the economy, and the insurance sector alike – will have to adapt to, so as to mitigate the growing losses from weather-related events."

Thomas Blunck, Member of the Board of Management

Analyses of long-term trends based on meteorological, underwriting and socioeconomic data indicate that the risks emanating from severe weather

events are changing. More frequent and intense weather-related natural disasters translate into higher claims payments for insurers.

Natural disasters in figures

Global losses in the first half of 2024, at US$ 120bn, were lower than in the previous year (US$ 140bn). However, 2023 was affected by extremely high losses in connection with the severe earthquake in Turkey and Syria. In a longer-term comparison, overall losses in the first half of 2024 clearly exceeded the average values for both the past ten years and the previous 30 years.

Insured losses were up slightly year on year from US$ 60bn – and significantly above the average values for the past 10/30 years (adjusted for inflation: US$ 37bn/24bn). Notably, the share of claims for “non-peak perils” – which include severe thunderstorms, flooding and forest fires – was once again high: 68% of total losses and 76% of insured losses were caused by these natural disasters.

Costliest natural disasters in the first half of 2024

The costliest natural disaster in the first half of the year was an earthquake in Japan on New Year’s Day. With a magnitude of 7.5, it rocked the western coast of Japan, near the Noto Peninsula. Numerous buildings collapsed and thousands of people were left without power or clean water for weeks. More than 200 people were killed. Estimated total losses amounted to some US$ 10bn, including insured losses of roughly US$ 2bn.

The country is thought to be well-prepared for natural disasters: when they strike, preventive measures like earthquake-resistant construction methods, advanced early-warning systems, and a robust emergency response strategy can save many lives.

Severe thunderstorm season in the US

In the United States, severe thunderstorms drove the loss statistics for the first six months of the year. From January to June, the US-based National Oceanic and Atmospheric Administration (NOAA) reported 1,250 tornadoes – well above the long-term average of 820.
Based on the first half, 2024 is currently the fourth-costliest year in terms of severe thunderstorm losses in the USA: US$ 45bn, of which more than US$ 34bn was insured. One year earlier, overall losses for the first half-year were roughly US$ 52bn, including insured losses of US$ 40bn.

Global temperatures at all-time high

From January to June, the global average temperature was roughly 1.5°C higher than the preindustrial level. Although the scientific community has stressed that a single year with global warming of more than 1.5°C does not constitute a failure to reach the declared Paris climate targets, the upward temperature trend shows no signs of stopping. Not only were average temperatures unusually high nearly everywhere in the world in the first half-year; record-breaking highs were also reported around the globe.

For example, in mid-June, temperatures above 50°C were recorded in many parts of Saudi Arabia, while New Delhi, India experienced a record high of 49.9°C in May. NOAA currently predicts that 2024 will be one of the five warmest years since 1850 and, with a 60% probability, the warmest year in history.

Heatwaves and droughts not only cause more fatalities from heatstroke; they also make forest fires more likely. In Texas, the worst forest fire in the state's history razed more than 400,000 hectares, an area roughly the size of the Spanish island Mallorca. In May, massive forest fires broke out in western Canada unseasonably early, forcing thousands to evacuate. As neither event affected densely populated cities or industrial areas, there were no extreme losses.

High water temperatures and La Niña could intensify hurricane activity

In the North Atlantic, indicators continue to point to a severe hurricane season. Climate change is a central factor in the very high water temperatures, which in turn offer ample energy for the formation of hurricanes. In addition, the natural ENSO (El Niño / Southern Oscillation) cycle affects the probability of these storms occurring. Last year was characterised by El Niño conditions, which tend to limit the formation of hurricanes. Nevertheless, with 20 named storms, 2023 was the fourth-most active hurricane season to date. This year, we cannot benefit from El Niño's dampening effects. Moreover, the very high water temperatures in the North Atlantic are conducive to the formation of hurricanes. The sea surface temperature continues to be at a record-breaking level – and 0.5°C to 1.0°C above the 30-year average. Taken together, these two factors could produce more hurricanes in the North Atlantic.

"The changing statistics on weather data are an increasingly clear sign. Many of the recently observed record temperatures can hardly be explained without

climate change. When the atmosphere is one degree warmer, it can absorb 7% more moisture – which means more energy for weather extremes and heavy precipitation. Thanks to its leading risk expertise, Munich Re is capable of covering natural disaster-related risks on a large scale. We laid the groundwork for that expertise 50 years ago, when we hired our first meteorologist," says Ernst Rauch, Chief Climate Scientist at Munich Re.

Regional overview

North and South America

As usual, tornadoes and hail spawned by severe thunderstorms in the first half of the year accounted for North America's high share of worldwide losses: Overall losses for the region amounted to US$ 60bn, of which US$ 44bn was insured.

In addition to severe thunderstorms, harsh winter weather early in the year produced losses in the billions. Nearly every state issued winter storm warnings. Arctic air masses were responsible for record lows and heavy snowfall, resulting in countless power outages, closed roads and flight delays. More than 2,500 local records for the lowest temperature were broken. In the southern states, a combination of prolonged heavy rainfall and melting snow led to flooding in parts of Texas and Louisiana. This January was the wettest month in ten years in the US.

In South America, Brazil experienced severe flooding in May and April. In the southern Brazilian state Rio Grande do Sul, 11 days of heavy precipitation – resulting in as much as 420 mm of rainfall – produced severe landslides and flooding. Buildings collapsed, bridges and roads were destroyed, and there were 181 fatalities. More than 90% of the region – an area the size of the United Kingdom – was underwater. It was one of the worst flooding disasters the country had seen in the past 80 years. With estimated total losses of around US$ 7bn, the floods were the third-largest natural disaster worldwide in the first half of the year. The insured portion was roughly US$ 2bn.

Europe

In May, Germany experienced severe storms and flooding. Some regions saw up to 135 mm of rain in a matter of days. Since precipitation levels had been well above average in the preceding months, the saturated soil was unable to

absorb much of the rainwater. Many rivers overflowed their banks; streams became torrents. Some rivers reached the highest warning level (4) at various points. The costliest loss event was a flooding in southern Germany with total losses of US$ 5bn, including US$ 2.2bn in insured losses.

This can be attributed to what is known as a Vb-track cyclone or “Genoa low”. In this type of cyclone, warm and moist air from the northwestern Mediterranean is driven northward past the Alps, producing intense rain and storms – particularly on the northern side of the Alps and farther north in Central Europe. According to researchers, such weather conditions will bring ever-increasing amounts of precipitation as climate change progresses.

Asia-Pacific and Africa

Following a January earthquake in Japan that produced losses in the billions, the earth also shook near Hualien, Taiwan in April. The magnitude 7.3 earthquake was the worst disaster in the region since 1999; total losses were US$ 4.6bn, only US$ 0.8bn of which were insured.

In the same month, unusual, massive floods attracted global media attention, e.g. in the United Arab Emirates, Oman and nearby countries. Dubai reported the heaviest rains in the past 75 years. Another study concluded that, in addition to El Niño, climate change was conducive to these torrential rains, as it leads to higher temperatures and more moisture in the atmosphere. At Dubai International Airport, more than 1,500 flights were delayed or cancelled. Overall losses for the region were estimated at US$ 8.3bn, thereof insured losses of US$ 2.8bn.

In the Chinese province Guangdong, among others, heavy rainfall caused severe flooding. Homes, roads and bridges were destroyed, resulting in massive financial losses of at least US$ 5bn – only a small percentage of which were insured. As climate change progresses, the scientific community expects the frequency and intensity of torrential rains to rise in many other parts of the world, including Asia, northwestern Europe and the American Northeast.

Months of seasonal monsoon rains produced flooding in East Africa, especially in Kenya, Tanzania, Burundi and Somalia. In addition, tropical cyclones Hidaya and Ialy struck the region in May, exacerbating the destruction. There were 283 deaths; nearly half a million fled the region.

In the first six months of 2024, natural disasters in the regions Asia-Pacific and Africa were responsible for total losses of US$ 40bn. Due to the perennially

substantial insurance gap, only US$ 9bn of those losses were insured. Both total losses and insured losses were above the average values for the past ten years: US$ 29bn and US$ 4.1bn, respectively.

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