



# 2023 Natural Disaster Roundup



# Introduction

The past few decades have seen natural disasters (e.g., hurricanes, flooding, tornadoes, droughts, thunderstorms, hailstorms, winter storms and wildfires) surge in frequency and severity, leaving impacted businesses and their communities with widespread losses. After all, these disasters often result in significant property and infrastructure damage, fatalities, business disruptions and economic downturns. What's worse is that natural disasters aren't limited to a single geographic region, affecting individuals and organizations across many locations.

This past year was no exception to worsening natural disaster trends. According to international reinsurance company Munich Re, total global losses stemming from such disasters reached \$250 billion in 2023, exceeding the 10-year average of \$223 billion.



Nearly \$93 billion  
in losses  
492 fatalities

**S**tateside, the National Oceanic and Atmospheric Administration (NOAA) reported that 2023 produced a record-high 28 separate billion-dollar weather and climate disasters in the United States, generating nearly \$93 billion in overall losses and causing 492 fatalities. This number represents a considerable jump from the previous record of 22 distinct billion-dollar disasters in 2020 and far exceeds the five-year average of 20 events.

Taking a closer look at U.S. natural disasters throughout 2023, events such as Tropical Storm Hilary, Hurricane Idalia and the Hawaii firestorm were particularly devastating. Additionally, the number of convective storms (e.g., thunderstorms, tornadoes and hailstorms) skyrocketed across the country this past year; Munich Re found that these storms contributed to 54% of all U.S. weather-related losses in 2023, costing \$50 billion and almost doubling the past decade's average. Further, the National Interagency Fire Center reported that more than 53,000 wildfires burned over 2.6 million acres nationwide during 2023, destroying thousands of structures.

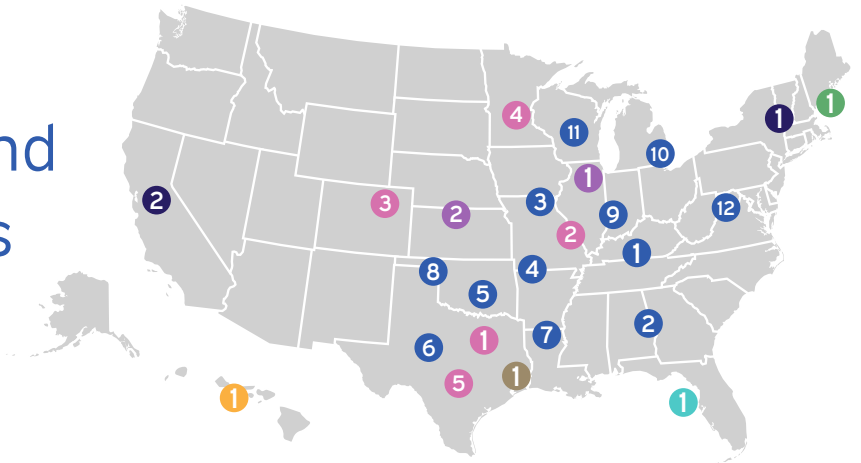
Considering these findings, it's important for businesses to have a better understanding of the various impacts of natural disasters in 2023 and take steps to minimize potential losses from future weather and climate events. The following document provides an overview of the biggest U.S. disasters that took place in 2023, outlines how this past year's disasters affected local communities and the national economy, explains the influence of these events on the commercial insurance space, and highlights associated risk management and insurance solutions for businesses to consider going forward.

# The Nation's Largest Natural Disasters in 2023

NOAA data showed that 2023 kicked off with severe cold waves and immense snowfall in several Northeastern states, producing the most frigid wind chill (-108 degrees Fahrenheit) the country has ever recorded and costing \$1.8 billion in losses. Between spring and early summer, a series of hailstorms, heavy winds and hundreds of tornadoes wreaked havoc on multiple Southeastern, Central and Midwestern states, leading to almost 100 fatalities and causing over \$35 billion in losses.

The NOAA also confirmed that 2023 was the hottest year on record, evidenced by more than one-third (34.3%) of the country experiencing prolonged droughts and heat waves for most of the summer. These conditions generated \$14.5 billion in losses and contributed to 247 fatalities. Throughout the year, record-high rainfall and flash flooding across states such as California, Illinois, Kentucky, Vermont and New York damaged hundreds of properties, costing more than \$6 billion in losses and causing over 30 fatalities. During the 2023 Atlantic hurricane season, 20 named storms produced nearly \$5 billion in losses, leading to over a dozen fatalities.

## U.S. 2023 Billion-dollar Weather and Climate Disasters



### Severe Weather

- 1 Southern and Eastern  
March 2-3, 2023
- 2 Southern and Eastern  
March 24-26, 2023
- 3 Central and Eastern  
April 4-6, 2023
- 4 Central and Southern  
April 15, 2023
- 5 Central  
April 19-20, 2023
- 6 Southern  
April 25-27, 2023
- 7 Southern  
June 11-14, 2023
- 8 Central and Southern  
June 15-18, 2023
- 9 Central  
June 28 - July 2, 2023
- 10 North Central and Southeastern  
July 19-21, 2023
- 11 North Central and Eastern  
July 28-29, 2023
- 12 Northeastern and Eastern  
Aug. 5-8, 2023

### Tornadoes

- 1 Central Tornado Outbreak and Eastern Severe Weather  
March 31 - April 1, 2023
- 2 Central and Eastern Tornadoes and Hailstorms  
May 10-12, 2023

### Wildfires

- 1 Hawaii Firestorm  
Aug. 8, 2023

### Hurricanes

- 1 Hurricane Idalia  
Aug. 29-31, 2023

### Droughts

- 1 Southern/Midwestern  
Spring-Fall 2023

### Flooding

- 1 Northeastern Flooding and North Central Severe Weather  
July 9-15, 2023
- 2 California  
Jan.-March 2023

### Winter Storms

- 1 Northeastern Winter Storm/Cold Wave  
Feb. 2-5, 2023

### Hailstorms

- 1 Texas  
May 18-19, 2023
- 2 Central Severe Weather (including hail)  
May 6-8, 2023
- 3 Rockies Hailstorms, Central and Eastern Severe Weather  
June 21-26, 2023
- 4 Minnesota Hailstorms  
Aug. 11, 2023
- 5 Southern Hailstorms  
Sept. 23-24, 2023

Source: NOAA

## Here are some of the most devastating individual disasters that took place across the United States this past year:



**Tropical Storm Hilary**—Between Aug. 16-19, the NOAA confirmed that a Category 4 hurricane with sustained winds of 145 mph rapidly formed and intensified near Mexico's West Coast before weakening into a tropical storm as it approached the United States. From Aug. 20-22, Tropical Storm Hilary became the first of its kind to enter California since 1997, bringing record-setting rainfall, flooded roads, downed trees and mudslides to the southern part of the state; some areas even experienced monsoon-like conditions, with rainfall amounts that were as much as 600% higher than monthly averages. Altogether, the storm led to two fatalities and cost approximately \$690 million in losses.



**Hurricane Idalia**—A few days after the events of Tropical Storm Hilary, the NOAA reported that Hurricane Idalia struck the Big Bend region of Florida as a Category 3 hurricane with sustained winds of 125 mph, making it the strongest hurricane to hit the area in over a century. From Aug. 29-31, this hurricane produced 2-8 feet of storm surges and 5-10 inches of rainfall across portions of Florida, Georgia and the Carolinas. The hurricane also spawned a series of 12 tornadoes across the same region. Hurricane Idalia caused a total of 10 fatalities and contributed to \$3.5 billion in losses.

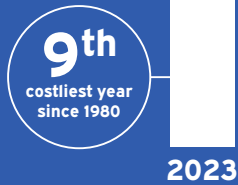


**The Alaska wildfires and Hawaii firestorm**—Losses that occur as aftereffects of major storms or arise from small- to mid-sized weather events (also known as secondary perils) became increasingly prevalent in 2023. Namely, the NOAA confirmed that a series of thunderstorms that produced thousands of lightning strikes in Alaska at the end of July ended up spawning dozens of wildfires and burning thousands of acres across the state, causing considerable damage. Further, the NOAA reported that heavy winds stemming from the remnants of Hurricane Dora over the Pacific Ocean played a substantial role in fueling the Hawaii firestorm in early August, which went on to generate \$5.6 billion in losses, claim 100 lives and ultimately become the deadliest fire in national history.

# Impact on Communities and the Economy

The NOAA confirmed that U.S. natural disasters produced almost \$93 billion in total losses and led to 492 fatalities throughout the course of 2023, affecting various communities and taking a serious toll on the national economy. The NOAA reported that these losses may continue to rise as additional costs incurred from fourth-quarter events come to light in the next couple of months.

Five-year average



**W**hile 2023's losses fell below the five-year average of \$119.1 billion, they still represent widespread devastation, ranking as the ninth-costliest year since 1980 and the eighth-deadliest year in the same time frame.

Here's a breakdown of the 28 separate billion-dollar disasters that impacted the United States in 2023, including their associated average costs per event and annual death tolls, according to NOAA historical data:



**Severe weather/convective storms**—This past year saw 19 severe weather/convective storm events, including tornado outbreaks, heavy wind and rainfall, thunderstorms and hailstorms. Such storms cost an average of \$2.4 billion per event and lead to about 48 fatalities every year.



**Floods**—There were four large-scale flooding events in 2023. On average, these disasters cost \$4.5 billion per event and cause 17 deaths each year.



**Tropical cyclones**—The country was affected by two tropical cyclones (e.g., hurricanes, monsoons and typhoons) last year. Such disasters often leave behind the most severe damage, costing an average of \$22.2 billion per event and resulting in about 157 fatalities every year.



**Winter storms/cold waves**—One winter storm/cold wave event took place this past year. On average, these disasters cost \$4.5 billion per event and cause 32 deaths each year.



**Wildfires**—There was one major wildfire event in 2023. Such disasters cost an average of \$6.5 billion per event and lead to about 12 fatalities every year.



**Droughts/heat waves**—One drought/heat wave event occurred last year. On average, these disasters cost \$11.4 billion per event and cause 103 deaths each year.

When it comes to calculating total losses from natural disasters, there are several factors to consider. Every weather and climate event is different, and related losses may vary based on the type of peril, geographic region and affected assets; nevertheless, the National Centers for Environmental Information reported that the following elements can be considered to determine the cost of a natural disaster:

- ☑ Damage to commercial, residential and municipal buildings and the material assets stored in these buildings (e.g., equipment, technology and important records)
- ☑ Business interruption-related expenses (e.g., downtime, lost income or temporary relocation costs)
- ☑ Damage to commercial fleets, personal vehicles and boats
- ☑ Health care costs (e.g., emergency services, treatment and rehabilitation) for injured individuals
- ☑ Damage or disruption to national and local platforms and essential infrastructure (e.g., energy plants, electrical grids, military and government bases, and public roads and bridges)
- ☑ Disaster-related suppression and environmental restoration costs

These factors showcase how businesses, their communities and the overall economy can be significantly impacted by natural disasters. However, it's worth noting that specific sectors of the economy could be more severely affected by these disasters than others. For instance, the agricultural industry is more likely to face large-scale losses and operational disruptions following certain disasters—namely, floods, wildfires, droughts and heat waves—as these events can easily lead to crop and timber destruction, soil erosion, debris deposition, water contamination, equipment damage, the spread of invasive species, and livestock illnesses and fatalities. On the other hand, the tourism and hospitality industries are more susceptible to lost income from natural disasters, especially when these disasters strike either during or just before peak tourist seasons and turn potential customers away.

Natural disasters can carry some immeasurable costs, particularly loss of life. In other words, although death poses some clear expenses (e.g., funeral costs and loss of future income), it's difficult to put a price tag on the lasting emotional trauma that bereaved individuals may endure after losing family members and loved ones amid such disasters. These fatalities can devastate communities for extended periods, leaving surviving individuals with persistent grief for years to come.

# Influence on the Commercial Insurance Space

While overall global losses stemming from natural disasters amounted to \$250 billion in 2023, Munich Re estimated that \$95 billion of these losses were insured. At a glance, this past year's worldwide insured losses totaled less than those from the prior year (\$125 billion) but still exceeded the 10-year average of \$90 billion and the 30-year average of \$57 billion.



**F**ocusing solely on North America, Munich Re confirmed that natural disasters in this region accounted for a considerable portion (40%) of global losses, causing a total of \$67 billion in insured losses.

Additionally, although “mega losses” such as those incurred from Hurricane Ian in 2022 were not as prevalent last year, Munich Re found that a surge in low- to medium-severity weather and climate events—primarily, convective storms—still drove up disaster-related expenses, contributing to more than half (\$58 billion) of 2023's global insured losses.

The difference between total losses caused by natural disasters and insured losses, also known as the protection gap, represents a substantial burden on the economy. Based on the latest data from the Insurance Information Institute, this gap currently sits at 62%, thus forcing businesses and their communities to pay major out-of-pocket expenses and face prolonged financial challenges when weather and climate events occur. There are several possible reasons behind this large gap. First, insurance carriers are having difficulty keeping up with disaster trends and the increasingly volatile risk landscape, making it harder for them to ensure accurate underwriting practices, properly assess policyholders' exposures, provide ample coverage and maintain overall profitability. Second, recent inflation issues, labor shortages and supply chain complications have exacerbated recovery costs for businesses and communities affected by natural disasters, driving up associated property repair and replacement expenses and increasing the likelihood of underinsurance concerns.

Rising natural disaster-related losses have influenced the commercial insurance industry in multiple ways, especially in the property segment. As such, worsening weather and climate events have prompted the following developments:



**Increased premiums and limited capacity**—Amid another intense season of natural disasters, commercial property insurance carriers made a series of large-scale payouts and struggled to achieve profitability. In an effort to improve their financial situations, many of these carriers have increased policyholders' premiums over the last 12 months and lowered available capacity by way of restrictive coverage terms.

Even though the commercial property segment has been characterized by hardening conditions since 2017, the Council of Insurance Agents & Brokers confirmed that premium jumps reached record highs in 2023, soaring to more than 20% in the first quarter and remaining above 18% in the latter half of the year. While these conditions may somewhat soften in the coming months and years, most policyholders will likely remain susceptible to double-digit rate increases and coverage limitations for the foreseeable future.



**Reinsurance challenges**—The reinsurance sector plays a valuable role in the commercial insurance landscape, allowing carriers to allocate their risks effectively and offer more capacity. In recent years, however, the reinsurance segment has faced substantial challenges. As natural disasters become more severe and inflation sits at elevated levels, commercial property reinsurers face a rise in claims and diminished profitability.

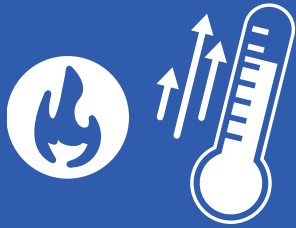
Consequently, some reinsurers have lowered capacity for disaster-related exposures and hiked up primary insurers' premiums, causing a trickle-down effect across the property insurance market. Certain reinsurers have also introduced sublimits and revised their policy wording to establish more distinct coverage restrictions. Although demand for reinsurance remains high, capacity will likely become further constrained throughout 2024, therefore impacting overall commercial property insurance limitations and costs.

Despite these trends, it's crucial for businesses to ensure ample financial protection against natural disasters. In doing so, businesses can avoid compounded out-of-pocket costs and limit the risk of financial ruin when weather and climate events take place.



# Looking Ahead

Moving forward, natural disaster trends are only expected to worsen, posing ongoing concerns for businesses, their communities, the economy and the commercial insurance space.



**A**ccording to weather and climate experts, global temperatures in 2024 are projected to be just as high as last year, with the potential to become the hottest year on record once again and fuel further heat waves, droughts and wildfires. For context, NASA reported that the past decade already reigns as the 10 warmest years in history.

Making matters worse, El Niño—a cyclical climate occurrence that generally causes above-average ocean temperatures and a surge in rainfall throughout the Southern region of the United States—is expected to spawn large-scale losses during 2024.

With this in mind, it's vital for businesses to be prepared for natural disasters and do what they can to minimize possible losses. Fortunately, there are a variety of strategies that companies can implement to limit their exposures, such as evaluating whether their operations are located in disaster-prone regions and assessing related risks, equipping their commercial properties with adequate safeguards (e.g., storm shutters, flood-resistant drywall and insulation, properly secured furniture and fixtures, and fire-resistant landscaping and roofing materials), storing critical assets in weather-resistant locations, including natural disaster scenarios in business continuity and emergency response plans, and educating employees on weather readiness.

Above all, businesses should aim to regularly review their commercial insurance policies and make periodic adjustments (if possible) to maintain sufficient protection amid evolving natural disaster exposures. There are also alternative risk financing options that may make sense for some businesses, such as catastrophe bonds and parametric coverage. These offerings can make all the difference in reducing companies' out-of-pocket losses following weather and climate events. Businesses can consult trusted insurance professionals for specific guidance.

**Contact us today** for additional risk management measures and coverage solutions.