

# What will climate change mean for your business?



Over the last century, scientists have documented clear evidence that our planet's climate is growing steadily warmer. Whether this is the result of human activity, natural processes, or a combination of the two is still not known. What we do know is that recent climate trends have shown an uptick in extreme weather events—and that those events can have a serious impact on business continuity, profitability, and workplace safety.

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## Here Are Just a Few of the Many Factors Playing into Our Planet's Warming Climate

### **Natural Causes**

The climate system on Earth is a living thing, constantly moving and shifting, sometimes quickly, and sometimes over long periods of time. One contributing factor to today's global warming is the Atlantic Ocean, which has been in a warm cycle since 1995. The Atlantic and Pacific oceans go through these cycles that last for decades. And while the cycles are normal, they can contribute to the development of more cyclones in tropical areas.

El Niño is another natural but unpredictable weather pattern that shifts jet stream winds over certain parts of the globe, which can result in conditions that are wetter, drier, colder, or warmer than usual.

### **Human Influence**

Deforestation and urbanization change our landscape and can raise the land temperature due to increased heat absorption and retention. It can also remove natural biological carbon dioxide sinks, or carbon reservoirs. The main natural causes are plants and other organisms that use photosynthesis to remove carbon from our atmosphere.

Humans also contribute to global warming with greenhouse gases. Carbon dioxide, methane, and chlorofluorocarbons make up only a small part of our atmosphere, but their effects are significant, trapping heat and preventing it from escaping the Earth, and destroying our ozone layer.



Even though weather observations, modeling, and forecasting have improved, these extreme events are unusual and unexpected, making them difficult to predict. But at this time, it is safe to assume these disruptive events will continue to happen—and happen more often—over the next several decades.

Understanding the ramifications that events like drought, flooding, extreme temperatures, and intense storms can have on your business can help you reduce the risk of disruption to your operations. By being aware of the increased likelihood and unpredictable nature of these events, you can make smarter risk assessments for growth and expansion, as well as better decisions about how to conduct your business around the world.

> More disruptive weather events have been happening and will likely continue to happen at an increased frequency over the coming decades.

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#### Weather Trends That Have Already Been Observed Include:

- Increased tendency for extreme dryness or wetness.
- Extended periods of either abnormally warm or cold weather.
- Higher rainfall totals during the heaviest rain events.
- More concentrated periods of severe weather.
- Extension of the warm season.
- More common episodes of extreme warmth, with extreme cold still occurs.



### 1.4

The number of degrees Fahrenheit our global climate has increased since 1901.

### 82%

Carbon dioxide (CO2) accounted for the majority of U.S. greenhouse gas emissions in 2012.

### 400 Years

How long  $CO_2$  stays in the atmosphere.

## 200%

The percentage of Earth's surface suffering drought has more than doubled since the 1970s.