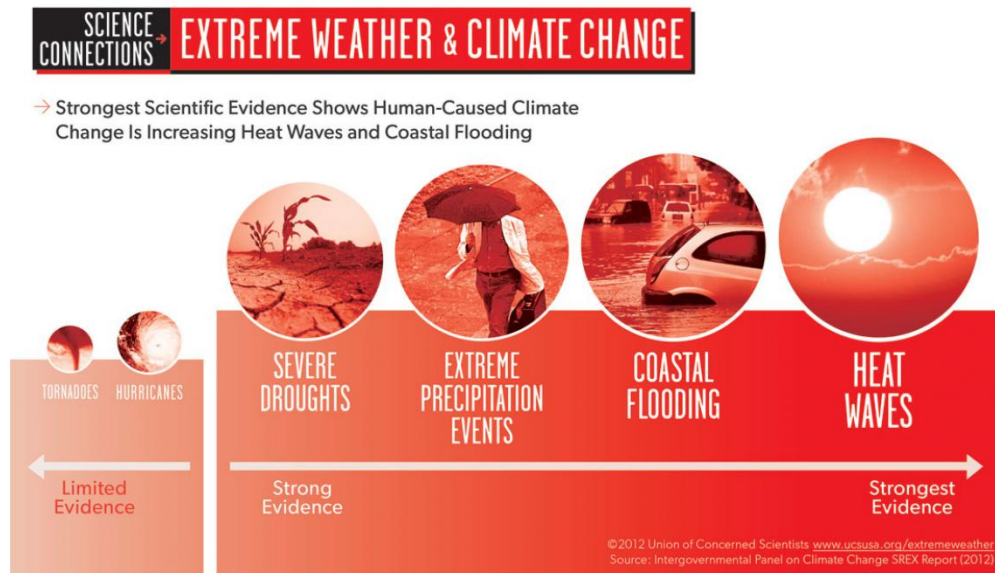


## Extreme Weather

- Climate Central shows how the number of downpours in the U.S. is increasing  
<http://www.climatecentral.org/gallery/graphics/more-us-downpours>

Is there a link between extreme weather and climate change? Basic physics suggest that global warming should increase extreme weather since more energy is being added to the atmosphere. Cold weather events should decline, and heat waves should increase. As the atmosphere warms, it also holds more water vapor. This means there should also be changes in the strength and frequency of the dry and wet periods that cause droughts and floods.



Source: Union of Concerned Scientists

[http://www.ucsusa.org/global\\_warming/science\\_and\\_impacts/impacts/extreme-weather-climate-change.html#share](http://www.ucsusa.org/global_warming/science_and_impacts/impacts/extreme-weather-climate-change.html#share)

However, the Earth's climate system is very complex and variable. For example, natural events like El Niño and La Niña make it difficult to tell if one extreme weather event is due to climate change or not. In addition, extreme weather is rare compared to average weather day-to-day. It can take a long time to see a meaningful trend.

Therefore, it is not possible to tie *individual* weather events to climate change. However, scientists are more and more sure that the *number* of extreme weather events is increasing. The Intergovernmental Panel on Climate Change recently studied all the scientific research on extreme weather. They found strong evidence that the number of extreme cold days around the world is decreasing. The number of extreme hot days is rising. Patterns of rainfall in many regions are changing as well. Surges created by storms are becoming higher. Rainfall and snowfall events are getting more intense.

There is still uncertainty about how much climate change affects hurricanes and tornadoes.

### More information

- Stanford scientists talking about extreme weather and climate change (2:55)



<https://www.youtube.com/watch?v=98VrLZFgGMY>

- Climate Central shows how the number of very hot days is increasing  
<http://www.climatecentral.org/gallery/graphics/number-of-extremely-hot-days-continues-to-rise>