

## Climate change and extreme events: Why every year matters

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Human emissions of greenhouse gases, and in particular CO<sub>2</sub>, which are mostly associated with the burning of fossil fuels such as coal, petrol and gas (<http://globalcarbonatlas.org>) are leading to an increasing level of global warming. CO<sub>2</sub> stays centuries to thousands of years in the Earth System, hence only a net-zero CO<sub>2</sub> emissions budget can allow to stabilize global warming. Global warming had reached +1°C (+2°F) in 2018.

In this presentation, I will give an overview on the main conclusions of the Intergovernmental Panel on Climate Change's (IPCC, [www.ipcc.ch](http://www.ipcc.ch)) Special Report on +1.5°C (<https://www.ipcc.ch/sr15/>). I will show what are the implications of small changes in global warming (+0.5°C, i.e. +1°F) for changes in climate extremes. Limiting global warming to +1.5°C would avoid widespread increases in extremes: hot extremes, but also heavy precipitation in several regions and drought in some regions. Texas is at the forefront of many of these changes in climate extremes. Every year of additional emissions leads to additional warming.