



This “warming stripe” graphic represents temperature change as measured in Connecticut over the past 100+ years. Each stripe shows the average temperature of a year. The graphic was produced by Ed Hawkins, at the University of Reading in England. Data was provided by the National Weather Service. A link to this graphic and others for areas around the world is: <https://showyourstripes.info/>.

A Temperature Reading

Burning fossil fuels, cutting down forests, and farming livestock increasingly influence the climate and the Earth's temperatures.

Results of these activities add more greenhouse gases to those naturally occurring in the atmosphere, creating the so-called “greenhouse effect” — the main cause of climate change and global warming. Some of the gases become like the glass of greenhouses, trapping the sun’s heat close to Earth and keeping it from going back into space.

Many greenhouse gases occur naturally, but human activities increase concentrations in the atmosphere, in particular: carbon dioxide, methane, nitrous oxide, and fluorinated gases. Carbon dioxide produced by human activities is the largest contributor to global warming. By 2020, its concentration in the atmosphere was 48% above its pre-industrial level before 1750.

Human activities adding to greenhouse gases include:

- **Burning coal, oil and gas.** That produces carbon dioxide and nitrous oxide.
- **Cutting down forests (deforestation).** Trees absorb carbon dioxide. When they are cut down, the carbon they stored is released into the atmosphere.
- **Increasing livestock farming.** Cows and sheep produce large amounts of methane when they digest food.

- **Fertilizing with nitrogen**, which produces nitrous oxide emissions.
- **Using fluorinated gases**, which are found in products such as refrigerators, air-conditioners, foams, and aerosol cans. Emissions from these products are caused by gas leakage during manufacturing and throughout use of the products. Such emissions have a warming effect up to 23,000 times greater than carbon dioxide.

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