

CO2 levels this year '50 percent higher than 18th century'

January 8 2021, by Patrick Galey



Atmospheric CO2 concentrations are rising annually, despite an unprecedented drop in emissions last year

Carbon dioxide levels in the atmosphere will this year reach levels 50 percent higher than before the industrial revolution because of manmade

emissions, Britain's Met Office predicted on Friday.

It forecasted the annual average CO₂ concentration measured at the Mauna Loa Observatory in Hawaii in 2021 will be around 2.29 parts per million (ppm) higher than in 2020.

It said CO₂ concentrations will exceed 417 ppm at some point between April and June—50 percent higher than the 278 ppm present in the late 18th century when the industrial era kicked off.

This is despite an unprecedented fall in [greenhouse gas emissions](#) in 2020 because of the pandemic.

"Since CO₂ stays in the atmosphere for a very long time, each year's emissions add to those from previous years and cause the amount of CO₂ in the atmosphere to keep increasing," said Richard Betts, lead producer of the Met Office's annual CO₂ forecast.

"Although the COVID-19 pandemic meant that less CO₂ was emitted worldwide in 2020 than in previous years, that still added to the ongoing build up in the atmosphere."

Mauna Loa has been continuously monitoring atmospheric CO₂ levels—which fluctuate according to season but continue to climb annually—since 1958.

The United Nations says emissions from energy, food production, transport and industry must fall more than 7 percent every year throughout the next decade in order to keep the temperature goals of the Paris climate deal in play.

The 2015 accord enjoins nations to limiting [global warming](#) to "well below" two degrees Celsius (3.6 Fahrenheit) above pre-industrial levels,

and to 1.5C if at all possible.

With just over 1C of warming so far, Earth is already beset by [extreme weather events](#) such as flooding, droughts and tropical storms supercharged by rising sea-levels.

The Met Office said it took around 200 years for CO₂ concentrations to increase 25 percent since the industrial era began.

"But now just 30 years later we are approaching a 50 percent increase," said Betts.

"Reversing this trend and slowing the atmospheric CO₂ rise will need global emissions to reduce, and bringing them to a halt will need global emissions to be brought down to net zero."

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