

Historic carbon peak soon to become global average, WMO says

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"At the current rate of increase, the global annual average [CO2 concentration](#) is set to cross the 400 parts per million threshold in 2015 or 2016," the UN agency said in a statement.

[Climate scientists](#) last week measured 400.03 parts per million of CO2 at a Hawaii station considered the global benchmark site for atmospheric observations—marking the first time in human history that the level has clearly surpassed the symbolic 400 ppm threshold.

This level has not existed on Earth in three to five million years—a time when temperatures were several degrees warmer and the sea level was 20 to 40 meters (22 to 44 yards) higher than today, experts say.

Several other stations in the Arctic and on the Canary Islands have over the past year also reported daily mean values exceeding the 400 ppm mark, but the benchmark Hawaii measurement sparked particular alarm, with the UN's climate chief Christiana Figueres warning Monday the world had "entered a new danger zone".

Before the industrial revolution, when man first started pumping carbon into the atmosphere by [burning fossil fuels](#), [CO2 levels](#) were about 280 ppm—rising steadily since records began in the 1950s.

The WMO pointed out Tuesday that the average annual amount of CO2 in the atmosphere reached 390.9 ppm in 2011, or 140 percent above the "balanced" pre-industrial level, and stressed there had been an average increase of 2.0 ppm each year for the past decade.

The 400 ppm symbolic threshold had been expected to be breached for some time, but campaigners say it should nevertheless serve as a wake-up call in efforts to curb [greenhouse gas emissions](#) and thus global warming.

The UN is targeting a maximum temperature rise of two degrees Celsius (3.6 degrees Fahrenheit) on pre-industrial levels for what scientists believe would be manageable climate change.

The Intergovernmental Panel on Climate Change, which informs policy makers, has said atmospheric CO₂ must be limited to 400 ppm for a temperature rise of 2-2.4 degrees Celsius (3.6 and 4.3 degrees Fahrenheit).

Many scientists however believe we are heading towards warming levels of between 3.0 and 4.0 degrees Celsius by the end of the century.

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