

Carbon dioxide levels reach a new milestone

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UP, UP and away. Parts of the planet have seen levels of carbon dioxide rise [above 400 parts per million](#) for the first time. Although it's largely symbolic, the milestone is a stark reminder of humanity's powerful influence on the atmosphere.

"During the month of April, the mean was over 400 ppm for the first time, throughout the Arctic," says [Pieter Tans](#) of the US National Oceanic and Atmospheric Administration's Earth System Research Laboratory in Boulder, Colorado. CO₂ levels reach an annual peak around April as the gas is released by respiration, and then fall over the summer as plants suck it up. As a result, the [2012 average](#) will be a little lower, at about 393 ppm.

Nevertheless, Tans says global levels will top 400 ppm in a few years.

The Arctic is not the only place seeing record levels. The [Japan Meteorological Agency](#) has reported levels above 400 ppm for both March and April at a monitoring station in Ofunato, [according to local media](#).

Despite its psychological significance, there's nothing to suggest 400 ppm is a [major threshold in the climate system](#), according to Tans. In fact, we don't know what a safe level of CO₂ would be.

The campaign group [350.org](#) wants levels reduced to 350 ppm, but Tans says that is arbitrary. The safe level could be 380 ppm, or 320 ppm - we just don't know. As a result, any growth in CO₂ increases the risk of [catastrophic climate change](#).

"We're playing a very dangerous game," Tans says.