

South Pole CO₂ Levels Cross 400 Ppm

The Earth passed another unfortunate milestone when carbon dioxide levels surpassed 400 parts per million (ppm) at the South Pole for the first time in four million years, according to US scientists.

The South Pole has shown the same, relentless upward trend in carbon dioxide (CO₂) as the rest of world, but its remote location means it is the last to register the impacts of increasing emissions from fossil fuel consumption, the primary driver of greenhouse gas pollution, researchers said.

"The far southern hemisphere was the last place on earth where CO₂ had not yet reached this mark," said Pieter Tans, the lead scientist of US National Oceanic and Atmospheric Administration (NOAA)'s Global Greenhouse Gas Reference Network.

"Global CO₂ levels will not return to values below 400 ppm in our lifetimes, and almost certainly for much longer," said Tans.

Over the course of the year, CO₂ levels rise during fall and winter and decline during the Northern Hemisphere's summer as terrestrial plants consume CO₂ during photosynthesis.

However, plants only capture a fraction of annual CO₂ emissions, so for every year since observations began in 1958, there has been more CO₂ in the atmosphere than the year before.

Last year's global CO₂ average reached 399 ppm, meaning that the global average in 2016 will almost certainly surpass 400 ppm. The only question is whether the lowest month for 2016 will also remain above 400 metres, experts said.

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