

# Global carbon dioxide levels reach new monthly record (Update)

May 6 2015

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The monthly global average concentration of Carbon dioxide surpassed 400 parts per million in March 2015, scientists say

In another ominous sign of human-caused climate change, US government scientists said Wednesday that global carbon dioxide concentrations have reached a new monthly record of 400 parts per million.

Carbon dioxide is a potent greenhouse gas, and is a harmful by-product of burning fossil fuels such as oil and coal.

"For the first time since we began tracking carbon dioxide in the global atmosphere, the monthly global average concentration of this greenhouse gas surpassed 400 parts per million in March 2015," said the National Oceanic and Atmospheric Administration (NOAA).

Scientists announced that CO<sub>2</sub> had passed the 400 ppm level for the first time in the Arctic in 2012, and at Mauna Loa in Hawaii in 2013.

"It was only a matter of time that we would average 400 parts per million globally," said Pieter Tans, lead scientist of NOAA's Global Greenhouse Gas Reference Network.

"Reaching 400 parts per million as a global average is a significant milestone."

Tans said CO<sub>2</sub> has risen more than 120 parts per million since pre-industrial times.

"Half of that rise has occurred since 1980," he said.

## **Hard to reverse**

In March, the International Energy Agency reported that the growth of global emissions from fossil fuel burning had stalled in 2014 and was level with emissions in 2013.

But experts warn that stabilizing the rate of emissions will not ward off climate change, since greenhouse gases linger in the atmosphere for years and trap heat around the Earth.

"NOAA data show that the average growth rate of carbon dioxide concentration in the atmosphere from 2012 to 2014 was 2.25 ppm per year, the highest ever recorded over three consecutive years," the agency said.

Carbon dioxide is a natural part of Earth's atmosphere but the burning of fossil fuels sends excess amounts into the air and creates an even tougher heat-trapping blanket.

NOAA collects its data on global carbon dioxide concentration on air samples taken from 40 sites around the world, including some remote islands.

"We choose to sample at these sites because the atmosphere itself serves to average out gas concentrations that are being affected by human and natural forces. At these remote sites we get a better global average," said Ed Dlugokencky, the NOAA scientist who manages the global network.

When the milestone of 400 ppm was first observed in 2012, many scientists said it should be considered a wake-up call that more renewable energies need to be used to cut back on cheap but polluting fuels.

But even though some countries have pledged to reduce emissions, the trend has proven hard to reverse.

"Elimination of about 80 percent of fossil fuel emissions would essentially stop the rise in carbon dioxide in the atmosphere, but concentrations of carbon dioxide would not start decreasing until even further reductions are made and then it would only do so slowly," said James Butler, director of NOAA's Global Monitoring Division.

Citation: Global carbon dioxide levels reach new monthly record (Update) (2015, May 6)  
retrieved 19 April 2024 from  
<https://phys.org/news/2015-05-global-greenhouse-gas-monthly.html>

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