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Carbon Dioxide Levels In The Atmosphere Hit Highest Mark In Human History

Researchers at Hawaii's Mauna Loa Observatory recorded the record-setting reading on Saturday.

By Nina Golgowski

Carbon dioxide levels in the Earth's atmosphere have soared to a new high, one never before been seen in human history, researchers announced.

A daily CO2 reading by researchers on Saturday recorded a 415.26 parts per million (ppm) baseline. It's the first daily baseline to top 415 ppm in mankind's history, the researchers with San Diego's Scripps Institution of Oceanography said.

"Not just in recorded history, not just since the invention of agriculture 10,000 years ago," Eric Holthaus, a meteorologist and writer for the non-profit environmental magazine Grist, emphasized on a Twitter post. "Since before modern humans existed millions of years ago."

Scripps Institution of Oceanography at UC San Diego Saturday's carbon dioxide reading at the Mauna Loa Observatory in Hawaii, depicted on a graph showing levels over several thousands of years.

Researchers have collected the daily measurements for more than 60 years at Hawaii's Mauna Loa Observatory, an atmospheric baseline station considered ideal for monitoring atmospheric conditions because of its undisturbed air, remote location, and minimal influences of vegetation and human activity. Those measurements are then compared to those from hundreds of thousands of years ago after analyzing gas contained in ice cores, according to the research institute.

"During ice ages, the CO_2 levels were around 200 ppm, and during the warmer interglacial periods, the levels were around 280 ppm," according to the institute's website.

The data has been showcased in what is called the Keeling Curve. This graph shows a significant spike in CO2 levels in more modern years, as well as particular milestones in more recent times.

At the end of 2018, the Mauna Loa Observatory recorded the fourth-highest annual growth in the concentration of atmospheric CO2 in its 60 years of record keeping. In 2013, CO2 levels were

recorded as exceeding 400 ppm for the first time in human history. To offer some comparison, CO2 levels were around 315 ppm at the start of record keeping in the 1950s.

Ralph Keeling, director of the Scripps Institution of Oceanography's CO2 program, said the current rise is likely from both human and natural causes.

"The average growth rate is remaining on the high end. The increase from last year will probably be around three parts per million whereas the recent average has been 2.5 ppm," he said in a statement. "Likely we're seeing the effect of mild El Niño conditions on top of ongoing fossil fuel use."

Keeling has previously said that human activity is undeniably to blame for CO2 levels rising so high, primarily due to fossil fuel burning.

"It's true that atmospheric CO2 has almost certainly been higher than present in Earth's distant past, many millions of years ago. But because fossil-fuel burning is not natural, the recent carbon increases in the atmosphere, oceans, and land biosphere cannot be natural either," he has said. "Few if any natural processes can release fossil carbon into the atmosphere as fast as we humans are doing it now via the extraction and burning of fossil fuels."