

# COVID-19: Economic slowdown doesn't stop climate change

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Efforts to control the coronavirus pandemic have reduced economic activity and led to localized improvements in air quality. But it is too early to assess the implications for concentrations of greenhouse gases which are responsible for long-term climate change. Carbon dioxide levels at key observing stations have so far this year been higher than last year.

Any cuts in emissions as a result of the economic crisis triggered by COVID-19 are not a substitute for concerted Climate Action, according to the World Meteorological Organization.

"Despite local reductions in pollution and improvement in air quality, it would be irresponsible to downplay the enormous global health challenges and loss of life as a result of the COVID19 pandemic," said WMO Secretary-General Petteri Taalas. "However, now is the time to consider how to use economic stimulus packages to support a long-term switch to more environmentally and climate-friendly business and personal practices."

"Past experience suggests that emissions declines during economic crises are followed by a rapid upsurge. We need to change that trajectory," he said.

"The world needs to demonstrate the same unity and commitment to [climate action](#) and cutting [greenhouse gas emissions](#) as to containing the Coronavirus pandemic," he said. "Failure in climate change mitigation could lead to greater human life and economic losses during the coming decades," he said.

According to an analysis carried out for Carbon Brief, the lockdown and reduction in [economic activity](#) in China led to an estimated 25% reduction in CO<sub>2</sub> emissions over four weeks.

WMO's Global Atmosphere Watch coordinates high-quality long-term global observations of greenhouse gas concentrations. Emissions represent what goes into the atmosphere. Concentrations represent what remains in the atmosphere after the complex system of interactions between the atmosphere, biosphere, lithosphere, cryosphere and the oceans.

Carbon dioxide remains in the atmosphere and oceans for centuries. This means that the world is committed to continued climate change regardless of any temporary fall in emissions due to the Coronavirus epidemic.

The February monthly average of atmospheric CO<sub>2</sub> at Mauna Loa observatory in Hawaii was 414.11 parts per million, compared to 411.75 ppm in February 2019, according to the US National Oceanic and Atmospheric Administration. Mauna Loa is the world's longest continual observing station and a benchmark station of the Global Atmosphere Watch Network. At another benchmark station, Cape Grim in Tasmania, average CO<sub>2</sub> levels were 408.3 ppm in February, up from 405.66 ppm in February 2019, according to CSIRO.

About a quarter of the total emissions is absorbed by the oceans. Another quarter is absorbed by the land biosphere—including forests and vegetation which act as carbon "sinks." Naturally, the land biosphere takes up a similar amount of CO<sub>2</sub> than it releases over the year in a seasonal cycle. Therefore, global average CO<sub>2</sub> levels generally increase until April/May.

This natural effect is much larger in magnitude than the emission reductions related to the recent economic slowdown. It is thus too early to draw firm conclusions on the significance of this economic slowdown on atmospheric greenhouse gas concentrations. After the 2008-2009 global financial crisis, was followed by strong emissions growth in emerging economies, a return to emissions growth in developed economies and an increase in the fossil fuel intensity of the world economy, according to a study in *Nature Climate Change*.

**More information:** Glen P. Peters et al. Rapid growth in CO<sub>2</sub> emissions after the 2008–2009 global financial crisis, *Nature Climate Change* (2011). [DOI: 10.1038/nclimate1332](https://doi.org/10.1038/nclimate1332)

Provided by World Meteorological Organization

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