

Climate at a Glance: Coronavirus Impact on CO2 Levels

Bullet-Point Summary:

- Some climate activists [celebrated the economic shutdown](#) due to the coronavirus pandemic and noted it created the [largest ever drops in global CO₂ emissions](#).
- The [entire global economy shrank](#) as a consequence of the lockdowns, and the [United States is on-track for a 40% reduction](#) in the second quarter of 2020.
- The world leader in CO₂ emissions, China, [had an estimated 25% drop in CO₂ emissions](#), while the [Energy Information administration predicts a 11% reduction](#) in energy-related CO₂ emissions in the U.S. this year.
- Despite crashing economies and large cutbacks in travel, industry, and energy generation, **climate scientists [have yet to find](#) and hint of a drop in atmospheric CO₂ levels.**
- The fact that despite massive global lockdowns and economic hardships hasn't reduced atmospheric CO₂ levels at all suggests climate activist calls for global energy use reductions are ineffective, disastrous, and would take decades.

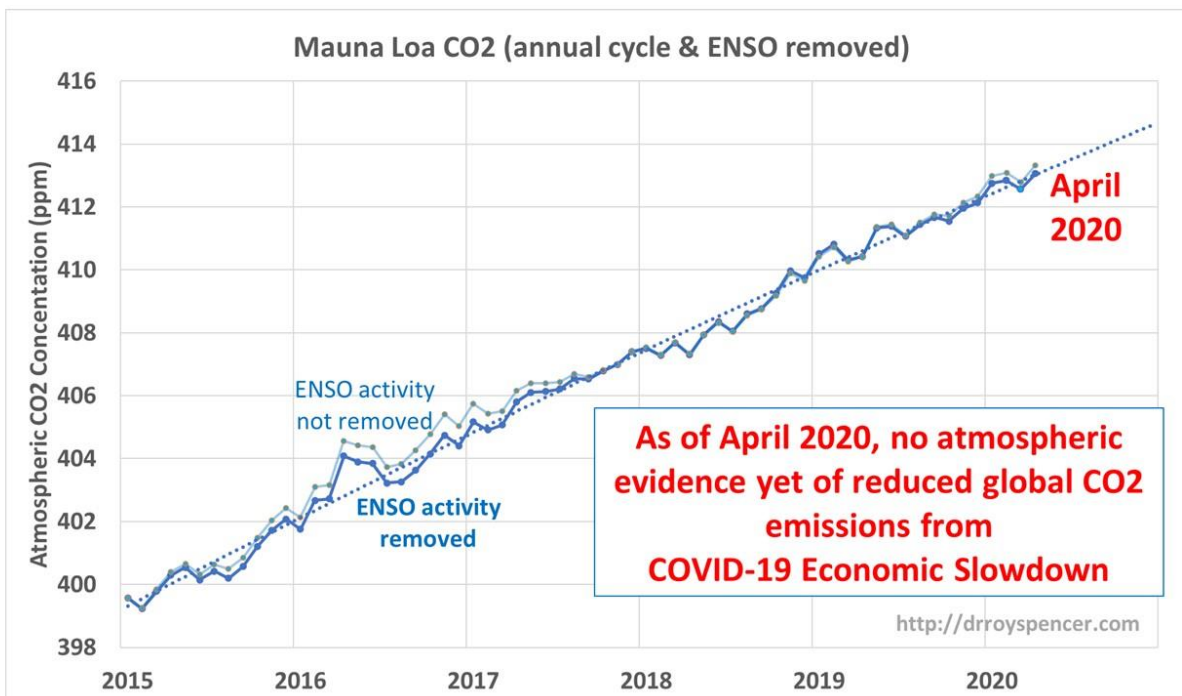


Figure 1: Using a simple method¹ for removing the large seasonal cycle from the Mauna Loa CO₂ data, and well as the average effects from El Nino and La Nina events, no obvious downturn in global CO₂ levels has been observed⁴. Analysis by Dr. Roy Spencer.

Short Summary:

The COVID-19 aka Coronavirus pandemic is causing a worldwide shutdown in economic activity as businesses close, airlines cancel flights, energy production is reduced, and people shelter in their homes and drive less.

Climate activists expected this economic downturn to translate to less energy usage, and therefore less CO₂ emissions globally. While that has indeed happened, with [China seeing a 40% emissions drop](#), and an expected [11% reduction in energy-related CO₂ emissions in the U.S. this year](#), it didn't translate into the proof they were seeking. What scientists are looking for is any evidence of a decline in global atmospheric CO₂ concentrations that would be strong enough to attribute to the economic downturn.

University of Alabama climate scientist Dr. Roy Spencer used a [simple method](#)¹ for removing the large seasonal CO₂ cycle², due to plant photosynthesis increases/decreases with seasons, from the Mauna Loa CO₂ data, and well as the average effects from El Nino and La Nina events, which change the rate of ocean outgassing of CO₂. The result: no obvious downturn in global CO₂ levels has been [observed](#)^{3,4}.

As can be seen in Figure 1, the latest CO₂ data show no downtrend, but instead just a ripple, that is not unlike other ripples in the graph when there was no crisis and resulting economic downturn. The newspaper *USA Today* [did a fact check on this issue and found the same result](#).

NOAA's Earth System Research Laboratories also studied the issue⁵ and [concluded](#):

"That drop in emissions needs to be large enough to stand out from natural CO₂ variability caused by how plants and soils respond to seasonal and annual variations of temperature, humidity, soil moisture, etc. These natural variations are large, and so far the "missing" emissions do not stand out."

Clearly, there is no indication that the forced reductions have had any effect on global CO₂ levels, suggesting that natural forces, such as ocean outgassing of CO₂ overwhelm man-made contributions. This further suggests that the calls from climate alarmists to reduce fossil fuel use, automobile use, airline travel, beef consumption, and an entire litany of complaints they make about modern life-enhancing energy use applications will have little or no effect if implemented as they demand.

Further reading:

1. *Is the COVID-19 Economic Downturn Affecting Atmospheric CO₂? Mauna Loa Data Say, Not Yet* Dr. Roy Spencer March 22nd, 2020 <https://www.drroyspencer.com/2020/03/is-the-covid-19-economic-downturn-affecting-atmospheric-co2-mauna-loa-data-say-not-yet/>
2. *Seasonal Changes in Carbon Dioxide* NASA's Scientific Visualization Studio May 4th, 2017 <https://svs.gsfc.nasa.gov/4565>

3. *March 2020 CO₂ Levels at Mauna Loa Show No Obvious Effect from Global Economic Downturn* Dr. Roy Spencer April 7th, 2020 <https://www.drroyspencer.com/2020/04/march-2020-co2-levels-at-mauna-loa-show-no-obvious-effect-from-global-economic-downturn/>
4. *Why the Current Economic Slowdown Won't Show Up in the Atmospheric CO₂ Record* Dr. Roy Spencer May 15th, 2020 <http://www.drroyspencer.com/2020/05/why-the-current-economic-slowdown-wont-show-up-in-the-atmospheric-co2-record/>
5. *Can we see a change in the CO₂ record because of COVID-19?* NOAA Earth System Research Laboratories May 2020 <https://www.esrl.noaa.gov/gmd/ccgg/covid2.html>

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