

WORLD

Covid-19's Environmental Benefits Evaporate as World Reopens

Carbon emissions sank as lockdowns took hold world-wide, but now they are rebounding fast



MY CONTRIBUTION:

As a part of a series on sustainability, I created this line/area chart that shows various scenarios of emissions. It was developed in an Observable notebook with D3.js and pulled into Illustrator.

Live link:

<https://www.wsj.com/articles/covid-19s-environmental-benefits-evaporate-as-world-reopens-11594290145>

Lockdowns across the world such as the one in New York City contributed to a fall in global carbon emissions.

PHOTO: JEHAD NGA FOR THE WALL STREET JOURNAL

By [Sarah McFarlane](#)

July 9, 2020 6:22 am ET

For climate scientists, the pandemic has made one thing clearer: the difficulty of reducing carbon emissions.

Emissions sank when factories were shut down, planes grounded and cars parked, as people stayed home to slow the spread of the coronavirus, but they are now rebounding fast as economies reopen.

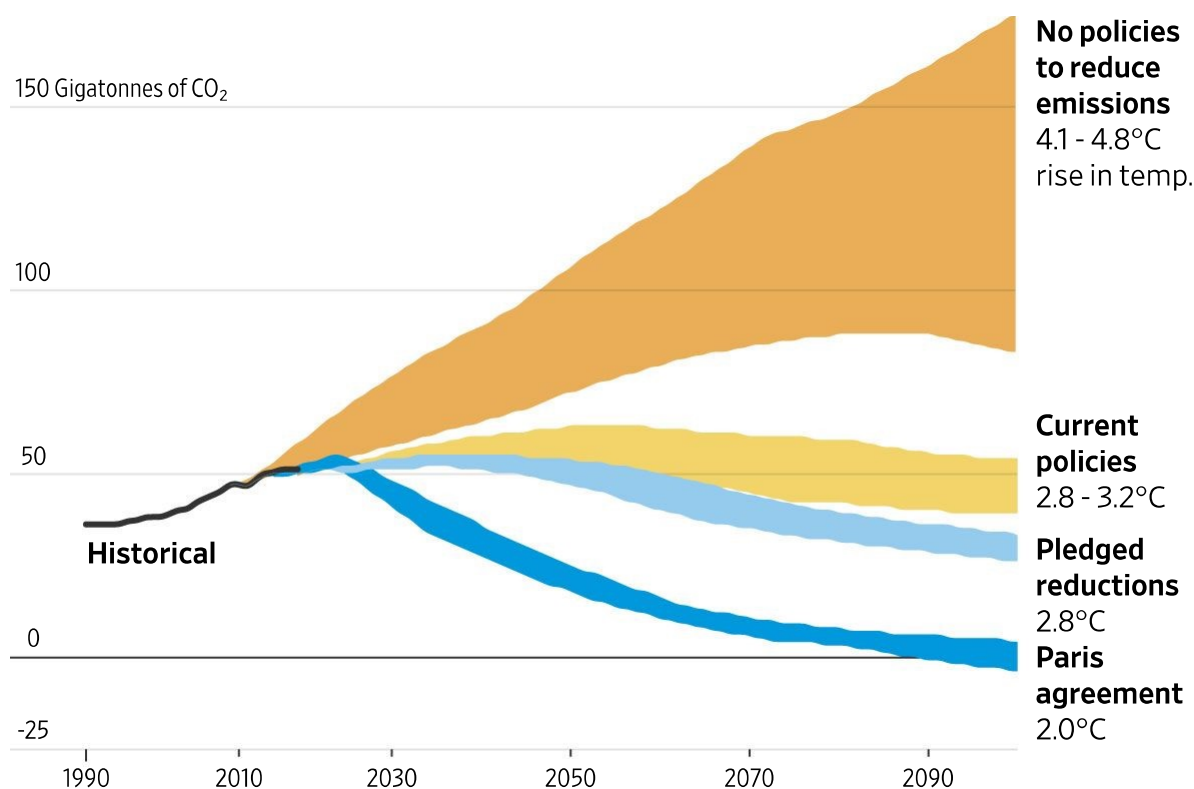
When two-thirds of the world's population was under lockdown in early April, carbon emissions were down 17% compared with average daily emissions last year, according to a study by a group of climate scientists published in the journal Nature Climate Change. By June 11, the drop was 5%.

“We’re getting to this by stopping all activities, not structural changes, so when people go back to work there’s no reason these emissions wouldn’t go shooting back up,” said Corinne Le Quéré, a professor of climate change science and policy at the U.K.’s University of East Anglia, who led the study. For a lasting impact, governments need to encourage low-emissions technologies such as electric vehicles, she added.

Warming Up

Global temperatures are expected to rise unless carbon emissions are reduced.

CO₂ emissions and projected temperature increases under various scenarios



Governments have put more effort into reducing emissions since the 2015 Paris climate accord, under which they agreed to limit global temperature increases to less than 2 degrees Celsius, with an ambition to cap them at 1.5 degrees. Since then, emissions have continued to rise, and the U.S. has said it is withdrawing from the deal.

Emissions are typically monitored on a monthly and annual basis, but scientists say the pandemic has accelerated efforts to move toward a system of daily reporting. To do that, they are tapping proxy data, such as measuring road traffic

via daily requests for driving directions on [Apple Inc.](#)'s maps app and [TomTom](#) NV statistics, and using data transmitted by smart meters to gauge residential electricity demand.

Scientists wanted to measure the impact lockdowns were having on global emissions and how long it would take to return to pre-lockdown levels.

"The virus will fundamentally change carbon cycle science, it already has in that we're focusing on real-time carbon emissions," said Rob Jackson, chair of the Global Carbon Project, which produces annual data focused on emissions from fossil fuels and land use.

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"We were struck by how ill-prepared we were to make real-time estimates," Mr. Jackson said. "What we weren't as creative about was using [proxy] data sources like cellphone data."

Scientists say that greater use of that data—while not as accurate as more direct sources—has allowed them to track the pace of the fall in emissions and the subsequent rebound.

"I think that is useful and sobering for the realization of the challenge," said Sverre Alvik, program director for energy transition at Norway-based consulting firm DNV GL.

The United Nations Environment Programme says global emissions need to fall 7.6% a year until 2030 to be on track to meet the Paris goals.

The world is set to exceed that target this year, with the International Energy Agency forecasting carbon emissions to fall 8% to 30.6 gigatons—the lowest level in a decade. However, many scientists expect the fall to be short-lived given it has been induced by a health crisis rather than a planned, permanent [change to emissions-emitting activities](#).

For instance, emissions fell 1% during the 2009 economic downturn but rebounded 6% the following year, according to IEA data, as governments pumped

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trillions of dollars into their economies to stimulate growth.

This year, governments have committed \$12 trillion to reinvigorating economies, with around 5% earmarked for climate-friendly initiatives, according to a report by BloombergNEF in June.

Scientists say their newfound ability to rapidly assess changes to emissions

could be helpful for future policy.

Most of the recent drop in emissions came from surface transport, where activity fell 50%, and industry, where it dropped 35%, according to the report by climate scientists. Aviation saw the largest drop in activity at 75%, but it only generates 2.8% of global emissions. Ordinarily, the largest contributor to carbon emissions is industrial production at 44%, followed by electricity generation at 22%, and road and rail transport at 21%.

“It’s shown us a few of the sectors that are more elastic in the sense that they can be rapidly targeted like transport,” said Richard Allan, professor of climate science at the University of Reading.

Scientists also say behavioral shifts during the pandemic have shown that governments, companies and individuals can make changes quickly that curb emissions, and that recent momentum could be used to bring about lasting reductions.

However, the extent to which people work from home more frequently, reduce international travel and opt to walk or cycle after the pandemic—and the impact of those actions on emissions—isn’t yet clear. The rebound in emissions indicates that it may be limited, scientists say.

There is also pushback from some businesses that don’t want to change their behavior, saying they need to focus on jobs and reviving activity rather than climate objectives.

“We see that the forces in both directions are equally strong, and we don’t see yet that this will hasten the energy transition,” DNV’s Mr. Alvik said.

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