

Climate and Environment

Mooney, C., Dennis, B., Muyskens, J. **Global emissions plunged an unprecedented 17 percent during the coronavirus pandemic.** *Washington Post*, May 19 2020

The wave of shutdowns and shuttered economies caused by the [coronavirus](#) pandemic fueled a momentous decline in global greenhouse gas emissions, although one unlikely to last, a group of scientists reported Tuesday.

As infections surged in March and April, nations worldwide experienced an abrupt reduction in driving, flying and industrial output, leading to a startling decline of more than 1 billion tons of carbon dioxide emissions. That includes a peak drop in daily emissions of 17 percent in early April, according to the [study](#), published in the journal *Nature Climate Change*. For some nations, the falloff was much steeper.

Scientists have long insisted that the world must scale back carbon pollution significantly — and quickly — to mitigate the worst effects of climate change over the coming decades, although none have suggested that a deadly global pandemic is the way to do so. Tuesday's study projects that total emissions for 2020 will probably fall between 4 and 7 percent compared with last year — an unheard-of drop in normal times but considerably less dramatic than the decline during the first few months of the year, when economies screeched to a halt. The final 2020 figure will depend on how rapidly, or cautiously, people around the world resume ordinary life.

The unprecedented situation produced by the coronavirus has offered a glimpse at the massive cuts in global emissions, year after year, that would be required to meet the most ambitious goals set by world leaders when they forged the 2015 Paris climate accord. Last fall, a United Nations report estimated that global greenhouse gas emissions must begin falling by 7.6 percent each year beginning in 2020 to avoid the worst effects of climate change.

Tuesday's study underscores how far the world remains from that long-term aspiration. The forced plunge in greenhouse gas emissions in recent months, while extraordinary, returned carbon pollution only to levels last seen in 2006. And the changes are unlikely to last. "History suggests this will be a blip," said Rob Jackson, a Stanford University professor and one of the authors of the peer-reviewed study, which attempts to assess the virus's effect by nation and economic sector. "The 2008 [financial] crisis decreased global emissions 1.5 percent for one year, and they shot back up 5 percent in 2010. It was like it never happened."

Light traffic on Sunset Boulevard in Los Angeles on April 15, during what would normally be the evening rush hour. Federal data from March showed that Los Angeles had its longest stretch of air quality rated as "good" since 1995. (Mario Tama/Getty Images)

Although the decline in emissions during the pandemic may have been unprecedented, it was relatively small when it comes to combating global warming. The peak 17 percent decline in

global emissions, which occurred in early April, still meant nations continued to generate more than 80 percent of the usual carbon pollution.

Researchers say the experience demonstrates how broad structural changes to the energy system are critical if the world is to slash emissions in a meaningful, sustainable way. “We can see now that behavior change alone is not going to do it,” said Corinne Le Quéré, lead author of the study and director of Britain’s Tyndall Center for Climate Change Research.

Le Quéré said she had expected to find even larger reductions in the power and industrial sectors during the pandemic. Instead, she said, many sources of carbon dioxide and other pollutants have continued steadily, almost on autopilot, even as much of the world has ground to a halt. Appliances still run, office buildings must be maintained, and some factories continue to hum. “There’s a lot of inertia in the infrastructure, in the built environment,” she said. “It seems like many things are able to function on their own, at least for a short time.”

Emissions have fallen before — during world wars and economic recessions, for instance, and markedly during the Great Depression. But experts do not think the modern world has experienced a plunge so sudden and sharp as in recent months. “In absolute terms, it will be the biggest,” said Glen Peters, one of the study’s authors and an expert at the Center for International Climate Research in Norway. “In relative terms, you will have to go back quite some [time] to find big changes like that.”

Most researchers agree that emissions are all but certain to bounce back once countries reopen. Already, [demand for energy is resuming](#) as people return to the roads and as many U.S. states begin easing stay-at-home orders that helped drive the price per gallon of gasoline to [less than \\$1 at some pumps](#). Governments also are expected to begin trying to boost their economies with stimulus spending in the coming months. But how leaders decide to spend that money could make a fundamental difference. “Where they put this stimulus is really critical,” Le Quéré said. “It’s 2020, and there’s not much time to tackle climate change.”

Some world leaders have pledged to push for greener economies in the wake of the pandemic. Last week, British Prime Minister Boris Johnson said his country’s effort to slash its emissions remains “undiminished” by the coronavirus and the economic turmoil it has caused. He singled out airlines during remarks in Parliament, saying the sector must limit its carbon emissions even when normal flights resume.

“Inadvertently, the planet this year will [have] greatly reduced its CO2 emissions. ... We need to entrench those gains,” Johnson told lawmakers. “I don’t want to see us going back to an era of the same type of emissions as we’ve had in the past. Aviation, like every other sector, must keep its carbon lower.”

A weather balloon of Airparif, which is responsible for monitoring air quality in the Ile-de-France region, flies near the Eiffel Tower in Paris on May 7. (Joel Saget/AFP/Getty Images). Last month, German Chancellor Angela Merkel indicated that she would support green investments as her nation seeks to restore its economy. “It will be all the more important that if we set up economic stimulus programs, we must always keep a close eye on climate protection,” Merkel [told a gathering](#) of leaders focused on climate change. The new research

was conducted by Le Quéré, Jackson, Peters and 10 other colleagues affiliated with the [Global Carbon Project](#).

Normally, global emissions are calculated on an annual basis; doing so more rapidly, nearly in real time, presented a scientific challenge. Tuesday's study used a combination of energy data across multiple sectors, as well as data on the strenuousness of lockdowns across 69 countries that account for 97 percent of the world's greenhouse gas emissions, to estimate the reductions.

The results varied greatly across different sectors. Airplane emissions plunged by as much as 60 percent – but airlines represent a relatively small fraction of global emissions. Emissions from surface transportation, one of the largest sources, fell 36 percent at the peak of the shutdown.

“Passenger vehicles are down a bit more,” Jackson said. “Commercial vehicles and long-haul trucking are down much less. I’m staying at home, but the Amazon delivery vehicle is still driving around.”

Emissions linked to home energy use increased about 3 percent, not surprising during a time when people are confined to their homes, using more appliances, lighting, heating and cooling. But industrial electricity demand plummeted, leading to net electricity declines overall.

Although some aspects of life may change in the wake of the pandemic – more people working remotely, fewer people commuting and taking frequent plane trips – individual changes are unlikely to make much of a long-term mark on emissions, said Zeke Hausfather, a scientist and director of climate and energy at the Breakthrough Institute.

“Unless anything structurally changes, we can expect emissions to go back to where they were before this whole thing happened,” he said.

Hausfather also said that one year of sharp reductions in emissions would do little to stave off the warming that scientists have said will continue unless the world significantly cuts emissions for good.

“I don’t think there’s much of a silver lining to covid-19 for the climate,” he said, “unless we use the recovery as a chance to both stimulate the economy and build the type of infrastructure to support a clean-energy future.”