



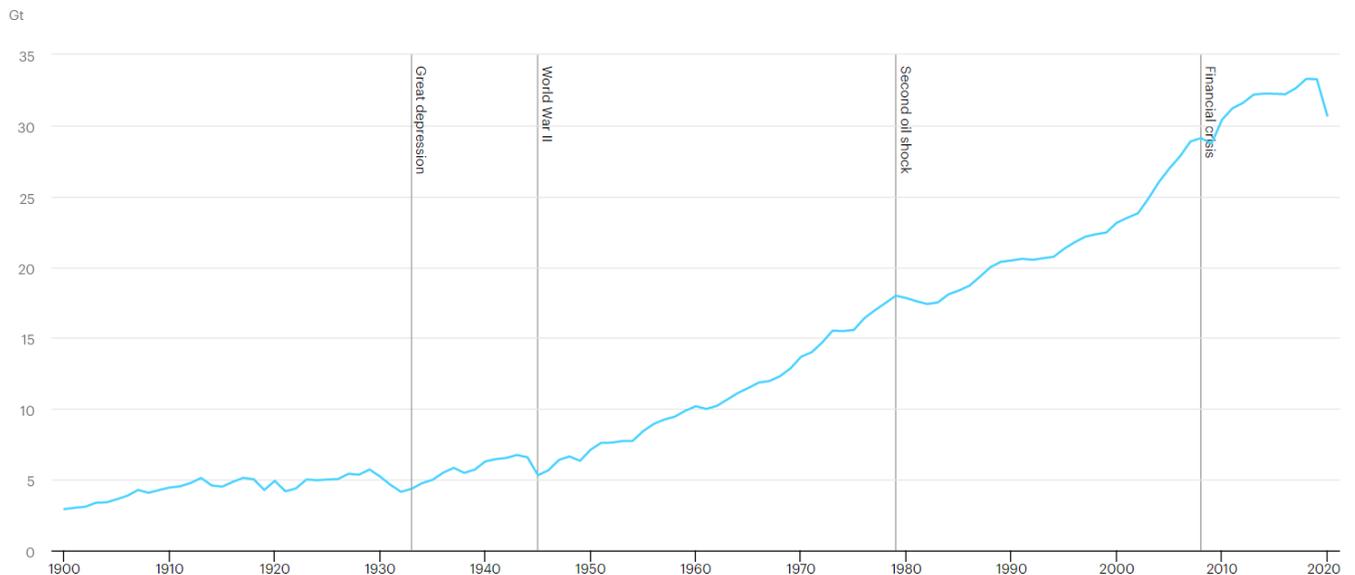
the weekly anthropocene

dispatches from the wild, weird world of humanity and its biosphere



By Sam Matey, May 27, 2020

Global energy-related CO₂ emissions, 1900-2020



Global Carbon. Several new analyses have shed light on how the COVID-19 pandemic and worldwide lockdowns have affected CO₂ emissions, the primary cause of climate change. First, a new study published in *Nature Climate Change* has offered the best view yet of the COVID-carbon connection. The researchers found that daily carbon emissions decreased by 17% during the peak of the lockdowns in April 2020 versus mean daily levels in 2017. Notably, emissions from surface transport (i.e. car journeys) accounted for 43% of the reduction, as commutes were curtailed and vacations were postponed. The researchers estimate that total global CO₂ emissions for 2020 will be 4 to 7 percent lower than in 2019. This is similar with the International Energy Agency's earlier estimate of a 7.7% decrease (see [iea.org/reports/global-energy-review-2020](https://www.iea.org/reports/global-energy-review-2020)). However, this should not be viewed as unalloyed good news. These decreases in carbon pollution are due to worldwide economic disruption from a virus that has caused hundreds of thousands of deaths. Furthermore, these reductions are likely to be temporary without further investment in renewable technologies, and it's still not nearly enough. The graph above, from the IEA report, shows global energy-related CO₂ emissions per year from 1900 to 2020, in gigatonnes (billions of tons). The decrease at the end of the graph is what we're experiencing now, and we really need to get those emissions all the way down to zero this century. And the world-spanning changes of the Anthropocene aren't slowing down: in April 2020, the average concentration of carbon dioxide in Earth's atmosphere was 416.21 parts per million (see [tinyurl.com/GlobalCO2Concentration](https://www.tinyurl.com/GlobalCO2Concentration)). For context, atmospheric CO₂ concentration was below 325 ppm in 1960, under 300 ppm before the Industrial Revolution, and ice core records have revealed that Earth's atmosphere did not exceed 300 ppm CO₂ for at least 800,000 years before the modern era.



the weekly anthropocene



dispatches from the wild, weird world of humanity and its biosphere

By Sam Matey, May 27, 2020

The good news, though, as discussed over the last few months in this newsletter, is that the turmoil of the COVID crisis offers a golden opportunity to accelerate the all-important transition to renewable energy. Perhaps summing it up best is Professor Corinne Le Quéré of the University of East Anglia, leader of the Nature Climate Change study. “Population confinement has led to drastic changes in energy use and CO2 emissions. These extreme decreases are likely to be temporary though, as they do not reflect structural changes in the economic, transport, or energy systems. The extent to which world leaders consider climate change when planning their economic responses post COVID-19 will influence the global CO2 emissions paths for decades to come. Opportunities exist to make real, durable, changes and be more resilient to future crises.”

Basically, the coronavirus crisis so far has reduced carbon emissions, but just by closing stuff down, not by making long-lasting changes like switching to renewable energy. The real opportunity lies in the possibility of building back better, of orienting economic stimulus packages towards investment in renewable energy. The effect of the COVID-19 pandemic on carbon emissions underscores what climate activists and scientists have known for many years now: we have moved well past the point where individual energy saving actions alone can stop the climate crisis. Structural and systemic change at the national and international level is needed, reshaping the energy, transport, and agricultural sectors of the global economy. World leaders’ choices in directing coronavirus recovery funds will be critical. In an early positive sign, many nations, like Canada and the EU, are already working to integrate climate action into their coronavirus recovery efforts. China’s plans remain inscrutable for now, but will be of immense importance. As previously chronicled in the Weekly Anthropocene, renewable energy is doing well in India during this crisis. In America, however, the degree to which we build back better is entirely dependent on the outcome of the 2020 presidential election. Presumptive Democratic Party nominee Joe Biden (pictured) has a robust climate plan (see joebiden.com/climate/), has experience overseeing the 2009 stimulus (which was also the largest federal investment in renewable energy to date) as Obama’s VP, and is currently advocating for a climate-sensible stimulus bill, while Donald Trump seems to descend further into rank idiocy and utter denial of reality every day. We are living in a hinge of history, and the events of the year 2020 will have profound repercussions on the state of Earth’s climate for decades, if not centuries. Stay tuned-and vote!



For more on the *Nature Climate Change* study, see tinyurl.com/COVIDCarbonStudy and tinyurl.com/COVIDCarbonStudy2. For excellent overviews of the impact of the COVID-19 crisis and response on carbon emissions, see tinyurl.com/COVIDandCarbon and tinyurl.com/COVIDandCarbon2.