**How is Covid-19 related to climate change?** Ralph S. Baker, 4/16/2020

In the midst of this global pandemic that has affected nearly every aspect of our lives, it may be hard to pay attention to seemingly less urgent matters like climate change and biodiversity loss. But in an increasingly interrelated world, Covid-19, climate change and loss of biological diversity are very much intertwined. As our human footprint on the Earth expands, so too does the severity of climate change and of novel diseases we may unknowingly be unleashing upon ourselves.

The virus that causes Covid-19 is believed to have had its origins late in 2019 at a seafood market in the city of Wuhan, China at which wild animal parts were also sold. It is currently a focus of research as to whether the source was horseshoe bats, pandolins or some other type of wild animal (<https://www.nature.com/articles/d41586-020-00364-2>). Transfer of the virus from wild animals to humans, called “zoonotic spillover” occurs when another animal transfers a pathogen to humans. Other examples of zoonotic spillover, besides SARS and H1N1, include HIV and the Bubonic Plague. (<https://www.nejm.org/doi/full/10.1056/NEJMc2005157>.)

Zoonotic spillover is believed to be exacerbated by the destruction of forests and expansion of large-scale agriculture, which cause wildlife to come into closer contact with humans (<https://www.sierraclub.org/sierra/blame-it-farm-covid-coronavirus-agricuture-coronavirus-covid-19>). Humanity’s destruction of biodiversity increasingly exposes us to new viruses and diseases such as Covid-19, with severe impacts to global health and economies in both rich and poor countries. (<https://www.theguardian.com/environment/2020/mar/18/tip-of-the-iceberg-is-our-destruction-of-nature-responsible-for-covid-19-aoe?blm_aid=26935>) David Quammen, author of “Spillover: Animal Infections and the Next Pandemic” (Norton, 2012), [on January 28, 2020 wrote](https://www.nytimes.com/2020/01/28/opinion/coronavirus-china.html?smtyp=cur&smid=tw-nytopinion) in the New York Times, “We cut the trees; we kill the animals or cage them and send them to markets. We disrupt ecosystems, and we shake viruses loose from their natural hosts. When that happens, they need a new host. Often, we are it.”

The numerous links between pandemics and climate change are also becoming apparent. Not only does climate change worsen biodiversity loss, but climate change also leads to poorer health outcomes for humans. Climate change disrupts the ability of nature to stay in balance.

As Covid-19 ravages our country, physicians and scientists are learning that the death rate in cities such as New York City, Detroit and New Orleans is disproportionately higher in minority communities where air pollution (specifically particulate matter, mainly derived from the combustion of fossil fuels) and consequently rates of asthma and other respiratory problems are worse. Such communities also suffer from poor access to health care and healthy food, and higher rates of diabetes and obesity, but these are all interrelated, according to Aaron Bernstein, M.D. of Harvard’s Center for Climate, Health and the Global Environment

(<https://www.hsph.harvard.edu/c-change/news/coronavirus-climate-change-and-the-environment/>), who boldly asserts that **“climate actions are pandemic prevention actions!”** (<http://www.loe.org/shows/shows.html?programID=20-P13-00015>).