



Map uses false-color satellite imagery to illustrate the varied land cover types in and around the Amazon Rainforest. Source: NASA Earth Observatory.

Long before the wet markets of Wuhan became the focus of worldwide attention, scientists have pointed to [tropical deforestation and habitat destruction](#) as key factors facilitating the spread of zoonotic viruses such as [Ebola](#) and the [Coronaviruses](#) as well as [other infectious](#) and [vector-borne diseases](#). The [obvious lesson from this research](#) is that protecting intact tropical forests and reducing human-animal interactions along disturbed forest frontiers should be a [global public health priority](#).

But my concern here is with what the current global pandemic means for the fight against tropical deforestation and climate change. The news is not good.

Deforestation is on the Rise (again)

In the Brazilian Amazon, cumulative deforestation from August 2019 to March 2020 has more than [doubled](#) compared to the same period last year. For the first quarter of 2020, deforestation is [up by more than 50%](#).

While it is too early to draw firm conclusions, the early evidence suggests that deforestation in the Brazilian Amazon could increase dramatically in the coming months. One indicator of this: [sales of crawler tractors](#) used to clear forests have skyrocketed. During the first three

months of 2020, more crawlers were sold than during the last three years combined.

The reasons for the increase in clearing are not hard to discern. Given that much of the clearing over the past several years has been driven by [illegal land grabbing](#) and illegal clearing on existing properties, the substantial [reduction in government enforcement](#) before and after the pandemic has opened the door to more deforestation.

As has been widely reported, the [federal pullback on enforcement](#) was well underway before the pandemic. Since taking office, President Bolsonaro has made no secret of his [plans to open up the Amazon to development](#), with particular attention to indigenous territories.

To date, his response to the Coronavirus has been [disastrous](#), even worse than President Trump's. Last week, he [fired his health minister](#). On Friday, [Brazil's Justice Minister resigned](#). And a few days before that, the head of enforcement at the federal environmental agency (IBAMA) was [fired](#).

Meanwhile, public health systems are failing, overwhelmed by Covid-19 patients. In Manaus, the capital of the state of Amazonas, [the hospital system has already "collapsed,"](#) according to the mayor.

In the absence of federal leadership, Governors across Brazil have stepped into the breach to fight the pandemic. In doing so they have had to reallocate budgets and staffing that had already been cut to the bone. Much of their already limited resources dedicated to environmental activities and, notably, enforcement against illegal deforestation, have been redirected to the Coronavirus response (as they obviously should be).

This is happening, not surprisingly, across the tropics. Informal surveys conducted across the membership of the [Governors' Climate and Forests Task Force](#) (38 states and provinces from ten different countries) indicates budget reductions of 40-50% for state and provincial environmental agencies, with much of the remaining budget and staffing redirected to respond to the emergency.

With limited enforcement and a green light from the federal government, it is hardly surprising that illegal forest clearing is increasing in Brazil, with some being carried about [criminal networks](#) that are adept at securing title for illegally cleared land that can then be sold to cattle ranchers. [Murders, violence, and human rights abuses](#) have become all too common on some of these tropical frontiers.

The Fire This Time

Increased clearing could also lead to a [fire season that could be far worse](#) than last year's, given what is expected to be [a drier than normal dry season in the western Amazon](#), with some suggesting that the fires this year could be as severe as [2010](#).

More burning will lead to poor air quality across the region, which will further increase respiratory distress and mortality associated with Covid-19.

While there is still time to ramp up enforcement to protect against burning in the months ahead, the capacity and resources needed to do so are not in place at the moment. Calls for a ban on burning will be little more than empty threats in the absence of boots on the ground to enforce such a ban.

Right now, in the state of Pará (which covers an area larger than France, Spain, and Portugal combined and where [forest clearing increased by 240%](#) during the January to March 2020 period), there are only 10 state environmental inspectors and fewer than 50 agents working for the federal environmental enforcement agency IBAMA.

The Governor of Para, who has tested positive for Coronavirus, has been one the most important leaders among the Brazilian Governors in responding to the virus, but he faces major challenges in his efforts to stop the burning in the months ahead. So far, the Government has plans to deploy [75 additional emergency agents](#), but as in other states, they are running out of resources.

It is worth noting here that the fire [season in the central and southern portions of the Peruvian Amazon and the northern part of the Bolivian Amazon](#) is also expected to be worse than last year. Fire season is also beginning in [Indonesia](#). Although a milder dry season is expected there this year compared to 2019, the smoke and persistent haze created by the fires will surely compound the health impacts of Covid-19 in the region.

Indigenous and Local Communities in Danger

All of the structural vulnerabilities that make climate change so dangerous for poor, front-line communities all over the world are being compounded and amplified by Coronavirus. This is particularly true for indigenous and local communities in the Amazon and other tropical forest regions.

In Brazil, President Bolsonaro has made clear that [he intends to open up indigenous lands to development](#), despite protections in Brazilian and international human rights laws. We know from anecdotal reports that there have been [incursions into indigenous territories](#) by

small-scale miners and others seeking to extract resources from these formally protected areas.

With every new incursion, the risk that the virus will spread among indigenous communities increases, providing a chilling replay of past encounters that decimated indigenous populations in Brazil and around the world. Recent reporting in the [New York Times](#) and [elsewhere](#) indicates the extreme vulnerabilities of indigenous and local communities in the Amazon during the current crisis.

Because of [underlying health conditions and other stressors such as poor sanitation and nutritional deficiencies](#), indigenous peoples are especially vulnerable to the Coronavirus. Many of these isolated communities also [lack medical posts, doctors, and basic medications](#), to say nothing of intensive care units and ventilators.

Brazil's official policy of no-contact for isolated tribes, which has long served as a model for other countries, has been [under threat](#) for years. In addition to proposing [new legislation to open up indigenous lands](#), the Bolsonaro administration has worked to end the demarcation of any new indigenous lands ([despite losing a key battle in the Supreme Court](#)) and has tapped a [former evangelical preacher](#) to oversee the government department responsible for ensuring the protection of isolated tribes. Taking advantage of a new opening, evangelical Christian missionary groups from the United States have been [mobilizing in recent months to contact and convert isolated Amazon tribes](#), even though such contact is prohibited under Brazilian law and would needlessly endanger these tribes to infection from Coronavirus and other diseases.

Without help, some of these communities may not survive.

Meanwhile, increased deforestation of the Amazon is pushing the forest closer to [a tipping point](#), threatening one of the most vital ecosystems on the planet and further intensifying the climate emergency. Now the global public health benefits of forest protection are back on the agenda, with tropical forest regions such as the Brazilian Amazon identified as [potential global hotspots](#) for the spread of infectious diseases. As these diseases amplify and spread across the circuits of the global economy, they pose obvious and substantial risks to global public health. Protecting forests and the forest dependent communities that are on the front lines in these regions is more urgent than ever.

While there has been a great deal of popular commentary in the United States and other rich countries about what the pandemic means for the climate emergency, it has often been framed in domestic terms. Calls for new forms solidarity, combined with a new appreciation

for government, new opportunities for a green stimulus and green jobs, and, most importantly, a reckoning with the extreme forms of inequality that have devastated American workers and communities are all well and good. But if we narrow our vision to only what we in America can do to respond to climate change in our own country as we struggle to emerge from the pandemic, we will have missed what is perhaps the most important lesson of all.