

Protecting biodiversity: our best shot at preventing the next pandemic

By Leah Gerber

It's widely known that the virus that causes COVID-19 likely jumped from an animal host to a humans in a wet market in Wuhan, China. As a result, media and public attention has fixated on the threats presented by the wildlife trade, and the resulting need to eliminate, or at the very least, better police it.

The wildlife trade is just one symptom of a larger problem of environmental degradation and biodiversity loss. Habitat loss is the primary driver of biodiversity loss, but it is accompanied by threats including overexploitation, species introduction, pollution and climate change.

As we continuously encroach on the natural world, we disrupt ecosystems and displace viruses from their natural hosts. These viruses, in turn, are left to find a new host, and increasingly, we fill that role.

In other words, degrading biodiversity increases human contact with novel pathogens, and thereby increases the risk of diseases that are transmitted from animals to humans, called zoonotic diseases. That's what made us vulnerable to this pandemic, and unless we do something, the same factors will make us even more vulnerable to the next one.

The impact of biodiversity loss on human health was evident long before the COVID-19 pandemic (just look to Middle East Respiratory Syndrome, H1N1, and Ebola, for example). We could have and should have taken better action to predict, prevent and prepare for our current pandemic. Now, we have an opportunity to look forward and do better in the future.

In order to prevent the next pandemic, we need a global body with scientific heft and enforcement teeth to identify and manage drivers of zoonotic diseases. This body, which we can call the Zoonotic Disease Commission (ZDC), should have three essential goals: first, to support and speak for basic science; second, to become a global governance regime with regulatory clout; and finally, to transform the global economy and markets to minimize risk.

In supporting and speaking for basic science, the ZDC should create and maintain an accessible, international evidence base that includes data from previous studies on disease outbreaks and the relationship between environmental degradation and disease risk. Having a widely available repository of data on past pandemics will promote evidence-based decision making, which is crucial on this front.

Evidence-based decision making, however, is only as strong as the regulatory teeth behind it. A global governing body like the ZDC would need to be able to uniformly and effectively

enforce agreed upon regulations. Such an international governance regime will only be feasible if there is political buy-in from nations and their constituencies, market-based incentives that encourage compliance and modest enforcement mechanisms in its absence, and a culture of transparency in order to preserve the body's legitimacy.

Finally, and perhaps most complexly, we need to bring transformative change to our economic systems and global markets. As it stands, our global economic system incentivizes unsustainable habitat destruction and resource extraction. Many people's livelihoods are dependent upon using land in a way that threatens exploited species and amplifies the threat of zoonotic jumps, and we need to make it a priority to provide those individuals with alternative livelihoods that are both economically feasible and environmentally sustainable. Through the ZDC, we should also enact, support and enforce market-based mechanisms to incentivize sustainable production and consumption, such as sustainability certifications and trade bans for high-risk species.

Some may eye the proposal for a global governing body like the ZDC with suspicion, citing potential costs and the existence of similar international efforts, such as the Convention on Biological Diversity and the World Health Organization. The reality is that the global costs of responding to a pandemic dwarf what it would cost to effectively implement something like ZDC. Further, existing international programs simply do not have the regulatory teeth nor the mission of fundamental economic change needed to truly prevent the next pandemic.

Our risk of contact with new zoonotic viruses is at an all-time high and increasing every day. We're left, in turn with a choice. We can act now to address the factors that exacerbate that risk, including environmental degradation, species loss, and wildlife trade. Or, we can wait for the next pandemic.

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[Leah Gerber](#) is a professor of conservation science and the founding director of the Center for Biodiversity Outcomes at Arizona State University.

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