

**Testimony of
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International Conservation Caucus Hearing on COVID-19**

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International Conservation Caucus Co-Chairs and Members of Congress, thank you for providing this opportunity to testify on “The links between the commercial trade and consumption of wildlife and disease outbreaks like COVID-19, SARS, HIV, and Ebola, and to consider steps the United States can take to prevent future pandemics.” WCS’s testimony will summarize an integrated set of U.S. government policy recommendations from the Wildlife Conservation Society, including from experts in wildlife health, wildlife trade, international policy, and communities and livelihoods, and from across the globe. I will focus on (1) links between zoonotic, pandemics, and wildlife; (2) the implications of stopping the commercial trade in wildlife for human consumption; (3) solutions to prevent future pandemics; and (4) identifying gaps in current U.S. government policies that provide an opportunity for global leadership.

WCS was founded in 1895 with the mission of saving wildlife and wild places worldwide. Headquartered at our flagship Bronx Zoo and managing the largest network of urban wildlife parks in the United States, WCS envisions a world where wildlife thrives in healthy lands and seas, valued by societies that embrace and benefit from the diversity and integrity of life on earth. Today, WCS has conservation projects and programs in more than 60 countries and across the world’s oceans, concentrating on many of the planet’s most important, ecologically intact places with the greatest biodiversity and resilience. Our goal is to conserve wildlife species as well as many of the world’s most ecologically intact wild places. WCS has scientists, veterinarians, conservationists, and other experts across the globe, whose years of experience in wildlife health, wildlife trade and trafficking, and conservation inform our views and policies.

Links Between Zoonotic Epidemics, Pandemics and Wildlife

The COVID-19 coronavirus has catapulted across the ever-evolving interface between humans and wild places, generating global impact and alarm, and illness, death, and economic collapse. Quarantines have been imposed, and borders have been closed. Free movement of people, the pursuit of normal daily routines, economic well-being — and in too many instances, health and even life itself — have been dramatically curtailed by a virus that previously existed beyond the pale and a disease that was unknown and unnamed only a few months ago. What was immediately apparent was that the virus responsible for the outbreak had most likely originated in wild animals. It had “spilled” from its natural environment and ancestral bat host into the maelstrom of activity around a wildlife trading market, just as the virus responsible for SARS likely did in 2002. The COVID-19 virus breached natural boundaries at the interface between human activity and wild ecosystems. This constitutes a zoonotic infection— infectious diseases caused by bacteria, viruses, fungi or parasites — that spread between animals and humans.

Over 75% of all new infectious diseases in humans have their origin in animals. More than 335 emerging infectious disease outbreaks (involving 183 distinct pathogens) were reported worldwide during 1940-2004, more than 50 per decade, and the rate of outbreaks is increasing. In recent years, 52% of all emerging infectious disease (EID) outbreaks have originated in wildlife. Among EIDs specifically, 71% of outbreaks have originated in

wildlife (with the rest from domestic animals). Populations of wild animals carry a high diversity of potential zoonotic pathogens, especially where the diversity of host animals is higher, as in the world's tropics. Most diseases in wild animals remain very poorly studied, many pathogens remain unidentified, and many outbreaks are overlooked. It is estimated that out of the 1.6 million potential viruses in mammals and birds, 700,000 could pose a future risk to human health if we do not take preventative action now.

Emerging zoonoses have significant implications in terms of both public health and economic stability with the costs of many individual recent major outbreaks such as SARS, MERS and Ebola estimated in the tens of billions of US dollars and exceeding 1-2% of GDP in less wealthy countries (GPMB 2019). When all is counted, it is certain that the economic devastation caused by COVID-19 will be far greater, in the trillions of US dollars.

Health Implications of Stopping the Commercial Trade in Wildlife for Human Consumption

The evolutionary or ancestral host of the SARS virus (SARS-CoV) and the closely-related COVID-19 virus (SARS-CoV-2) are bats and in both cases, index cases were associated with wildlife trading and processing markets, for human consumption. It is thought that SARS-CoV passed through civets (wild or farmed) before crossing the wildlife-human interface and it is unknown at this point in time if SARS-CoV-2 also passed through an intermediate host.

Commercial wildlife trade involves the capture, transport, and containment/caging of wild animals, causing them stress, injury, sickness, and/or compromised immune systems. These multiple stressors inhibit animals' immune responses and allow for enhanced shedding of pathogens. Stress also leads to increased excretion of saliva and voiding of urine and feces, all of which facilitates the shedding and/or creation of new viruses and ultimately, disease transmission. The wildlife trade, particularly in live animals, creates super-interfaces along the value chain forcing together species from many different geographies and habitats (that would never have otherwise come into contact) and bringing the animals into close proximity with humans and domestic animals. One of our recent studies in Vietnam has demonstrated how positivity to coronaviruses increases the further an animal is moved from the capture site along the value chain, increasing the risk for a spillover event to occur. Wildlife is often traded at markets, such as the market in Wuhan, which in contrast to small stalls where local communities exchange and sell wildlife for subsistence, these are vast, industrialized centers, cramming thousands of live animals from hundreds of species alongside thousands of domestic animals. But animals do not only transmit viruses among themselves, vendors and customers circulate within this milieu while slaughter and purchasing practices continually expose them to potential spillover events. The commercial wildlife trade and wildlife markets constitute true caldrons of contagion and one could not design better conditions for the emergence of new diseases. The risk of spillover leading to human disease, epidemics, and pandemics, is higher for birds and mammals than for other terrestrial animals (though the risk from reptiles and amphibians is not zero).

The COVID-19 pandemic has clearly demonstrated that the limited profits – legal and illegal – generated from the commercial trade in wildlife are negligible in comparison to the tens of trillions of dollars of economic devastation that we are now seeing. Economic relief and training for individuals involved in the legal commercial wildlife trade is similarly negligible compared to the cost of another pandemic. The exponential growth in

commercial wildlife trade is being driven by an increasing human population and massive global socioeconomic shifts, especially but not exclusively in Asia, where customers now pay high prices for 'luxury' meats and medicines, with little benefits to local communities who suffer the brunt of both the consequences of ecological devastation and the economic damage that outbreaks bring. The illegal and legal commercial trade in wildlife is pulling apart the tapestry of life at a global scale. The ecological toll has been so extensive that many parts of the world now suffer from 'empty forest syndrome,' a result of rampant poaching and over-exploitation. Many species that were once widespread and common have been devastated, such as the eight species of pangolin, and even our closest living relatives, the great apes.

Solutions to Prevent Future Pandemics

It is no small task to predict which of the millions of unknown pathogens in circulation will become "bad actors" in the future. But one thing is clear: A major factor driving such spillover events is the loss of natural boundaries between humans and wild ecosystems and the organisms that live in them. We have blindly consumed and traded wildlife while destroying wild places. Spillovers are likely to become regular occurrences unless we, as a world community, elect to change. If we are to reduce the likelihood of future spillovers of pathogens like the COVID-19 coronavirus, or even prevent them altogether, we need to adopt a comprehensive approach, centered on the integral role played by the interfaces.

Our future health and economic security requires an immediate and permanent ban of the commercial collection, trade, and marketing of wildlife for human consumption, particularly for birds and mammals. If this trade, and large commercial markets for wildlife for human consumption, continue unabated, then the risk of another COVID-19 like pandemic will remain high. The health, human death toll, global and national security, economic, social, and ecological costs of the current pandemic demonstrate that anything less than addressing the root cause would be grossly negligent. We must prevent these outbreaks by forever shutting down commercial trade in wildlife for human consumption—it is the most responsible and ethical thing to do.

Rigorous enforcement of existing laws, regulations, and international treaties that deal with wildlife trade and markets is critical and necessary, but will simply not be enough. The conditions for viruses to emerge and be transmitted to humans occur in legal and sustainable trade and markets with common species as much as in illegal and/or unsustainable trade and markets. Policies focused on protected species, illegal practices, and wildlife trafficking are vital from a conservation perspective, but will fail to prevent future zoonotic pandemics. A new paradigm is needed if we are to avoid a pandemic such as the one we are experiencing today.

WCS' recommendations do not pertain to subsistence hunting by Indigenous Peoples and local communities for household consumption. From a public health perspective, the use of wildlife for consumption should be limited to the needs of Indigenous Peoples and local communities for whom other sources of protein are generally not available, and others hunting for their own consumption. Once an animal enters a commercial supply chain the risks of viral emergence and transmission increases. If people are eating wild birds and mammals, for example, because they have no alternatives then we need to make sure that they have access to sustainably produced poultry, fish, invertebrates in some cases, and plant protein, which will provide families with a reliable and sanitary source of high quality, protein rich food, and reduce the risk of exposure to novel zoonotic pathogens.

The commercialization and resultant consumption of wild meat, especially in urban areas, anywhere in the world, that poses a significant risk to global health and security, and should end.

U.S. Government Leadership Opportunities in Response to COVID-19 Pandemic

The U.S. government has an opportunity to lead in this time of global pandemic crisis. U.S. government diplomatic and programmatic efforts are needed to stop the commercial trade in wildlife for human consumption, and all the consequences that flow from that. A pandemic is not a one-country problem, and countries must band together to change the root causes of pandemics. The world cannot let this happen again. Below are immediate actions that can be taken by the U.S. government to address the current pandemic and prevent future pandemics:

- The U.S. government has been a leader on international wildlife trade issues for decades, including through the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), which was negotiated here in Washington, DC in 1973. CITES does not deal with the impact of traded wildlife upon import, or with health issues—and as such we urge Congress to direct relevant Federal Agencies, including the U.S. Fish and Wildlife Service, to prioritize efforts to end commercial wildlife trade and markets, for human consumption. The U.S., as the largest donor to CITES and a great supporter of its efforts, should work with CITES member governments in this regard.
- USAID Global Health must commit to a 10-year emerging pandemic threats strategy that elevates zoonotic disease surveillance at high risk spillover locations, to prevent the next pandemic.
- USAID biodiversity programs should prioritize ending commercial wildlife trade and markets for human consumption, and should prioritize efforts to provide alternative livelihoods and protein sources for communities currently involved in the legal wildlife trade for human consumption (if they are currently dependent on wildlife for food security).
- A One Health Interagency Task Force chaired by the National Security Council Chair and a One Health Strategy must be established to leverage the public health, wildlife health and livestock veterinary expertise to combat the current pandemic at federal, state and local levels in the U.S. and to build One Health institutions around the world.
- Counter-Wildlife Trafficking Enforcement efforts must be fully funded and indeed enhanced through the U.S. Department of State Bureau of International Narcotics and Law Enforcement Affairs and the U.S. Fish & Wildlife Service to combat wildlife trafficking to ensure full compliance with commercial wildlife trade and market bans (as well as other wildlife legislation).
- USAID Food Security Programs need to expand nutritional programs to provide alternative protein (e.g., small scale household poultry production, locally farmed freshwater fish) to food insecure towns and cities, and support social marketing programs to change consumption behaviours.
- Restore and grow funding for core USG programs that protect intact ecosystem health, including USAID Office of Forestry and Biodiversity, Combating Wildlife Trafficking programs, the Global Environment Facility, USFWS Multinational Species Conservation Funds, USFWS International Affairs, and US Forest Service International Programs.

In closing, governments, conservationists, scientists, public health and veterinarians must now work together to ensure what we are experiencing now, due to the trade in wild animals for food, never happens again. WCS urges US leadership to help end the international trade in wildlife, particularly birds and mammals, for human consumption. If strong action is not taken, COVID-19 will not be the last such pandemic.