

The animal connection:

Policies to prevent another global health crisis

These eleven key policy recommendations from the Humane Society of the United States, Humane Society Legislative Fund, and Humane Society International would help prevent future outbreaks of disease and stop the resulting human and economic toll while strengthening our social, cultural, economic and political commitments to higher animal welfare.

Introduction

The COVID-19 pandemic is a global wake-up call for humanity to reassess our relationship with animals.

Time and again—as with avian influenza, swine flu, Ebola and SARS—we see human health emergencies that can be traced back to how humans use animals in commerce, whether for agricultural production, wildlife trade, animal testing or the pet industry—highlighting the dire need for policy changes.

The Humane Society of the United States, Humane Society Legislative Fund and Humane Society International have been advocating for policy improvements related to animal protection for decades and are uniquely positioned to lead the charge for effective change around the globe.

The COVID-19 pandemic underscores the urgency of critical policy shifts and strong action at the intersection of animal protection and public health, within both domestic and international contexts. Like COVID-19, some [73% of emerging infectious diseases in humans are zoonotic](#), originating in animals. In addition, more than 58% of known infectious diseases affecting humans, like the rabies virus and *Salmonella*, are transmitted by animals. Together, zoonotic diseases account for billions of illnesses and millions of deaths across the globe. Their spread has direct connections to our use and misuse of animals, connections that should rise to the forefront of public policy discussions in the immediate future.

When zoonotic diseases spill over to humans, human activity is frequently the cause, whether that activity takes the form of intensive confinement of farm animals, the destruction of natural habitats, poaching of wild animals, or the multibillion-dollar international wildlife trade—the source of COVID-19. The current crisis demands a deeper and more searching scrutiny of such areas of animal use as the trade and consumption of wildlife, intensive confinement agriculture and the operation of commercial pet breeding enterprises.

The COVID-19 pandemic has forced governments across the globe to impose severe restrictions that will have massive economic costs and a myriad of other consequences. But there has been less discussion about identifying and modifying the human behaviors and institutions that contribute to the emergence of zoonotic diseases, and the role of public policy that, in light of what we know about pandemic threats, would enhance human safety. Scrutiny and reform of several key arenas of human-animal interactions could hardly be more timely or imperative.

The Humane Society of the United States, Humane Society Legislative Fund and Humane Society International have long championed science-based public policy measures in all instances where the treatment of animals and the interests and demands of public health converge. Nowhere is this more important than in the case of pandemic disease, and in such exigent circumstances an action agenda targeting

key areas of risk and danger is vital to the safety and well-being of everyone, just as it is critical to the health and security of countless others whose lives have been so drastically affected by the worldwide spread of COVID-19.

We have developed eleven key policy recommendations that governments can and should implement to prevent another global health crisis rooted in our poor treatment of animals.

Wildlife

1. Wildlife markets have been the origin of multiple disease outbreaks. Shut them down permanently around the world.

As detailed in a recent [white paper](#) issued by Humane Society International, wildlife markets, sometimes called wet markets, bring wild animals into stressful and cramped spaces where they are slaughtered and butchered on-site. These markets are typically unsanitary, with vendors and consumers exposed to blood, flesh and bodily fluids that allow viruses to easily migrate to humans. This includes diseases caused by coronaviruses—like COVID-19—transferred to humans through a range of intermediate host species. Large-scale urban wildlife markets in China are a recent phenomenon; similar markets are widespread in other eastern Asian countries, and the sale of wild meat, with similar associated risks of disease, occurs in many other parts of the world, including the United States. Scientists have long [acknowledged](#) that these wildlife markets pose an unjustifiable risk for unleashing zoonotic disease outbreaks, and have [called](#) for an end to selling wild animals for human consumption.

2. To protect people from zoonoses, end the trade of live wild animals.

Whether captive-bred or wild-caught, wild animals bought and sold for the exotic pet trade or other commercial purposes can spread a variety of viral, bacterial, fungal, and parasitic infections that pose serious health risks to humans. For example, the United States Centers for Disease Control and Prevention (CDC) has reported numerous multistate *Salmonella* outbreaks involving reptiles, amphibians, and small mammals including hedgehogs. While some zoonotic diseases are rare, their impact on individuals can be devastating, causing permanent disability or death. In 2003, the U.S. experienced a [monkeypox](#) outbreak, caused when Gambian pouched rats and other small mammals imported from Africa transmitted the virus to prairie dogs who in turn transmitted the virus to people who obtained the animals as pets. Macaque monkeys kept as pets in households with children have tested positive for the deadly [Herpes B](#) virus, and [Raccoon roundworm](#), which can cause neurological impairment in people, was found in kinkajous also kept as pets. Diseases that people can acquire from pet birds include chlamyphilosis, psittacosis, tuberculosis, and avian influenza. People often buy exotic pets on a whim, then neglect the animal after they lose interest. Many exotic pets die prematurely due to improper care and many more die before even making it to the point of sale. Standard industry [mortality rates](#) at exotic animal wholesale facilities are as high as 70 percent due to poor sanitation, lack of food and water, improper temperatures, high stress levels, overcrowding, and inhumane handling.

3. Ban close encounters with wild animals and their use in traveling shows to limit the potential of disease transmission.

The [Compendium of Measures to Prevent Disease Associated with Animals in Public Settings](#), published by the National Association of State Public Health Veterinarians and the U.S. CDC details extensive risks associated with animals used in exhibition, including zoos, fairs, circuses, and petting zoos and recommends completely prohibiting direct contact with dangerous animals including reptiles, primates, and certain carnivores. Animals stressed by transport, confinement, crowding, and handling—conditions common in traveling shows—are more likely to shed pathogens. Rabies vaccines are [not licensed](#) for use in wild animals or hybrids in the U.S., a critical consideration for any captive wild animal used for public handling. If someone is bitten or scratched by a wild animal during a close encounter, they may need painful rabies prevention shots that [cost as much as \\$10,000](#). [Tuberculosis-infected elephants](#) have been used in traveling shows and for giving rides to the public in the U.S. Big cats infected with ringworm have been used for photo ops with the American public and are at risk themselves of [contracting COVID-19](#) if exposed to infected people. To

date, over 45 countries and six U.S. states and more than 160 other localities in 37 U.S. states have banned or restricted the use of numerous wild animal species in circuses and traveling shows. At least six U.S. states also ban public contact with bears, big cats, and/or primates.

4. End fur farming and the fur trade.

Undomesticated animals used for fur—including raccoon dogs, foxes and mink—are unable to exhibit natural behaviors in intensive confinement systems, and are killed by anal electrocution, blunt force trauma or being skinned alive. These species are [common sights at live animal markets in China](#), and foxes and raccoon dogs were found to have been infected with SARS and mink may be a potential intermediate host for the virus that causes COVID-19 (indeed, mink on a [fur farm in the Netherlands](#) recently tested positive for COVID-19).

Many international apparel brands and retailers have already banned fur. And legislation around the world has led to India banning fur imports in 2017, California banning fur sales in 2019, and countries including Norway, U.K., Austria and the Netherlands banning fur production.

Minks, foxes and raccoon dogs can become infected with SARS-CoV-related coronaviruses. Accordingly, the trade in these animals should be banned globally and apparel companies and other entities should reinforce the trend toward fur-free fashion to eliminate the demand for animal fur.

Factory Farming

5. Intensive confinement of farm animals provides a harbor for pathogens. Move to better systems.

Keeping farm animals in overcrowded confinement facilities is a potential risk factor facilitating the development of [zoonotic pathogens](#) with the potential to infect human populations. When thousands of animals are tightly confined, it creates a larger “laboratory,” in which potential pathogens can exchange genetic material and generate viral forms with the ability to infect people. There is [evidence](#) that these pathogens can become more virulent when they circulate through large groups of closely confined animals. A 2013 review published in the [Proceedings of the National Academy of Sciences](#) found “strong evidence” that “intensified [farming] systems can be linked to disease emergence and amplification.” Eliminating the intensive confinement of farm animals would reduce the risk of generating new viral diseases with the potential to spread to people.

More animals can be crowded together in the same building when they are tightly confined in cages and crates, providing a greater number of potential pathogen hosts. Governments around the world should phase-out the cage confinement of egg-laying chickens, mother pigs in gestation crates and calves in veal crates. To date, the European Union, United Kingdom, New Zealand, Canada and India, as well as a dozen U.S. states, have moved to phase out, limit or ban all or some use of these intensive confinement systems. Others should follow suit. Additionally, while governments spend billions on agricultural funding, they should make money available to support farmers transitioning from caging systems to less intensive cage/crate-free systems.

In the private sector, food companies should complete their pledged animal welfare commitments, including eliminating their purchasing and sale of eggs from caged chickens and pork from operations that cage breeding pigs. Banks and other lenders should use their influence in restructuring loans to food corporations to make sure their clients eliminate—or at least take tangible steps to eliminate—their purchase and sale of meat and eggs from and to industrial operations that confine animals in cages and crates.

6. The global food industry should shift its focus to plant-based proteins.

Research programs exist in some countries and should be prioritized in others to develop plant-based and cultivated meat technologies to ensure a greater availability of more diverse, safe and dependable protein sources. Governments should also take steps to ensure that public institutions (K-12 schools, universities, hospitals, jails, etc.) offer plant-based meals.

The food industry itself can play a greater role in promoting public health and animal welfare by offering more plant-based menu options and grocery shelf space for plant-based proteins. Many key players have already done so. Even meat companies have recognized that the future is moving away from meat from animals, and have begun offering new products made with plant proteins.

Animal Testing

7. Fund alternatives to animal testing to speed up treatment and vaccines.

The emergence of infectious diseases will prompt an urgent need for effective diagnostic tests, vaccines and treatments. The current approach for development of these lifesaving products, which relies heavily on the use of animals, is slow, expensive and often results in failures, in no small part due to animal models that do not reliably predict human outcomes. Vaccine development [typically takes 5-18 years](#) and [costs a minimum of \\$2.8-3.7 billion](#), but this could be greatly accelerated by reducing animal research and testing

There are existing non-animal approaches that can help us understand the biology, behavior and potential countermeasures to COVID-19, including human lung tissue cultures, organ-on-a-chip technologies and [other cell-based models](#), which are more human-predictive, time- and cost-efficient and ethical. Governments and science funding bodies have an important role to play in creating incentives for the pursuit of non-animal approaches to more quickly find a vaccine and treatments to address this pandemic.

Companion Animals

8. End the sale of dogs from puppy mills, a frequent disease vector.

Pet stores that source dogs from American puppy mills have been the source of a zoonotic disease outbreak that has infected over 150 people, hospitalizing some, and leaving one teenage girl in a wheelchair. This disease is caused by the *Campylobacter* bacteria, which runs rampant in the unsanitary and crowded conditions found in puppy mills. An investigation by the U.S. Centers for Disease Control and Prevention found that 95% of the pet store puppies [whose medical records the agency reviewed](#) received antibiotics before being sold, with 55% of puppies given antibiotics prophylactically, 38% given antibiotics both to treat an illness and prophylactically and 1% being given antibiotics to treat an illness—a clear sign that the industry recognizes the threat of illness spreading. In the United States, three states and over 350 municipalities ban the sale of puppies in pet stores. Every state needs to do the same. Furthermore, the U.S. Department of Agriculture should strengthen its licensing, dog care standards and enforcement efforts.

9. End the dog and cat meat trade.

The dog and cat meat trade poses a significant risk of rabies transmission throughout countries where these animals are consumed. The collection of street dogs and stolen pets gathered from various regions within a country (and sometimes across country lines) to be crammed into cages or large crowded pens, then transported long distances results in a strong risk of rabies transmission from animal to animal. This transport of unvaccinated animals from different geographic areas undermines the creation of rabies-free zones and hinders the elimination of rabies. In studies conducted in China, Nigeria, and Vietnam, rabies has been detected in the population of animals traded for consumption at rates as high as 1 or 2 animals per 100. One study in Nigeria of 10 human rabies cases contracted over a four month period determined that 8 out of 10 of the cases were contracted directly or indirectly through the dog [meat trade](#). Additionally in South Korea, where dogs are intensively farmed, HSI has noted a high use of antibiotics to combat disease transmission, which contributes to a heightened risk of antibiotic resistant diseases. Countries where the practice is allowed should [ban the consumption of dog and cat meat](#) and enforce existing laws on the quarantine and transport of animals in this trade.

10. Effectively manage street dog populations, the main vector of rabies transmission to humans.

Free roaming dogs are the lead vector of rabies transmission to humans. Fear of rabies often causes humans to mistreat street animals, increasing conflict and bite incidence which can in turn lead to rabies transmission and death. Governments with scientific and humane dog management programs in place can decrease reproduction rates and create herd immunity by vaccinating dogs against rabies and other zoonotic diseases.

According to the [WHO's](#) key facts about rabies, “Dogs are the main source of human rabies deaths, contributing up to 99% of all rabies transmissions to humans. Globally, the impact of rabies causes an estimated cost of US\$ 8.6 billion per year.” Eliminating rabies is a global priority, and implementation of proven, effective dog management programs are essential to accomplishing this.

Animal Fighting

11. Pass and enforce stronger laws on cockfighting.

The WHO recognizes H5N1, a highly pathogenic avian influenza virus subtype, as a serious concern because it can cause severe disease in infected humans. Cockfighting is known to have spread the highly pathogenic avian influenza virus (H5N1) from roosters to humans through contact with blood, feces and droplets of fluid. The WHO puts the mortality rate of this form of avian flu at 60% and has traced human deaths to cockfighting. Avian influenza from infected birds may have caused at least eight human cases of avian influenza in Asia and is known to have killed an 18 year old in Thailand and a 13 year old boy in Vietnam.

Cockfighters maintain game fowl yards with hundreds, sometimes thousands, of birds for fighting. The congregation of this many birds in one area creates an ideal environment for the spread of disease. Cockfighters routinely engage in unsanitary practices, such as putting their own mouths over an injured rooster's beak to suck fluids and/or blood from their airways, which greatly increases the risk of human infection. Additionally, cockfighters export and import birds to and from numerous countries for the purposes of breeding and fighting birds. Cockfighting is illegal in the United States, including its five territories, and the U.S. Department of Agriculture should aggressively pursue enforcement actions against violators, including those U.S.-based gamebird breeders who ship their birds internationally. The ten U.S. states that do not prohibit the possession of game fowl for fighting should address this threat by passing legislation making the possession of birds for fighting illegal. Finally, countries where cockfighting is still legal should ban this dangerous practice.