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# The Dog and Cat Meat Trade: A Global Health Risk

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Cats next to chickens for sale at live animal market in Indonesia



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Customers at a dog and cat meat restaurant in Vietnam



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## Executive summary



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The COVID-19 pandemic has had a devastating toll globally; not only in terms of its impact on global health but also economically with widespread job losses and the livelihoods of millions threatened. As the world struggles with the effects of the disease, it is important to consider and understand how it came about in the first place so that measures can be taken to reduce the chances of other pandemics happening in the future.

COVID-19 is believed to have originated in a live animal market in Wuhan, China, as the result of zoonotic transmission. It is widely accepted that the conditions in such live animal markets provide the perfect environment for the emergence of novel zoonotic pathogens, and many pathologists and virologists have warned authorities of the public health dangers that these conditions represent. While the COVID-19 pandemic is certainly not the first time that infectious diseases have been linked to human activities that bring animals of various species and sources into close proximity with each other and humans, the scale and devastation of this pandemic are unprecedented. This raises the question of why actions were not taken sooner to address the risks of this type of animal trade when the zoonotic risk factors were known to be high.

While most recent international public and political attention is focused on the trade and sale of wildlife species, the risks posed by the mostly illegal and unregulated dog and cat meat trade (DCMT) continue to be largely ignored. This is despite mounting evidence that it is not only increasingly controversial, but also poses a very real threat to human and animal health and welfare. The trade involves up to 30 million dogs and cats each year throughout Asia, the majority of which are stray animals taken from the streets, or

stolen pets. These animals are often taken to markets to be sold for slaughter alongside wildlife species. At the markets and generally, the trade operates in breach of existing laws and regulations pertaining to infectious disease control, sanitation, cross border transportation, theft, and animal welfare.

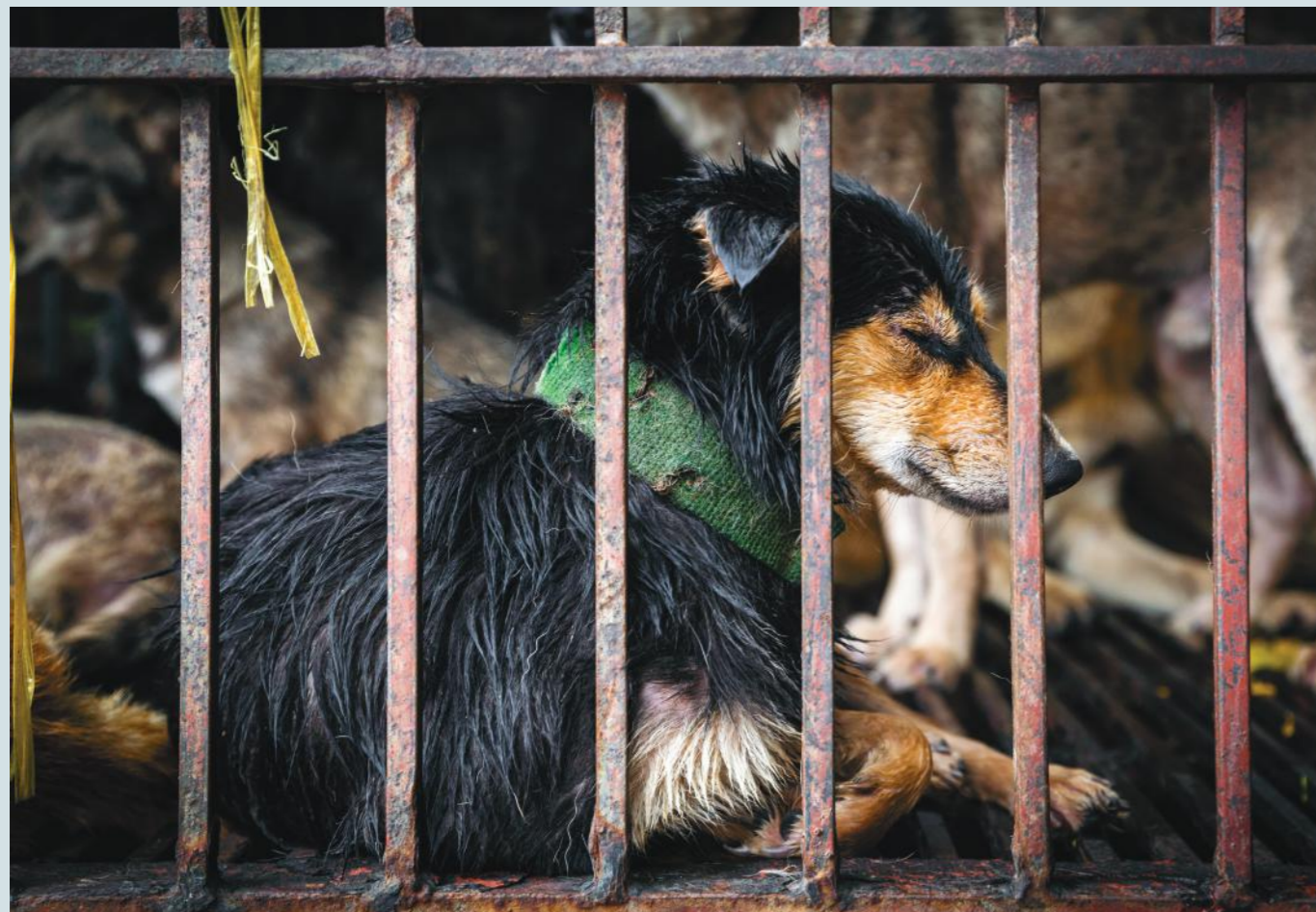
The true scale of the risks the dog and cat meat trade poses to both public and animal health is difficult to quantify given the nature of the operations of the trade, its reliance on a supply of animals of unknown health status and origins, as well as illegal operations. However, there is mounting evidence that the trade poses significant risks to global health – on top of well-known zoonotic risks of the trade that have directly been seen, such as rabies and anthrax. It is clear that the dogs and cats in the trade serve as a significant reservoir for the emergence and spread of zoonotic pathogens, including viruses due to their treatment. Despite warnings from leading experts in human and animal health, inter-governmental organisations and epidemiologists, the overwhelming majority of animal trade and markets throughout Asia continue to operate largely unchallenged, providing almost identical environments to those from which COVID-19 is thought to have emerged, and potentially exposing millions of people every day to a variety of zoonotic diseases.

Animal trade that affects national and international health, welfare and stability can no longer be ignored or defended as personal choice or culture. Now is a critical time for countries around the world to introduce and implement policies banning the breeding, capture, sale, and slaughter of dogs and cats, to reduce the risk of future pandemics and to safeguard human and animal health and welfare.

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Stolen pet in cage awaiting slaughter



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# 1. COVID-19 – global impacts and lessons learned



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The impact of COVID-19 in terms of loss of human life, physical and mental health, the global economy, livelihoods, the quality of public life and diplomatic relations has been devastating. At the time of writing, COVID-19 has led to more than 107,000,000 infections and 2,362,000 deaths across 192 countries/regions (11 February 2021)<sup>1</sup>. Calculated estimates of the cost of the COVID-19 pandemic vary, with the International Monetary Fund estimating losses in output to the global economy of between US\$12 trillion USD over 2020-2021 to US\$28 trillion over 2020-2025<sup>2,3</sup>. It is clear that the true cost of fighting a global pandemic far surpasses the costs of preventing one.

When zoonotic diseases spill over from animals to people, human activity is frequently the cause. The COVID-19 pandemic is certainly not the first time that infectious diseases have been linked to human activities that bring animals of various species and sources into close proximity with each other and humans. For example, between 2002 and 2003, Severe Acute Respiratory Syndrome (SARS), resulted in more than

8,000 human cases across 29 countries, and 774 deaths<sup>4</sup>. Other significant zoonotic diseases and pathogens, such as Ebola, MERS, HIV, bovine tuberculosis, rabies, and leptospirosis<sup>5</sup> have also been associated with transmission from animals.

Despite the mounting evidence spanning the last several decades from around the world of the risks that current animal production and trade policies have on public health and safety, to date, few permanent and global changes have been made to minimise these risks. Given that the management and treatment of animals has failed to improve, the number of emerging infectious disease outbreaks has more than tripled every decade since the 1980s. Zoonotic origins account for around 60% of all infectious diseases and 75% of emerging infectious diseases in humans, showing an increasing occurrence of transmission from animals<sup>6</sup>. Zoonoses are responsible for two billion cases of human illness and two million human deaths every year<sup>4</sup>.

<sup>1</sup> Johns Hopkins Coronavirus Resource Center. 2021

<sup>2</sup> The Guardian. 2020

<sup>3</sup> Gopinath, G. 2020

<sup>4</sup> World Health Organization. 2003

<sup>5</sup> UNEP & ILRI. 2020

<sup>6</sup> Grace, D. et al. 2012

### 1.1 'Live animal markets' – A continuing source of emerging infectious diseases

Although there is debate about its exact source and infection pathway, COVID-19 appears to have originated in a 'live animal market' in Wuhan, China, in late 2019 as the result of zoonotic transmission from an original wildlife host, possibly via an intermediate animal host, following close contact with people<sup>7</sup>. The vast array of different species of animals for sale at the Huanan Seafood Market in Wuhan has been widely documented.

Live animal markets are places where fresh meat, fish, produce, and other perishable goods are sold; and in many parts of Asia, a variety of species of live animals, including dogs and cats, are also sold and slaughtered in close proximity to each other and to humans. In many parts of the region, fresh meat is preferred to frozen meat, encouraging live animal markets to be situated in densely populated cities<sup>8</sup>.

The live animal markets found throughout the region sell a variety of different species for slaughter, often trafficked across provincial and international borders and imported into densely populated cities, under highly stressful and brutal conditions and in close confinement. While most recent international attention is focused on the trade and sale of wildlife species, millions of dogs and cats are also trafficked and killed at these markets, alongside wildlife. These animals are either stolen pets or stray animals captured from the streets, with up to 30 million dogs and cats slaughtered each year in Asia alone for the meat trade. Aside from the obvious animal welfare concerns, given the unhygienic conditions in which the animals are transported, confined and slaughtered as well as the lack of enforcement of any health and safety regulations, it is impossible to ensure that the meat sold at these markets is safe for human consumption. It is therefore only a matter of time before the next deadly zoonotic disease emerges.

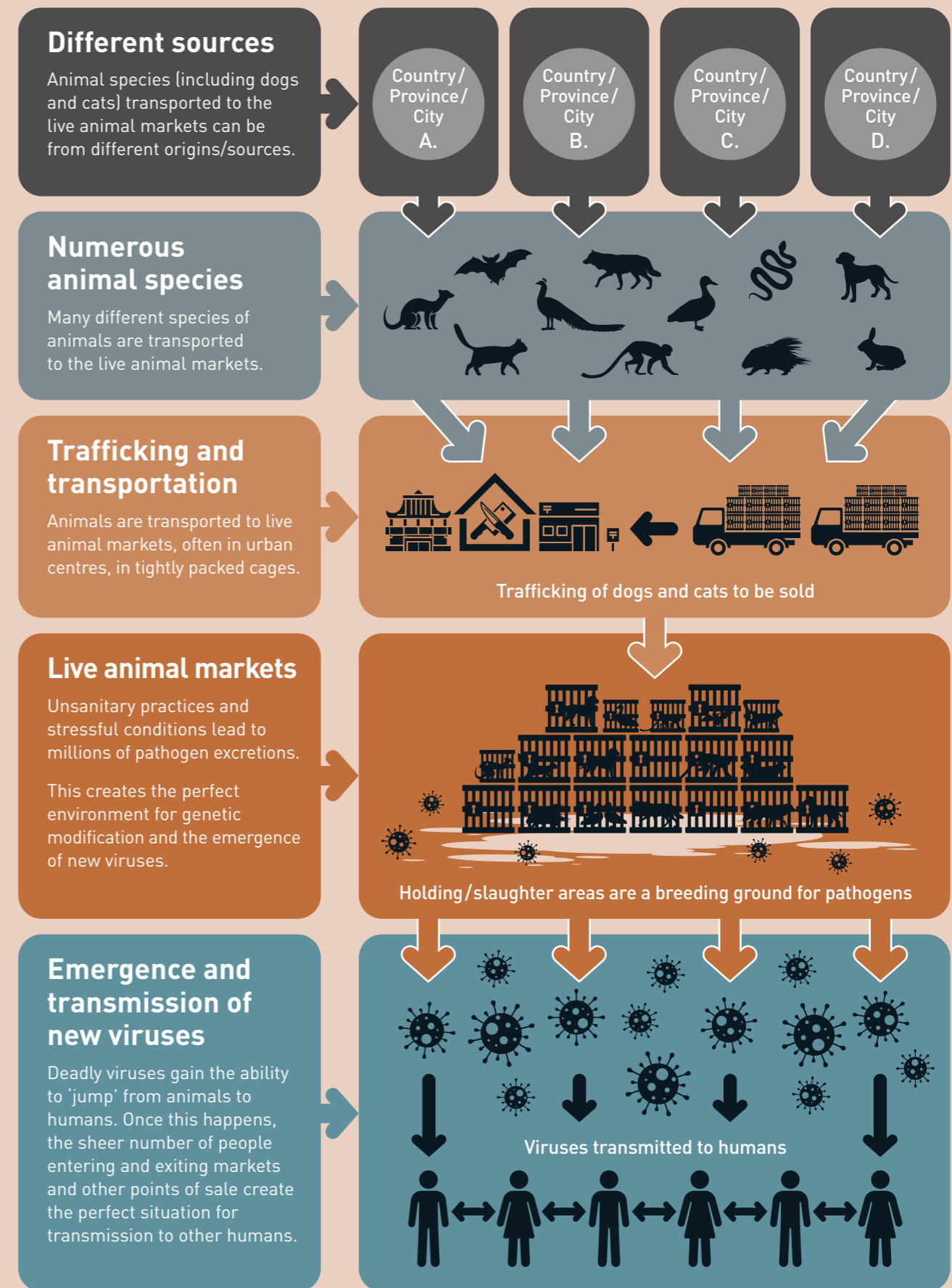
It is widely accepted that the conditions in live animal markets provide the perfect environment for viral recombination, from which deadly pathogens, including viruses can emerge and spill over to other animals and humans; and many pathologists and virologists have warned authorities of the public health dangers that these conditions represent<sup>9</sup>. Several of the conditions documented above also apply to dog and cat meat trade establishments that are outside of live markets.

What makes these markets so dangerous to public health is not only the unsanitary and unhygienic conditions or the large diversity of animal species that are sold from various sources, but also the way in which many animals are kept on display, to be slaughtered and butchered on site at the customers' request. Caged animals are often crammed into tight spaces, stacked on top of each other, with cages on lower levels constantly contaminated by the excrement and blood of animals caged above<sup>9</sup>. Wild animals are sold alongside domesticated species, including dogs and cats, and the regular mixing of a high diversity of pathogens, from wild and domestic species, that are immunocompromised from the immense stress endured prior to even arriving at the markets, creates the perfect conditions for the emergence of novel pathogens that can infect humans. Dogs and cats used for their meat are almost always sold in live animal markets or in facilities fulfilling all the dangerous conditions presented by live animal markets.

**Aside from the obvious animal welfare concerns, given the unhygienic conditions in which the animals are transported, confined and slaughtered, and lack of enforcement of any health and safety regulations, it is impossible to ensure that meat sold at these markets is safe for human consumption. It is therefore only a matter of time before the next deadly zoonotic disease emerges.**

Vendors, customers and consumers can be exposed to blood, tissues and bodily fluids facilitating pathogen transmission to humans, be it through a wound, the cross-contamination of food, or through aerosols<sup>9</sup>. In turn, the high levels of both human and animal traffic into and out of these markets further increase the transmission potential of new pathogens once they emerge.

### Live animal markets and trade provide optimal conditions for deadly pathogen emergence and transmission to humans



<sup>7</sup> Wu, F. et al. 2020  
<sup>8</sup> Woo, P.C. et al. 2006  
<sup>9</sup> Schuck Paim, C. et al. 2020

## 1.2 Global call for change

The COVID-19 pandemic has highlighted the urgent need for countries around the world to review and reconsider their existing policies pertaining to the production, transportation, sale, and slaughter of all animal species destined for human consumption. Across the globe, nations are united in a collective response to the deadly COVID-19 pandemic, including calls from many to close the most dangerous trades and markets that are associated with the transmission

of diseases and the emergence of novel diseases. Yet, despite warnings from leading human and animal health experts, inter-governmental organisations and epidemiologists, unregulated animal trades and markets throughout Asia continue to operate largely unchallenged, providing almost identical environments to those from which COVID-19 emerged, and potentially exposing hundreds of thousands of people every day to a variety of zoonotic diseases.

## 2. The dog and cat meat trade – an ignored public health risk

Every year, an estimated 30 million dogs and cats are trafficked for the meat trade in Asia, mainly in China, Vietnam, Indonesia, Cambodia, Lao PDR and South Korea. With the exception of South Korea, where the majority of dogs used to supply the demand are farmed, most countries rely on the collection of dogs from the streets and the theft of people's pets to supply the demand.

There are growing concerns regarding the risks the trade poses to both human and animal health. The dog and cat meat trade almost universally operates either illegally or in breach of existing laws and regulations pertaining to disease control, health and hygiene, as well as animal protection and criminal laws.

Dogs to be slaughtered being transported in a van in Cambodia



Given that the trade relies on the slaughter of dogs and cats of unknown health status and from unknown origins, it is impossible to ensure that the meat is safe for human consumption. Animals in the trade often display overt signs of clinical illness or are incubating disease. Some animals may even be poisoned before consumption, as the use of highly toxic agents, including strychnine, potassium cyanide, and succinylcholine, are known to be used to capture dogs and cats. These animals are then trafficked to and slaughtered in the very same type of markets as that from which COVID-19 is believed to have emerged, which has had a devastating impact on human health globally.

The true risk to both public and animal health is difficult if not impossible to quantify, given the unregulated and undocumented nature of the trade, its reliance on a supply of animals of unknown health status and origins, as well as illegal operations. Dogs and cats in the trade serve as a significant reservoir for zoonotic diseases that can be transmitted to humans through infected saliva, aerosols, contaminated urine or faeces and direct contact<sup>10</sup>. There is evidence from throughout Asia spanning decades of the role the dog meat trade plays in the transmission of notifiable diseases, including cholera and rabies.

A growing body of knowledge on disease transmission and emergence is showing that there are grave risks prevalent throughout all stages of the dog and cat meat trade – from sourcing to transport, sale, slaughter, butchery and to consumption. The lack of application of even the most basic animal welfare principles

generates immense stress and suffering, which contribute to immunosuppression and recrudescence of many bacterial, viral and parasitic infections. Certain activities in the trade have the potential to cause high levels of stress, to facilitate disease transmission, and exacerbate disease shedding including:

- **Animal collection and transportation:** Millions of dogs and cats of unknown disease and vaccination status are brutally collected from the streets or stolen and taken from various regions and provinces within a country (and sometimes internationally), crammed into small cages on trucks and transported long distances to crowded holding areas or directly to unhygienic markets and slaughterhouses.
- **Force feeding:** In an effort to increase canine body weight and market price, traders will often force a pipe into the stomach of a dog and pump water in to increase the dog's weight. The water used is typically fetid, contaminated waste water. This process not only causes immense animal stress and pain, causing death to some dogs during the process, but also has the potential to transmit water-borne pathogens such as cholera, which have been closely associated with dog meat practices.
- **Holding:** Captured dogs and cats are kept in overcrowded, unhygienic facilities, often for days or weeks, awaiting further transportation or slaughter. From an infectious disease standpoint, these places increase exposure to pathogens and susceptibility to infection, amplifying the potential for disease transmission. High pathogen contact rates induced by overcrowding have been demonstrated to contribute to canine respiratory pathogens such as those involved in canine infectious respiratory disease complex (CIRDC), which includes a variety of viral bacterial pathogens ranging from parainfluenza to *Bordetella bronchiseptica* and canine influenza (H3N8 and H3N2)<sup>11</sup>.
- **Sale and slaughter:** At markets and slaughterhouses, dogs and cats are caged with or next to conspecifics or other species; kept in close proximity to people; experience rough handling; and are given inadequate or no food or water. Slaughter and butchery happen on floors and surfaces contaminated with organic waste, surrounded by live and slaughtered animals of the same or different species from various sources and of unknown origins.

The immense stress results in immunocompromised animals, and this, coupled with unhygienic conditions, can increase the individual animals' susceptibility to infection with pathogens and the likelihood that they will shed pathogens. This in turn increases the risk of infection of other animals and humans<sup>12</sup>, providing the perfect breeding grounds for the next serious public health disaster.

Live dogs in cages with dead dogs on top in Indonesia



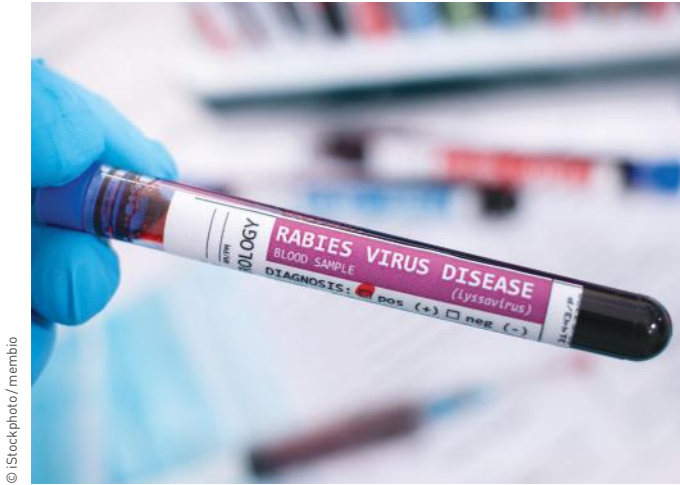
Furthermore, there are numerous opportunities for direct exposure to disease for traders working at markets, and those visiting, including tourists. Live animal markets in particular have the potential to expose hundreds of thousands of people every day to a variety of zoonotic diseases, especially given the unhygienic, overcrowded and stressful conditions in which the animals are both kept and slaughtered. Situations where disease exposure can occur include:

- A trader handling or a butcher slaughtering dogs and cats: given the immensely stressful conditions for the dogs and cats and their rough handling by traders and butchers, there is a high risk of bites and scratches and contact with saliva and other bodily fluids for those handling and slaughtering animals. The slaughter process is often brutal, with the wide splattering of blood and organic matter. Rarely, if ever, do butchers wear any type of personal protective clothing or equipment or follow any health and safety guidelines or regulations.
- A consumer eating cross-contaminated dog or cat meat.
- A visitor inhaling microscopic droplets of blood or saliva from an injured or slaughtered animal.
- A tourist bitten or scratched by a caged dog or cat at a market awaiting slaughter.

<sup>10</sup> Ghasemzadeh, I. et al. 2015

<sup>11</sup> Sykes, JE. et al. 2013

<sup>12</sup> Broom, DM. et al. 2019



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## 2.1 The spread of rabies and the dog meat trade

While the eradication of rabies has been flagged as a global health priority by the World Health Organization (WHO), and despite well-documented eradication protocols and successfully implemented programmes in countries around the world, each year approximately 59,000 people still die from rabies – 45% in Asia – with an estimated global cost of US\$ 8.6 billion per year<sup>13</sup>.

The trans-provincial and trans-national spread of rabies viruses is believed to be one of the aspects responsible for exacerbating the dog rabies epizootics in Indonesia<sup>14</sup> and China<sup>15</sup>, and the WHO has explicitly highlighted the trade in dogs for human consumption as a contributing factor to the spread of rabies<sup>16</sup>. With extensive knowledge of the rabies virus, this is not surprising given that the dog meat trade is the only trade in Asia that encourages the mass movement of millions of dogs of unknown disease and vaccination status across provincial and even international borders each year. Such mass canine movements and population disruptions are in breach of recommendations from all leading human and animal health experts on rabies control and elimination guidelines – including the WHO, Pan American Health Organisation (PAHO), Food and Agriculture Organisation of the United Nations (FAO) and World Organisation for Animal Health (OIE) – that stipulate mass canine vaccination and limiting the movement of dogs as minimum requirements so as to create the necessary herd immunity and limit the risk of introducing new infections.

### What is herd immunity?

'Herd immunity', also known as 'population immunity', refers to the indirect protection that is conferred to a human or animal population when a certain proportion are immune to the disease, either through vaccination or previous infection. Population-level thresholds are calculated at which herd immunity is reached – meaning individuals, such as dogs, not immune to a specific disease are protected because other immune individuals act as buffers between them and infected individuals<sup>17</sup>.

Once herd immunity is established and coupled with other efforts to hinder disease spread, this can lead to the elimination of disease – one example of this is smallpox.

The generally accepted vaccination threshold in dogs for rabies herd immunity – necessary to eradicate the disease – is 70%<sup>18</sup>. However as the Dog Meat Trade removes large numbers of dogs (including vaccinated dogs) from populations, this makes reaching 70% herd immunity difficult, if not impossible.

The Dog Meat Trade undermines a country's efforts to eliminate rabies through canine vaccination programmes.

Dog being vaccinated for rabies in Cambodia



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In addition there is well-documented evidence of rabies-positive dogs being traded and slaughtered for human consumption in public markets, slaughterhouses, and even restaurants in China<sup>19,15</sup>, Vietnam<sup>20</sup> and Indonesia<sup>21</sup>, with up to 20%<sup>22</sup> of dogs tested being positive for rabies. In many cases the dogs were reported to be asymptomatic.

In a personal communication to the Dog Meat Free Indonesia coalition, the United States' Centers for Disease Control and Prevention (CDC) explained, "There are reports that dog meat markets have a higher rate of rabies than the general dog population, as people often sell dogs to the markets when they act sick; some of these sick dogs have rabies. Some reports have found that as high as 5% of dogs entering the dog meat market have rabies in endemic countries, which is a very high risk considering that this disease is nearly 100% fatal. Furthermore, there are at least three published reports of humans acquiring rabies from activities associated with the dog meat market, emphasizing that the risk is very real."

There is a significant risk of rabies exposure for traders, slaughterers/butchers and consumers, for example:

- Traders handling infected dogs are exposed by bites, scratches, etc.

- Slaughter and butchery (handling carcasses of infected animals) could lead to transmission of rabies. Two surveys of dog slaughterhouse workers in Nigeria respectively report 18/19 and 8/12 being bitten in the course of their work<sup>23,24</sup>. Considering the similarities in practices in the DCMT between Nigeria and Asia, similar rates are likely in Asia. Transmission of rabies through contact with the meat of an infected animal has been highlighted by several studies<sup>22,25</sup>, and the slaughter of an unvaccinated rabies reservoir species (including dogs) in endemic areas needs to be considered a category III (severe) exposure, requiring prophylaxis<sup>27</sup>.

- Consuming rabies-infected dogs and cats. The WHO and USCDC advise against the consumption of meat from rabies-suspect animals. There have also been historical reports from China<sup>26</sup>, Vietnam<sup>26,27</sup>, and the Philippines<sup>28</sup> of patients with signs of rabies infection who had a history of preparing and consuming dogs and cats that may have been infected.

- People, including tourists, visiting markets selling rabies-infected animals could come into contact with the virus unknowingly.

Traders unloading dogs ready for slaughter



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<sup>13</sup> Hampson, K. et al. 2015

<sup>14</sup> Clifton, M. 2010

<sup>15</sup> Tao, XY. et al. 2009

<sup>16</sup> Dog Meat Free Indonesia. 2020

<sup>17</sup> GAVI – The Vaccine Alliance. 2020

<sup>18</sup> OIE – World Health Organisation. 2020

<sup>19</sup> Hu, RL. et al. 2008

<sup>20</sup> Nguyen, AKT. et al. 2011

<sup>21</sup> Adiani, S. et al. 2009

<sup>22</sup> Wertheim, HFL. et al. 2009

<sup>23</sup> Mshelbwala, PP. et al. 2013

<sup>24</sup> Otolorin, G. et al. 2014

<sup>25</sup> Tariq, WU. et al. 1991

<sup>26</sup> Kureishi, A. et al. 1992

<sup>27</sup> Asia Canine Protection Alliance. 2013

<sup>28</sup> Dimaano, EM. et al. 2011

## Case study: Vietnam

### Two cases of furious rabies in Vietnam



In 2009, Wertheim *et al.* published case studies of two men who died of rabies despite neither patient having a history of an animal bite that may have been the source of infection<sup>29</sup>. Both cases shared similarities including, the killing, butchering, preparing and eating of dog and cat meat.

**Patient 1** had butchered and eaten a dog that had been killed in a road traffic accident.

**Patient 2** had killed, butchered, and consumed a cat that had been sick for three days.

There were multiple opportunities for both men to become infected with the rabies virus and die, all associated with dog and cat meat trade practices. Both patients became ill within the expected incubation time for rabies following the exposure during the butchering process; and the researchers noted that the removal and preparation of the dog's and cat's brains generated large amounts of infectious rabies virus, with transmission occurring via either the conjunctiva, or the oral and nasopharyngeal mucosae. Patients might have also become infected through the contamination of cuts or abrasions of their hands. Rabies infection through open wounds following the handling of infected carcasses has been reported previously<sup>25</sup>. Both cases demonstrate a clear association between the dog and cat meat trade and fatal rabies infection in people.

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## Case study: Cambodia

### Dog meat trade and rabies in Cambodia



The Kingdom of Cambodia is home to a rampant dog meat trade and is rabies endemic. It is estimated that rabies kills 800 people annually in Cambodia; however, this is very likely to be a significant underestimate. Since 2000, the Pasteur Institute in Cambodia, the leading authority on

rabies in the country, has tested, on average, 200 biting dogs each year. Nearly 50% of tested dogs were identified as rabies-infected<sup>29</sup>. Despite the obvious public health risk, the dog meat trade continues almost unabated in most parts of the country, involving upwards of 3 million dogs per year, potentially exposing tens of thousands of people including traders, wholesalers, butchers, and any other persons potentially exposed to the dogs during the whole process. In order to achieve rabies eradication and reduction in risk of transmission to humans, a dog vaccination programme, coupled with a ban on the dog meat trade, is necessary.

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### 2.2 Other dangers to public health and consumer safety

Given that the processing of dog and cat meat is unregulated, there are no official guidelines or practices to ensure that the meat is prepared in a safe or hygienic way or that it is safe for human consumption – including ensuring that it is not contaminated with zoonotic pathogens or poisons that are used by traders to immobilise or kill dogs, including potassium cyanide. Furthermore, dog and cat meat processing facilities encourage large numbers of flies, other insects, and rodents, contaminating meat products and potentially contributing to the spread of disease.

#### Other infectious diseases

In addition to rabies, consuming dog and cat meat can also put consumers at risk of other deadly infections including *E. coli* and *Salmonella spp.*, commonly found in contaminated meats; and the dog meat trade is also linked to the transmission of a number of other notifiable diseases, including anthrax, brucellosis, hepatitis, cholera and trichinellosis.

#### Cholera

Cholera is an infection caused by the bacteria *Vibrio cholerae* that can spread rapidly causing profuse watery diarrhoea, vomiting, and even renal failure and acute death if left untreated. Outbreaks of the disease can last for months and serve as a significant public health burden. Cholera outbreaks have been associated with the dog meat trade throughout northern Vietnam<sup>30</sup>, with the Cholera bacterium having been found in samples of dog meat, on equipment in slaughterhouses and restaurants, and in waste water released from dog slaughterhouses in Hanoi<sup>31</sup>.

In July 2010, 60 dog meat restaurants and slaughterhouses in and around Hanoi were closed amid concerns for human health – notably the sale of dog meat contaminated with *vibrio cholerae* – with Hanoi health officials stating that in the first seven months of 2010, over 60% of reported cases of cholera in Hanoi (121 out of 200) were related to dog meat<sup>32</sup>.

## Case study: Vietnam

### Cholera outbreak in Vietnam linked to dog meat



In Huong Noi Commune (Hanoi), 37 samples were collected from four slaughterhouses on 8 May 2009, with 11 samples found to be positive for *V. cholerae* O1. Later in the month, 54 samples were collected from dog slaughterhouses in Thanh Hoa province, with 3 samples tested positive<sup>33</sup>.

Analyses by the NIHE of the cholera epidemic waves from between 2007 and 2010 identified dog meat as the suspected food to cause cholera in over 64% of cases in 2007 and over 83% of cases in 2008. Interestingly, researchers also concluded that the Vietnamese tradition of not eating dog meat at the beginning of lunar month, due to superstition, was reflected in the low incidence of acute diarrhoea also seen in the first two weeks of the lunar calendar. An analysis of risk factors associated with infection<sup>34</sup> resulted in a warning from the WHO that eating dog meat, or other food from outlets that serve it, is linked to a 20-fold increase in the risk of developing the infection<sup>35</sup>.

From October 2007 to June 2009, an outbreak of severe, acute watery diarrhoea affected thousands of people in 22 cities and provinces across northern Vietnam. More than 1,500 were culture positive for *V. cholerae* O1 when stool samples were tested at the Department of Bacteriology, National Institute of Hygiene and Epidemiology (NIHE) in Hanoi. According to one study looking at imported dogs as possible vectors of *Vibrio cholerae* O1, the majority of patients at the beginning of the outbreak had eaten dog meat either at their homes or at dog meat restaurants<sup>33</sup>.

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<sup>29</sup> Institut Pasteur. 2017

<sup>30</sup> Ngo, TC. et al. 2011

<sup>31</sup> Vietnam Culture. 2009

<sup>32</sup> Thanh Nien News. 2010

<sup>33</sup> Ehara. 2011

<sup>34</sup> Trần, ND. et al. 2009

<sup>35</sup> World Health Organization. 2008

### Trichinellosis

Trichinellosis is a global food-borne parasitic disease caused by eating raw or undercooked meat containing the infective larvae of *trichinella* nematodes. Human infection with adult or larval stages of trichinella, known as trichinellosis, is the direct result of ingesting *trichinella* larvae. Trichinellosis, if left untreated, can be fatal. The most common source of human infection is the domestic pig; however, trichinellosis can also occur from ingesting improperly prepared meat from other animals, including dogs.

Dog meat is a major source of *trichinella* infection in humans in China, and most likely in other countries where dog meat is common. Surveys were performed in nine provinces or Autonomous Regions of China among 19,662 dog samples. Canine trichinellosis prevalence ranged from 7% in Henan to 39.5% in Heilongjiang, with an overall prevalence of 21.1%<sup>36</sup>. Dog meat has also been implicated in human trichinellosis in Thailand<sup>37</sup>. A survey showed 7 infected dogs out of 421 in one dog meat market<sup>38</sup>.

### Poisonous substances

To facilitate the capture of dogs, a variety of poisons and/or sedatives are sometimes put in baits by traders to paralyse or kill dogs. There is no way of ensuring that the meat from poisoned dogs is uncontaminated and

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safe for human consumption. Commonly used poisons include potassium cyanide and strychnine, as well as muscle relaxants, such as suxamethonium. These poisons and immobilisers are not only incredibly cruel for the animals that are targeted, but can also pose a health risk to consumers. For example, in 2014, 11 people were sentenced to prison in China for selling the meat of nearly 1,000 dogs killed by poisoning using darts containing succinylcholine chloride<sup>39</sup>. In June of 2020, a couple was arrested in central Vietnam after lacing food with cyanide to kill and steal dogs and cats for the trade<sup>40</sup>.

Slaughtered animals in a live animal market in Indonesia



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## 3. Immediate regional responses to the COVID-19 pandemic

Mixing of live and dead animals of different species at a live animal market in Indonesia



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Since the emergence of COVID-19, national governments and human and animal health inter-governmental organisations and experts have called for countries around the world to review policies and adopt stringent and urgent measures to tackle the trades and industries involving animals, which may pose a risk to human health.

With the global spotlight on live animal markets selling wildlife alongside domesticated species, including dogs and cats for their meat, the global community and key public health stakeholders have called on governments to tackle both the unregulated trade in wildlife and the dog and cat meat trade on the grounds of not only human and animal health but also ethics, in recognition that around the world dogs and cats are widely considered as 'companion animals' and not 'livestock' or 'food animals'.

Progressive and innovative schemes and legislation were passed at unprecedented speeds to tackle the wildlife trade. Even before the WHO classified COVID-19 as a 'global pandemic'<sup>41</sup>, China responded to the outbreak with groundbreaking bans on the wildlife trade that came in with immediate effect, with cities adopting additional measures prohibiting wildlife consumption to safeguard human health, including Wuhan and Beijing. Shenzhen City, for example, passed legislation permanently prohibiting the consumption, breeding, and sale of wildlife such as snakes, lizards, and other wild animals for human consumption, with heavy fines of up to 150,000 yuan (>US\$20,000)<sup>42</sup>.

A first-of-its-kind nationwide scheme in China is creating a buyout programme to help wildlife traders switch to alternative livelihoods, such as growing fruits, vegetables, tea plants and herbs<sup>43</sup>. These changes came despite China's wildlife trade and consumption industry being valued at 520 billion yuan (US\$74 billion) by the

<sup>36</sup> Cui, J. et al. 2001

<sup>37</sup> Chalermchaikit, T. et al. 2001

<sup>38</sup> Khamboonruang, C. 1991

<sup>39</sup> Jinran, Z. et al. 2014

<sup>40</sup> VnExpress. 2020

<sup>41</sup> World Health Organization. 2020

<sup>42</sup> Shenzhen News Network. 2020

<sup>43</sup> Boyle, L. 2020

<sup>44</sup> South China Morning Post. 2020



Chinese Academy of Engineering in 2017, recognising the threat that this industry can pose to global human health.

Similar steps were taken in July 2020 by Vietnam to “reduce the risk of new pandemics” through the publication of a directive with immediate effect, banning wildlife markets and the wildlife trade (including imports of live wild animals and wildlife products); and strengthening the enforcement of prohibitions on illegal hunting and trading of wild animals, including online sales.

Over the following months, China’s Ministry of Agriculture and two major Chinese cities adopted measures to address the dog and cat meat trade amid growing national and international concerns and condemnation. At both national and city level, the basis of legislative reform was that dogs are ‘companion animals’ not ‘livestock’, and recognised the need for laws to reflect public sentiment.

Dog paws on a barbeque in Cambodia



#### Shenzhen, Guangdong Province

On 31 March 2020, Shenzhen became the first city in mainland China to permanently ban the consumption of dogs, cats and wildlife. The food safety legislation (‘Shenzhen Special Economic Region Regulation on a Comprehensive Ban on the Consumption of Wild Animals’)<sup>45</sup> was proposed in February 2020 by Shenzhen legislators and came into effect on 1 May 2020. The law prohibits dog and cat meat consumption by listing those species permitted to be consumed, with dogs and cats not included in the list<sup>46</sup>. As of 1 May 2020, the sale of cats and dogs for human consumption has been banned in restaurants and stores throughout Shenzhen, and the sale of live cats and dogs for consumption in markets has also been banned.

<sup>45</sup> Ministry of Agriculture and Rural Affairs of the People’s Republic of China. 2020  
<sup>46</sup> Shenzhen News Network. 2020

Cooking dog meat in Cambodia



During the announcement of the groundbreaking law, a spokesperson for the Shenzhen government stated: “... dogs and cats as pets have established a much closer relationship with humans than all other animals, and banning the consumption of dogs and cats and other pets is a common practice in developed countries and in Hong Kong and Taiwan. This ban also responds to the demand and spirit of human civilization<sup>47</sup>.”

#### National legislation

On 27 May 2020, the updated National Catalogue of Livestock and Poultry Genetic Resources<sup>48</sup> was published by the national government (Ministry of Agriculture). The Catalogue includes a list of animals which are considered ‘livestock’. Neither dogs nor cats were included in the list, and for the first time, the document includes an explanation for the omission of dogs, and officially reclassifies them as ‘companion animals’: “With the progress of human civilization and the public’s concern and preference for animal protection, dogs have changed from traditional domestic animals to companion animals. Dogs are generally not regarded as livestock and poultry around the world, and China should also not manage them as livestock and poultry<sup>49</sup>.”

#### Zhuhai, Guangdong Province

On 15 April 2020, following the release of the updated draft National Catalogue of Livestock and Poultry Genetic Resource<sup>48</sup>, the city of Zhuhai became the second city in mainland China to permanently ban the consumption of dogs, cats and wildlife. The Standing Committee of the People’s Congress of Zhuhai Municipality stated that lawmakers must adhere to China’s livestock ‘white list’ of animals for human consumption<sup>49</sup>, from which dogs and cats are excluded.

<sup>47</sup> Ministry of Agriculture and Rural Affairs of the People’s Republic of China. 2020  
<sup>48</sup> China News Network. 2020

## 4. Why regulation is not a solution for addressing the dog and cat meat trade

The dog and cat meat trade is not only increasingly controversial and divisive, but also poses a very real threat to human and animal health and welfare. Furthermore, it can have significant negative impacts on a country’s international reputation with an ever-growing and vocal global intolerance to animal cruelty including a mounting local opposition to the trade, especially among the younger generation.

To date, no country has officially legalised or regulated the trade in dogs and cats for food; and it is evident that any attempts to regulate a trade that operates in breach of existing laws (including health and safety regulations), and is reliant on the lack of enforcement, will fail. There is no substantiated evidence to suggest that regulation of dog and cat meat production would resolve the systemic cruelty involved or alleviate all the risks posed to human health. Furthermore, no government or inter-governmental organisation has devised a safe and humane way of raising and slaughtering dogs and cats for commercial meat production, and any attempts to do so would be out of step with the rest of the world, where dogs and cats are considered companions.

Research and investigations from throughout Asia suggest that wherever it is prevalent, dog and cat meat consumption is highly controversial and usually only practised by – and provides financial profits to – a minority of the population, while the trade negatively

impacts the entire population in terms of health, economy and reputation.

For example, companion animals have never been part of China’s culinary mainstream, and surveys suggest that dog meat is only eaten – and only infrequently – by less than 20% of the Chinese population<sup>49</sup>. This reflects similar surveys and investigations in Cambodia, where it is estimated that only 12% of Cambodians regularly consume dog meat, and consumption remains a controversial practice among Khmer people<sup>50</sup>; and in Indonesia, where it is estimated by the Dog Meat Free Indonesia coalition that fewer than 7% of the population consume dog meat. In South Korea, dog meat consumption is declining, particularly among younger generations, and most Koreans do not eat it regularly. In Vietnam, a market research study found that the prevalence of dog meat consumption varies widely based on location. In Hanoi for instance, a city known for having a high prevalence of dog meat consumption, the survey found that only 11% of people eat dog meat regularly, and in Ho Chi Minh City even fewer, only 1.5%. Also, in Ho Chi Minh City, 88%<sup>51</sup> of those surveyed responded that they would refuse to eat dog meat. A survey by Gallup Korea in June 2018 showed that 70% of South Koreans say they will not eat dog meat in future<sup>52</sup>. Therefore - to end the trade would impact a minority but benefit the majority of the wider population.

Dog and cat meat for sale in a market in Vietnam



<sup>49</sup> Humane Society International. 2020  
<sup>50</sup> FOUR PAWS International. 2020

<sup>51</sup> FOUR PAWS International. 2020  
<sup>52</sup> Kim. 2018

## 5. Progressive legislation to end the trade

In recognition of the need for legal clarity, an ever-growing number of countries and territories have passed progressive legislation explicitly recognising dogs and cats as 'companion animals', not as 'livestock' or 'food animals', and removing them from lists of 'livestock species' in governing laws. For example, the Philippines, Taiwan and Hong Kong have passed laws, regulations and ordinances explicitly banning the slaughter, sale and consumption of dogs, in line with public sentiment, commitment to protecting animal welfare, and in line with global expertise on rabies control and elimination requirements, by taking various legal approaches. In Taiwan and Hong Kong, the slaughter, sale and consumption of cats is also explicitly banned, while in the Philippines, cats are not listed as a species that can be consumed, which effectively also precludes them being used for their meat.

In other countries, such as India, there is not an explicit ban as such but rather it is considered illegal under the Food Safety and Standard (Food Products Standard and Additives) Regulation<sup>53</sup>, which does not recognise dogs as food, as well as the national Prevention of Cruelty to Animals Act<sup>54</sup> (1960); and in Singapore<sup>55</sup>, animal protection and food safety laws prohibit the slaughter

and consumption of dogs and cats, which are not recognised as 'food animals'. This legal route of defining 'food animals' – those that are considered acceptable to be consumed by humans – is an approach that was also adopted in Thailand and Indonesia; and is reflected in steps being taken by China since the COVID-19 pandemic demanded a review of existing policies relating to animal trading and consumption practices.

### Impact of the trade on pet owners and society

The dog meat trade not only operates in breach of existing laws, it also results in societal unrest and discontentment as dog thieves and traders increasingly clash with the ever-growing pet-owning and pet-loving communities. In both China and Vietnam, for example, reports of traders trying to steal pets being seriously injured and even killed during these clashes are regularly featured in the media, with pet owners becoming increasingly frustrated with the lack of law enforcement and taking matters into their own hands to protect their pets.

Cambodian government officials indicating their willingness to take action against the dog meat trade



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<sup>53</sup> Food Safety and Standards Authority of India. 2011

<sup>54</sup> Animal Welfare Board of India. 1960

<sup>55</sup> Singapore Government. 2002

## 6. Recommendations

Millions of dogs and cats are being taken, traded and slaughtered for consumption every year across much of Asia, and in light of the serious public health threat that these trades pose, it is the responsibility of regional and national governments around the world to do everything in their power to eliminate sources of disease outbreaks. Any policies and practices that sustain the dog and cat meat trade not only prohibit any attempts to eliminate rabies – given that the dog and cat meat trade and rabies elimination programmes are incompatible – but also carry a huge and unpredictable public health risk that could lead to future outbreaks and pandemics of zoonotic diseases among human populations.

It is therefore incumbent upon governments across Asia to also tackle the dog and cat meat trade that, while not implicated as the origin of COVID-19, undoubtedly poses its own significant human health risks, including the spread of trichinellosis, cholera and rabies that kill tens of thousands of people every year.

Consequently, increasingly progressive and stringent measures are required to reflect mounting national and global concerns for the risks the trade in dogs and cats for human consumption poses to public health and safety; and to reflect growing global awareness of our responsibilities to better protect animal welfare through the provision of adequate legislation to prevent cruelty towards animals. Furthermore, the economic burden of the trade must be considered in terms of both economical and societal costs. These range from costs associated with the role the trade plays in sustaining and worsening disease transmission, notably rabies, to those associated with the country's international reputation and associated tourism and other investment industries and opportunities that are impacted.

It is essential that governments around the world act to address the source of deadly zoonotic pathogens – believed in the case of COVID-19 to be a live animal market where human and various species of animals are brought into close proximity – to ensure they are not the point of origin of the next pandemic. If action is not taken, the question is not whether another similar pandemic will emerge, but when. In light of the catastrophic impact of the COVID-19 pandemic, a precautionary approach is required to limit all risks.

Animal trades that affect national and international welfare and stability can no longer be ignored or defended as personal choice or culture. Now is a critical

time for countries around the world to review and reconsider their existing policies pertaining to the breeding/capture, keeping, transport, sale, and slaughter of all animal species destined for human consumption, including dogs and cats.

**Based on scientific evidence and expert recommendations, we thereby urge the governments throughout the region to take urgent preventative measures by:**

- Issuing a comprehensive Law or Directive prohibiting all aspects of the dog and cat meat trade, including trafficking, sale, slaughter and consumption.
- Ensuring the closure of all markets and facilities selling and/or slaughtering live dogs and cats.
- Issuing public statements regarding the public health dangers of slaughter and consumption of dogs and cats.
- Taking strong measures to ensure the enforcement of existing laws, regulations and directives to end the dog and cat meat trade.

**It is essential that governments around the world act to address the source of deadly zoonotic pathogens – believed in the case of COVID-19 to be a live animal market where human and various species of animals are brought into close proximity – to ensure they are not the point of origin of the next pandemic.**

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When zoonotic diseases spill over from animals to people, human activity is frequently the cause. The COVID-19 pandemic is certainly not the first time that infectious diseases have been linked to human activities that bring animals of various species and sources into close proximity with each other and humans.








## About FOUR PAWS

FOUR PAWS is the global animal welfare organisation for animals under direct human influence, which reveals suffering, rescues animals in need and protects them. Founded in 1988 in Vienna by Heli Dungler, the organisation advocates for a world where humans treat animals with respect, empathy and understanding. FOUR PAWS' sustainable campaigns and projects focus on companion animals including stray dogs and cats, farm animals and wild animals – such as bears, big

cats, orangutans and elephants – kept in inappropriate conditions as well as in disaster and conflict zones. With offices in Australia, Austria, Belgium, Bulgaria, Germany, Kosovo, the Netherlands, Switzerland, South Africa, Thailand, Ukraine, Hungary, the UK, the USA and Vietnam as well as sanctuaries for rescued animals in twelve countries, FOUR PAWS provides rapid help and long-term solutions.

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