

The Right Honourable Justin Trudeau, P.C., M.P  
Office of the Prime Minister  
80 Wellington Street  
Ottawa, ON K1A 0A2

July 27, 2020

**Re: COVID-19: Health risks and wild animal markets – the need for a permanent global ban on wildlife markets and a precautionary approach to the wildlife trade.**

Dear Prime Minister Trudeau:

The undersigned Canadian animal protection organizations and scientific experts commend your leadership and efforts to contain and combat the spread of COVID-19 during this most difficult time for our country. Unfortunately, the emergence of COVID-19 was a textbook example of emerging zoonotic infections (infections transmitted from animals to people).

We urge you to do all that is within your power and authority to prevent a crisis like this from ever happening again. Global and national action to curb the wildlife trade is one of the most effective strategies to prevent future pandemics, and is necessary to reduce animal suffering and protect biodiversity.<sup>1 2</sup> We therefore call upon you to support and champion a permanent ban on wild animal markets<sup>3</sup> that could become sources for future pandemics and to commit to end the international trade in wild animals and their products that could aid in the spread of zoonotic diseases<sup>4</sup> at the G20 Leader's Summit this November. To fulfil Canada's commitment and demonstrate that this is a global problem requiring a global solution, we further urge you to develop a national plan to ensure that our own contributions to the wild animal trade do not contribute to this global problem.

Reducing the risk of zoonotic spillover events from wild animals to people requires maintaining wild animals in secure and intact wild habitats and minimizing wild animal-human interaction, including by severely limiting the use and trade of wild animals, particularly for sale as luxury meats in large urban wildlife markets. We define wild animals as non-domesticated species captured from the wild or bred in captivity; a particular focus is required for mammals and birds as these have been the sources of past zoonotic outbreaks. We define the wild animal trade as the legal and illegal commerce of such live wild animals, as well as of their parts and derivatives. We are not advocating for restrictions on local community subsistence or Indigenous use of wild animals, parts and products or on the movement of animals for non-commercial trade (e.g., conservation, sanctuaries).

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<sup>1</sup> Wishart, David. Commentary: Four states to help avoid the next pandemic. Folio. May 28 2020 [www.folio.ca/commentary--four-strategies-to-help-avoid-the-next-pandemic/](http://www.folio.ca/commentary--four-strategies-to-help-avoid-the-next-pandemic/)

<sup>2</sup> Kolby, Jonathan. To prevent the next pandemic, it's the legal wildlife trade we should worry about. National Geographic. May 7 2020. <https://www.nationalgeographic.com/animals/2020/05/to-prevent-next-pandemic-focus-on-legal-wildlife-trade/>

<sup>3</sup> Markets that sell live wild animals (either captured from the wild or bred in captivity) and their parts and derivatives

<sup>4</sup> Refers to legal and illegal commerce of live non-domesticated animals that are captured from the wild or bred in captivity as well as parts and products that are derived from non-domesticated animals

Evidence suggests that a market in Wuhan, Hubei Province, China played a significant role in the COVID-19 outbreak.<sup>5 6 7</sup> This market had a section which reportedly sold many live and dead wild animals including snakes, hedgehogs, crocodiles and raccoon dogs.<sup>8 9</sup> Scientists are still investigating how the novel coronavirus (SARS-CoV-2) was transmitted to humans, but scientific research suggests it may have been transferred from bats via pangolins or some other intermediate host species, as was the case with SARS.<sup>10</sup> Whether the intermediate host is determined to be a pangolin or another species, evidence supports the view that the current pandemic and previous zoonotic epidemics around the world (e.g., SARS, Ebola, Monkeypox, HIV/AIDS, HPAI H5N1)<sup>11 12</sup> are fundamentally linked to our poor treatment and exploitation of wild animals and our encroachment on their habitats.<sup>13</sup>

While being conscious of the complex cultural and food security issues that are inherent with animal markets, infectious disease experts in Canada and around the world have called for a permanent closure of markets that sell live wild animals and their body parts.<sup>14 15</sup> Live wild animal markets pose a serious risk to public health, animal welfare and wildlife conservation. These markets typically have a diverse array of animals, many of which would never encounter each other in the wild, held in crowded, unsanitary and stressful conditions as well as in close proximity to humans. These circumstances result in stressed animals whose compromised immune systems make them more prone to contracting and shedding pathogens, more infectious and more vulnerable to infections.<sup>16</sup> They provide the ideal environment for the emergence and spread of infectious diseases which can then be transmitted to humans.

These markets sell wild animals and wild animal products for a variety of purposes. Ultimately, it is immaterial whether they are being used for food, traditional medicine<sup>17</sup> or pets; it is how they are treated and their close proximity to each other and to humans during capture, transport and sale that is the root of the issue.

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<sup>5</sup> Shereen, M.A., Khan, S., Kazmi, A., Bashir, N. and Siddique, R., 2020. COVID-19 infection: origin, transmission, and characteristics of human coronaviruses. *Journal of Advanced Research*.

<sup>6</sup> US Centres for Disease Control and Prevention. "Coronavirus Disease 2019 (COVID-19): Situation Summary. Updated Apr 19 2020." <https://www.cdc.gov/coronavirus/2019-ncov/cases-updates/summary.html>

<sup>7</sup> Humane Society International. (2020). *Wildlife Markets and COVID-19*. Washington, D.C. <https://www.hsi.org/wp-content/uploads/2020/04/Wildlife-Markets-and-COVID-19-White-Paper-FINAL-6-Apr-2020.pdf>

<sup>8</sup> Ralph R, Lew J, Zeng T, et al. 2019-nCoV (Wuhan virus), a novel Coronavirus: Human-to-human transmission, travel-related cases, and vaccine readiness. *J Infect Dev Ctries*. 2020;14(1):3-17. doi:10.3855/jidc.12425

<sup>9</sup> McNeil, S and C. Choi. "Virus renews safety concerns about slaughtering wild animals. AP. Feb 16 2020. <https://apnews.com/caa64052d429b2b0fa56b1d5caeab99b>

<sup>10</sup> Andersen, G.A., Rambaut, A., Lipkin, W.I. et al. The proximal origin of SARS-CoV-2. *Nat Med*. 2020. <https://www.nature.com/articles/s41591-020-0820-9>

<sup>11</sup> <https://www.folio.ca/commentary--four-strategies-to-help-avoid-the-next-pandemic/>

<sup>12</sup> As cited in Alves, R. R. N., & da Silva Policarpo, I. *Animals and human health: where do they meet?*. In *Ethnozoology* (pp. 233-259). Academic Press. 2018.

<sup>13</sup> Webster RG. Wet markets--a continuing source of severe acute respiratory syndrome and influenza? *Lancet* (London, England). 2004 Jan;363(9404):234-236. DOI: 10.1016/s0140-6736(03)15329-9. <https://europepmc.org/article/MED/14738798>

<sup>14</sup> Nelson, J. "Dr Fauci says it's 'mind-boggling' that any of China's wet markets are still operating". Fox News. Apr 3 2020. <https://www.foxnews.com/media/dr-fauci-china-wet-markets-open-coronavirus>

<sup>15</sup> See [Preventpandemics.org](http://Preventpandemics.org) and [endthetrade.com](http://endthetrade.com)

<sup>16</sup> Hing Stephanie, Narayan Edward J., Thompson R. C. Andrew, Godfrey Stephanie S. (2016) The relationship between physiological stress and wildlife disease: consequences for health and conservation. *Wildlife Research* **43**, 51-60. 2016. <https://doi.org/10.1071/WR15183>

<sup>17</sup> According to legislation passed in 2017, Traditional Chinese Medicine (TCM) is the general name of Chinese medicine, including Han nationality and minority nationality medicine. It reflects the Chinese nation's understanding of life, health and disease. It has a long history, tradition and unique theory and technical method. The majority of TCM is plant-based. A recent survey found 80% of the total materials in TCM were derived from plants.

Protecting wildlife, biodiversity and animal welfare needs to be part of a global and national pandemic prevention strategy. Canada's leading animal welfare and wildlife protection organizations recommend that the Canadian Government take the following actions:

**1. Support, and urge other G20 countries to support, an immediate and permanent closure of wild animal markets.**

On February 24, 2020, China banned the farming and trade of many wildlife species for consumption,<sup>18</sup> and offered wildlife farmers financial support to transition to plant-based alternatives.<sup>19</sup> Vietnam is planning to pass similar restrictions to reduce wildlife consumption.<sup>20</sup> It is vitally important that these bans remain in place after the pandemic, and be extended to all aspects of the commercial wildlife trade (including the capture, farming and trade of wild animals for meat, traditional medicine and exotic pets) and supported by strong enforcement measures and initiatives to reduce consumer demand.

This problem is not unique to China and Vietnam. Wildlife markets exist around the world and draw crowds of locals and tourists alike in urban centres across Asia, Africa and Latin America who could act as vectors and spread zoonotic diseases. The United States and Australia are calling for a permanent shutdown of wildlife markets and a recent poll found that 68% of Canadians would like our government to follow suit.<sup>21</sup> A comprehensive solution is needed, and we urge the Government of Canada to champion this.

**2. Commit at the G20 to end the international trade in wild animals and wild animal products that could contribute to the spread of zoonotic disease and ask global institutions and bodies and their national parties to put in place mechanisms to develop, facilitate and implement this ban.<sup>22</sup>**

Policies and practices that sustain the wildlife trade may carry unpredictable and potentially monumental public health and economic risks and could lead to future pandemics. COVID-19 could cost the global economy \$9 trillion USD<sup>23</sup> and is on course to put much of the world into

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<sup>18</sup> Standing committee of the 13th National People's Congress Decision "Comprehensively Prohibiting the Illegal Trade of Wild Animals, Eliminating the Bad Habits of Wild Animal Consumption, and Protecting the Health and Safety of the People" <http://www.loc.gov/law/foreign-news/article/china-legislative-decision-passed-to-punish-trade-and-consumption-of-wild-animals-amid-covid-19-epidemic/>

<sup>19</sup> Pasley, J. Wuhan has banned eating wild animals and nearby provinces are offering farmers cash to stop breeding exotic livestock. Business Insider. May 21 2020. <https://www.businessinsider.com/wuhan-china-bans-eating-wild-animals-2020-5>

<sup>20</sup> Humphrey, C. "Billion-dollar wildlife industry in Vietnam under assault as law drafted to halt trading." The Guardian. March 18, 2020. <https://www.theguardian.com/environment/2020/mar/18/billion-dollar-wildlife-industry-in-vietnam-under-assault-as-law-drafted-to-halt-trading>

<sup>21</sup> Results from online study conducted by Research Co from March 21 to March 22, 2020, among 1,000 adults in Canada. The data has been statistically weighted according to Canadian census figures for age, gender and region. The margin of error—which measures sample variability—is +/- 3.1 percentage points, nineteen times out of twenty <https://researchco.ca/2020/03/24/covid-19-governments/>

<sup>22</sup> In our call for a global wildlife trade ban we refer to wild animals that are involved in non-essential global commercial trade (e.g. for use as luxury goods, exotic pets, traditional medicine and entertainment) that have been bred in captivity or captured from the wild. We do not include plants, fisheries that supply the food industry, wild animals hunted by communities for subsistence, or other wildlife trade that poses a limited health risk and is deemed essential for human survival.

<sup>23</sup> Chapman, B. Coronavirus could deliver \$8.8 trillion hit to global economy without government intervention, bank says. May 15 2020 <https://www.independent.co.uk/news/business/news/coronavirus-global-economy-impact-gdp-covid-19-a9516806.html>

recession. Such devastating economic impacts are not new. The SARS outbreak in 2003 alone cost China's economy \$25.3 billion USD, yet six months after SARS, China lifted the ban on the trade of wild animals for consumption which had been imposed to deal with the outbreak.

Millions of wild animals are captured, bred and traded every year across the globe for food, traditional medicine and pets. Zoonotic infections can emerge and be spread at every stage of the trade. This should be of critical concern, as almost 75% of emerging infectious diseases affecting human health originate in wildlife.<sup>24 25 26 27</sup> This leads us to encourage Canada to support a broad precautionary approach to the wildlife trade as a whole.

### **3. Curb the import and domestic trade in wild animals and wild animal products that could contribute to the spread of zoonotic disease in Canada.**

Every country has experienced the impact of this pandemic and must play a role in the long-term sustainable solution to the emergence of future pandemics. Canada fuels the supply and demand for wildlife and wildlife products and despite the existence of the Wild Animal and Plant Protection and Regulation of International and Interprovincial Trade Act (WAPPRIITA), contributes to the growth in this trade through inadequate domestic regulations.<sup>28 29 30 31</sup> Millions of wild animals and related products are imported annually into Canada.<sup>32 33</sup> Although there are systems in place to control incoming animals, we are concerned that diseases from the legal and illegal wildlife trade go largely unnoticed. Experts suggest most countries do not have a government agency that comprehensively screens wildlife imports for pathogens<sup>34 35</sup> We believe that inspectors at the borders are doing the best they can with the resources and mandates they have, but we are not convinced this is sufficient when dealing with diseases that can potentially threaten our health, environment and economy.

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<sup>24</sup> Jones, K.E., N.G. Pate, M.A. Levy, A. Storeygard, D. Balk, J.L. Gittleman, and P. Daszak. 2008. Global trends in emerging infectious diseases. *Nature* 451:990–994; Available at: <https://doi.org/10.1038/nature06536>

<sup>25</sup> World Health Organization. "Neglected zoonotic diseases"

[https://www.who.int/neglected\\_diseases/diseases/zoonoses/en/](https://www.who.int/neglected_diseases/diseases/zoonoses/en/)

<sup>26</sup> Vorou, R M et al. "Emerging zoonoses and vector-borne infections affecting humans in Europe." *Epidemiology and Infection* vol. 135,8 (2007): 1231-47. doi:10.1017/S0950268807008527

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2870710/>

<sup>27</sup> Field, H.E. 2008. Investigating Infectious Disease Emergence from Wildlife – A Transdisciplinary Approach. *International Journal of Infectious Diseases*. Vol 12, Supplement 1, E139. [https://www.ijidonline.com/article/S1201-9712\(08\)00478-5/fulltext](https://www.ijidonline.com/article/S1201-9712(08)00478-5/fulltext)

<sup>28</sup> World Animal Protection. Risky Business: The unregulated exotic pet trade in Canada. 2019.

[https://www.worldanimalprotection.ca/sites/default/files/media/ca\\_-\\_en\\_files/wap\\_exotic\\_pets\\_in\\_canada\\_report\\_final\\_forweb\\_oct\\_3\\_2019.pdf](https://www.worldanimalprotection.ca/sites/default/files/media/ca_-_en_files/wap_exotic_pets_in_canada_report_final_forweb_oct_3_2019.pdf)

<sup>29</sup> World Animal Protection. Cruel Cures. The industry behind bear bile production and how to end it. 2020.

[https://dkt6rvnu67rj.cloudfront.net/cdn/ff/G5gzb5CdhZVxyM9QRW4fW7tCv1esjoUr2wnIHGmt3s8/1585685333/public/media/Cruel\\_Cures\\_Bear\\_Bile\\_Report\\_2020\\_Final\\_Canada.pdf](https://dkt6rvnu67rj.cloudfront.net/cdn/ff/G5gzb5CdhZVxyM9QRW4fW7tCv1esjoUr2wnIHGmt3s8/1585685333/public/media/Cruel_Cures_Bear_Bile_Report_2020_Final_Canada.pdf)

<sup>30</sup> Anthony, L. The illegal wildlife trade in biodiversity apocalypse. *Canadian Geographic*, Dec 2 2017

<https://www.canadiangeographic.ca/article/illegal-wildlife-trade-biodiversity-apocalypse>

<sup>31</sup> World Animal Protection. 2020. Ball pythons: misunderstood and suffering in silence

<https://www.worldanimalprotection.ca/news/ball-pythons-misunderstood-and-suffering-in-silence>

<sup>32</sup> UNEP. CITES Trade Database. Retrieved from: <https://trade.cites.org>. Accessed June 2 2020

<sup>33</sup> Gerson, H., Cudmore, B., Mandrak, N. E., Coote, L. D., Farr, K., & Baillargeon, G. Monitoring international wildlife trade with coded species data. *Conservation Biology*, 22(1), 4-7.) 2008.

<sup>34</sup> Kolby, J. To prevent the next pandemic, it's the legal wildlife trade we should worry about. *National Geographic*.

May 7 2020. <https://www.nationalgeographic.com/animals/2020/05/to-prevent-next-pandemic-focus-on-legal-wildlife-trade/>

<sup>35</sup> Farnese, P. L. Searching for wildlife: a critique of Canada's regulatory response to emerging zoonotic diseases. *Queen's LJ*, 39, 471. 2013.

Furthermore, Canada seemingly only tracks a small fraction of wildlife species that are commercially and legally traded within and across our national and provincial borders. Whether imported or bred in Canada, captive wild animals are regulated by a patchwork of inadequate municipal, provincial and federal laws. For example, no province or territory adequately restricts the breeding, sale and possession of wild animals for pets to reduce zoonotic disease transmission, let alone from an animal welfare perspective. Some provinces like Ontario fall far behind the rest of the country by not even requiring a basic licence to keep an exotic wild animal, regardless of the species or the purpose of possession.<sup>36</sup>

We therefore recommend that the Government of Canada:

- a) Establish and adequately fund a comprehensive and transparent system for tracking and monitoring the import, export and sale of live wild animals and their parts and derivatives in Canada.
- b) Work with provinces and territories to mitigate inherent risks to public health, animal welfare and our natural environment by harmonizing and strengthening regulations to drastically reduce captive breeding, transport and the physical and online trade in wild animals.
- c) Strengthen enforcement of both the legal and illegal wildlife trade through improved coordination across agencies and federal/provincial/territorial jurisdictions and increased funding and resources.

Together our organizations represent more than half a million supporters across Canada. Canadians want to see their government do all that it can to prevent the next pandemic. The most effective pandemic prevention strategy is one that addresses the root of this current crisis, which is the exploitation and trade of wild animals and the destruction of their habitats. We look forward to working with your government on this critically important issue.

Yours sincerely,

**Colin Saravanamuttoo, Canadian Director, World Animal Protection**

World Animal Protection is a global animal welfare organization with offices in 14 countries including Canada and China. We have been working to protect animals from cruelty for over 55 years. We have General Consultative Status at the United Nations and regularly engage with governments, intergovernmental organizations, corporations, civil society and the general public on a wide range of animal welfare issues related to animals in communities, animals in disasters, animals in farming and animals in the wild.

**Amy Morris, Executive Director, Vancouver Humane Society**

The Vancouver Humane Society is a registered charity dedicated to the humane treatment of animals. Since 1984, we have been encouraging individuals, organizations, and governments to take responsibility for the welfare and rights of domestic animals and wildlife influenced by human activities.

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<sup>36</sup> Anthony, L. The illegal wildlife trade in biodiversity apocalypse. Canadian Geographic, Dec 2 2017  
<https://www.canadiangeographic.ca/article/illegal-wildlife-trade-biodiversity-apocalypse>

**Camille Labchuk, Executive Director, Animal Justice**

Animal Justice leads the legal fight for animals in Canada. Our lawyers work to pass strong new animal protection legislation, push for the prosecution of animal abusers, and fight for animals in court.

**Rob Laidlaw, Executive Director, Zoocheck Inc**

Zoocheck is a Canadian-based international wildlife protection charity established in 1984 to promote and protect the interests and well-being of wild animals. Zoocheck works with a broad range of collaborating partners around the world, endeavors to promote animal protection in specific situations and strives to bring about a new respect for all living things and the world in which they live. Zoocheck's activities include investigation and research, public education and awareness campaigns, capacity building initiatives, legislative actions, litigation and animal rescue.

**Marcie Moriarty, Chief Prevention and Enforcement Officer, BC Society for the Prevention of Cruelty to Animals.**

The BC SPCA is a registered charity established in 1895 to protect and care for BC's most vulnerable animals. We strive to create a new future for domestic, farm, and wild animals through education, advocacy, research, enhanced animal protection, and ensuring vulnerable animals receive the care they need.

**Barbara Cartwright, CEO, Humane Canada**

Humane Canada (previously known as the Canadian Federation of Humane Societies) is Canada's federation of SPCAs and humane societies. We drive positive, progressive change to end animal cruelty, improve animal protection and promote the humane treatment of all animals. As the convener and representative of the largest animal welfare community in Canada, we advance the welfare of animals with a strong national voice, promoting animal welfare interests and concerns to government, policymakers, industry and the public.

**Ericka Ceballos, CEO and Founder, CATCA Environmental and Wildlife Society and International Aid For Animals Foundation**

CATCA Environmental and Wildlife Society is an NGO with over 32 years of experience, working in animal conservation at an international level. Since 12 years ago, we have been formally investigating and researching the illegal e-commerce of protected wildlife worldwide. CATCA EWS often engage with governments and enforcement authorities and mostly work on CITES issues. All of our e-commerce reports are at the INTERPOL database.

International Aid for Animals Foundation is a new animal welfare/conservation NGO, created to help already established animal organizations in developing countries, such as confiscated wildlife sanctuaries, volunteer veterinarians, so on. IAFAF currently has projects in Bolivia, Mexico, Peru and Kenya.

**Liz White, Executive Director, Animal Alliance of Canada**

Animal Alliance of Canada's mandate is to protect all animals and the environment through politics, legislative advocacy, education and rescue.

**Fran Duthie, Co-Founder & President, Elephanatics**

Elephanatics is a Vancouver-based, science-driven non-profit to help both African and Asian elephants. Our goal is to assist global elephant conservation efforts by educating people about issues of ivory poaching, habitat loss, and the continued exploitation of elephants by humans.

We advocate for elephants with the government; teach in classrooms; hold fundraising events; and donate funds to on-the-ground elephant organisations and conservation partners in Africa and Asia.

**Janine Cavin, Global March For Elephants and Rhinos – Toronto**

GMFER is dedicated to raising awareness about the poaching crisis of African elephants and working with government officials to ban the domestic trade of African elephant ivory, and to make the import of wildlife, including hunting trophies, illegal.

**Annelise Sorg, President, No Whales in Captivity and Secret Bay Project Society**

**Monique Charron, Executive Director, Veterinarians without Borders / Vétérinaires sans frontières – Canada.**

VWB/VSF is an international organization with a mission to work for, and with, communities in need to foster the health of animals, people and the environments that sustain us. With a One Health approach VWB/VSF has developed strategic expertise in livestock production and animal healthcare provision through its community-based animal healthcare model which is particularly relevant in developing countries where livestock is socially, nutritionally, and economically important. Besides implementing ongoing development initiatives in the Global South, VWB/VSF also supports remote communities in Canada's three northern territories that have little or no access to veterinary services. In those communities, animals tend to live shorter lives, dying from causes that are either treatable or preventable. There is also a very real health threat to people. In some communities, the inability to control dog populations puts humans, particularly children, at risk as unvaccinated dogs can transfer diseases, including rabies.

**Chris Genovali, Executive Director, Raincoast Conservation Foundation**

Raincoast is a team of conservationists and scientists empowered by our research to protect the lands, waters and wildlife of coastal British Columbia.

**Angela Grimes, CEO, Born Free USA**

Born Free USA works to ensure that all wild animals, whether living in captivity or in the wild, are treated with compassion and respect and are able to live their lives according to their needs. We oppose the exploitation of wild animals in captivity and campaign to keep them where they belong – in the wild. Its Primate Sanctuary is the largest in the United States and provides a permanent home for more than 450 primates rehomed from laboratories or rescued from zoos and private ownership. Born Free USA primarily works in the United States, Canada, and West and Central Africa though its reach spans the globe. We are pleased to have an office outside of Toronto and more than 10,000 Canadians in our ranks of supporters.

**Andria Teather, CEO, Jane Goodall Institute of Canada**

The mission of the Jane Goodall Institute is to understand and protect chimpanzees other apes and their habitats, and to work toward creating an informed and compassionate multitude who will help to create a better world for people, other animals and our shared environment.

## **The following international organizations endorse this letter**

### **Will Travers, President, Species Survival Network**

The Species Survival Network (SSN), founded in 1992, is an international coalition of over eighty non-governmental organizations (NGOs) committed to the promotion, enhancement, and strict enforcement of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). Through scientific and legal research, education and advocacy, the SSN is working to prevent over-exploitation of animals and plants due to international trade.

### **Greg Tully, Pan African Sanctuary Alliance (PASA) on behalf of its member organizations in 13 countries**

The Pan African Sanctuary Alliance (PASA), the largest association of wildlife centers in Africa, includes 23 organizations in 13 African countries. PASA's members are securing a future for Africa's primates by working to stop the illegal trade in wildlife, rescuing, rehabilitating, and reintroducing orphans of the trade, protecting wild primate populations and their habitats, and educating and empowering communities. PASA strengthens its member organizations and is building a global movement to save Africa's great apes and monkeys. The combination of PASA's worldwide network and its members' local expertise uniquely positions the Alliance to make a sustained impact on a large scale.

### **Marie Levine, Executive Director, Shark Research Institute**

A multi-disciplinary nonprofit scientific research organization, we were the first shark conservation organization in the U.S. Founded in 1991 at Princeton, New Jersey, USA, today we have field offices in Florida, Pennsylvania and Texas, and internationally in Australia, Canada, Ecuador, Honduras, India, Mexico, Mozambique, Seychelles, South Africa and UK.

### **Scientific experts**

J. Scott Weese, DVM DVSc DipACVIM, Director of the Centre for Public Health and Zoonoses, Professor at the Ontario Veterinary College, University of Guelph and a Zoonotic Disease/Public health Microbiologist at the University of Guelph's Centre for Public Health and Zoonoses. Chief of Infection Control at the Ontario Veterinary College Teaching Hospital.

Jason Stull, VMD, MPVM, PhD, DipACVPM, Assistant Professor at The Atlantic Veterinary College and expert in infectious disease control and prevention at the human-animal interface.

Kai Chan, Professor of Applied Ecology and Conservation Science, Institute for Resources, Environment and Sustainability, University of British Columbia.

Jan Hajek MD, FRCPC, DTMH, Infectious Diseases Specialist and Clinical Assistant Professor of Medicine at the University of British Columbia; previous work with the WHO and MSF in responding to the international outbreak of zoonotic disease.

Katie M. Clow, DVM, PhD, Assistant Professor (One Health) at the Ontario Veterinary College, University of Guelph; expertise in emerging vector-borne zoonoses, disease ecology and epidemiology.

David Waltner-Toews, DVM, PhD. Veterinary epidemiologist, specialist in zoonotic diseases, University Professor Emeritus, University of Guelph, founding president, Veterinarians without Borders-Canada. Author of more than 20 books, most recently "On Pandemics: Deadly Diseases from Bubonic Plague to Coronavirus" (ECW, 2020).



## Prominent Canadians

Jann Arden, C.M.  
Buffy Sainte-Marie, C.C.  
Candice Batista  
Liisa Winkler  
Karman Wong

CC Hon. Chrystia Freeland, P.C., M.P., Deputy Prime Minister and Minister of Intergovernmental Affairs  
Hon. Jonathan Wilkinson, P.C., M.P., Minister of Environment and Climate Change  
Hon. Francois-Philippe Champagne, P.C., M.P., Minister of Foreign Affairs  
Hon. Patty Hajdu, P.C., M.P., Minister of Health  
Hon. Marie-Claude Bibeau, P.C., M.P., Minister of Agriculture and Agri-Food  
Hon. Mary Ng, P.C., M.P., Minister of Small Business Export Promotion and International Trade  
Hon. Dominic LeBlanc, P.C., M.P., President of the Queen's Privy Council  
Hon. Bernadette Jordan, P.C., M.P., Minister of Fisheries and Oceans  
Hon. Bill Blair, P.C., M.P., Minister of Public Safety and Emergency Preparedness

Christiane Fox, Deputy Minister of Intergovernmental Affairs  
Christine Hogan, Deputy Minister of Environment and Climate Change Canada  
Marta Morgan, Deputy Minister of Foreign Affairs  
Stephen Lucas, Deputy Minister of Health Canada  
Kristina Namiesniowski, President of the Public Health Agency of Canada  
Chris Forbes, Deputy Minister of Agriculture and Agri-Food Canada  
John Hannaford, Deputy Minister of International Trade  
Ian McCowan, Deputy Secretary to the Cabinet, Privy Council Office  
Timothy Sargent, Deputy Minister of Fisheries and Oceans Canada  
Rob Stewart, Deputy Minister of Public Safety and Emergency Preparedness