



Protecting our world from future pandemics

Why the G20 must end the
global wildlife trade

Contents

World Animal Protection is registered with the Charity Commission as a charity and with Companies House as a company limited by guarantee. World Animal Protection is governed by its Articles of Association.

Charity registration number
1081849

Company registration number
4029540

Registered office 222 Gray's Inn
Road, London WC1X 8HB

Protecting our world from future pandemics – why the G20 must end the global wildlife trade

Executive summary	3
Why trade is an issue – making the links to conservation and welfare	5
Why trade is an issue – public health and legality	6
Problems with the current system	7
Legislative examples governing wildlife trade in G20 countries	8
Legislation governing wild animal extraction from their natural habitat	9
Legislation governing commercial management of captive wild animals	10
Legislation governing wildlife trade mechanisms and their enforcement	12
Why a trade ban commitment is needed	14
Specific calls to action for the G20	15
References	16

Cover image: A seized pangolin at the Natural Resources Conservation Center Riau, Pekanbaru, Indonesia, in 2017. Credit: Arief Budi Kusuma / shutterstock.com

Executive summary

Millions of dead and live wild animals annually are traded through the legal and illegal wildlife trade as products, pets or entertainments. This trade, which inflicts grave cruelty on animals and threatens the biodiversity of our planet, is laying firm foundations for future pandemics. It has been labelled a 'perfect microbial storm' for pathogenic disease.^{1, 2}

SARS, Ebola and the highly likely link between wildlife and COVID-19 have sharply highlighted the long-lasting global turmoil, deaths and suffering zoonotic diseases can cause. Over 75% of all new and emerging infectious diseases of the past few decades have come from animals.³ And approximately 70% of zoonotic emerging infectious diseases are thought to originate from wildlife.⁴

Transmission between people and animals can occur in situations where wild animals are abused and commercially exploited. And our global failing system of wildlife trade regulation and inadequate domestic legislation is largely responsible for this unacceptable risk to human health. This broken and convoluted system ineffectively governs the legal and illegal commercial trade in wild animals across the G20 and globally.

Because of its power, breadth and influence – representing more than 80% of the world's GDP and 75% of global trade – the G20 is key to overturning this system and protecting human and animal health.

Some crucial progress has already been made.

In an important first step addressing the pandemic-wildlife link, the G20 Agriculture and Water Ministers issued a Communiqué, in November 2020, which included a call to the One Health Tripartite. The Tripartite is a collaboration of the World Health

Organisation (WHO), the World Organization for Animal Health (OIE), and the Food and Agriculture Organization of the United Nations (FAO). Ministers tasked it to 'develop a list of wildlife species and conditions under which they could present significant risks of transmitting zoonoses, and to issue guidelines towards mitigating these risks.'⁵

But this does not go far enough. Mitigation measures such as biosecurity protocols, risk assessments, border controls, and surveillance can help to lower the risk of zoonotic disease introduction. However, there are still challenges due to several factors, including the wide variety of wild animal species involved and the complex natural history of zoonotic pathogens.

WHO, OIE and United Nations Environment Programme (UNEP) have called on countries to suspend the sale of live caught wild mammals in food markets.⁶ The Italian parliament has adopted legislation, which delegates that the government should restrict animal trade, including a specific ban on the import and trade of exotic and wild animals, to reduce the risk of zoonoses.⁷ The South African government has announced its intention to ban commercial captive lion breeding, which will bring an end to canned lion hunting, lion petting, lion walking, and the use of farmed lion body parts and derivatives for traditional medicine.^{8, 9} These 2021 announcements are examples of actions to mitigate the risk of zoonotic disease transmission.

However, more significant and comprehensive G20 action will effectively mitigate these risks, and prevent future pandemics linked with the emergence and transmission of zoonotic diseases. A permanent end to the global trade in wild animals and wild animal products is the logical and effective way to do this.

International wildlife trade agreements and national legislation govern the legal wildlife trade. They also seek to prevent the illegal commercial trade in wild animals and wild animal parts across the G20 and globally. But the current system doesn't work.

This World Animal Protection report highlights examples of legislation and policies within G20 countries. It reveals where ineffective legislation perpetuates animal cruelty, enables zoonotic disease transmission, damages environments and biodiversity, affects climate change, and causes economic devastation.

Importantly, it also shows how the laws of one country can have a detrimental impact on the lives of wild animals in another. Our information is based on publicly available legislation and policy, and current animal welfare, climate and conservation science.

We outline observations about the current legislation in G20 countries regarding wildlife trade, after reviewing relevant laws and policies of some G20 countries. We provide positive and negative examples across the following three broad categories of wildlife exploitation.

1. Extraction from the wild
2. Commercial management of captive wild animals
3. Trade mechanisms and enforcement

This report is an initial review of a complex area and a vital tool for the G20. It will help members identify current international agreements supporting a system of unnecessary cruelty that puts their citizens, natural environment and economies at risk. The following definitions relating to wildlife are used in this report.

Wildlife/wild animal: These terms refer solely to animal species. Irrespective of whether in the wild or in captivity, wild animals are undomesticated species that have not undergone genetic changes in either appearance or behaviour that enables them to adapt readily to 'non-wild' captive conditions. Although some wild animals can be 'tamed' they cannot be considered domesticated animals.

Wildlife trade: Our call for a global wildlife trade ban refers to wild animals bred in captivity or captured from the wild who are involved in non-essential global commercial trade. This might be,

for example, for use as luxury goods, exotic pets, traditional medicine and entertainment. We do not include plants, fisheries that supply the food industry, wild animals hunted by communities for subsistence, or other wildlife trade deemed essential for human survival.

Further in-depth analysis of country-specific legislation is needed to identify further measures G20 countries need to take to effectively address the risks associated with the wildlife trade and improve pandemic prevention.

Committing to a ban

The G20 must make a collective commitment to permanently end the global and inter-country trade in wild animals and wild animal products. Their commitment should recognise the trade's devastating impact on animal welfare, biodiversity and ecosystems, economies, human health, wellbeing and security. The G20 should commit to the refinement and development of the One Health, One Welfare approach in wildlife health and welfare.^{10,11}

Global institutions and bodies should adopt mechanisms to develop, facilitate, implement, and monitor this ban.

Countries should commit the necessary resources to effectively facilitate and enforce both international and domestic bans on the trade in wildlife.

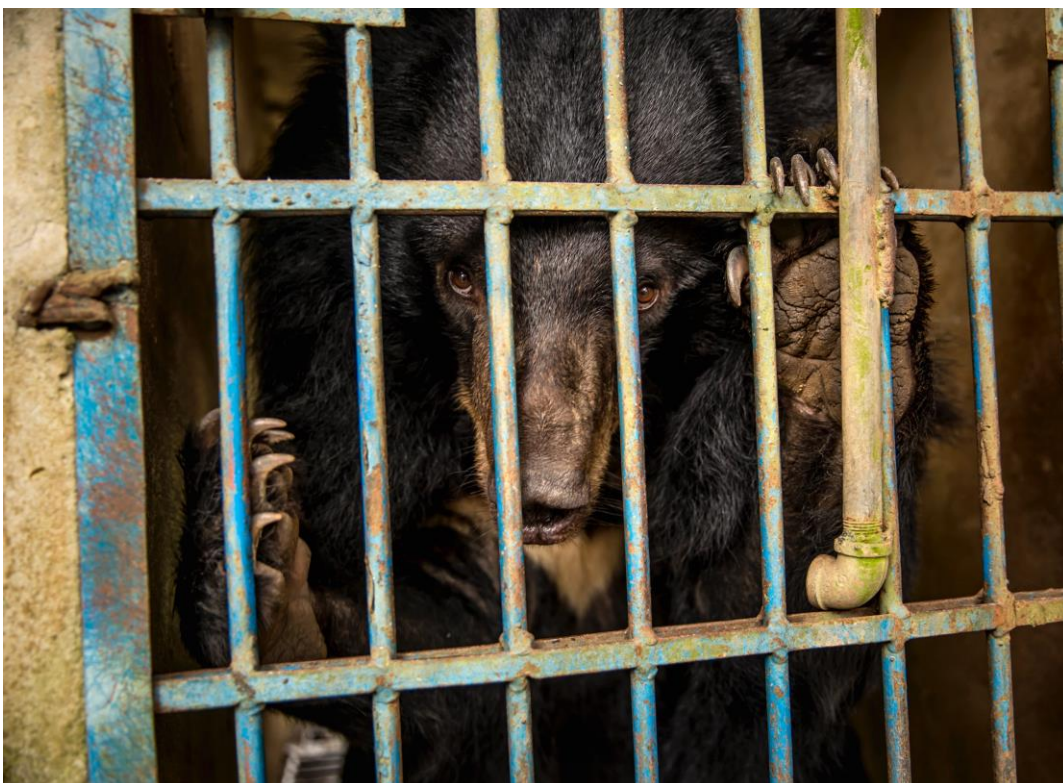


Image: A bear at a farm near Bien Hoa in Dong Nai Province looks through the bars in their cage during a bear microchipping session near Bien Hoa in Dong Nai Province. Credit: World Animal Protection / Tim Gerard Barker

Why trade is an issue – making the links to conservation and welfare

The global wildlife trade affects more than 18% of all terrestrial vertebrate species on earth.¹² They are captured, bred and sold for use as exotic pets, luxury goods, entertainment, food and traditional medicine. This trade is now so substantial – involving millions of animals annually – that it is one of the most prominent drivers of vertebrate extinction globally.¹³

The most recent global assessment of biodiversity and ecosystems identifies the trade as among five key drivers of harmful ecosystem change, and the second most important driver of change in nature.¹⁴

Entire ecosystems are clearly at risk from this multi-billion-dollar business. It facilitates the introduction of invasive species to new regions, where they can compete with (or outcompete) native species for resources and alter ecosystems.¹⁵ For example, the red lionfish in the Caribbean Sea and the Burmese python in south Florida have negatively affected native species and ecosystems.¹⁶ Diseases associated with invasive species contribute to biodiversity loss as they infect other species.^{17, 18} For example, frogs and the chytrid fungus linked to the exotic pet trade has had a devastating impact on amphibian biodiversity.¹⁹

Any international community confidence in the overall sustainability of the global commercial wildlife trade is misplaced. This is because the trade and the sustainability argument are underpinned by a systemic lack of scientific data on the status of wild populations, ineffective management, and monitoring.

Furthermore, wild species can be genetically ‘polluted’ and risk being lost to the world forever through ineffectively managed, ‘sustainable’ captive breeding and trading processes.²⁰ So-called sustainable solutions such as commercial captive breeding and ranching of wild animals, may only be viable for a limited number of wild animal species fitting specific criteria.^{14, 21} They may maintain or even increase demand for products that continue to pose a risk for wild populations, or lead to additional poaching pressure to supplement wild animal stock on farms.^{15, 22, 23}

Wildlife trade also has a severe impact on animal welfare in terms of numbers of animals and their scale of suffering. And this suffering – physical and mental – happens at each stage of the trade chain whether legal or illegal. It is inherent throughout

capture, captive breeding, transport, slaughter, and private ownership.^{24, 25}

Mammals, birds, amphibians, reptiles, fish, and many invertebrates are sentient. They can experience emotions, including pain and pleasure.²⁶ Too often, there is a failure to acknowledge this fact,^{27, 28, 29, 30} and so animal pain, stress, and suffering are ignored.³¹ This lack of acknowledgement severely exacerbates public health risks.

Wild animals often experience compromised immune systems when subjected to debilitating captive conditions.³² And when combined with other situations that facilitate cross-species transmission such as close mixing of different species during transport or trade, the stress on the animals’ immune systems increases and in turn the risk of disease.³³ In 2003, a shipment of rodents from Ghana to the USA resulted in an outbreak of monkeypox affecting 72 people. Domestic and international restrictions were implemented to control disease transmission.³⁴

No overarching global body regulates or addresses the impacts of the global supply of wildlife on animal welfare^{35, 36} and the links to zoonotic diseases. Although several international entities and corporations could play an influential role, responsibilities are not always clear.^{37, 38} The result is a perilous situation where wild

Image: Young girl with pet python at Repticon pet expo, Memphis. Credit: World Animal Protection / Aaron Gekoski



Why trade is an issue – public health and legality

The global wildlife trade is a clear threat to public health. Around 70% of zoonotic emerging infectious diseases are thought to originate from wildlife.³⁹ In recent decades the trade has been linked to serious disease outbreaks including SARS, Ebola and COVID-19.

The current pandemic is responsible for more than 3.3 million deaths worldwide. And zoonotic diseases can spread to people at all stages of the supply chain. Animals are more susceptible to infection when kept in a poor environment, on a poor diet, or under stress.⁴⁰

Trading wild animals allows pathogens to move across global boundaries.⁴¹ If nothing is done, scientists warn that the stream of new emerging zoonotic diseases that could affect public health is likely to continue at an ever-increasing rate. The trade of wild animals has been labelled a 'perfect microbial storm' for pathogenic disease.⁴²

Alarmingly there is often little or no disease screening of wild animal imports⁴³ yet there are more than 320,000 mammalian viruses – including coronaviruses – awaiting discovery and with the potential to infect people.⁴⁴ This highlights the immense threat of emerging infectious diseases of pandemic potential.⁴⁵

The international wildlife trade clearly brings infectious diseases to a global scale. It amplifies potential consequences of outbreaks, presenting a wider threat to more people (in addition to ecosystems and economies) than local disease occurrences.⁴⁶ There are likely to be hundreds of undiscovered mammalian coronaviruses worldwide with the potential to infect human beings.⁴⁷ Unless wildlife's commodification is addressed and the scale of the commercial trade shifts significantly, there will be greater opportunities for pathogens to proliferate across the globe.⁴⁸

Threats to public health exist whether the trade is legal or illegal. And most bodies with regulatory oversight of the international wildlife trade (eg CITES – The Convention on International Trade in Endangered Species) are not focused on preventing zoonotic disease introduction. They also have no authority for biosecurity regulation.⁴⁹ This is despite the trade's recognised role as a major transmission pathway for pathogenic organisms.

From those who harvest wildlife to eventual consumers, animals in the global wildlife trade have contact with many people in the supply chain. These include workers involved in storage, handling, transport, manufacturing, marketing, and exporting, both domestically and internationally. Throughout the process, there is ample opportunity for infectious disease transmission.⁵⁰

The CITES trade database hosts a large number of international wildlife trade records, but species traded under CITES guidance represent only a small fraction of all species traded internationally.^{51, 52} The trade involves millions more wild animals annually – both legal and illegal.

It's important to recognise that legality and regulation, by bodies like CITES doesn't guarantee protection of animal and human health and welfare. Regulations are also not necessarily always linked with sustainability and the protection of natural environments.⁵³

And when considering calls to merely improve wildlife trade regulation, it is also critical to consider that legal and illegal trade are not always easily distinguishable. A close complex relationship exists between these markets.⁵⁴

Wildlife trade can be legal, illegal, or a combination of both, depending on how a species is classified as it moves throughout the market chain.⁵⁵ Legal wildlife trade can also be difficult to monitor due to unintentional mistakes, such as inadequate record keeping,^{56, 57} and mislabelling of species.⁵⁸

This creates opportunity for crossover and intentional fraudulent activity, such as when legal operations, including wildlife farms, act as covers for laundering poached wildlife,⁵⁹ such as the Tokay gecko trade, which is significantly impacting the wild population.⁶⁰ Similarly, criminal networks are known to seek influence over legally operating wildlife industries.⁶¹ Previous attempts to sustainably manage some aspects of legal trade have failed due to criminal involvement.⁶²



Image: A Lion in captivity in an undisclosed location in Africa. The lion was not made to interact with visitors, but paced up and down the fence line.
Credit: World Animal Protection

Problems with the current system

Legislation surrounding the legal trade in wild animals fails to properly conserve biodiversity, protect animal welfare or our planet's biosecurity. There are many loopholes in the legislative patchwork relating to wildlife that crisscross local, national and international boundaries. Furthermore, strategies to reduce demand for wildlife products are not sufficiently backed by governments.

Consequently, wild animals suffer from enforcement actions or lack of them and consumer demand that drives prohibited trades onto (unprotected) substitute species. In addition, many countries are unable to properly deal with and care for confiscated wildlife who may be smuggled across their borders.⁶³

Wildlife farming is often touted as a solution to meet demand and is legal for some species in some countries. However, meeting demand for wildlife products through legal wildlife farming has clear animal welfare consequences. It also means animals poached from the wild can be sold – effectively 'laundered' – onto farms.

And even responsible, non-consumptive mechanisms where wildlife can 'pay' for their own existence – eg ethically-managed wildlife-friendly tourism, require enforcement of the regulatory patchwork usually controlled by several different bodies.

Such complexity, exacerbated by limited resources and the pressure of commercial interests, means too often regulations are rarely enforced. Because there is no one international regulatory body responsible, separate authorities shirk responsibility regarding impacts on sustainability, legality, and welfare standards.⁶⁴

The wildlife trade also causes environmental injustice, burdening the very same communities who rely on wildlife for livelihoods.⁶⁵ Indigenous and local communities already face increased threats to the health and livelihoods from commercial resource extraction, manufacturing, mining, and transport and energy infrastructure.⁶⁶

Data show some communities perceive harvesting wildlife for export as a sporadic, unreliable, and risky income source.⁶⁷ Infectious disease case reports show wildlife farm workers are at a heightened risk of zoonotic disease transmission.⁶⁸ And in some cases, wages are so low they manage only to keep families above the extreme poverty line.⁶⁹

The global commercial wildlife trade clearly has a devastating impact on animal welfare, biodiversity and ecosystems, and on our economies, health, wellbeing and security. The COVID-19 outbreak and on-going biodiversity crisis shine a harsh spotlight on the need for urgent action to help protect wildlife and prevent other zoonotic disease outbreaks of wildlife origin in future.

The G20 countries' inadequate legislation and policies enable and encourage the commercial wildlife trade. Consequently, these states are inadvertently complicit in the devastating harm caused by the commercial wildlife trade to our economies, our health, the world's biodiversity and the wellbeing of its animals.

With a few exceptions the G20 countries' current legislation govern and often allow:

- the killing and taking of wildlife from the wild for the trade as trophies, luxury goods, exotic meat, exotic pets, entertainment, or for medicinal ingredients
- the breeding and keeping of live wild animals in poor captive conditions in wildlife 'farms', public exhibits for entertainment, or private pet ownership
- the international trade in wild animals through outdated trade mechanisms, such as CITES, that have no bearing on the vast majority of species.

Legislative examples governing wildlife trade in G20 countries

The following sections outline observations about the current legislation in G20 countries regarding wildlife trade. Positive and negative examples across three broad categories of wildlife exploitation are given. These are:

1. Extraction from the wild
2. Commercial management of captive wild animals
3. Trade mechanisms and enforcement

These examples highlight the need for a full and systematic analysis across G20 countries to inform steps towards phasing out the commercial trade in wild animals.



Image: Dead pangolins being held at a bushmeat market in Kumasi, Ghana.
Credit: World Animal Protection

Legislation governing wild animal extraction from their natural habitat

The management, protection and exploitation of wild animals in their natural habitats are often included in laws relating to the wider environment. Examples include Argentina's Wildlife Conservation Law 22421 of 1981⁷⁰ or Germany's Federal Nature Conservation Act (BNatSchG) of 2009.⁷¹

Specific Acts and regulations regarding particular species often sit alongside these overarching laws. Examples include the UK's Protection of Badgers Act 1992⁷² or Deer Act 1991.⁷³

G20 member India provides a positive example of overarching wildlife protection legislation through its Wildlife Protection Act 1972.⁷⁴ It states animals should only be taken from the wild for legitimate conservation programmes as a last resort, or for the provision of veterinary care and evacuation, or rescue due to a disaster or human-animal conflict.

In 2008, Brazil declared its entire coast a sanctuary for whales and dolphins⁷⁵ (Federal Decree No. 6,698/2008).⁷⁶ It introduced severe restrictions prohibiting the import and export of live specimens of aquatic species caught in the wild (Federal Decree No. 6,514/2008)⁷⁷ and created a specific coordinating body called Foreign Trade Coordination (IBAMA/DBFlo). This works on the management of international trade in plants and animals.⁷⁸

An example of a G20 country with a lower level of legal protection for wild animals in their natural habitat is Indonesia. Its Law 18 of 2009 has some animal welfare provisions, but under Article 28 the removal and captive breeding of wild-caught animals for livestock purposes is allowed, as long as this is done in accordance with wildlife preservation laws. These can then be considered domestic animals.^{79, 80, 81}

Citizens of all G20 countries are permitted to participate in commercial hunting of some wildlife, both in their own countries (except India) and abroad. In India, all sport / commercial hunting is prohibited under the Wildlife Protection Act 1972. The only exceptions are animals designated as 'pest' and problem animals in human-animal conflict situations.

In comparison, the USA has no federal legislation addressing the treatment of individual wild animals during hunting, trapping and fishing (aside from the Airborne Hunting Act 1971).⁸² There is also no federal legislation which includes humane hunting provisions. At the state level, there is some protection of the welfare of individual animals during hunting activities, but this is limited and varies between states.

In Australia, hunting wild kangaroo is commonplace, and all national and international commercial trade in kangaroo meat involves wild-sourced animals. Australia's government has produced national codes of practice for the 'humane shooting' of kangaroos. However, it is reported that hundreds of thousands of individuals are not cleanly shot (in the case of adults), or are killed inhumanely (in the case of juveniles).⁸³

The UK establishes clear parameters regarding how and when animals may be removed from the wild through the Wildlife and Countryside Act 1981.⁸⁴ However, for many species (both native and non-native), there are exceptions to prohibitions, that allow their removal from the wild.

This Act also bans the introduction of wild species not native to Great Britain. Additionally, the Hunting Act 2004 solely bans hunting wild mammals with dogs and hare coursing in certain circumstances. However, it expressly permits the killing of wildlife by dogs within certain other parameters.

Dogs are allowed to 'flush out' prey and for the prey to then be shot by rifle. Rats and rabbits are excluded from the remit of the legislation, and a hare may be hunted by any number of dogs if they have been shot.⁸⁵ Hunts, often use trail hunting to carry on the tradition of hunting with dogs upon horseback.⁸⁶

The Agreement on International Humane Trapping Standards (between the European Commission, Russia, Canada and the United States, Council Decisions 98/142/EC and 98/487/EC)⁸⁷ attempts to ensure humane trapping methods for all skins imported into the European Union. However, not all furbearers are included notably American mink, *Neovison vison*, hundreds of thousands of whom are trapped annually.^{88, 89}



Image: In 2020, World Animal Protection undertook a study into the welfare of Ball pythons traded in the EU and North America. Credit: World Animal Protection

Legislation governing commercial management of captive wild animals

The commercial captive breeding or farming of wild animal species is prevalent across G20 countries. For example, in Brazil, The Fauna Protection Law No. 5.197/67, under Article 6, formalises that the commercial breeding of certain wild species will be encouraged by the government.

Brazil has a huge commercial breeding market. It keeps more than 430,000 wild animals in commercial breeding facilities, belonging to 553 native and exotic species.⁹⁰ Conversely, the Indian Wildlife Protection Act 1972 explicitly prohibits the farming of wildlife.

Legislation governing animal welfare on wildlife farms varies. For example, in Canada there is no federal legislation addressing the welfare of wildlife kept on farms for fur or meat.

The Canadian National Farm Animal Care Council, with various mammal breeding associations^{91, 92} published a Code of Practice for the Care and the Handling of fur farm mammals. However, these codes only contain voluntary minimum requirements for housing, security, feed, water, health, husbandry, euthanasia and transport. Several provinces have incorporated these requirements in their provincial legislation, but it is not consistent across the country.

In the UK, well established regulations for domesticated farmed livestock apply to wild animal species in a farming context. But there are limited species-specific guidance and regulations regarding farming wild animal species. This may result in unintended poor welfare for the farmed animals. Furthermore, species-specific animal welfare standards can be inconsistent across species. For example, the UK has guidance regarding the farming of deer but not ostrich.^{93, 94}

In China and South Africa, recent changes have been made to the laws regarding farming of wild animals.

In early 2020, China's top legislative body imposed a ban on the consumption of wildlife as food.⁹⁵ Soon after the National People's Congress announced an amendment to the Law on the Protection of Wildlife 1989 and other supplementary legislation, to phase out the industry of farming wild animals as food.⁹⁶

There are further efforts to amend the Law on the Protection of Wildlife 1989. However, the use of wild animals for other purposes, such as the tourism industry, for pets, for traditional medicine purposes is still permitted.

The South African government adopted a short amendment to the Animal Improvement Act 1998 (Act 62 of 1998) in 2019.⁹⁷ This added 32 species of wild animals to the list of species which can be farmed as 'livestock'. The list now includes Cape buffalo, lions, giraffes, cheetahs, rhinos and zebra.⁹⁸

The updated Animal Improvement Act now authorises "the breeding, identification, and utilisation of genetically superior animals in order to improve the production and performance of animals". The government has also added approximately 100 wild animal species to the Meat Safety Act 2000, acknowledging that large numbers of wild animals are being bred on farms.^{99, 100}

Exotic pets

Legislation regarding the private keeping of exotic pets across G20 countries is varied and generally limited. In the EU, there are very few species that have an outright ban on private ownership.¹⁰¹ In Canada, there is a patchwork of federal, provincial, and municipal laws and regulations governing the trade and ownership of wild animals.¹⁰² While laws and regulations do exist, they vary greatly across the country and leave many gaps and loopholes.

Definitions of common terms, such as 'exotic animal', may differ from area to area. Some kinds of animals may be prohibited in one jurisdiction but allowed in another. Few jurisdictions have robust criteria or processes for adding or removing species from their lists.

Similarly, Australian legislation varies by state. All states allow the keeping of certain native wild animals as pets, mostly on a permit

basis. However, 41 native birds can be kept without a permit or licence in New South Wales.¹⁰³ In South Australia, certain animals who are not protected or classified as 'basic wildlife' may not need permits if a person only owns one individual animal.¹⁰⁴

Some G20 countries such as Japan have relatively little legislation regarding exotic pets. In other cases, legislation appears to be bypassed. For example, a 2016 statement from the Saudi Wildlife Authority says it is illegal to import any exotic animal for the purpose of pet keeping. However, private ownership of such animals in Saudi Arabia has been reported in the media.¹⁰⁵ This is especially concerning regarding the presence of CITES Appendix I listed species, such as cheetahs, which are not permitted to be internationally traded.¹⁰⁶

Zoos and circuses

All G20 countries except Saudi Arabia have specific legislation regarding zoos. In Japan, Law No. 105 of 1973 contains a legal framework for animal welfare. This aims to prevent cruelty and ensure suitable treatment and protection of animals.¹⁰⁷

In some cases, as in EU countries, there are non-legally binding 'best-practice' guides for common species found in zoos. Italy requires all zoos to implement conservation measures. The UK requires every zoo to provide conservation education to the visiting public. In 2009, the Central Zoo Authority of India banned the use of elephants in zoos and later also in circuses.¹⁰⁸

Four G20 countries – Mexico, the UK, India and Italy – have issued national bans prohibiting the use of wild animals in circuses. Brazil prohibits the use of wild animals in circuses or shows in some states and municipalities, but federal legislation is necessary to apply the ban nationwide.

Captive cetaceans

Prohibitions on the keeping of cetaceans for entertainment purposes are even more limited. Out of all G20 members, Canada has banned the keeping of all cetaceans in captivity. India prohibits the keeping of dolphins and Brazil prohibits the use of marine mammals in entertainment, specifically in the form of circus shows or any artistic production.

In the UK, the last dolphinarium closed in 1992. Although keeping dolphins is not technically illegal in the UK, the standards of care required to legally do so are extremely

Legislation governing wildlife trade mechanisms and their enforcement

Most laws and agreements relating to the wildlife trade are intended to make the trade sustainable, humane and safe.¹⁰⁹ However, their number, complexity and local, national and international differences mean the reverse is too often the case.

For example, legislation relating to wildlife in England and Wales was subjected to a 2014 review by the UK's Law Commission. The Commission reported that 'the legal framework for wildlife management [in England and Wales] is overly complicated, frequently contradictory and unduly prescriptive'.

And when multiple regulatory bodies have jurisdiction in some way over animal welfare, there can be a lot of inconsistency in implementation and a lack of accountability. This is common across G20 countries.

For example, members of the UK government's cabinet have responsibility for issues that affect animal protection. But no

individual overall responsibility has been assigned by the government for coordinating the improvement of animal welfare across agencies and throughout the country. This differs from the way environmental issues are managed by the Department for Environment, Food and Rural Affairs (Defra). In the UK there is no one ministry or department responsible for animals as a whole.

In Canada, provinces and territories have the authority to regulate wildlife farming, but regulations vary greatly. This includes the definitions as to which species are included in wildlife farming. The same is true of South Africa and Australia. There are often substantial differences in the approach taken by different jurisdictions. These make it more difficult to ensure consistency of animal welfare for wild animals in captivity.¹¹⁰

However, in India things are more straightforward. The Animal Welfare Board of India (AWBI), established by the Prevention of Cruelty to Animals Act 1960, implements and enforces animal welfare legislation and public policy in India.

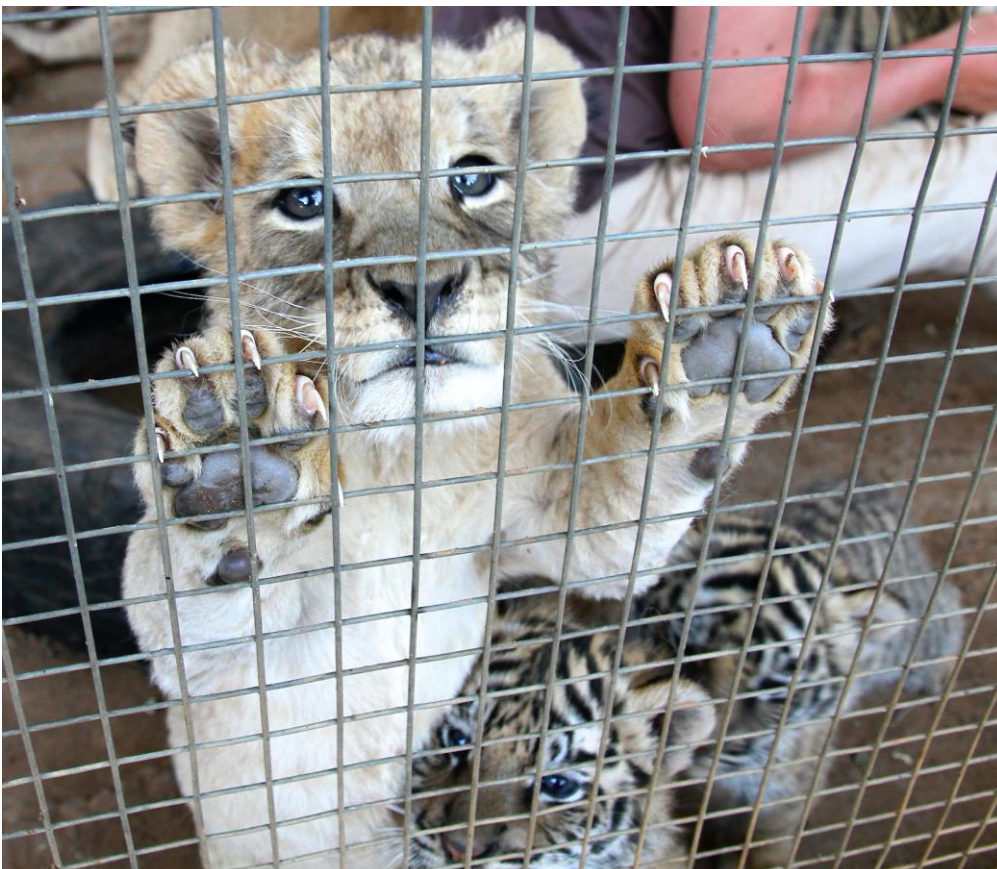


Image: A lion and tiger cub at an undisclosed venue in South Africa offering petting and interaction with big cats. Venues like this sometimes have industrial scale pens of larger, young lions and tigers mixed together. These are cubs who have grown too big for the visitor petting experiences. They are likely to become targets for canned hunting, with their bones then being used in traditional medicine. Credit: Pippa Hankinson / Blood Lions

Governing international trade

CITES is an agreement between countries that regulates the international trade of species of wildlife and wildlife products, including live animals, their parts or derivatives. It operates through a system of permits, quotas and bans. CITES became effective 1 July 1975, in response to an increasing global recognition of the need to regulate trade of rare or threatened species. Its purpose is to ensure that international trade of wild animals and plants does not threaten their survival.

All G20 members are Parties to CITES, but practices vary between countries. For example, in India CITES regulations are not directly included in any legislation. Consequently, non-indigenous species, such as the African grey parrot that are provided protections through CITES are not provided protection under Indian law.

In contrast, in Australia, the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) adopts a range of domestic measures that impose additional requirements to further restrict trade in CITES listed species.¹¹¹

There are increasing concerns that CITES is now outdated and insufficient to safeguard wildlife, people and our planet. It has no formal remit to deal with the health or disease impacts of traded wildlife or any disease issues with regards to animal welfare or public health.

Furthermore, it only lists approximately 5,950 species of animals. This is just a small fraction of the wild animal species traded each year. For example, more than 10,000 reptile species have been scientifically described. Yet only a mere 8% of these animals who include snakes, lizards and tortoises are covered by either CITES or the European Wildlife Trade Regulations.¹¹²

Most species advertised and shipped are not protected under CITES, but this does not mean that their trade is not a conservation concern now or in future. One of the reasons is that CITES uses a 'negative list' approach. This places the burden of proof on the conservationist to prove trade in a given species is unsustainable, rather than on the trader to prove that it is not.

Wild animal protection through CITES is also undermined by poor record keeping that is often inaccurate, incomplete and inconsistent. For example, reports often incorrectly list only the number of permits issued. They lack information regarding the source of the animal (eg captive-bred or wild-caught), use different volume measurements, and vary between exporter and importing countries. These kinds of errors hinder efforts to accurately monitor wildlife trade and impede policy decision making.

In addition to CITES, some G20 countries have national wildlife crime laws. For example, the USA's Lacey Act (most recently amended in 2008)¹¹³ regulates the import of any species protected by international or domestic law. Under the Lacey Act, the importer is responsible for making sure that imported wildlife products are legally harvested, processed and imported. Violation can result in strict penalties that could involve fines for civil penalties or incarceration for criminal penalties.

Some G20 countries, such as the UK and India, have dedicated wildlife crime units.^{114, 115} Internationally, INTERPOL, regional enforcement networks such as ASEAN Wildlife Enforcement Network (ASEAN-WEN), and NGOs including TRAFFIC and the Environmental Investigation Agency, track the illegal trade and help national agencies enforce wildlife laws.

Enforcement mechanisms, most commonly fines, or sentences of imprisonment, exist to encourage compliance with the law and act as a deterrent. For the G20 countries, enforcement mechanisms regarding wildlife are a requirement of their compliance with CITES regulations.

However, many enforcement mechanisms are ineffective because of insubstantial legislation. For example, penalties such as fines and jail sentences for illegal trade must be greater than the profits. But regulatory systems are failing, particularly because trade is typically allowed to continue unless proven harmful. This means resulting actions can come too late, if at all, to prevent negative impacts.¹¹⁶

Enforcement may also be difficult on a practical level. For example in the USA, approximately 9,400 facilities have been granted licences under the Animal Welfare Act 1966. There are so many that this makes inspections of all these facilities challenging.¹¹⁷

Why a trade ban commitment is needed

The global trade in wildlife requires urgent attention. The COVID-19 pandemic is a stark reminder of the need to mend our broken relationship with nature. This relationship has led to a tragic health, social and economic crisis for people and has put the environment, wildlife and welfare of animals at serious risk.

The G20 has already committed to tackle zoonotic diseases based on the One Health approach.¹¹⁸ This commitment must be implemented by comprehensively addressing the risks of zoonotic disease emergence and transmission, associated with the wildlife trade.

Current regulations to prohibit trade in certain species are inadequate. The enforcement of existing laws, regulations and international treaties is not good enough.¹¹⁹ Some endangered species are already protected by international and domestic laws which ban the trade in live animals, their parts and derivatives. However, loopholes and exceptions are accidentally created and purposefully exploited by those benefitting from the commercial wildlife trade.¹²⁰

The pangolin is a key example of where the system is failing. The global trade in pangolins for their meat and scales is causing many thousands to be cruelly slaughtered each year. Greater political will and stronger enforcement of national and international laws are essential to ensure their long-term survival. These measures must be combined with a reduction in consumer demand, and the promotion of humane and alternative livelihoods.¹²¹

The wildlife trade system often ignores the fact that wild animals are sentient, feeling and emotive beings, with the ability to suffer. Their welfare is frequently ignored. They are either cruelly extracted and slaughtered, or tightly packaged alive in inappropriate containers and subjected to lengthy journeys to destinations across the world.

The stress this inflicts means many wild animals arrive dead or diseased. The way they are treated lowers their immunities and creates breeding grounds for disease, laying foundations for future pandemics.

Banning the commercial trade in wildlife is the most effective, practical and cost-efficient way to address these issues. The ban should include wild animals currently traded legally, who are

involved in non-essential global commercial trade. This means for use as luxury goods, exotic pets, traditional medicine, and entertainment who have been bred in captivity or captured from the wild.

The following should be excluded from the ban: plants; fungi; fisheries supplying the food industry. Wild animals hunted by communities for genuine subsistence and non-commercial purposes, or other wildlife trade deemed essential for human survival should also be excluded. Although the sustainability of this trade should still be ensured.

G20 action is required to safeguard human health, the economy and wildlife, which are all negatively affected by our commodification of the natural environment. Such commodification, and its repercussions, is a governance issue of paramount importance. Ending the wildlife trade requires high-level national and international political commitment.

But strong laws with effective enforcement are only one part of the solution.

A multifaceted approach is needed. Commercial trade of wild animals should be phased out; government support for consumer information and human behaviour change is vital. Ending the trade also requires the necessary resources and development of humane and sustainable alternative livelihoods for communities that rely on it. Ecosystems must be restored.

It is critical that governments implement meaningful action; the G20 is the catalyst which will drive them forward. This powerful grouping of countries has shown during other crises quick and decisive responses on a global scale that have truly moved the world.

Without their action, many more wild animal species will be lost and people will be vulnerable to another global pandemic potentially even more deadly than COVID-19.



Image: After 13 years of pain and suffering in captivity, these 5 Asiatic black bears were finally rescued in Vietnam's Tieng Giang Province from the horrific abuse of bear bile farming. Bears kept for the bile industry are often kept in small, barren cages such as these. Credit: World Animal Protection

Specific calls to action for the G20

To protect our wildlife, people and the planet the G20 should...

- Make a collective commitment to permanently end the global and inter-country trade in wild animals and wild animal products. The commitment should recognise that this trade has a devastating impact on animal welfare, biodiversity and ecosystems, economies, health, wellbeing and security.
- Request that global institutions and bodies adopt mechanisms to develop, facilitate, implement and monitor this ban.
- Recognise G20 countries who have already implemented domestic bans on the trade in wildlife and call for other G20 countries to introduce legislation to implement such bans.
- Commit the necessary resources to effectively facilitate and enforce both international and domestic bans on the trade in wildlife.
- Commit to the refinement and development of the One Health, One Welfare^{122, 123} approach in wildlife health and welfare.

References

1. Brown, C. Emerging zoonoses and pathogens of public health significance—An overview. *Rev. Sci. Tech. O. Int. Epizoot.* 2004, 23, 435–442.
2. Institute of Medicine (US) Committee on Emerging Microbial Threats to Health in the 21st Century; Smolinski MS, Hamburg MA, Lederberg J, editors. *Microbial Threats to Health: Emergence, Detection, and Response*. Washington (DC): National Academies Press (US); 2003. 1, Introduction. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK221489>
3. Taylor LH, Latham S, Woolhouse MEJ (2001). Risk factors for human disease emergence. *Philosophical Transactions of the Royal Society Biological Sciences*
4. Jones KE, Patel N.G., Levy M.A., Storeygard A., Balk D., Gittleman J.L., and Dazak P. (2008). Global trends in emerging infectious diseases. *Nature* 451:990–993.
5. G20 Agriculture and Water Ministers Communique (<http://www.g20.utoronto.ca/2020/2020-g20-agriculture-0922.html>).
6. <https://news.un.org/en/story/2021/04/1089622>
7. <https://www.gazzettaufficiale.it/eli/gu/2021/04/23/97/sg/pdf>
8. <https://news.mongabay.com/2021/05/south-africa-pulls-the-plug-on-controversial-captive-lion-industry/>
9. <https://www.nationalgeographic.com/animals/article/south-africa-bans-lion-farming>
10. One Health One Welfare highlights the interconnections between the health and wellbeing of animals, humans and the environment (<https://www.onewelfareworld.org/>)
11. Fraser S. (2016) What do we mean by “One Welfare”? (<https://www.oie.int/eng/animal-welfare-conf2016/Abstracts/2.1.%20Fraser.pdf>)
12. Scheffers, B.R., Oliveira, B.F., Lamb, I. and Edwards, D.P. (2019) Global wildlife trade across the tree of life. *Science*, 366 (6461). pp. 71–76.
13. Scheffers, B.R., Oliveira, B.F., Lamb, I. and Edwards, D.P. (2019) Global wildlife trade across the tree of life. *Science*, 366 (6461). pp. 71–76.
14. [IPBES] Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. 2019. Summary for policymakers of the global assessment report on biodiversity and ecosystem services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. IPBES.
15. Smith, K.F.; Behrens, M.; Schloegel, L.M.; Marano, N.; Burgiel, S.; Daszak, P. Reducing the Risks of the Wildlife Trade. *Science* 2009, 324, 594–595.
16. Lockwood, J. L., Welbourne, D. J., Romagosa, C. M., Cassey, P., Mandrak, N. E., Strecker, A., ... & Tlustý, M. F. (2019). When pets become pests: the role of the exotic pet trade in producing invasive vertebrate animals. *Frontiers in Ecology and the Environment*.
17. Smith, K.M.; Zambrana-Torrel, C.; White, A.; Asmussen, M.; Machalaba, C.; Kennedy, S.; Lopez, K.; Wolf, T.M.; Daszak, P.; Travis, D.A.; et al. Summarizing US Wildlife Trade with an Eye Toward Assessing the Risk of Infectious Disease Introduction. *EcoHealth* 2017, 14, 29–39
18. Greenberg, D.A.; Palen, W.J.A deadly amphibian disease goes global. *Science* 2019, 363, 1386–1388
19. <https://www.sciencemag.org/news/2019/03/fungus-has-wiped-out-more-species-any-other-disease>
20. Auliya, M.; Hofmann, S.; Segniagbeto, G.H.; Assou, D.; Ronfot, D.; Astrin, J.J.; Forat, S.; Ko_v, K.; Ketoh, G.; D’Cruze, N. The first genetic assessment of wild and farmed ball pythons (Reptilia, Serpentes, Pythonidae) in southern Togo. *Nat. Conserv.* 2020, 38, 37–59.
21. Tensen, L. Under what circumstances can wildlife farming benefit species conservation? *Glob. Ecol. Conserv.* 2016, 6, 286–298
22. World Animal Protection; *Trading Cruelty – how captive tiger farming fuels the traditional Asian medicine industry*; 2019
23. Livingstone, E. and Shepherd, C.R., 2016. Bear farms in Lao PDR expand illegally and fail to conserve wild bears. *Oryx*, 50(1), pp.176–184.
24. Baker, S.E.; Cain, R.; Van Kesteren, F.; Zommers, Z.A.; D’Cruze, N.; Macdonald, D.W. Rough Trade: Animal Welfare in the Global Wildlife Trade. *BioScience* 2013, 63, 928–938
25. Grant, R.; Montrose, V.; Wills, A. ExNOTic: Should We Be Keeping Exotic Pets? *Animals* 2017, 7, 47
26. Jones, R.C. Science, sentience, and animal welfare. *Biol. Philos.* 2012, 28, 1–30.
27. Lambert, H.; Carder, G.; D’Cruze, N. Given the Cold Shoulder: A Review of the Scientific Literature for Evidence of Reptile Sentience. *Animals* 2019, 9, 821.
28. Proctor, H. Animal Sentience: Where Are We and Where Are We Heading? *Animals* 2012, 2, 628–639
29. Wallach, A.D.; Beko, M.; Batavia, C.; Nelson, M.P.; Ramp, D. Summoning compassion to address the challenges of conservation: Compassionate Conservation. *Conserv. Biol.* 2018, 32, 1255–1265
30. Van Huis, A. Welfare of farmed insects. *J. Insects Food Feed* 2019, 5, 159–162.
31. Proctor, H. Animal Sentience: Where Are We and Where Are We Heading? *Animals* 2012, 2, 628–639.
32. Godoy, S.N.; Matushima, E.R. A Survey of Diseases in Passeriform Birds Obtained from Illegal Wildlife Trade in São Paulo City, Brazil. *J. Avian Med. Surg.* 2010, 24, 199–209
33. Greger, M. The Human/Animal Interface: Emergence and Resurgence of Zoonotic Infectious Diseases. *Crit. Rev. Microbiol.* 2007, 33, 243–299.
34. Smith, K.F.; Behrens, M.; Schloegel, L.M.; Marano, N.; Burgiel, S.; Daszak, P. Reducing the risks of the wildlife trade. *Science* 2009, 324, 594–595.
35. Sekar, N.; Shiller, D. Engage with animal welfare in conservation. *Science* 2020, 369, 629–630.
36. Scholtz, W. ‘Ethical and humane use’, intrinsic value and the Convention on Biological Diversity: Towards the reconfiguration of sustainable development and use. *Rev. Eur. Comp. Int. Environ. Law* 2020
37. Scholtz, W. ‘Ethical and humane use’, intrinsic value and the Convention on Biological Diversity: Towards the reconfiguration of sustainable development and use. *Rev. Eur. Comp. Int. Environ. Law* 2020

38. Bowman, M. Conflict or compatibility? The trade, conservation and animal welfare dimensions of cities. *J. Int. Wildl. Law Policy* 1998, 1, 9-63.
39. Jones KE, Patel N.G., Levy M.A., Storeygard A., Balk D., Gittleman J.L., and Dazak P. (2008). Global trends in emerging infectious diseases. *Nature* 451:990-993.
40. Humphrey T. 2006. Are happy chickens safer chickens? Poultry welfare and disease susceptibility. *British Poultry Science* 47: 379-391.
41. Karesh,W.B.; Cook, R.A.; Bennett, E.L.; Newcomb, J. Wildlife Trade and Global Disease Emergence. *Emerg. Infect. Dis.* 2005, 11, 1000-1002.
42. Brown, C. Emerging zoonoses and pathogens of public health significance-An overview. *Rev. Sci. Tech. O. Int. Epizoot.* 2004, 23, 435-442.
43. MacDonald, D. Harrington, L. Moorhouse, T. D’Cruze, N. ‘Trading Animal Lives: Ten Tricky Issues on the Road to Protecting Commodified Wild Animals’ *BioScience*, in prep
44. Eskew EA, Carlson CJ. Overselling wildlife trade bans will not bolster conservation or pandemic preparedness. *The Lancet Planetary Health.* 2020 Jun 1;4(6):e215-6.
45. Anthony S.J., Epstein J.H., Murray K.A., et al; A strategy to estimate unknown viral diversity in mammals; *mBio* Sep 2013, 4 (5) e00598-13
46. Karesh,W.B.; Cook, R.A.; Bennett, E.L.; Newcomb, J.Wildlife Trade and Global Disease Emergence. *Emerg. Infect. Dis.* 2005, 11, 1000-1002
47. Eskew EA, Carlson CJ. Overselling wildlife trade bans will not bolster conservation or pandemic preparedness. *The Lancet Planetary Health.* 2020 Jun 1;4(6):e215-6.
48. Greenberg DA, Palen WJ. A deadly amphibian disease goes global. *Science.* 2019;363[6434]:1386-1388.
49. Green, J., Coulthard, E., Norrey, J., Megson, D. and D’Cruze, N., 2020. Risky business: Live non-CITES wildlife UK imports and the potential for infectious diseases. *Animals*, 10(9), p.1632.
50. Nijman V. An overview of international wildlife trade from Southeast Asia. *Biodivers Conserv.* 2010 Apr 1;19(4):1101-14.
51. Smith, K.M.; Zambrana-Torrel, C.; White, A.; Asmussen, M.; Machalaba, C.; Kennedy, S.; Lopez, K.; Wolf, T.M.; Daszak, P.; Travis, D.A.; et al. Summarizing US Wildlife Trade with an Eye Toward Assessing the Risk of Infectious Disease Introduction. *EcoHealth* 2017, 14, 29-39.
52. Greenberg, D.A.; Palen,W.J. A deadly amphibian disease goes global. *Science* 2019, 363, 1386-1388.
53. MacDonald, D. Harrington, L. Moorhouse, T. D’Cruze, N. ‘Trading Animal Lives: Ten Tricky Issues on the Road to Protecting Commodified Wild Animals’ *BioScience*, in prep
54. Broad, S.; Mulliken, T.; Roe, D. *The Nature and Extent of Legal and Illegal Trade in Wildlife*; Earthscan Publication: London, UK, 2003; pp. 3-22.
55. Lockwood, J.L.; Welbourne, D.J.; Romagosa, C.M.; Cassey, P.; Mandrak, N.E.; Strecker, A.; Leung, B.; Stringham, O.C.; Udell, B.; Episcopio-Sturgeon, D.J.; et al. When pets become pests: The role of the exotic pet trade in producing invasive vertebrate animals. *Front. Ecol. Environ.* 2019.
56. Symes, W.S.; McGrath, F.L.; Rao, M.; Carrasco, L.R. The gravity of wildlife trade. *Biol. Conserv.* 2018, 218, 268-276.
57. Harfoot, M.; Glaser, S.A.M.; Tittensor, D.P.; Britten, G.L.; McLardy, C.; Malsch, K.; Burgess, N.D. Unveiling the patterns and trends in 40 years of global trade in CITES-listed wildlife. *Biol. Conserv.* 2018, 223, 47-57.
58. Lockwood, J.L.; Welbourne, D.J.; Romagosa, C.M.; Cassey, P.; Mandrak, N.E.; Strecker, A.; Leung, B.; Stringham, O.C.; Udell, B.; Episcopio-Sturgeon, D.J.; et al. When pets become pests: The role of the exotic pet trade in producing invasive vertebrate animals. *Front. Ecol. Environ.* 2019.
59. Livingstone, E.; Shepherd, C.R. Bear farms in Lao PDR expand illegally and fail to conserve wild bears. *Oryx* 2016, 50, 176-184.
60. <https://www.nationalgeographic.com/animals/article/160106-tokay-geckos-indonesia-traditional-medicines-wildlife-trade-traffic>
61. Tensen, L. Under what circumstances can wildlife farming benefit species conservation? *Glob. Ecol. Conserv.* 2016, 6, 286-298.
62. Carpenter, A.I.; Robson, O.; Rowclie, J.M.; Watkinson, A.R. The impacts of international and national governance changes on a traded resource: A case study of Madagascar and its chameleon trade. *Biol. Conserv.* 2005, 123, 279-287
63. <https://www.nationalgeographic.com/animals/article/wildlife-watch-animals-seized-smugglers>
64. MacDonald, D. Harrington, L. Moorhouse, T. D’Cruze, N. ‘Trading Animal Lives: Ten Tricky Issues on the Road to Protecting Commodified Wild Animals’ *BioScience*, in prep
65. Díaz, S.; Settele, J.; Brondízio, E.S.; Ngo, H.T.; Agard, J.; Arneth, A.; Balvanera, P.; Brauman, K.A.; Butchart, S.H.M.; Chan, K.M.A.; et al. Pervasive human-driven decline of life on Earth points to the need for transformative change. *Science* 2019, 366, eaax3100
66. Brondízio, E.S.; Settele, J.; Díaz, S.; Ngo, H.T. *IPBES Global Assessment Report on Biodiversity and Ecosystem Services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services*; IPBES Secretariat: Bonn, Germany, 2019.
67. Robinson, J.E.; Griths, R.A.; Fraser, I.M.; Raharimalala, J.; Roberts, D.L.; St. John, F.A.V. Supplying the wildlife trade as a livelihood strategy in a biodiversity hotspot. *Ecol. Soc.* 2018, 23.
68. Tappe, D.; Meyer, M.; Oesterlein, A.; Jaye, A.; Frosch, M.; Schoen, C.; Pantchev, N. Transmission of *Armillifer armillatus* Ova at Snake Farm, The Gambia, West Africa. *Emerg. Infect. Dis.* 2011, 17, 251-254.
69. Tappe, D.; Meyer, M.; Oesterlein, A.; Jaye, A.; Frosch, M.; Schoen, C.; Pantchev, N. Transmission of *Armillifer armillatus* Ova at Snake Farm, The Gambia, West Africa. *Emerg. Infect. Dis.* 2011, 17, 251-254.
70. https://www.animallaw.info/sites/default/files/Argentina_CONSERVACION%20DE%20LA%20FAUNA%20 LEY%20N%C2%BA%2022.421%20.pdf
71. https://www.bmu.de/fileadmin/Daten_BMU/Download_PDF/Naturschutz/bnatschg_en_bf.pdf
72. <https://www.legislation.gov.uk/ukpga/1992/51/section/2>
73. <https://www.legislation.gov.uk/ukpga/1991/54/contents>
74. <http://extwprlegs1.fao.org/docs/pdf/ind21932.pdf>
75. <http://www.ens-newswire.com/ens/dec2008/2008-12-18-01.asp>
76. http://www.planalto.gov.br/ccivil_03/_ato2007-2010/2008/decreto/d6698.htm
77. http://www.planalto.gov.br/ccivil_03/_ato2007-2010/2008/decreto/d6514.htm
78. <https://www.ibama.gov.br/noticias/730-2019/2095-2019-um-ano-de-avancos-para-a-coordenacao-de-comercio-exterior-do-ibama>

79. http://www.flevin.com/id/lgso/translations/IICA%20Mirror/english/4340_UU_18_2009_e.html
80. <https://www.kemhan.go.id/ppid/wp-content/uploads/sites/2/2016/11/UU-41-Tahun-2014-1.pdf>
81. http://ksdae.menlhk.go.id/assets/news/peraturan/Permenhut_69_tahun_2013_Penangkaran_-_Perubahan.pdf
82. <https://www.fws.gov/laws/lawsdigest/airborn.html>
83. Graeme McEwan, *Animal Law Principles and Frontiers* (2011 published at www.bawp.org.au), page 132
84. <https://www.legislation.gov.uk/ukpga/1981/69>
85. <https://www.legislation.gov.uk/ukpga/2004/37>
86. Trail hunting involves people on foot or horseback following a scent along a pre-determined route with hounds or beagles. It effectively replicates a traditional hunt but without a fox being chased, injured or killed.
87. <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A31998D0487>
88. European Union; Regulation (EU) No 1143/2014 of the European Parliament and of the Council of 22 October 2014 on the prevention and management of the introduction and spread of invasive alien species; <https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1417443504720&uri=CELEX:32014R1143>
89. MacDonald, D. Harrington, L. Moorhouse, T. D’Cruze, N. ‘Trading Animal Lives: Ten Tricky Issues on the Road to Protecting Commodified Wild Animals’ *BioScience*, in prep
90. <https://www.ibama.gov.br/phocadownload/fauna/faunasilvestre/2019-ibama-diagnostico-criacao-animais-silvestres-brasil.pdf>
91. https://www.nfacc.ca/pdfs/codes/Farmed_Fox_Code.pdf
92. https://www.nfacc.ca/pdfs/codes/mink_code_of_practice.pdf
93. <https://www.gov.uk/government/publications/deer-on-farm-welfare>
94. At the time of writing, the UK is conducting a review of wildlife practices and trade, which may result in new legislation and/ or regulations.
95. http://www.xinhuanet.com/english/2020-02/25/c_138814681.htm
96. <https://chinadialogue.net/en/nature/chinas-list-of-protected-animals-to-be-updated-after-32-years/>
97. [https://www.nda.agric.za/daaDev/sideMenu/animalAndAquacultureProduction/docs/Animal%20improvement%20act\(2\).pdf](https://www.nda.agric.za/daaDev/sideMenu/animalAndAquacultureProduction/docs/Animal%20improvement%20act(2).pdf)
98. https://www.gov.za/sites/default/files/gcis_document/201905/42464gon664.pdf
99. https://www.gov.za/sites/default/files/gcis_document/202002/43050gon201.pdf
100. <https://www.lifegate.com/south-africa-meats-safety-act>
101. <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32014R1143>
102. <https://www.worldanimalprotection.ca/our-work/animals-wild/wildlife-not-pets>
103. Ibid.
104. See, eg, Department for Environment and Water South Australia, ‘Native Animals as Pets’ (accessed 19 August 2020) <<https://www.environment.sa.gov.au/licences-and-permits/wildlife-permits/permit-types/keep-sell-display-native-animals/native-animals-pet>>
105. <https://english.alarabiya.net/en/variety/2016/05/05/Cheetahs-sell-for-6-000-on-social-media-in-Saudi-Arabia>
106. <https://www.bbc.co.uk/news/world-africa-51124487>
107. Kamal Halili Hassan; Ensuring Animal Welfare in Zoos’ Operations: A Comparative Note on Malaysian and Japanese Legislation; *Mediterranean Journal of Social Sciences*; 2016.
108. <https://www.thehindu.com/news/national/kerala/Elephants-don't-belong-in-zoos-Central-Zoo-Authority/article16892629.ece>
109. MacDonald, D. Harrington, L. Moorhouse, T. D’Cruze, N. ‘Trading Animal Lives: Ten Tricky Issues on the Road to Protecting Commodified Wild Animals’ *BioScience*, in prep
110. At the time of writing, an Animal Welfare Bill is currently being drafted in South Africa. This follows several landmark high court cases which found animals to be sentient.
111. <http://www.environment.gov.au/epbc>
112. <https://www.sciencedirect.com/science/article/abs/pii/S0006320716301987>
113. <http://extwprlegs1.fao.org/docs/pdf/usa153636.pdf>
114. <https://www.nwcu.police.uk/>
115. <http://wccb.gov.in/>
116. MacDonald, D. Harrington, L. Moorhouse, T. D’Cruze, N. ‘Trading Animal Lives: Ten Tricky Issues on the Road to Protecting Commodified Wild Animals’ *BioScience*, in prep
117. https://www.aphis.usda.gov/animal_welfare/downloads/List-of-Active-Licensees-and-Registrants.pdf
118. G20 Riyadh Leaders’ Declaration (<http://www.g20.utoronto.ca/2020/2020-g20-leaders-declaration-1121.html>).
119. Lieberman S. WCS Issues policy on reducing risk of future zoonotic pandemics. [Internet]. WCS ISSUES POLICY ON REDUCING RISK OF FUTURE ZOONOTIC PANDEMICS. Available from: <https://www.wcs.org/getinvolved/updates/wcs-issues-policy-on-reducing-risk-of-future-zoonotic-pandemics>
120. Sand PH. Whither CITES? The Evolution of a Treaty Regime in the Borderland of Trade and Environment. *Eur J Int Law*. 1997 Jan 1;8(1):29-58.
121. World Animal Protection (2018) Suffering at scale – pangolin poaching for the traditional medicine trade.
122. One Health One Welfare highlights the interconnections between the health and wellbeing of animals, humans and the environment (<https://www.onewelfareworld.org/>)
123. Fraser S. (2016) What do we mean by “One Welfare”? (<https://www.oie.int/eng/animal-welfare-conf2016/Abstracts/2.1.%20Fraser.pdf>)


World Animal Protection

5th Floor

222 Grays Inn Road

London WC1X 8HB

UK

 +44 (0)20 7239 0500

 info@worldanimalprotection.org

 W: worldanimalprotection.org

 [/WorldAnimalProtectionInt](https://www.facebook.com/WorldAnimalProtectionInt)

 [/world_animal_protection](https://www.instagram.com/world_animal_protection)

 [/MoveTheWorld](https://twitter.com/MoveTheWorld)

 [/animalprotection](https://www.youtube.com/channel/UC...)

Copyright © World Animal Protection

04.21