



Elephants. Not commodities.



Taken for a ride 2

Cover image: Saddled elephants giving tourists rides at a venue in Cambodia.

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

Elephants. Not commodities – Taken for a ride 2

Foreword	4
Acknowledgement	4
Executive summary	5
Introduction	9
Species information and population	11
The myth of the domesticated elephant	12
Tourist perceptions of captive elephants	13
Risks of elephant interactions to people	13
Captivity and welfare – what to consider about the wellbeing of elephants	15
Results	18
Animal welfare conditions at elephant tourism camps in Asia	19
Methodology	19
Findings	20
Thailand	27
Other countries	33
Documenting the common methods of elephant training in Thailand	38
Socio-economic study of Thai mahouts	43
Tourist attitudes, motivations and behaviour	45
The role of the travel industry	52
Economics of the elephant tourism industry	56
High economic value drives exploitation	59
Covid-19 impact: an opportunity to build back better	61
Conservation value and captive breeding	62
Conclusions	65
Life in captivity	65
A way forward	66
Appendix 1	68
Appendix 2	69
Appendix 3	70
References	71



Image: A couple of elephants at a sanctuary in Thailand.

Foreword

Acknowledgement

This report was authored by Dr Jan Schmidt-Burbach, PhD, World Animal Protection's Head of Wildlife Research and Animal Welfare, and Lindsay Hartley-Backhouse, MSc, Research Manager. It would not have been possible to complete without the dedicated contribution of the following people (in alphabetical order): Rachel Ashwanden, Manoj Gautam, Tim Gorski, Elodie Guillon, Danielle Michon, Julie Middelkoop, Faiza Mookerjee, David Owen, Nick Reale, Amy Squires and Madison Wigley.

Executive summary

This report documents the plight of the 3,837 elephants used in tourism in Thailand, India, Laos, Cambodia, Nepal, Sri Lanka and Malaysia as of January 2020. It features elephant living conditions, training, breeding, the status of the industry, academic research – regarding welfare and conservation – and is part of our 10 years work in the region. Over these years we have conducted more than 1,000 visits to more than 350 elephant entertainment venues, conducted several global public surveys, engaged with hundreds of travel companies and associations, and been working with elephant venues on the ground.

Despite greater demand for 'ethical tourism' and awareness of the distress caused by elephant rides, the vast majority of captive elephants in Asia still endure widespread and lifelong cruelty, living in severely inadequate conditions.

And their situation is likely to get worse because of the numbers of captive elephants still being bred for the tourist industry and the economic devastation caused by Covid-19.

Pre-Covid-19 we estimated that the entire captive elephant tourism industry generated between US\$581.3 to US\$770.6 million of sales per year on the back of elephant suffering. Now, with very few tourists, owners and venues are struggling to feed their elephants and pay their workers.

Throughout our research we have consistently found distressing cruelty to captive elephants in all countries. It involves separation of mothers and calves, harsh training methods, restriction of movement, poor nutrition, limited or no veterinary care, social deprivation and punishment. In most tourist venues the elephants are chained for long periods when not needed for tourism activities, often in inadequate shelters featuring concrete floors and unhygienic conditions. They will typically have little or no social interaction with other elephants and are made to perform strenuous and stressful activities. Our researchers also noted many venues actively trying to breed more elephants into captivity. This not only fails to address the core problem of elephant captivity, but also reduces the limited resources available to the elephants already in the industry.

Assessing elephant welfare conditions

We assessed elephant welfare using nine recognised criteria considered to have a significant direct impact on an elephant's

welfare. Our researchers visited elephant tourism venues offering a range of entertainment activities including rides, shows, elephant washing, feeding, selfies and observation.

Our data was collected through in-person observation of the elephants, tourism activities and living conditions as well as through informal conversations with staff on site. Photographs and occasionally videos were taken to document the findings.

Ongoing suffering – but also some positive changes

From January 2019 to January 2020, our researchers assessed the welfare conditions of 3,837 elephants at 357 venues. In the Asian countries evaluated for this report we found 2,390 (63%) elephants suffering in severely inadequate conditions at 208 (58%) venues. Improved, yet still inadequate conditions, were experienced by 1,168 (30%) elephants. Only 279 (7%) elephants were kept in truly high-welfare observation-only venues.

We documented distressing conditions at venues with severely inadequate welfare conditions. Frequent short chaining, demanding activity schedules for the elephants, limited possible social interaction between elephants and conditions that allowed for very little natural behaviour were common.

Venues with improved, yet still inadequate conditions often offered half or full-day elephant washing or bathing experiences. Despite tourists' perceptions that elephant washing, and bathing venues provide high welfare to elephants, our researchers expressed concerns about these attractions. Although our research shows that venues offering bathing activities typically offer better welfare conditions than riding venues, they still have significant welfare problems. These facilities were often misleadingly promoting themselves using terms like 'sanctuary'; 'rescue centre' and 'ethical'.

The high welfare, primarily observation-only venues allowed the animals to behave more naturally and within natural habitats. Visitors at these venues had very limited or no direct interaction with the elephants. They were able to enjoy observing elephants being elephants, without human interactions, while the mahouts continued to supervise their elephants remotely.

Thailand – centre of captive elephant tourism

Nearly three quarters of the elephants in Asia are used in Thailand (73%, 2,798) which attracted 39.8 million tourists in 2019. Our research estimates that about 10.9 million (28%) of those rode or planned to ride an elephant while on holiday in Thailand.

Our 2019–2020 research identifies Thailand as a continuing hotspot for elephant suffering. This is because of the number of elephants involved and the scale of cruelty inflicted due to tourist numbers and demand.

The overall number of captive elephants used for tourism has increased by a shocking 70% in just 10 years. Between 2010 and 2020, there was a dramatic 135% increase in the number of elephants living in the very worst of conditions in the country. Out of 2,798 elephants, we found that only 5% (144) were kept in high welfare conditions.

India

India is home to the second highest number of elephants used in tourism out of the countries in our report. Twenty one tourism venues housing 509 elephants were assessed. We found that 44% (225) of the elephants were kept in severely inadequate conditions. Fifty one percent were housed in medium welfare venues. Just 4% of the assessed elephants lived in higher welfare conditions. Seventy percent of elephants were housed at venues offering rides.

Sri Lanka

In Sri Lanka, we identified and assessed 13 venues, housing 188 elephants. This is an increase of 13% or 22 elephants held captive since 2015. More elephants were living in severely inadequate conditions – 24% (46) compared to 22% (36) of elephants in 2015. However, we found 28% (52) of elephants living in high-welfare conditions at a single venue, Elephant Transit Home. Here there is a clear policy against elephant entertainment and the ultimate aim is to reintroduce their elephants into the natural habitat.

Cambodia

We assessed 10 venues with 64 elephants. Thirty eight percent 38% (24) of elephants were living in severely inadequate conditions. This has decreased from 67% (24) of elephants in 2015. Forty two percent (27) were living in medium scoring venues with improved conditions. In 2015 there were no elephants at any middle scoring venues.

Nepal

We assessed 55 venues with 143 elephants. The number of elephants at tourism venues in Nepal has decreased by 8% between 2015 and 2020, from 155 to 143 elephants. We also found that between 2015 and 2020, the percentage of elephants living in severely inadequate conditions decreased, and those living in improved conditions at medium welfare venues had increased. Since 2015 several smaller scale projects have been initiated that aim to provide observation-only attractions for tourists, providing higher welfare to a few elephants.

Laos

We assessed 11 venues with 105 elephants. The number of venues has increased by 83% (6) and the number of elephants by 78% (46) elephants since 2015. We found 48% (50) elephants living in severely inadequate conditions and 15% (16) living in improved conditions at medium scoring conditions. Thirty seven percent (39) of elephants lived in two high welfare venues. In Laos, during 2019–2020, more elephants were living in better conditions, and fewer were living in the worst than in 2015.

Malaysia

We assessed 30 elephants at the sole identified elephant tourism venue. This was the first year including Malaysia in our assessments.

Image: An elephant giving rides at a venue in Thailand



Training cruelty – lasts a lifetime

Footage was made available to World Animal Protection documenting the common practices of training elephant calves for the tourism industry. This footage was made during 2019 following elephant trainers in Thailand who train 30-40 elephants annually for the industry. It includes harrowing footage of eight calves being trained.

The footage documents the traumatic separation of two-year-old calves from their distressed mothers. This was followed by the physically and emotionally cruel methods used to establish the dominance needed to make elephants 'safe' for the tourist industry.

Methods included: calves put in a 'crush' – two heavy, wooden frames – to stop them moving; chaining; prodding and hitting if they showed any signs of defensive behaviour or aggression. These extremely cruel methods were mixed with offering rewards when the elephants complied, and often involved some spiritual components as well.

Similar or variations of these training methods are used throughout Asia, but the cruelty of them is frequently denied or underplayed by venues and trainers. They are also not failsafe; mahouts (handlers) and tourists are injured or killed by elephants every year.

In a separate study, conducted together with the Faculty of Social Sciences of Chiang Mai University, we found that thirty one percent of the mahouts we interviewed had been sick or injured through their work; and of those almost half were still in pain from their injuries when interviewed.

Other less punishing training methods have been tried but are deemed ineffective in reliably protecting tourists and their handlers from harm if close contact with elephants continues to be required.

Breeding matters

Many venues argue that they keep and breed elephants for conservation purposes. However, elephants reared and kept in tourist venues are unlikely to ever be successfully released in the wild.

The breeding and use of captive elephants in tourism is a lucrative business and is driven by tourist demand, commerce and profit. Most captive elephants in Thailand today have been bred specifically for commercial tourism. Across most of Asia, elephants are commodities and legally traded as livestock. Prices are as high as an expensive car.

Unfortunately, more captive elephant breeding is likely to be happening during 2020 and beyond as owners try to mitigate the economic effects of Covid-19.

Changing tourist attitudes

Our consumer surveys show that attitudes towards wildlife entertainment in China and other Asian countries are changing, as the public become more aware of animal welfare issues. Several industry-leading travel companies in China have joined our list of more than 250 travel companies worldwide pledging to stop selling elephant rides and offer humane alternatives instead.

More tourists from China visit Thailand than from any other country – nearly 11 million visited in 2018. And elephant riding has usually been on the bucket lists of many. However, from 2016 to 2019, there has been a decrease: 23% of Chinese tourists took part in elephant rides in 2019 compared to 36% in 2016.

In 2016, tourists interviewed in Thailand cited riding an elephant as their favourite activity (36%), and observing elephants as their least preferred activity (14%). By 2019, things had changed dramatically. Seeing wild animals in their natural habitat (37%) and observing elephants (24%) became the two most preferred activities. Eighty five percent of tourists interviewed in our most recent global poll believed that tour operators should avoid activities that cause suffering to wild animals.

Ending the suffering

The Covid-19 pandemic has shown the vulnerability and dependency of captive elephants on tourism – venues have been struggling to feed their animals. The food costs for all elephants in Thailand alone are estimated at more than US\$900,000 per month; a similar amount is needed for the salaries of their caretakers. World Animal Protection, other international NGOs organisations, and local organisations have had to step in to stop these iconic animals starving.

Covid-19 has also shown the close link between diseases that can be transmitted from animals to people. Tuberculosis has long been documented in both elephants and the mahouts that look after them – although this risk to human health is rarely publicised.

Change must start now to protect Asia's elephants and over a period that gradually:

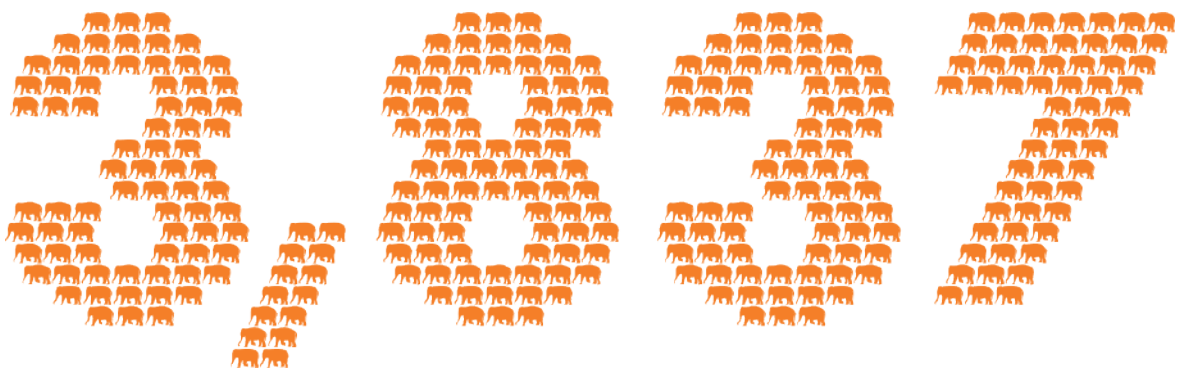
- reduces the number of captive elephants used for commercial tourism
- decreases demand for captive elephant tourism entertainment attractions
- improves conditions for the current generation of captive tourism elephants and their caretakers.

Governments must prevent captive breeding and the intake of any wild elephants for commercial use. They should also support transitions to high-welfare observation-only venues. In this report we detail how such venues can be successful businesses using the examples of Thailand’s ChangChill and Following Giants.

Travel companies and individual travellers are key to change. They should choose to only promote and visit elephant-friendly venues offering observation-only experiences, or choose to observe elephants responsibly in the wild.

Mahouts must be part of the improvements to venues and to elephant welfare. They need better employment packages and living conditions. They also need career development that will take them beyond the lifespan of the elephant in their care.

This generation of elephants must be the last to be kept in captivity. Elephants are wild animals – not entertainment commodities. They need our protection to stay in the wild where they belong



Our researchers assessed the welfare conditions of 3,837 elephants at 357 venues.



63%

elephants suffering in severely inadequate conditions.



30%

experienced improved, yet still inadequate conditions



7%

of the elephants were kept in truly high-welfare observation-only venues.



Image: An elephant stands chained amidst rubbish at a venue in Sri Lanka. This is a far cry from their life in the wild, where they belong.

Introduction

Worldwide, wild animals are taken from the wild, or bred in captivity, to be used for entertainment in the tourism industry. Visits to wildlife tourist attractions are estimated to account for up to 20-40% of global tourism.¹

Wildlife attractions, such as those where captive wild animals are used for entertainment¹, are among the most popular with tourists. These attractions are highly profitable and a market that has grown considerably.^{1,2}

On the other hand, some wildlife attractions can be considered humane and ethical, contributing to the protection of wild animal populations through tourism's full economic potential. These attractions may include observing wild animals responsibly in their natural habitats from a safe and respectful distance. They may also involve viewing them in genuine sanctuaries or wildlife-friendly facilities that are part of efforts to phase out captive wild animal use.

¹ Wildlife entertainment includes activities that risk portraying or trivialising wild animals as pets, novelty objects, comedians, or domesticated species; that encourage animals to perform behaviours that are either unnatural, unnecessary, or harmful; that involve procedures that may be considered stressful or harmful to all or individual animals; that expose visitors or handlers to unnecessary risks of injury or disease; that are commerce-driven beyond sustaining maintenance of the animals at facilities striving to phase-out captive wild animal keeping; or that may risk replication of similar activities in harmful ways in other places.

However, many other wildlife tourist attractions rely on practices that require keeping wild animals in captivity for handling, posing with, riding or watching in shows. These attractions lead to severe wild animal suffering and in many cases may pose a risk to species conservation.³

Until early 2020, international tourism growth was consistently strong and regularly outpaced the global economy.⁴ In 2019 1.5 billion tourist arrivals were recorded globally. Wildlife tourist attractions account for a large proportion of tourism; this highlights the need to address the increasing demand pressure on captive wildlife tourism attractions.

The dependency on tourism also leads to severe risks for captive wild animals when tourists fail to come. In January 2020 the United Nations World Tourism Organization (UNWTO) confirmed tourism as 'a leading and resilient economic sector, especially in view of current uncertainties'.⁴

But then the Covid-19 pandemic hit and changed the situation dramatically. It stopped tourism dead in its tracks and led to the suffering of thousands of captive wild animals as their facilities struggled for income.

There is limited accurate data on the global scale of the industry for specific species, the welfare conditions of the animals and the impact of this industry on the conservation status of wild populations. A study commissioned by World Animal Protection through Oxford University's WildCRU found that out of 24 types of wildlife tourist attractions 14 (involving 120,000–340,000 animals) had negative conservation impacts. Eighteen (involving 230,000–550,000 animals) had negative welfare impacts.¹

Despite these figures, very few tourists gave negative feedback on these attractions because of conservation or welfare concerns. The WildCRU study concluded that wildlife tourist attractions have substantial negative effects unrecognised by, or concealed from, most tourists. This suggests an urgent need for tourist education and regulation of wildlife tourist attractions worldwide.

Wildlife entertainment is one of the most worrying types of wildlife tourist attractions. It involves animals being taken from the wild or bred in captivity and removed from their mothers at a young age. They are then forced to endure cruel and intensive training to make them perform and interact with people for the tourist entertainment industry.

Global efforts are needed to address the welfare and conservation concerns inherent in this industry and lead to a phase-out of wildlife entertainment.

Our Wildlife. Not Entertainers global campaign is based on the vision that wild animals belong in the wild – not in entertainment. This campaign focusses on captive elephant, tiger and dolphin tourism. We believe these animals are flagship species, and changes for them can trigger changes across the entire wildlife entertainment industry.

We encourage people to be animal-friendly tourists and ask travel companies to replace sales and advertisement of wildlife entertainment with activities not involving animal suffering. The campaign also asks venues to adopt more humane practices for their existing captive wild animals, and encourages a long-term transition towards a humane tourist attraction model.

Since 2010 more than 250 travel companies have joined us by committing to end all sales and promotion of venues offering elephant rides and shows. Instead they have pledged to offer more humane alternatives. These include visits to genuine elephant sanctuaries to support captive elephants in need, or responsible viewing of elephants in the wild.

Although the proliferation of wildlife entertainment tourism is a global trend, it is most evident in Asia, where millions of tourists flock each year. Upon arrival in Thailand, Asia's second most popular tourist destination⁵, tourists are bombarded with advertising for wildlife entertainment attractions. They are invited to: 'Ride an elephant', 'Be a mahout for a day', 'See elephant shows', 'Take selfies cuddling tigers'.

Over the years, many venues have adopted language that aims to address the increasing concerns by tourists around the wellbeing of animals. They use words such as 'ethical', 'retirement home', 'rescue', 'love animals', in their marketing material. To what degree these terms reflect reality is mostly impossible for tourists to confirm.

We have conducted three comprehensive, empirical studies, over 10 years, on the welfare conditions of captive tourism elephants in Asia. The first study from 2010 covered only Thailand. In the 2015 and the 2019–2020 studies we included most countries with significant captive elephant tourism.^{6,7} Between 2010 and 2015 we detected a 30% increase in the number of tourism elephants in Thailand. Three out of four elephants were living in poor and unacceptable conditions. The conditions were similar in other Asian countries as well.

Our main points of concern were:

- extreme physical restraint by chaining during day and/or night
- limited or no opportunity for social interaction with other elephant individuals
- participation in stressful, and in some cases, extremely demanding show activities
- non-existent or insufficient veterinary care
- inadequate nutrition
- use of pain-inflicting or fear-instilling tools to train and retain control over elephants.

This report expands and updates our research from 2010 and 2015. Our results and comparison over the past 10 years have produced one of the most comprehensive studies of the welfare conditions for captive elephants in the tourism industry. In this report we have also included our global public attitude surveys and industry analyses. Our comprehensive research will help expert travel industry stakeholders, governments, elephant experts and regular travellers make informed decisions to better protect elephants.

The effects of the Covid-19 pandemic illustrate the urgency of reversing the intentional dependency of endangered, complex animals such as elephants on commercial tourism. The pandemic demonstrates the risks and consequences to us all of close interactions with captive wild animals.

The loss of tourism and the lack of compensative government actions has led to severe challenges in maintaining the elephants that are bred specifically for the tourist industry. Although World Animal Protection, many other groups and initiatives stepped in to support elephants in this difficult time, the pandemic clarifies that keeping captive elephants in commercial tourism must be phased out.

And this phase-out must be supported by responsible governments, the travel industry and elephant protectionists. It is vital that there are solutions to protect the existing captive elephants and that captive breeding for commercial purposes is ended.

Elephants need to be protected in the wild where they belong and where they can serve their important ecological role. Tourism entertainment is no adequate place for them.

Species information and population

Asian and African elephants are the largest land-based mammals alive. Adults can weigh between 3,000–5,000kg with a body length of more than 6m. Elephants are long lived – up to about 70 years in the wild, although their lifespan in captivity is generally considered shorter.⁸

Pregnant females have a gestation period of around 20 months. They take care of their offspring for the first four to five years and continue to supervise them for several years after that. Adult males travel alone, joining a female group for periods or forming temporary male groups.

Elephants are some of the most socially-developed mammals in the world and can arrange themselves into a complex social structure. They form multi-tiered societies, based on mother-calf units, bonded joint-family units (that stay together), and clans that coordinate their behaviour.⁹

Asian elephants are considered endangered by the International Union for Conservation of Nature (IUCN). They are on Appendix I of the Convention on International Trade in Endangered Species (CITES), which prohibits commercial international trade of elephants and their elephant parts.

Constant human encroachment into the elephant's habitat and poaching for ivory or live animals has caused the Asian elephant population's rapid decline in recent decades. Estimates of the total population range between 45,671 and 49,028 elephants.¹⁰



Image: Tourists ride elephants at a venue in Thailand.

The myth of the domesticated elephant

There are three commonly recognised elephant sub-species. These are: the Indian elephant (*Elephas maximus indicus*) on the Asian mainland; the Ceylon elephant (*E. m. maximus*) in Sri Lanka, and the Sumatran elephant (*E. m. sumatranus*) in Indonesia.¹⁰ Populations of these wild elephant species spread across 13 countries (or range states).¹¹

There are estimates of fewer than 500 elephants in the wild in each of Bangladesh, China, Nepal and Vietnam and fewer than 1,000 in Bhutan, Cambodia and Laos. The population of elephants in the wild in Thailand is estimated to be between 3,126–3,341. India has the largest population with an estimated 27,312 elephants.¹⁰

There are also significant populations of captive elephants; these are estimated to constitute about one-third of all remaining Asian elephants and this ratio is likely to increase. In 2018, 14,930–15,130 Asian elephants were assumed to live in captive or semi-wild conditions and were typically used for logging, village work, tourism, or temple purposes.¹⁰

Captive elephants are primarily sourced from the wild although in some countries captive breeding has been practiced with some success. Commercial gain has been identified as a prime motivator for acquiring elephants.¹² A report from the wildlife trade monitoring network TRAFFIC, reports the illegal capture of 79–81 wild elephants, between April 2011 and March 2013, for sale to the Thai tourism industry.¹³

Most of the animals were from Myanmar. There the capture of elephants is considered a serious threat to the future survival of the country's wild population of around 2,000–4,000 Asian elephants. TRAFFIC concluded: 'Wild live elephants are being illegally captured to supply the lucrative tourism industry in Thailand and urgent changes to the country's legislation and elephant registration procedures are needed to stop the trafficking.'

'Domesticated' is a term often used to describe elephants in captivity, to imply they are distinct from their wild counterparts. Tourists and travel industries are exposed to this term in advertising and at elephant entertainment venues where it is communicated through educational materials and by guides and mahouts.

Also, many tourist industry stakeholders in countries using captive elephants refer to them as 'domesticated animals'. They argue domestication because of the long history of keeping elephants in captivity. Even in scientific literature, a medium relied on for accuracy, the term is sometimes and incorrectly used to describe captive elephants.

But elephants are not domesticated.^{14,15} They have never undergone the process of 'domestication': a long-term socio-biological process. Although discussions continue on the exact definition of domestication, it is commonly agreed that domestication can only involve human-guided, selective breeding for no fewer than a dozen generations.^{16–18} In each generation, the offspring that carry the desired traits (eg strength, fur, size, behaviour) are selected for further breeding.

The term 'domestication' also always refers to a whole population, so by definition an individual animal can never be domesticated in its lifespan. A domesticated species is significantly different from its wild cousin in its instincts, anatomy and the emphasised traits desired by humans. While domesticated animals still often display a range of natural behaviours, they differ in the intensity of stimuli required to trigger a certain behaviour change. This makes them easier to handle than their wild counterparts.

Throughout the 3,000-year human-elephant relationship, most elephants used by people have been captured from the wild. This means the long history of people using elephants is not a valid argument to label elephants as domesticated. Even today, most adult elephants originate from the wild, while others are typically first or second generation captive-bred. Breeding is not done selectively – yet selective breeding is a prerequisite in the biological process of domestication.

Elephants are not domesticated.

Most captive Asian elephants used for tourist rides today will still have been captured directly from the wild. However, the exact number is difficult to validate as there are only incomplete databases available to verify origins. Various authors define the case of captive elephants as a classical example of animal taming and training, not domestication.¹⁵

While elephants are not domesticated, their time in captivity and the close interaction with their human keeper imprints on the behaviour of individuals. Some authors suggest introducing additional terminology between the outliers of 'domesticated' and 'wild', such as 'tamed' or 'captive wild animals'.¹⁶ However, 'tamed' is commonly felt to be vague and potentially misleading considering the persisting dangerousness of the animals. And the word 'captive' could imply that the animal has been captured directly from the wild, which is not the case for elephants born in captivity.¹⁹

Consequently, the term 'captive wild animals' most closely reflects elephants in entertainment as they remain biologically identical to their wild relatives and many still originate from the wild.²⁰ This label also allows for stricter regulations of the use of these animals, recognising that their complex needs are identical to their truly wild relatives. The term 'domesticated' is prone to misuse by applying livestock regulations and keeping elephants accordingly.¹⁴

Tourist perceptions of captive elephants

The term 'domesticated' is not only inaccurate, it distorts tourist perceptions, hinders conservation work and efforts to ensure better welfare of captive elephants. If animals are described as domesticated not wild, visitors are more likely to accept their chaining for long periods, their confinement to small spaces, and their close contact with handlers and trainers.

The term 'domesticated' implies that the animal has lost its wild instincts and, like cats, dogs and horses, has adapted successfully to a life of human companionship. For elephants, nothing could be further from the truth. The usual visitor experience of elephants in tourism paints a skewed picture of a captive elephant's life.

The few minutes a tourist spends with an elephant during a ride do not reveal the elephant's true life or what it has endured before. Although elephant painting or playing football are clearly not natural to elephants, the venues rely on the 'cute', exotic and novel factors of these activities appealing to tourists. And although the brief interaction of riding allows the tourist to appreciate the elephant's bulk and beauty it hides the daily boredom, social isolation and confinement of captivity.

Messaging communicated by tour guides and mahouts also does not usually reveal the realities of the elephant's life in captivity; it

usually paints an inaccurate and often romanticised picture. This reinforces the perception of elephants as well-cared-for pets, adding to the enjoyment for the visitor and further fuelling support for this industry.

It can also be difficult for an untrained person to identify signs of elephant distress or discomfort. Apart from the typical stereotypical swaying, distressed elephants do not always display distress. Elephant body language can be difficult to interpret and is not comparable with the body language of domesticated animals people are familiar with.

The usual visitor experience of elephants in tourism paints a skewed picture of a captive elephant's life.

Risks of elephant interactions to people

Captive elephants remain one of the most dangerous animals used in tourism. Anecdotal sources suggest that for every male elephant in captivity, one human fatality will occur. Considering that there are a few thousand bulls in captivity, this is a worrying suggestion. It is unclear how many people each year are killed or severely injured by captive elephants, but it is certainly higher than with any other captive wild animal used by humans.

Our 2017 'Taken for a ride' report outlines that between 2010 and 2016, 17 fatalities and 21 serious injuries caused by captive elephants in Thailand alone were reported by the media.⁷ Victims were international tourists, local bystanders, or mahouts. Mahouts clearly bear the highest risk and so are the most frequent victims. The number of unreported incidents is high; there is often no publicity unless a foreign tourist is involved.

Male elephants are most commonly involved in these incidents. During their 'musth' period, a natural and periodic phase of increased testosterone production, an elephant bull can become unpredictable and often extremely aggressive. Even the most progressive elephant institutions struggle with the management of elephants in musth and chain them in isolation for the duration. This can be anything from a week in younger animals to up to two months in older ones.²¹

Elephants that turn aggressive and uncontrollable or start expressing severe stereotypic behaviour due to their captive environment are usually removed from the camps. They may be traded off to other places or isolated spatially. However, sometimes a tourism venue will ignore the signs of aggression and urge a mahout to keep using the elephant to maximise profits. Other times a less experienced or over-confident mahout might not recognise, or ignore these signs.

Managing elephants is extremely high risk and highlights their unsuitability for captive environments, especially when in direct contact with people.

There are also public health concerns for people in close contact with elephants. Tuberculosis in elephants has been well recognised for centuries.^{22,23} Tuberculosis is a chronic disease documented in captive Asian elephants worldwide including Thailand²⁴, Nepal²⁵ and in zoos in the USA²⁶. It has long been recognised as an emerging zoonotic disease, with two-way transmission of the disease between people and elephants evidenced in 1998.²⁷

Consequently, close contact between tuberculosis-carrying elephants and people within confined workplaces poses a serious infection risk. Molecular studies on four elephants with tuberculosis in Thailand indicated that the disease was most probably transmitted from humans.²⁴ Studies on tuberculosis in zoos in the USA found that Asian elephants carried the disease six times more often than African elephants.²⁸

Active and latent tuberculosis has been reported in 20% of captive elephants in Malaysia and 24% of their mahouts with indication of two-way transmission of the disease.²⁹ In Nepal, tuberculosis in captive elephants was first identified in 2002. During 2002-2009 seven captive elephants died from the disease, and in 2011, 25% (11 out of 44) elephants tested positive for tuberculosis.²⁵

In 2018, an examination by the Animal Welfare Board of India (AWBI) of 10 elephants at Amer Fort in India showed they had tuberculosis; AWBI urged that they be removed from tourism activities.^{30,31} The AWBI used a test that was internationally accepted as standard for elephant tuberculosis testing. Worryingly, in response, the Rajasthan authorities decided to use a local, non-elephant specific test-kit to test these elephants again. They concluded that the elephants were fit to continue being used for tourist rides. Reliable screening for tuberculosis is rare, so the actual health risk of tuberculosis carrying elephants is hard to predict, but the results can have grave consequences.

This information raises serious questions about the public health risk of elephant attractions that allow close contact between tourists and elephants. Activities such as trunk kisses or giving tourists trunk showers may facilitate a disease transmission. It is

crucial for future studies to assess this risk and its impact on the health of tourists. It is also crucial that the risk of transmission of tuberculosis to elephants from people carrying the disease be assessed too.

There may be other diseases too. Sixty percent of emerging infectious diseases are zoonotic, most are thought to originate from wild animals; close proximity to people elevates the risk of infection.^{32,33} If the Covid-19 pandemic has proven one thing, it is that people should stay clear from handling wild animals. This includes trading wild animals for consumption, for supposed medical use or for tourist entertainment.

Managing elephants is extremely high risk and highlights their unsuitability for captive environments, especially when in direct contact with people.

Image: A male elephant at a Thai riding venue. Males are most commonly involved in incidents injuring tourists and mahouts.



Captivity and welfare – what to consider about the wellbeing of elephants

Animal welfare is about how an animal feels resulting from mental, physical and behavioural functions. Ensuring high standards of welfare for elephants in captivity is particularly challenging. This is due to their physical size, complex social needs, high level of intelligence, large home ranges, diverse diet, large behavioural repertoire, and natural habitat of tropical and subtropical climates and forests.

The following are some of the complex considerations relating to their natural habitat.

- As the largest terrestrial land mammal³⁴, Asian elephants require a great deal of space and resources. They consume up to 300kg of food per day³⁵ and forage up to 10km through dense forest³⁶. Their home ranges vary between 30km² to 600km²³⁷.
- Natural resources in the complex forest environment enable elephants to self-regulate their nutrient intake, particularly to supplement dietary deficiencies and counter digestion problems.³⁸ They are known to be very selective in what plants they eat. They depend on the availability of between 20 to 75 different plant species in the wild.³⁹⁻⁴² The forest also provides plenty of stimulation for their highly developed olfactory receptors, which they engage daily for foraging, social communication and reproduction^{43,44}.
- Elephants are always close to a source of fresh water because they need to drink at least once a day. They also typically bathe and often swim in water each day. Other common activities are mud and dust bathing, rubbing on trees, and exploring their environment using their trunk.⁴⁵
- Asian elephants are sensitive to environmental and social surroundings. Factors such as herd structure can have negative welfare impacts⁴⁶ and there is a wide range of individual variation in responses to environmental conditions⁴⁷.
- Male elephants experience 'musth', an annual rise in testosterone levels that causes increased aggression. In captivity, violent behaviour exhibited during musth can be a danger to surrounding elephants and people and is difficult to control without intervention.⁴⁸
- Asian elephants have complex social structures. They form multi-tiered societies with herds of up to 20 individuals.⁹ Herds display a range of social and cooperative behaviours, including sharing the care of offspring. Studies have documented captive calves spend up to 98% of time with different herd members during their first six months of life⁴⁹ which is crucial for social development. After birth, elephant mothers look after their offspring for the first four to five years and continue to supervise them for several years after. Female offspring tend to remain in the mother herd all their life, while male offspring may leave the herd at between 10-15 years.⁵⁰
- Elephants are highly intelligent animals with the capacity for complex thoughts and emotions.³⁴ Evidence of a wide range of cognitive abilities⁵¹ and emotional responses to stress and trauma^{52,53} have been documented.
- New research shows that we have much more to learn about behaviour and biology of Asian elephants. Due to the practical difficulties of observing them in thick foliage in forest environments, we have a relatively limited understanding of their social behaviour and structure in the wild.^{38,54} Therefore we cannot ensure they are suitably provided for in captivity.

In captivity, elephants will face situations which they would rarely, or never experience in the wild.⁵⁵ Understanding how captivity affects elephants and how to assess their condition has been a topic of dispute between stakeholders for a long time.

Historically, when assessing conditions of elephants, most attention has been placed on parameters that are readily measurable. These include body condition, health status or glucocorticoid hormone levels. Consequently, animal welfare is still often defined as the absence of negative states, such as absence of disease, of hunger, or of pain.

Yet the welfare of animals, especially highly sentient species such as elephants, is vastly more complex. It requires a deeper recognition of the psychological needs as well.⁵⁶ Insights into neuro- and behavioural science over the past 15 years highlight that sentient animals are likely much more sensitive to environmental and social factors than previously thought.⁵⁷ These insights have led to revising previous animal welfare concepts, such as the Five Freedoms.

One of the original animal welfare concepts, the Five Freedoms, is limited in its assumption that the absence ('freedom') of negative states ensures high welfare. The more modern animal welfare concept of the Five Domains considers nutrition, environment, health, and behaviour as governing inputs that result in a range of positive or negative mental states.⁵⁸

Combined with concepts such as the Quality of Life spectrum it enables one to prioritise reducing negative experiences and enabling positive experiences to ensure highest welfare throughout an animal's life.⁵⁹ To what degree such high welfare can be achieved depends on several factors. These include whether a species has adapted to captivity through domestication, its species specific needs and each individual animal's characteristics and preferences. It also depends on the available resources and what motivates people keeping the animals to prioritise welfare over the animal's value as a commodity.

It can be challenging to measure an individual animal's physical and psychological welfare. However information about longevity, health status, range of natural behaviours, foraging opportunities, autonomous decision-making and opportunities for social interaction can build a picture.

Modern zoos have mostly advanced to elephant management styles that allow elephants to freely roam enclosures, while staff only interact with them through protective barriers. This was done partially to enable higher welfare standards, but also to protect the elephant keepers from injuries and fatalities. Yet in the Asian elephant range countries 'protected contact' elephant management styles are not common or feasible.

Intensively managed elephants

In Asia, a caretaker usually controls the elephant through direct contact and relying on restraints and tools to ensure compliance. Caretakers are prone to injury despite the tools, and in most cases the impact on the welfare of captive elephants is severe. In Asian range countries, captive management has prioritised the interests of the owner and, understandably, the safety of the caretaker over the psychological or physiological needs of elephants.¹²

These captive management systems resemble 'intensive management' systems of livestock. This contrasts with 'extensively' managed farming systems, where animals like sheep seasonally enjoy a significantly enhanced behavioural freedom through free roaming access to land.⁶⁰ When managing elephants intensively it is crucial to recognise that some procedures may be necessary to safeguard the keeper, visitors or property from harm. However, their necessity does not make them any more acceptable or better for the elephant. The following typical examples highlight this dilemma.

- Chaining, tethering or keeping elephants in enclosures is often necessary when managing elephants. But this directly affects their behavioural freedom and behavioural freedom is critical to ensuring better welfare.
- Providing a diet that consists of only three or four different components may be a necessity in captivity due to economic or logistic limitations, yet it negatively affects the elephant's welfare.
- Maintaining control of a 3,000 - 5,000kg elephant may require using tools that create a strong enough stimulus to prevent the elephant from aggressive or unwanted behaviour. However, this leads to painful punishment, induces fear, and limits behavioural freedom.
- Training of elephants to perform in shows or other activities requires aversive, punishment-based training to ensure sufficient compliance by the animals to perform the various tricks and activities. Studies have shown development of symptoms associated with post-traumatic stress disorder (PTSD) from such traumatic incidents in an elephant's youth, and increased mortality several years after training.^{53,61}



Image: A mahout and elephant at a riding venue in Thailand. The mahout carries a bullhook, or ankhus, a tool used to express and reinforce the dominance of the mahout over the elephant.

Researchers from Thailand's Chiang Mai University and the USA's Smithsonian Conservation Biology Institute dispute that elephant shows, rides, the metal hooks used by mahouts for control, or chain restraints always affect elephants' welfare negatively.⁶² However, the researchers do not clarify how, why or where these practices will not have a negative impact. It appears that the necessity of such practices is confusing as it rules it as acceptable. This leads to the worrisome conclusion that it is acceptable to use chains, metal hooks, or show performances when keeping endangered wild animals such as elephants in captivity. Chiang Mai University is based in an area that is at the epicentre of the captive elephant entertainment industry.

Several other similar studies originating in Thailand have investigated selective aspects of the conditions of captive tourism elephants. This is positive as even basic animal welfare concepts were mostly unheard of 10 years ago. However, the language and methodologies used tend to oppose a phase-out of the commercial captive elephant industry.

In some cases the studies attempt to discredit elephant management models that allow for increased autonomy and less interaction with visitors by asserting they are negative for elephants.⁶²⁻⁶⁴ It is disconcerting that an expansion of the commercial captive elephant industry is accepted while discrediting or ignoring benefits of less intensive alternative elephant tourism attractions, such as observation-only models. More details can be found in Appendix 1.

It must be acknowledged that these cited studies also contain many very useful and important findings that must certainly be considered when trying to improve captive elephant welfare. And it is crucial to understand that offering observation-only tourist

activities alone is not automatically guaranteeing higher welfare for the elephants.

Our elephant-friendly transition guidelines involve best-practice animal management practices that must be incorporated at all venues, no matter which tourism activity is offered. Best-practice animal management venues allowing elephants more autonomy, more natural behaviours, and no direct contact with visitors potentially offer vastly higher welfare than venues using conventional, direct interaction and restraint practices. There are clear challenges in implementing such improved practices and not all captive elephants may benefit from them. But, these arguments should not prevent striving for such improvements or calling for a decrease in captive elephant populations.

However, even high-welfare observation-only practices can only be a compromise to fully meeting all of an elephant's needs. They cannot serve as a justification for continuing to keep elephants captive for tourism beyond the current generation of elephants.

The notion from many proponents of the captive elephant industry that there could be an acceptable way of keeping elephants within a commercial industry is deeply worrying. The need for the many procedures restricting elephants' autonomy, social interaction and natural behaviour when intensively managing elephants in 'protected contact' systems, highlights their unsuitability for captivity.

This unsuitability is highlighted further by the risks to the lives and wellbeing of keepers and people around elephants and the financial dependency on tourism. As evidenced by the Covid-19 pandemic the decline in tourism has led to a crisis where captive elephants are at risk of starvation.

There are clear challenges in implementing such improved practices and not all captive elephants may benefit from them. But, these arguments should not prevent striving for such improvements or calling for a decrease in captive elephant populations.

Results

The findings of several in-depth studies on captive elephant tourism are included in this report. They are:

- the third iteration of our elephant camp assessment across most of South-East and South Asia
- a socio-economic study on mahouts in Thailand
- a detailed outline study of the commonly used elephant training methods in Thailand
- a summary of our three biennial global public surveys of 12,000 respondents to track attitudes and knowledge trends.
- a summary of our three biennial public surveys of over 1,000 tourists of the top nationalities visiting Thailand.

Together, they form a comprehensive analysis of the tourism industry driving captive elephant tourism.

Image: An elephant performs in a circus-style show at a venue in Thailand.



Animal welfare conditions at elephant tourism camps in Asia

Methodology

The elephant camp assessment, conducted between February 2019 and January 2020, assesses the scale of the captive Asian elephant tourism industry across Thailand, Sri Lanka, Nepal, India, Laos, Cambodia and Malaysia. It provides clarity about the conditions the elephants face in the industry by assessing conditions that affect their welfare at each venue.

This research is the third iteration of its kind, following our 2010 study on elephant welfare conditions in Thailand ⁶ and the more comprehensive study from 2015 which has an identical scope as the present one ⁷. This 2019–2020 study concludes a 10-year timeframe of monitoring welfare conditions of tourism elephants in Thailand, and five years for the other countries. It is the longest and most comprehensive study of its kind to date in defining trends and concerns in the captive elephant tourism industry.

The assessment focussed on elephants in venues destined for tourism; it does not reflect the entire captive elephant population. Elephants are sometimes kept at temples for ceremonies, used for logging or to carry heavy loads, or kept by government authorities for use in national park law enforcement activities. A welfare assessment of the conditions those animals face was not within the scope of this research. This choice of focus on tourism elephants was made due to our campaign focus. It does not suggest that elephants in other captive situations do not suffer or do not require attention.

The aim was to identify and assess as close as possible to 100% of the existing captive elephant tourism venues. These included: elephant riding camps; elephant shows in zoos; elephant-care tourism experiences, and venues focusing on providing better alternatives to captive elephants without offering performances or direct visitor interactions.

We identified the venues through a review of internet sources, guidebooks, interviews with local experts and street-by-street physical scouting for venues in tourist areas likely to have elephant attractions. Previously collected GPS locations of the venues identified in the 2010 and 2015 studies were also very useful.

This study only provides names of the highest-ranking venues in the Appendix. Other venues are not named because we acknowledge that practices may change; we would like to avoid misrepresenting venues in this report once they have implemented improvements.

All venues were visited by the researchers in person at least once, sometimes repeatedly, to document the situation and ensure an objective assessment not reliant on hearsay or anecdotal evidence. If it was not possible to conduct a personal visit to an

As outlined previously, captivity is not an adequate place for elephants as their needs can never be fully met there.

identified venue, this venue is not included in the analyses, yet we have listed them separately for transparency reasons in this report.

For each venue, a range of information was collected. This included everything that researchers were able to observe or extract through casual conversations and interviews with staff. They focussed on the number and genders of elephants; the way they were kept day and night; stereotypic occurrences; the daily routines; interaction with keepers, and activities the elephants were used for. Photographs and occasionally videos were taken to document the findings.

A rapid welfare conditions assessment was completed for each venue and a score sheet approach was used. This score sheet covered nine criteria considered to have a significant direct impact on an elephant's welfare. Table 1 shows the criteria and the associated sub-criteria of the well-established WelfareQuality® assessment system often used for livestock.⁶⁵ Each criteria was scored along a 5-point scale from 0-4 for each venue.

The total score of all nine criteria for each venue was converted into a single final score on a scale from 1 (worst) to 10 (best possible captive conditions). Where rounding was required, scores of .0–.4 were rounded down, while scores of .5–.9 were rounded up to the next digit.

It must be stressed that even a best score of 10 would only indicate best-practice captive conditions and is not suggesting that these would be adequate for elephants. As outlined previously, captivity is not an adequate place for elephants as their needs can never be fully met there.

This rapid welfare conditions assessment was created to allow for the large scope of this study; it does not attempt to be fully comprehensive. It also does not provide a direct measurement of an individual elephant's welfare; this would require long-term monitoring of behaviour combined with physical health parameters. Instead it evaluates the conditions that affect the elephants' welfare that they face daily. The study identifies key areas of welfare concern. In previous published studies this methodology has proved to give a good indication of the situation for elephants.

Table 1: Scoring criteria with relevant associated WelfareQuality® subcriteria.⁶⁶

Scoring criteria in this study	Associated WelfareQuality® subcriteria
Behavioural freedom	Expression of other behaviours, expression of social behaviours, thermal comfort
Hygiene	Absence of disease, comfort around resting
Environmental noise	Comfort around resting, absence of general fear
Rest area	Comfort around resting, ease of movement, thermal comfort
Naturalness	Expression of other behaviours, thermal comfort, absence of general fear
Social interaction	Expression of social behaviours
Diet	Absence of prolonged hunger, absence of prolonged thirst, expression of other behaviours
Visitor interaction intensity	Expression of social behaviours, expression of other behaviours, good human-animal relationship, absence of general fear, absence of injuries
Animal management	Absence of injuries, absence of disease, good human-animal relationship, absence of general fear, absence of pain induced management procedures

Findings

As of January 2020, 3,837 elephants were kept at 357 identified and assessed venues across Thailand, India, Nepal, Sri Lanka, Laos, Cambodia and Malaysia.ⁱⁱ This is an increase of 31% (932) of assessed elephants since 2015.

Elephant rides were offered at 57% (205) of venues, housing a total of 2,449 elephants. Eighty percent (165) of those venues – housing 2,078 (54%) of total elephants – used wooden or steel saddles. The remaining 20% (40) of venues offered bareback rides, without saddles, as part of experiences that teach visitors the basics of how mahouts manage their elephants.

Thirty two percent (1,214) of elephants at 46 venues took part in circus-style shows, often performing several times a day. At 98 venues, 16% (608) of elephants were used in washing and bathing activities, but not for rides. At 14 venues, 6% (228) of elephants were used only in feeding interactions; they were not washed, ridden, used to perform in shows or for selfie opportunities.

As of January 2020, 3,837 elephants were kept at 357 identified and assessed venues across Thailand, India, Nepal, Sri Lanka, Laos, Cambodia and Malaysia.

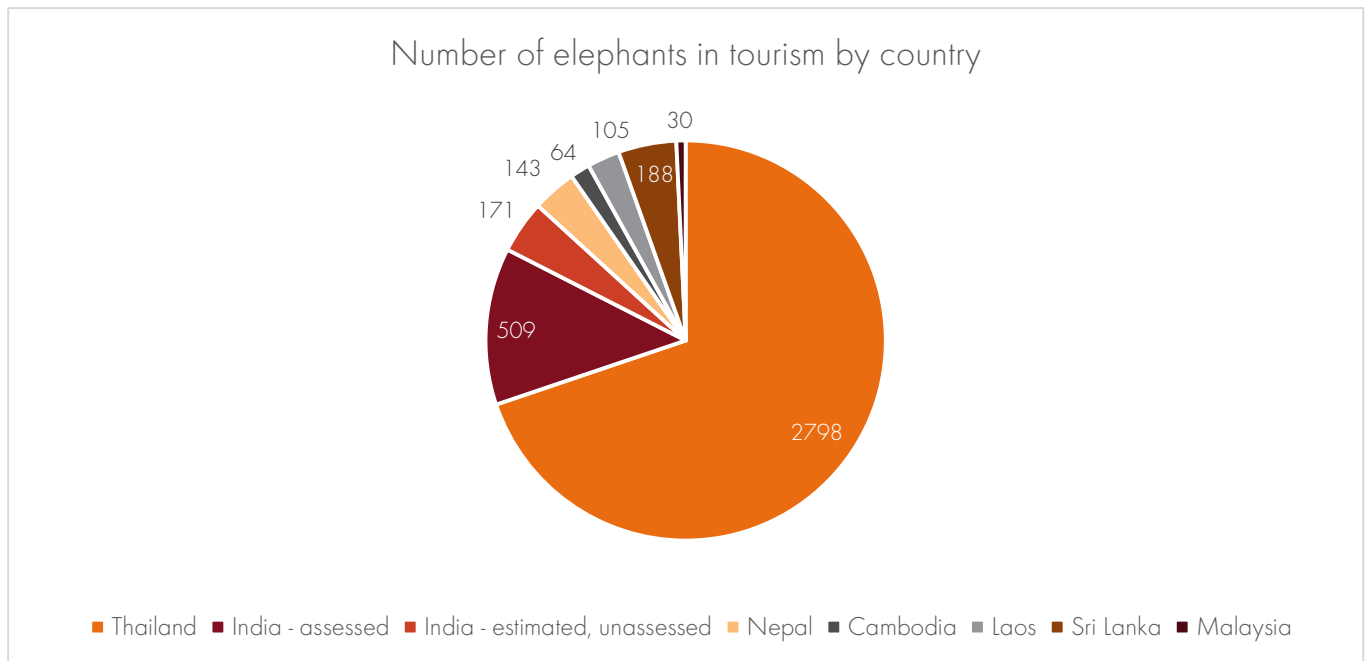
ⁱⁱ For Sri Lanka, Nepal, Cambodia, Laos, Malaysia and Thailand we are confident that our research has covered more than 90% of the existing venues. Due to India's size and despite best efforts in the research, we must assume that several elephant tourism venues there are not accounted for in this research. In the countries other than India, an additional 10 venues were identified, but were unable to be assessed. These house an estimated 60 elephants, 28 of which are housed at Wildlife Friends Foundation of Thailand (WFFT). While WFFT scored well on our previous assessments, permission to visit during this research was not granted.

At venues where feeding is the only interaction permitted between elephants and guests, this is commonly carried out over a barrier for safety reasons. In many cases, the elephants' participation in feeding is voluntary and they can leave the feeding area at will. A further 17 venues (5%) were observation only, where no feeding

or other activities were offered. These 17 venues housed 183 elephants, or just under 5% of all the elephants identified.

Nearly three quarters of the elephants assessed were used in Thailand (73%, 2,798) (Figure 1). Thailand has more than twice the number of elephant venues than the other countries combined.

Figure 1: The number of elephants in tourism by country.



Our research shows that 2,390 elephants (63% of all elephants) are kept in severely inadequate conditions. Severely inadequate is represented by welfare scores of 5 or lower on a scale from 1 (worst) to 10 (best) (Figure 2). For those elephants, chaining is a common feature both day and night when not used in activities.

Typical welfare concerns include being allowed only the bare minimum of social interaction if any. They are fed an inadequate diet with very little variation, have limited access to appropriate veterinary care and generally face stressful environments. These can include loudspeakers, concrete-ground shelters, large visitor groups or noisy roadside locations. During the day, when not being used for rides or shows, 23% (898) of the elephants were chained on short chains of a maximum 3m length. A further 2% (94) of elephants were chained on long chains outside of rides and 54% (2,078) of elephants were kept at venues offering saddled rides to tourists every day.

During the day, when not being used for rides or shows, 23% (898) of the elephants were chained on short chains of a maximum 3m length.

Improved conditions, represented by scores from 6-8, were experienced by 1,168 elephants (30% of all elephants). Their venues provided a more natural environment, less intensive tourist activities and no saddled rides. These venues also usually featured more knowledgeable and caring staff, limited working hours for the elephants and usually better working conditions for the mahouts. Despite these improvements, elephants were still mostly restrained by chains when not participating in activities. However, these chains were usually long chains of 5-15m or longer.

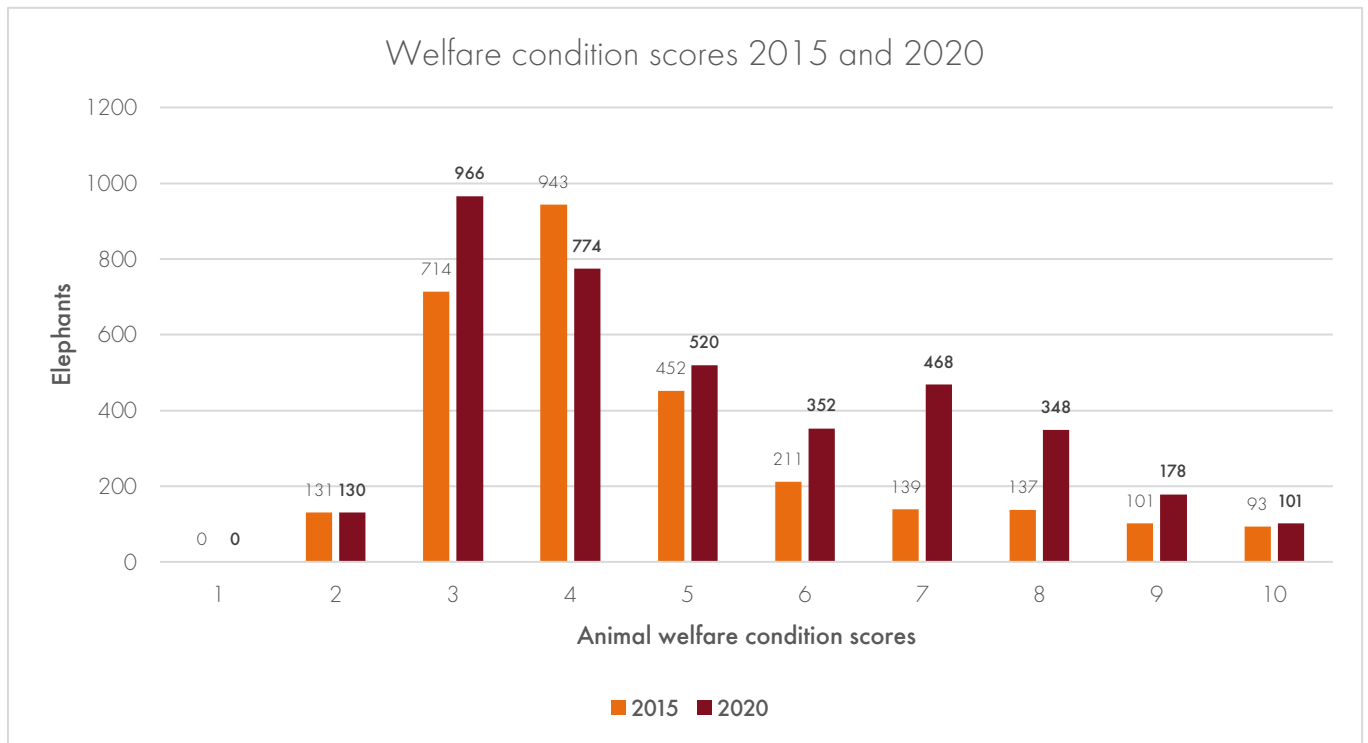
Tourist activities commonly focussed on bathing and washing elephants, feeding them and learning some basic elephant facts. Most of these activities require constant control - either physically or verbally - of the elephants by their mahouts, so that tourists can participate in these direct interactions.

Finally, 279 elephants (7% of all elephants) were kept at venues where conditions are described as best possible under captive conditions. The best possible means receiving scores of 9 or 10.

Typical conditions at these higher-welfare venues usually included chain-free access to enclosures or natural habitat during the day and sometimes at night. Elephants were also allowed to socially interact with other elephants on their own terms and form social bonds. There were also usually opportunities to browse or forage themselves in natural habitat and demonstrate a wider range of natural behaviours. This was facilitated through free access to varied terrain that often included sand or mud pits. Visitors at these venues had very limited or no direct interaction with the elephants; they primarily enjoyed observing elephants simply being elephants, or preparing food treats for them.

Activities Offered	Pros	Cons
Shows		<ul style="list-style-type: none"> • Reduces elephants to circus-style entertainers. • Repetition of unnatural tricks poses injury risk. • Harmful training techniques. • Loud crowds and noisy environment. • Under full mahout control - no autonomy.
Saddled rides	<ul style="list-style-type: none"> • Regular exercise through the riding activity if visitor demand is adequate. 	<ul style="list-style-type: none"> • Under full mahout control - no autonomy. • Monotonous activity. • Potential injury and discomfort due to unnatural weight bearing and if inadequate saddles. • When visitor numbers are low, elephants may be chained for long periods during the day.
Washing, bathing and feeding, or Be a mahout (1hr, half-day, full-day, multi-day visits)	<ul style="list-style-type: none"> • Half-day and full-day activities may allow some time for autonomous behaviour and socialisation. • Venues with half-day and full-day activities are often located in more natural environments which allow foraging opportunities. They may include features that encourage some natural behaviour, such as mud and sand pits for bathing. 	<ul style="list-style-type: none"> • Close interaction by visitors requires full mahout control, particularly during bathing / feeding. • Higher risk of injury for visitors through close interaction with elephants. • 1hr bathing activities are of serious concern - elephants may be washed repeatedly over the course of the day, damaging skin and providing no additional hygiene benefits. • Risk of glossy marketing and promotion as an 'ethical no-ride' venue covering up potentially poor elephant management.
Observation only	<ul style="list-style-type: none"> • Offers the best opportunities to observe elephants behaving more naturally. • Offers highest autonomy for elephants, with the freedom to socialise, forage and move at will. • Offers elephants an environment with free choice of clean water, pools for bathing and mud/dust baths. • Lower visitor footfall due to higher pricing - less disturbance for the elephants. 	<ul style="list-style-type: none"> • Risk of glossy marketing and promotion as an 'ethical no-ride' venue covering up potentially poor quality elephant management. • Risk of limited movement and so lack of exercise if elephants are not incentivised with food or other enrichment to encourage them to use the full available space. • Requires skilled mahouts who understand how to integrate elephants in compatible groups and supervise elephants with the least amount of interaction possible.

Figure 2: Welfare conditions for elephants at venues in Sri Lanka, India, Nepal, Thailand, Laos and Cambodia in 2015 and 2020. Note: As Malaysia was not studied in 2015, the 30 elephants there have been removed from the comparison.



While these welfare condition scores are based on a relatively complex scoring system, our data shows that it is also possible to gain general indications of the welfare conditions by simply looking at the activities offered by the venues.

Figure 3 shows that venues offering elephant shows or saddled elephant rides dominate the lower ranking welfare scores. They are followed by venues that only offer rides without saddles, such as venues that offer ‘Be a mahout’ for a day. Observation-only venues tend to dominate the higher ranking scores.

Medium-high scores were usually achieved by venues not offering any riding, but close direct interaction, such as washing elephants as part of a half or full-day programme. High welfare scores were achieved by venues only offering feeding opportunities. The highest welfare condition scores were achieved by venues only offering observational activities. These venues offer no close direct interaction with the elephants, which also have free-range opportunities.

There are exceptions to these rules as Figure 3 also shows. For example, venues with scores of between 5 and 7 can be found across several different activity types. In these mid-scoring venues, it is the conditions of the elephants outside of their activities which affect their scoring. For example, a noisy, roadside venue where elephants are kept on short chains, without shelter, would score

poorly despite only offering feeding. Conversely, a venue which offers bareback riding may score well if the elephants are off chain and free to roam in the jungle outside of short working hours.

It is important to recognise that any venue must implement best-practice general elephant management practices independent of the tourist activity offered. Regular health checks, access to adequate veterinary care, balanced nutrition and a healthy balance of exercise are important foundations for the welfare of elephants. Simply offering observation-only or feeding activities without implementing such general elephant care best-practice aspects should be addressed by the venue management immediately.

Figure 4 clearly shows how the average score of a venue increases as the intensity of interaction increases, with venues offering shows and riding having the lowest scores and observation-only venues, the highest.

Figure 3: Animal welfare condition scores according to their offered activities. Venues offering elephant shows or saddled riding rank lowest, followed by venues offering rides without saddles and venues offering only washing of elephants. Venues offering only feeding activities follow, with venues offering purely observational activities receiving highest scores for the welfare conditions offered to their elephants.

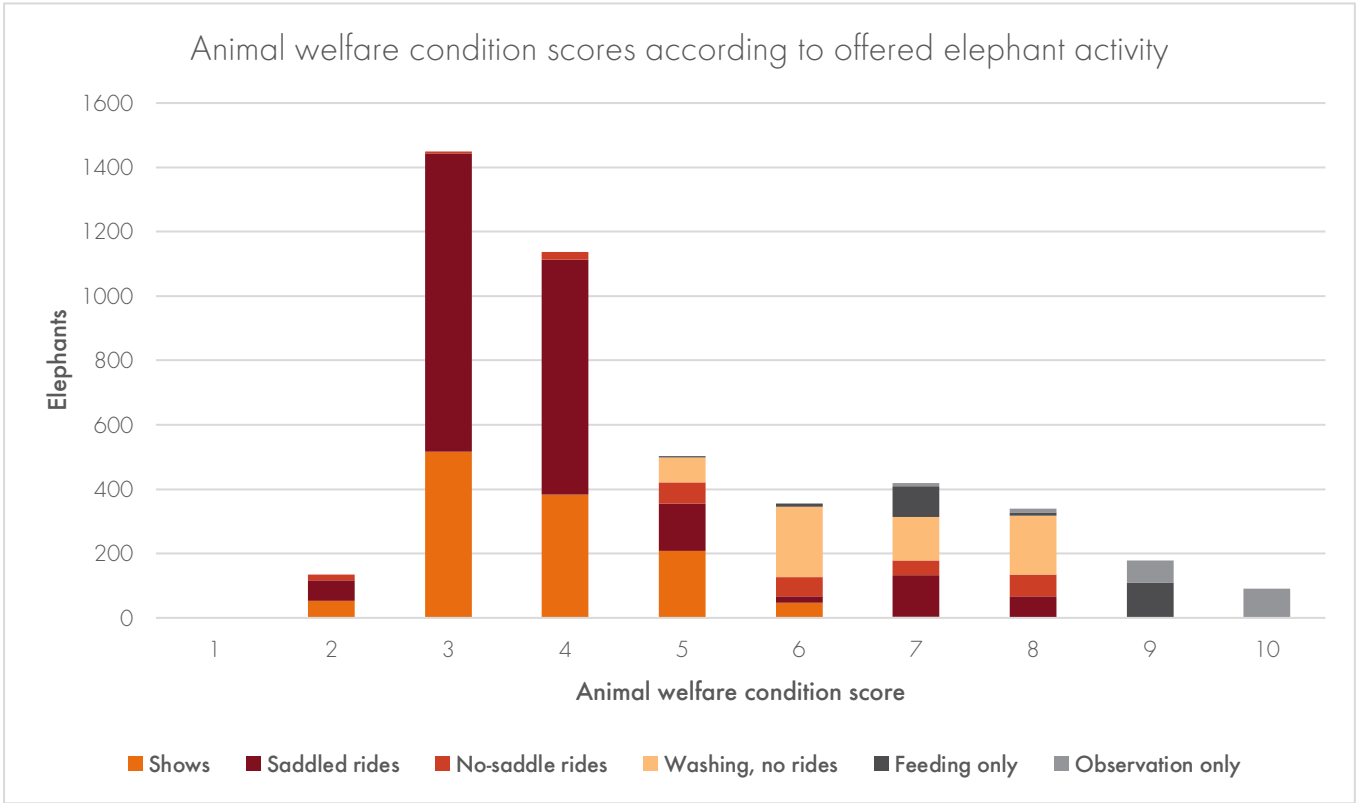
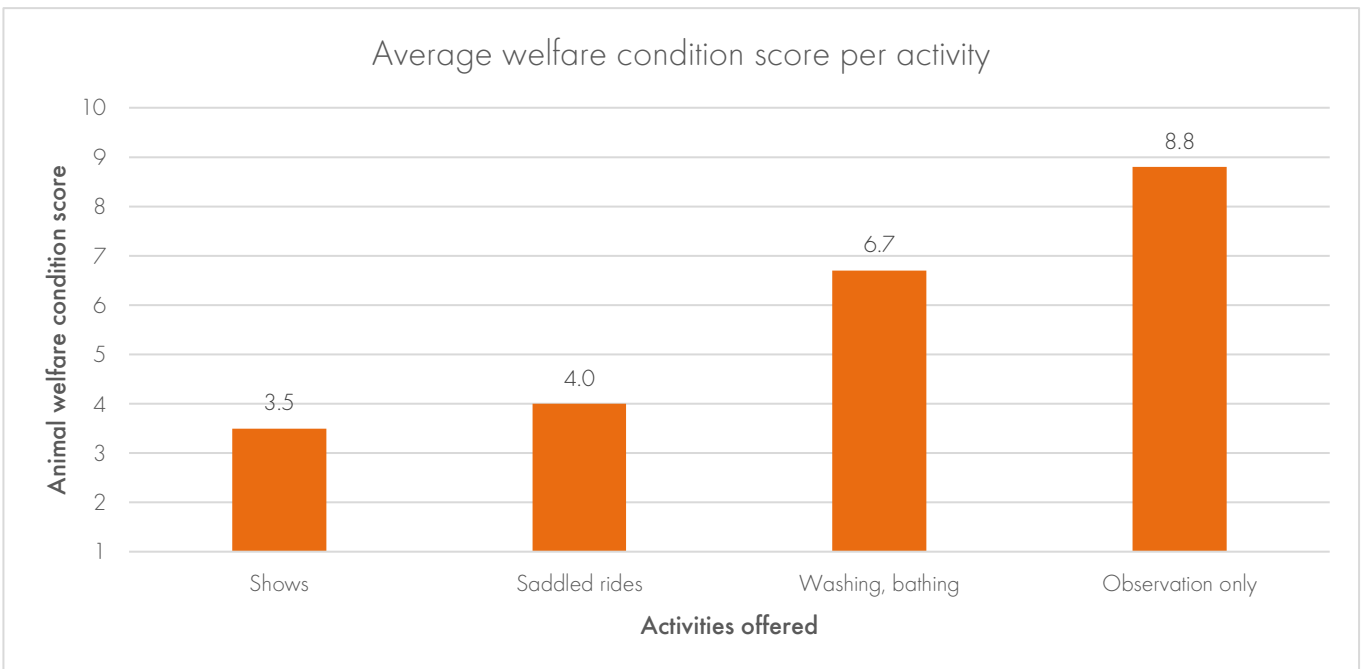


Figure 4: The relationship between average welfare condition scores and the activities offered at venues.



Stereotypies and welfare conditions

The assessment used in this study primarily includes provisional factors – factors in the elephant’s environment that affect its welfare. However, we also collected data on direct welfare indicators, such as behavioural abnormalities including stereotypies. Stereotypic behaviour in wild animals is only found in captivity. It is usually an indicator for acute stress or a manifestation of extended exposure to chronic stress or poor welfare in the past, which can lead to chronic behaviour problems if not addressed.

Stereotypies are commonly caused by restraint, that may not allow the elephant to carry out its desired actions at a specific time. This in turn leads to frustration.

Typical elephant stereotypic behaviour can involve repeatedly shifting weight from one side to the other, moving a few steps forward and backward continuously, or bobbing the head. There are also numerous other stereotypic behaviours.

Stereotypic behaviours are certainly not the only behavioural abnormality indicating welfare concerns, but others tend to be more difficult to diagnose, especially in short observation times. Because stereotypic behaviours are suppressed when elephants

are involved in activities, we did not include active elephants when researching stereotypies.

Of the 1,824 elephants that were not in any activity during the assessment visit, 19% (343) were displaying stereotypies. This is an improvement since 2015, where 30% of inactive elephants were displaying stereotypies. This can possibly be explained by an increase in mid-scoring venues in Thailand, which house almost three quarters of elephants in tourism, and is discussed further in the Thailand specific results.

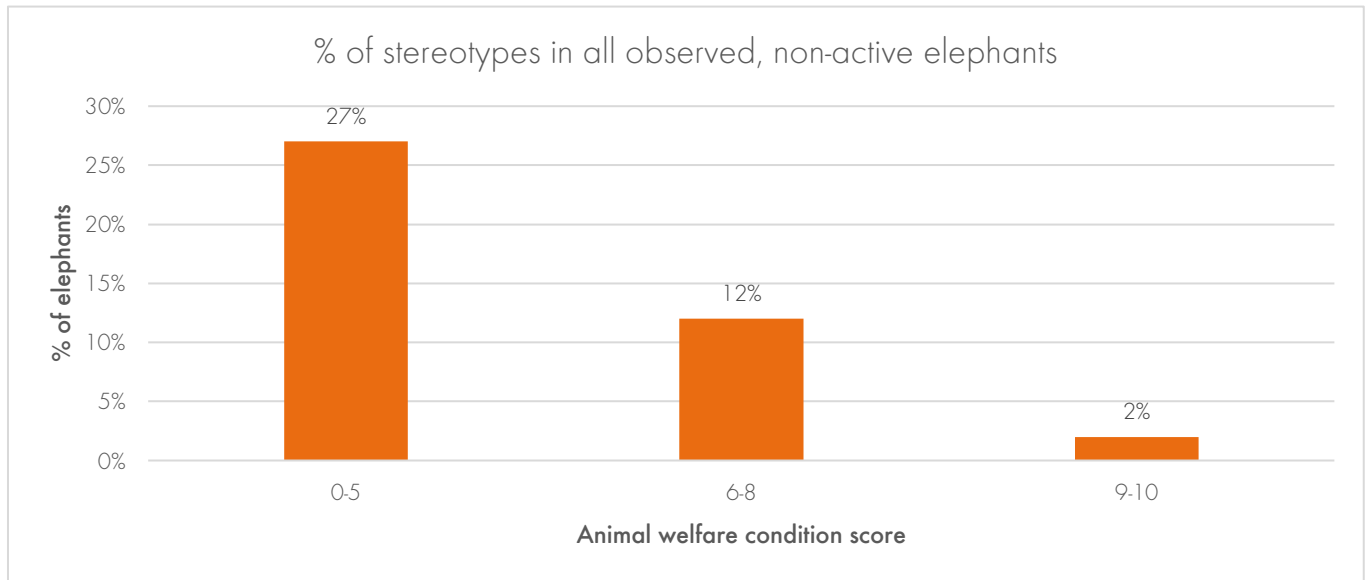
We documented a clear correlation between the ratio of elephants expressing stereotypies and the welfare scores for the venue in which the elephants were kept (Figure 5). In venues with scores of between 0 and 5, representing severely inadequate conditions, 27% (272) of elephants that were not engaged in a tourist activity expressed stereotypies.

In venues with scores of 6-8, we still documented 12% (66) of elephants with stereotypies. The ratio continues to decline with higher welfare scores, with just five elephants (2%) displaying stereotypies housed at venues with the highest scores of 9 and 10.

Image: A young, underweight elephant tied up at a venue in Thailand. At this venue, 50% of the elephants demonstrated stereotypies including head-bobbing and pacing.

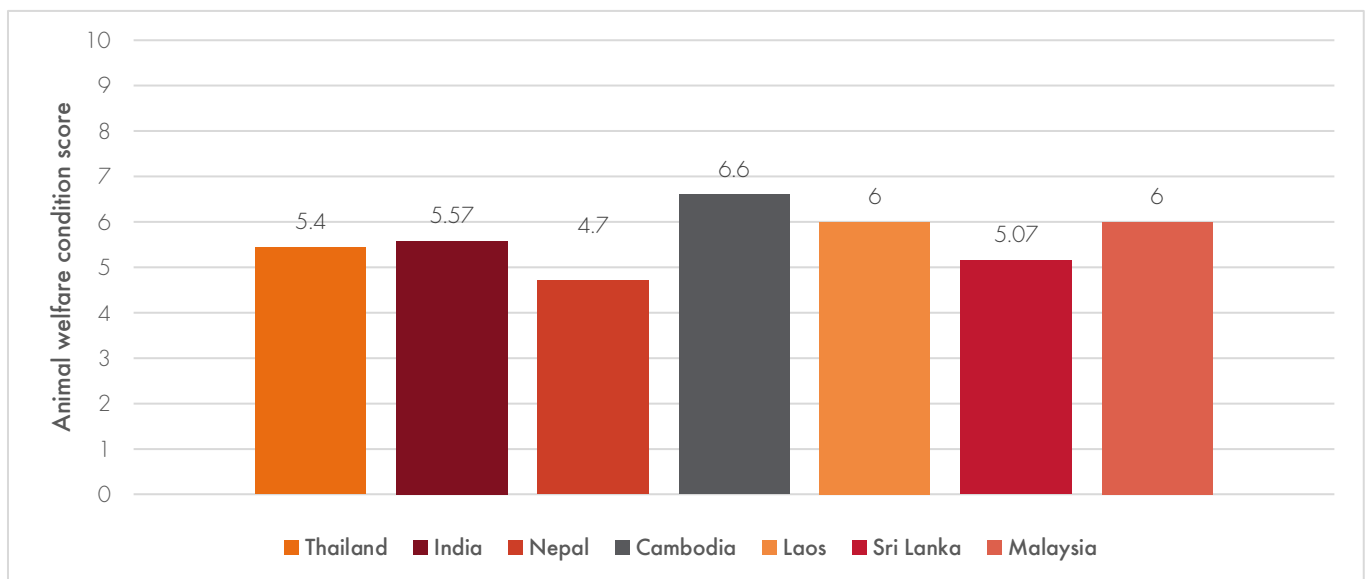


Figure 5: Percentage of stereotyping elephants in all observed, non-active elephants. Lower welfare condition scores clearly show higher percentages of stereotypic behaviour problems, possibly indicating higher stress levels or discomfort. The percentage of stereotypies decrease as welfare condition scores increase.



In comparison, the various countries show similar scores in their elephant welfare conditions, when averaging all individual venue scores (Figure 6). All countries, except Cambodia, show average scores of between 4 and 5 points. Cambodia scores significantly higher, as of the 64 elephants identified, over a quarter (17 elephants) of those live in three venues scoring 8 or higher. Most other countries also featured at least one venue that reflected a growing recognition of implementing higher welfare standards and avoiding conventional elephant entertainment.

Figure 6: Average welfare condition scores of elephant venues by country.



Thailand

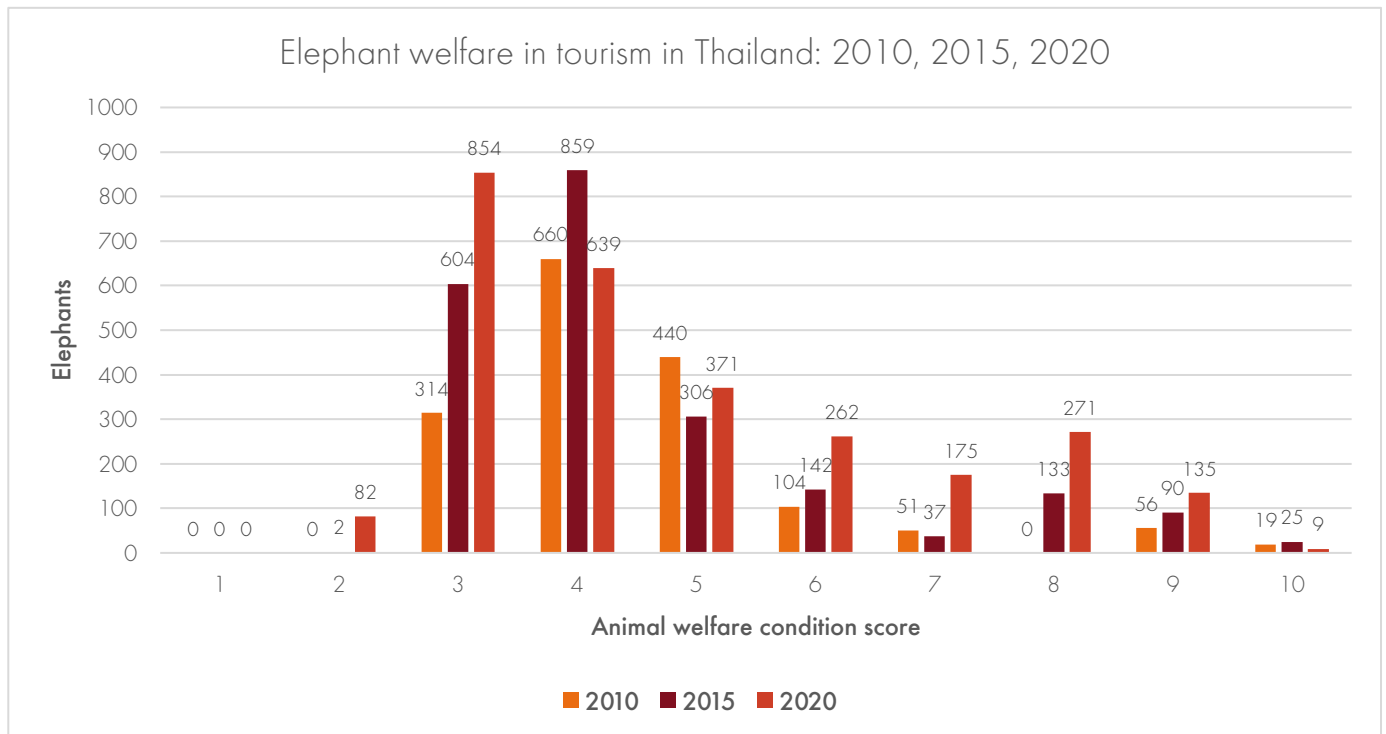
Since our first research in Thailand in 2010, there have been dramatic changes within the elephant tourism industry. Between 2010 and 2015, the number of elephants at Thai tourism venues has increased by 30% from 1,688 to 2,198. In the past five years, up until January 2020, this figure increased by an additional 27%. This means that in fewer than 10 years the number of elephants in the captive elephant tourism industry increased by 1,110 animals. This represents a 70% increase and brings the total number of elephants at Thai venues to 2,798¹.

Our research in Thailand identified 263 elephants below the age of five at the assessed tourism venues, which calculates to an average of over 50 newborn elephants per year. This is an increase in comparison to our findings from 2015 when approximately 30 calves were being born annually.

As of January 2020, 70% of elephants were living in severely inadequate conditions scoring 5 or below and 25% were living in improved medium welfare venues, scoring 6-8. Just 5% of elephants were living in high welfare venues scoring 9-10.

Our research over the past 10 years has recorded the changes in the distribution of elephants in Thailand according to welfare condition scores (Figure 7). Since 2010, there has been a 92% increase in the number of elephants living in the highest scoring venues, from 75 to 144 elephants. Although this growth has slowed in the last five years, between 2015 and 2020 the number of elephants in the highest scoring venues still increased by 25%.

Figure 7: Number of captive tourism elephants in Thailand and the welfare conditions scores that they are kept at. Comparison of results from the 2010, 2015 and 2020 World Animal Protection studies.



ⁱⁱⁱ This does not include an additional 60 elephants housed in 10 venues which were identified but unable to be assessed.

Movement away from elephant riding

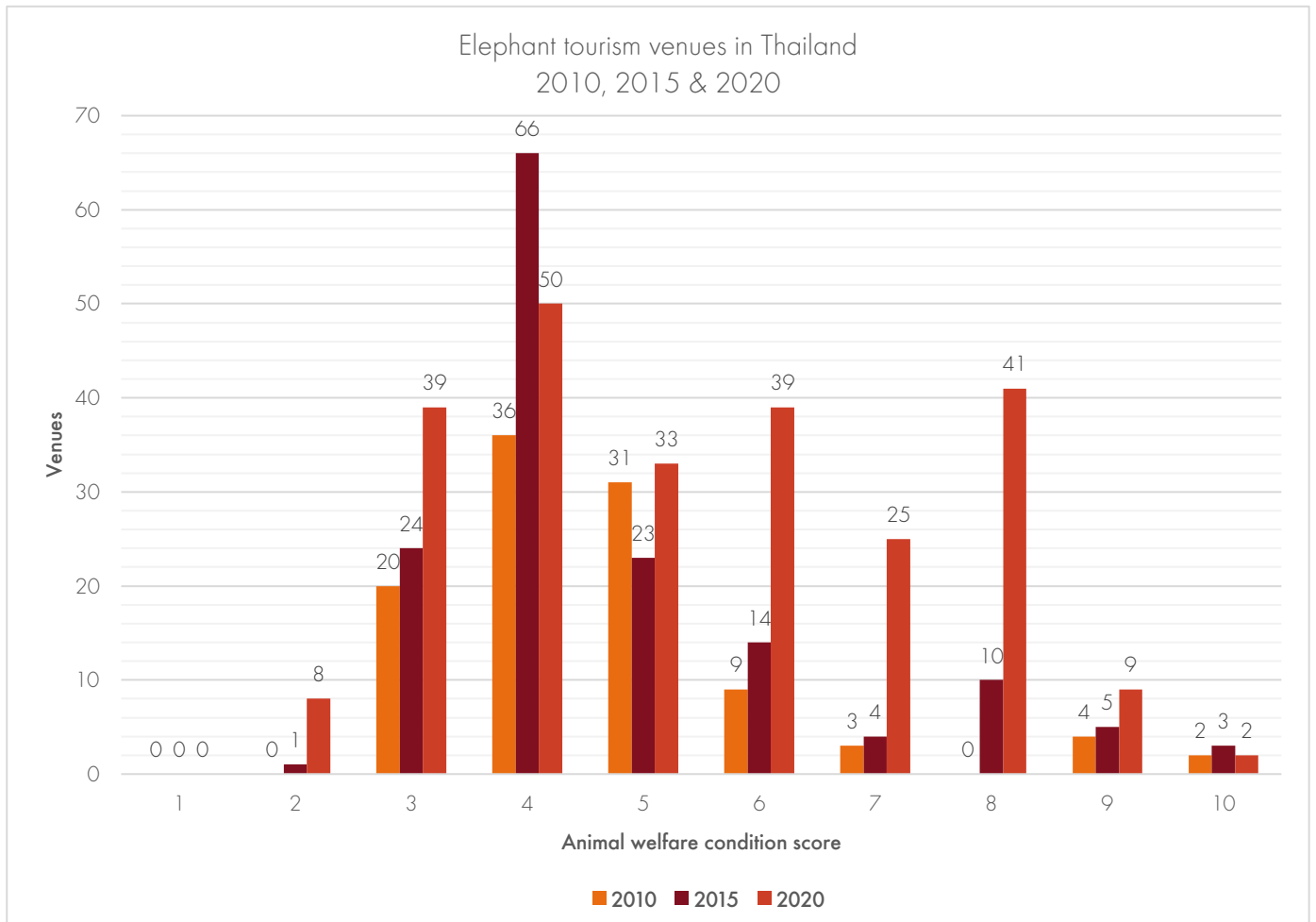
Between 2010 and 2020, the number of elephant venues has more than doubled, growing by a staggering 134%. In the last five years alone, venue numbers have increased by 64% from 150 assessed venues to 246.

Most of this increase occurred in the group of medium welfare venues scoring in the 6-8 points range regarding animal welfare conditions (Figure 8). They represent 43% of all venues and house

25% of all tourism elephants, compared to just 14% of elephants in 2015 and 9% in 2010. These are typically venues with a handful of elephants, offering washing and bathing or 'Be a mahout' opportunities.

Venues offering elephant washing have seen an incredible increase in the past five years, more than tripling in numbers from 50 venues in 2015 to 161 venues in 2020.

Figure 8: Number of elephant venues in Thailand and their animal welfare condition scores as established by World Animal Protection in 2010, 2015 and 2020.



Many of the medium welfare venues are found in the north of Thailand, around Chiang Mai, aside from several notable exceptions dotted around the country. The increase of these types of venues can be explained by the continuing growth of awareness of animal welfare, especially among younger travellers. Venues have recognised this awareness, which has led to many of them labelling themselves 'rescue centre', 'retirement place', 'sanctuary', or 'refuge'. This is despite continuing to offer conventional commercial elephant tourism activities.

It is difficult for a tourist to know whether these labels are accurate - especially before booking a visit. In several venues labelled this way our researchers observed several welfare concerns. These included: frequent short chaining; separation of young calves and mothers; demanding elephant activity schedules, and no intention to prevent elephant breeding - the core problem of elephant captivity.

Many of these venues also seemed to be trading their elephants very frequently. This meant there was no guarantee that their elephants would actually benefit from improved conditions for the rest of their lives.

The increase of tourist demand for ethical and 'intimate' elephant experiences might also explain the decrease in the average number of elephants per venue. In 2010, the average number of elephants per venue was 15, this decreased to 14 by 2015. As of January 2020, the average number of elephants at all Thai venues was 11. In venues scoring 5 or below, there was an average of 14 elephants per venue.

When looking at mid-range venues scoring 5-7, however, this average decreases to 6.7. This is these venues were trying to provide more 'intimate' experiences involving fewer elephants to entertain the same number of tourists. Some mid-range venues operated up to a dozen locations across which their 80+ elephants were distributed. A positive aspect of some washing and bathing venues is that they tend to allow at least some of their elephants to have social contact with each other. This addresses a crucial need of these highly social animals.

The significant growth in the number of mid-range venues, and the elephant numbers they hold highlights the adaptability of the elephant tourism industry in meeting tourist demand for supposedly more ethical elephant experiences.

Image: Tourists crowd around elephants during a mud-bathing activity at a 'no riding' venue. Washing and bathing venues like this still allow intensive contact between guests and the elephants, presenting concerns for the welfare of elephants and safety of visitors.



Despite our research showing the trend towards better welfare conditions at mid-range bathing and washing venues, these interactions are only possible through cruel early training to obey commands. And at venues allowing direct interaction, mahouts must remain in relatively close control of their elephants to protect the visitors' safety.

Because direct contact activities must rely on traditional cruel training, sustaining demand for such activities is clearly not a long-term solution to ending commercial elephant captivity. Close interaction between visitors and elephants may also yield an increased risk of injury for the visitors, especially with young elephants around.

Our study also positively shows that there is a 25% increase in the number of elephants at venues with scores of 9 or 10 compared to 2015. In January 2020, 144 elephants were kept at primarily observation-only venues. These venues met criteria that suggest best captive conditions, while recognising that elephant needs can only fully be met in the wild (Figure 7).

This number includes venues that were putting considerable effort into consistently improving their care for their elephants. They emphasised elephant welfare before profit while generating money to continue running their venues to these higher standards. Many of these venues were in keeping with our elephant-friendly guidelines.

What is an elephant-friendly venue?

A true elephant-friendly venue is purely observational for visitors, where the safety of visitors and wellbeing of elephants reduce the need to constantly control the animals. The elephants are managed in humane ways through the mahout who allows a maximum of behavioural and spatial freedom.

Elephant-friendly venues should also implement best-practice elephant management protocols. These can involve frequent health checks, adequate veterinary care, healthy amounts of exercise through incentivising movement, and adequate nutrition. They allow for social grouping of compatible elephants and try to provide access to natural habitat as much as possible to encourage expression of natural behaviours.

These venues also provide a safer work-environment that allows for professional self-development of the venue's mahouts. Importantly they prevent the breeding of elephants to address the principal problem of elephant captivity and focus their resources on the wellbeing of elephants already in the industry.

Image: Elephants at an elephant-friendly venue in Thailand. Here the elephants are free-roaming and have the opportunity to express a wide range of natural behaviours, including socialisation with other elephants.



A true elephant-friendly venue is purely observational for visitors, where the safety of visitors and wellbeing of elephants reduce the need to constantly control the animals.

More elephants in the worst conditions

These developments are encouraging and are having a direct positive effect on the welfare of the elephants in these improved conditions. However, our research also shows that between 2010 and 2020, there was a dramatic 135% increase in the number of elephants living in the very worst of conditions, scoring 3 or below. Since 2015 alone, there has been a 54% increase in elephants living in this same scoring category.

The 1,096 elephants we found at venues scoring 3 or under were housed in conventional riding and show venues. There they were chained for most of the day, often in inadequate shelters featuring concrete ground or unhygienic conditions. They had little or no interaction with other elephants and had to perform in strenuous and stressful activities. In these lowest scoring venues, circus-style shows were frequent, with 56% (651) of show elephants living at venues where shows were held more than three times per day. Forty percent (470) of show elephants lived at venues with two to three shows daily.

As in 2015, our research suggests that there is an increased demand for intensive riding and show venues. This can be explained by an overall increase in the number of tourists, particularly from countries such as China, where animal welfare awareness is still lower.

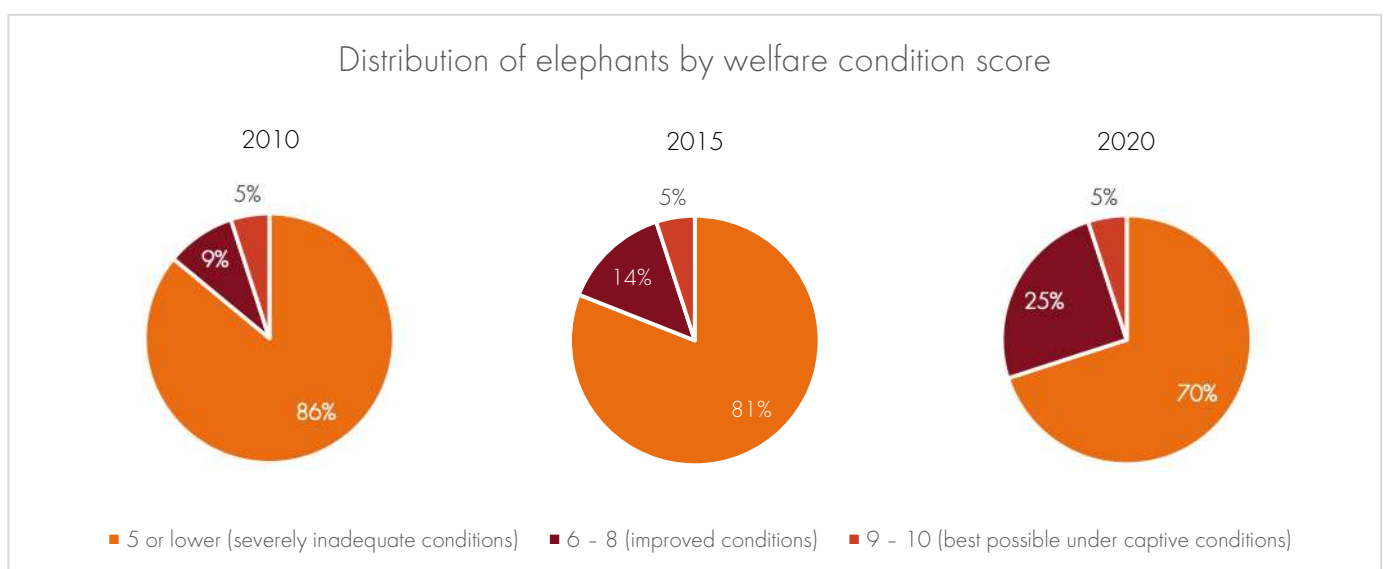
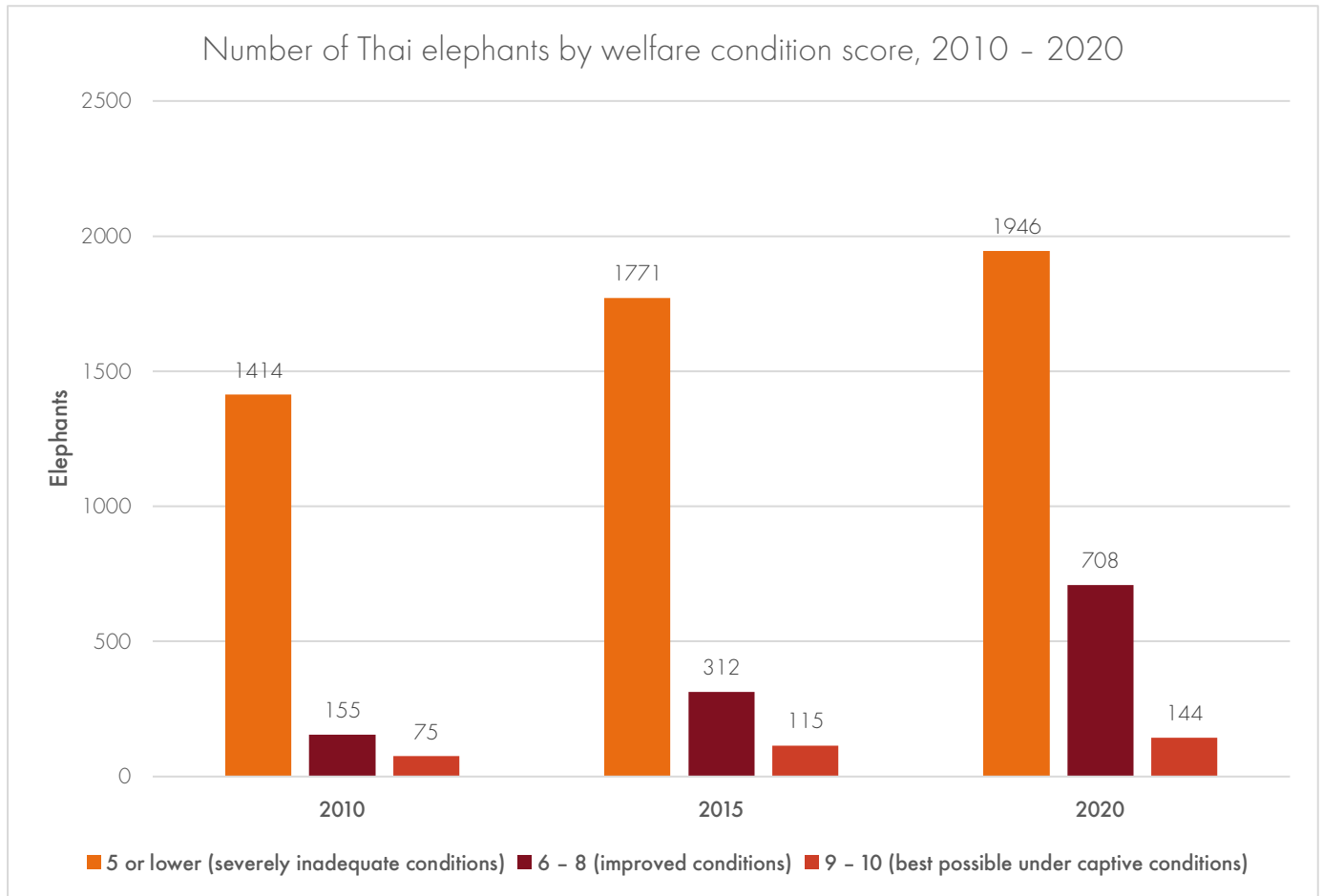
Those tourists with a higher awareness of animal welfare have driven real change. They have increased the proportion of elephants experiencing improved conditions.

Thankfully, our consumer attitude surveys show that attitudes towards animal welfare in China and other Asian countries are changing to the positive as well. Several industry-leading travel companies in China have joined our list of more than 250 travel companies worldwide pledging to stop selling elephant rides and instead offer humane alternatives. Our chapter in this report on the role of the travel industry offers more detail.

The captive elephant tourism industry can only be gradually and successfully phased out if the demand for elephant entertainment decreases simultaneously with the reduction of captive, commercially used elephants. Although rising tourist numbers have led to higher numbers of elephants at low scoring venues, those tourists with a higher awareness of animal welfare have driven real change. They have increased the proportion of elephants experiencing improved conditions (Figure 9).

By going further and supporting truly elephant-friendly venues, this will enable a real shift towards better conditions for the existing elephants. It will also support efforts to gradually decrease the number of captive elephants in this industry.

Figure 9: Comparing the number of elephants in Thailand, grouped by animal welfare condition scores. While the numbers of captive elephants continue to rise, our research shows a shift in the proportion of elephants from poor towards middle scoring conditions.



Other countries

India

In 2005 and 2006 we funded research into the welfare of elephants in India. This was conducted by Compassion Unlimited Plus Action (CUPA) and Asian Nature Conservation Foundation (ANCF). The findings highlighted severe welfare problems for most captive elephants in India. However, the exact numbers of elephants used specifically within tourism venues is unknown. For this research we used CUPA and ANCF's data and our own desktop and in-field research to estimate that we assessed approximately 75% of India's captive elephants working specifically in tourism.¹² In total, we assessed 21 tourism venues housing 509 elephants.

Captive elephants are kept by the state governments in forest camps, zoos, or some temples. They are also kept by circuses, or by private owners using them for tourism, begging or other purposes. In India, we found that 44% (225) of the elephants were kept in severely inadequate conditions, while 51% of the elephants were housed in medium welfare venues. Just 4% of the assessed elephants that were accessible for tourists – those 23 living at the Wildlife SOS Elephant Conservation and Care Centre – lived in higher welfare conditions.

Two additional elephants live in high welfare conditions at the Wildlife Rescue and Rehabilitation Centre (WRRC) in Bangalore, where our researcher visited upon special request. The centre is not open to the public to minimise stress to the animals, so WRRC elephants have not been included in our statistics

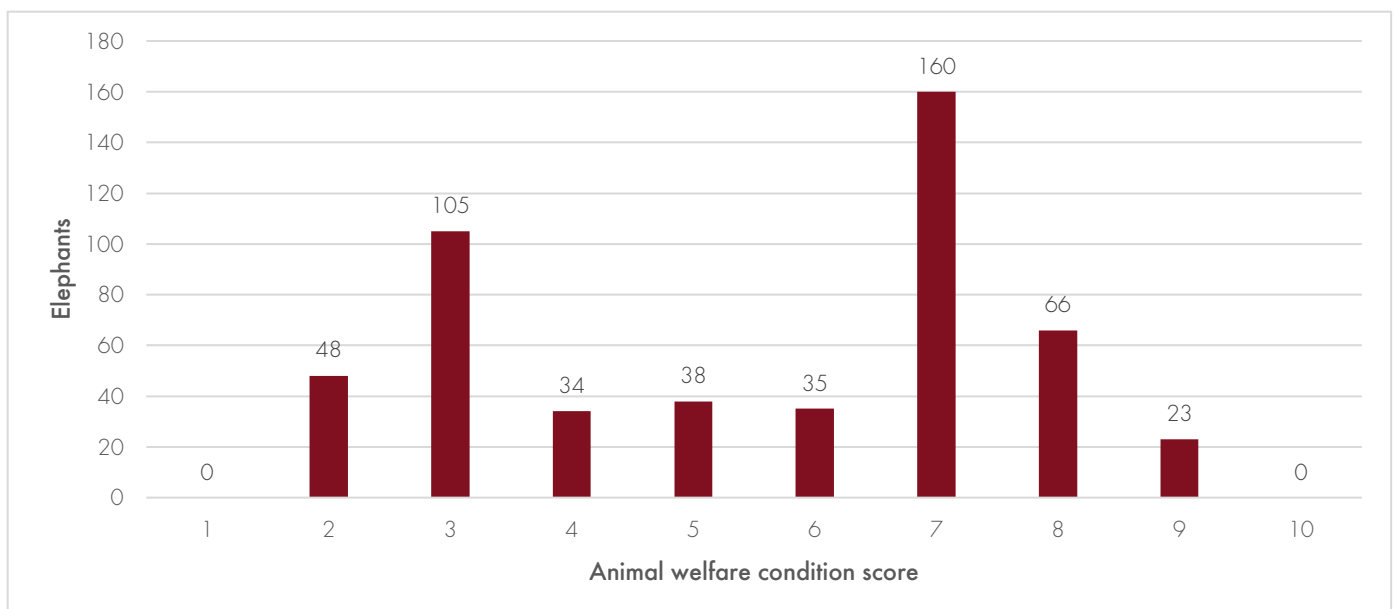
Of the 210 elephants, observed by our researchers, that were not engaged in an activity, 42% (89) were kept on short chains of 3m or less. This severely affected their mobility. A further 30% (62) were kept on chains between 3 and 15m long.

Overall the average welfare conditions of elephants in India are comparable to other countries we assessed, it is important to note the distribution of elephants across the welfare conditions (Figure 10). While 30% (153) of elephants live in venues scoring just 2 or 3, 31% (160) of elephants lived in medium welfare venues scoring 7. The relatively high number of elephants living at venues with this score is due to four venues based in or around national parks and reserves.

The elephants at these venues are owned by the forestry department and have lives that would be considered unusual in Thailand. While they may offer rides for one or two hours a day, the rest of the time the elephants are not used to entertain tourists. Instead, many spend their days with their mahouts in the forest, while some are used in anti-poaching programmes.

Some may be chained on long chains for periods of the day, but our researchers found there were ample opportunities for them to express natural behaviour. Elephants at these venues could socialise, forage, mud bathe and on occasion mix with wild elephants, all aspects which would improve their welfare, despite rides being offered.

Figure 10: Welfare condition scores for elephants in tourism in India.



Regarding activities available to tourists, our research found more than 70% of the elephants were housed at venues offering rides. Saddles were used at more than 86% of riding venues; 8% of elephants were used in washing and bathing activities, but no riding. Just 2% of elephants lived at observation-only venues, where no interaction between the guests and elephants was permitted.

In India, no elephants are made to perform in shows as part of their daily routines. There were no venues offering washing and bathing activities without also offering rides, a very different situation to that found in Thailand.

Nepal

In Nepal, most elephant tourism venues are located near the buffer zone of Chitwan National Park. Our research found the number of tourism elephants in Nepal has decreased by 8% between 2015 and 2020, from 155 to 143 elephants.

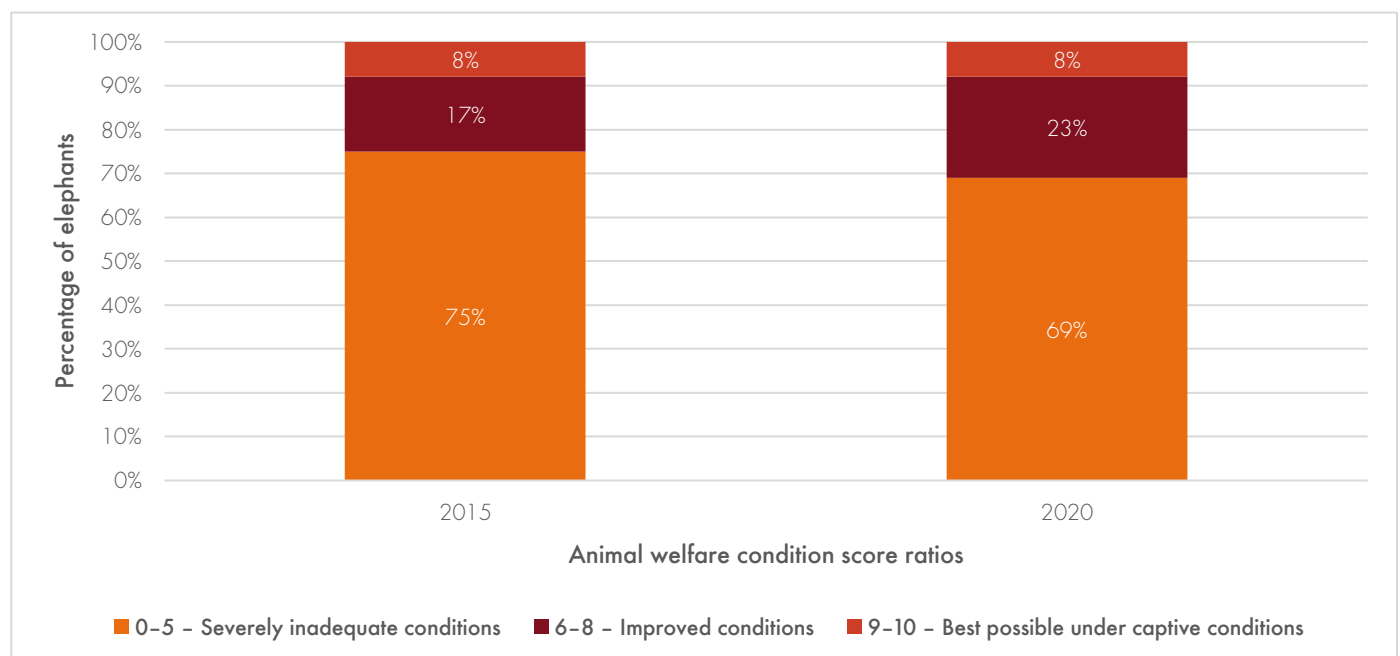
In contrast, the number of venues has increased by 53% in the last five years, from 36 to 55 venues. While the number of venues has increased, the average number of elephants per venue has decreased from 4.3 to 2.6 during the same period. Additionally, the number of adult males has halved since 2015 from 22 to 11.

We also found that between 2015 and 2020, the percentage of elephants living in severely inadequate conditions decreased, and those living in improved conditions at medium welfare venues increased (Figure 11).



Image: Government-owned elephants at a tiger reserve in India. Although some of these elephants will offer limited rides, venues in Indian reserves and national parks typically offer improved conditions when compared to riding venues in Thailand.

Figure 11: The percentage of elephants in Nepal according to welfare condition scores in 2015 and 2020.



Unlike Thailand, shows were not offered at Nepalese venues. Instead riding was the predominant activity with 71% (101) of elephants being used for rides. Of the venues offering rides, 83% (40) of the venues offered rides lasting one to two hours and all use saddles. There were four observation-only venues housing 13 elephants, or 8% of the total Nepalese elephants. Two of the observation-only venues – Tiger Tops and Association Moey – scored animal welfare conditions scores of 9 or 10.

There are two other observation-only initiatives trying to provide better alternatives for their elephants which also scored well above the national average. There were no venues where feeding was the only activity. Instead, the 28 elephants at venues where feeding took place were also available for selfies posing which required close contact.

Sri Lanka

In Sri Lanka, we assessed all 13 venues that housed 188 elephants. This is an increase of 13% or 22 elephants since 2015 when 166 elephants were kept at 12 venues. More elephants – 46 (24%) – are now living in severely inadequate conditions scoring 5 or lower compared to 2015 when there were 36 (22%) living in these conditions (Figure 12).

We found improved conditions for 48% (90) captive elephants at medium scoring venues. This seems positive, but there are 2% fewer elephants living in improved conditions compared to the 2015 results.

The percentage of elephants living in the best captive conditions had not changed since 2015 with 28% (52) elephants living in high-welfare conditions at a single venue, Elephant Transit Home. Here there is a clear policy against elephant entertainment and the ultimate aim is to reintroduce their elephants into the natural habitat. As in 2015, this Elephant Transit Home was the highest scoring Sri Lankan venue; its population has increased by 13% from 46 to 52 over the past five years.

In terms of venue size, Sri Lanka is home to two large venues where 75% (141) of the elephants are housed. The other venues have on average 4.2 elephants per venue. Riding was again the most popular activity, with 62% (8) of venues offering rides.

While in Nepal all riding venues used saddles, in Sri Lanka 95% (35) of the elephants at riding venues were ridden bareback. Shows were offered at two venues, housing 6% (12) of the total elephants in Sri Lanka. Eighteen percent (33) of elephants at 62% (8) of venues also take part in washing activities. All riding venues, except for one, also offered washing as an option.

Figure 12: The percentage of elephants in Sri Lanka according to welfare condition scores in 2015 and 2020. Although the ratio of elephants living in high welfare conditions has remained the same, there has been a marginal increase in the ratio of elephants living in severely inadequate conditions.



Laos

In Laos, we assessed 105 elephants across 11 venues. The number of venues has increased by 83% (6) and the number of elephants by 78% (46) elephants since 2015. We identified two additional venues, one outside Vientiane and one in Boten, but were not able to visit them in time during our research.

We found 48% (50) elephants living in severely inadequate conditions and 15% (16) living in improved conditions at medium scoring conditions. Thirty seven percent (39) of elephants lived in two high welfare venues.

Over the past five years, the distribution of elephants across different scoring welfare groups has changed. We found more elephants living in better conditions, and fewer living in the worst (Figure 13).

Laos Elephant Conservation Centre and Mandalao Elephant Conservation are predominantly observation-only venues. Their 39 elephants roamed freely across large areas of land, with ample opportunities for foraging, socialising and expressing natural behaviour.

In Laos, 61% (60) of the elephants were used at riding venues and 83% (50) of those used saddles. Of the seven venues offering riding, six also offer washing. Fifty seven percent (60) of elephants were used for washing activities and 70% of those (42) were also ridden. Four elephants (4%) at a single venue were used in shows.

Figure 13: The percentage of elephants in Laos according to welfare condition scores, 2015 and 2020.



Cambodia

In Cambodia, we assessed 64 elephants at 10 venues. We found an increase of 150% (6) in venues and 78% (28) of elephants since 2015. Thirty eight percent (24) of elephants were living in severely inadequate conditions, a decrease from 67% (24) of elephants in 2015 (Figure 14).

Forty two percent (27) were living in medium scoring venues with improved conditions. This was different from 2015, where elephants were distributed only between the lowest and the highest welfare score groups, without any middle-scoring venues.

In 2020, 20% (13) of elephants were living in venues with high welfare condition scores of 9 or 10. These 13 elephants were

housed at Elephant Valley Project and the Cambodia Wildlife Sanctuary. Here, activities are observation only, aside from one allowance of protected contact feeding, where the elephants are free to leave at any point.

Riding was offered in 30% (3) of venues in Laos that housed 42% (27) of elephants. All the riding venues were using saddles. Only one venue housing four elephants (6%) offered shows. Thirty six percent (23) of elephants were used in washing activities, however only 17% (4) of these were also ridden.

Figure 14: The percentage of elephants in Cambodia according to welfare condition scores in 2015 and 2020.

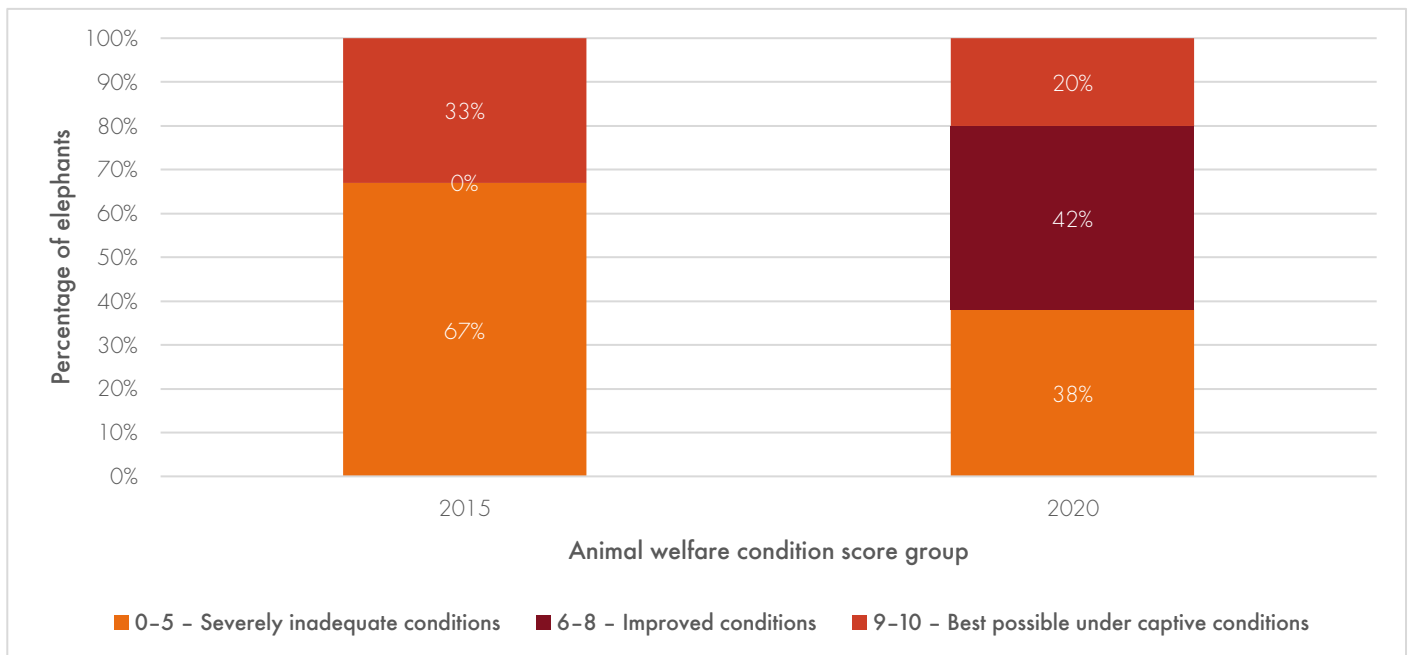


Image: Guests observe free-roaming elephants at a venue in Cambodia.



Malaysia

In Malaysia, we assessed 30 elephants^{iv} at the sole identified elephant tourism venue. This mid-ranking government run facility offers a show, elephant washing, feeding and selfie activities daily. Although the elephants have access to a large enclosure as well as multiple visits to the forest, they spend much of the day on a tight schedule, committed to involuntary entertainment activities.

^{iv} The number of elephants reported by venue staff varied - 30 was the most common number provided.

Documenting the common methods of elephant training in Thailand

This chapter focusses on the initial and cruel training of young elephants. This training is the foundation laid to enable the use of captive elephants for interaction with people.

Separating elephants from their mothers at young age and training them with cruel methods is widely accepted as common practice in Asia.

These controversial practices have been associated with the development of post-traumatic stress disorders^{52,53} in elephants and increased mortality of calves even years after the training as compared to wild elephants⁶¹. Yet, documentation of the actual practices used by elephant communities is rare. Harrowing footage of the intensely cruel training of a juvenile elephant over 15 years ago led to many in the elephant industry stating that these methods are outdated, not acceptable today and that softer methods are used.

This chapter is focussing at the initial training of elephants to gain control that is the foundation for any captive elephant to be used for interaction with people.

All day-to-day handling methods used on captive elephants involved in close contact with tourists are based on the commands and tools established in this initial training.

In the last few years it's been claimed that the cruel training of elephants is not needed anymore as a 'softer' training method has

been developed. In the eyes of some captive-elephant tourism proponents, this allows for the continuation of current tourism practices – a statement that we dispute with the new evidence outlined below.

Between November 2018 and January 2020, the most commonly used training methods in Thailand were documented by a person who followed several of the most prominent trainer teams in Thailand during their training of several elephant calves. These trainers have a reputation for and long history of elephant training. This leads to their senior trainers often being contracted to train elephants in China and South Korea. For example, one of the senior trainers was involved in training African elephants imported from Zimbabwe to China in 2019.

This trainer community trains the largest number of elephant calves in Thailand each year – approximately 30-40 elephant calves per year, either on site or elsewhere in Thailand.

All training stages were captured on film to enable an objective and truthful documentation of the most common training methods. The identities of all trainers and helpers was protected by blurring their faces.

The documentation includes the training of eight calves and one adult male who was returned for a 'retraining' as he had been causing problems (Table 2). Several more calves were scheduled for training, but arrived after the period of this documentation. Nonetheless, more than 30 hours of footage makes this the most comprehensive documentation of elephant training to date.

Table 2: Elephant calves and their training ages as recorded through the documentation.

Elephant ID	Gender	Age in years at begin of training	Documented
1	Female	2	Yes
2	Female	2.5	Yes
3	Female	2	Yes
4	Male	1.5	Yes
5	Female	2	Yes
6	Female	3	Yes
7	Male	2	Yes
8	Male	2	Yes
9	Female	2	No
10	Male	2	No
11	Male	14	No
12 (retraining)	Male	15	Yes

The methods used by the different trainers differed slightly from each other. They depend on the individual trainer's experience or characters. However, in principle all elephants went through similar stages.

According to the person that documented the training, most trainers that were accompanied were good natured people. They did not apply cruelty for the sake of it; they saw it as a necessity to ensure safe handling of elephants in tourism. In a separate study on mahouts in Myanmar, 60% pitied the elephants undergoing such training, while 37% felt neutral about it.⁶⁷

The trainers were family people, that cared well for their other animals, such as pet dogs and livestock. They consider training elephants a profession that has been part of their community for many hundreds of years. There is a distinct pride in this tradition and in their reputation of producing elephants that can be safely used for any purpose.

The trainers gauged the level of training intensity required for each individual elephant's character, to avoid applying overly cruel methods when not needed. Some trainers had their family join the training. This was stated to provide some comfort to the calf and to participate in spiritual ceremonies to ask for safe-keeping of the elephant and their own health.

However, such efforts do not justify the inherent cruelty of the training methods documented here that are commonly used in Thailand. Also, some trainer individuals seemed less compassionate or patient and were quicker to resort to more extreme measures to gain submission of the elephant.

The trainers stated that in some cases they had to chain mothers for up to two months before they would stop screaming and searching for their babies.

Separation from their mother

The first stage of training involves elephant calves being separated from their mothers. In the eight documented training cases this occurred at an average age of 2.1 years and was highly traumatic for both mothers and calves.

In the wild, female calves are cared for by their mothers for four to five years and supervised for several more years. Female calves remain in the mother herd all their lives and form close relationships with the other family members. Male calves tend to leave the herd between 10 and 15 years of age.⁵⁰

Separation begins with the mother chained securely at her resting spot and the calf roaming free. The trainers then use an adult elephant trained specifically for the task of separating the calf from the mother. The calf is secured to the separation elephant and briskly led away from the mother.

While the calves seemed at this stage to comply easily, the mothers showed extreme distress. For some mothers this was the first experience of separation from their babies, others had experienced it with two other calves.

The mothers attempted to charge against the people surrounding her, flaring their ears and trumpeting, while trying to rip their chains. In one instance a mother was able to rip her chains and run. Reportedly, this caused a dangerous situation as she frantically searched for her calf before mahouts were able to restrain her again. The trainers stated that in some cases they had to chain mothers for up to two months before they would stop screaming and searching for their babies.

Following the separation, the calves are led to a different location. They are then securely tied down with chains that only allow for minimal movement and sometimes prevent them from lying down. This exhausts the calves.

During this stage, the calves showed severe distress as they faced an entirely new environment, with no mother to comfort them, and were restrained to the ground. The calves reacted differently to this distress by screaming loudly, tearing at their chains, rolling on the floor, or swaying.

The trainers left them chained in isolation for periods from several days up to two weeks to exhaust themselves and to adjust to being alone. During that time only the trainers would bring food and water. This meant calves would start to forge a dependency on them.

Establishing dominance

During the second stage, which could last between two to five days, the training aims to establish dominance over the calf. This is the crucial stage in the opinion of the trainers. They believe that if an elephant understands and accepts the dominance of trainers while it is young and relatively weak it will ensure better compliance of the elephant once it's grown to full size. So, this stage requires submission of the calf to the trainers, getting it to understand that not submitting incurs pain and that this pain comes from the hook or sticks that the mahouts use to control their elephants.

This is the cruellest stage of the training process. Depending on the calf's nature the trainers choose to carry it out with the elephant brought into the 'crush': two heavy, wooden frames between which the calf would be tied on ropes so that it cannot move in any direction. Elephants deemed easier to handle will be chained and roped against a strong wooden frame or post instead.

Next, trainers start touching and prodding the restrained elephant calf with their hands, sticks and metal hooks. Initially, calves recoil or react aggressively against the trainers. This leads to additional prodding and hitting.

In many cases during the documentation the elephants were being hit and scraped repeatedly with the sharp metal ends of the hooks or sticks with nails until their entire foreheads were bloody. This only stopped when an elephant succumbed by giving up its defensive behaviour. Signs of submissive behaviour were rewarded with a clap or with food.

At the end of each one to two-hour session any blood would be washed off the calf's head and body, and food and water would be provided. Each calf usually endured two sessions per day. Basic commands such as 'follow' or 'back up' were gradually introduced with trainers prompting and prodding using hooks or

sticks. During this training, the elephants usually had their front and back legs shackled together which only allowed hobbled movement, or they were tied on a shorter chain of 2-3m to stop them escaping the hooks and sticks.

Very initial walks outside of the training area would also be undertaken to test the submission of each elephant.

Basic commands and riding

The third stage involves reinforcing the basic commands, having the calf accept a rider on its back, and starting to learn basic tricks and more advanced commands. The riding is usually trained with one mahout climbing on the back of the calf and several others preventing it from escaping. Wrong behaviour continues to be punished, while submission to commands is rewarded by words or claps with hands.

Eventually, calves are introduced to road traffic by being hobbled with shackles and surrounded by several mahouts with hooks that leave no space to escape. Advanced commands, such as picking up the hook or sandals of the mahouts, are trained through an extremely repetitive process. It involves the trainer forcing the required trunk movement by hand, then requesting the calf to do the same movement. The calf will be punished until successful when it is rewarded.

Most trainers said that once the calves understood what was required of them, teaching more advanced tricks and commands became comparatively quick and easy. For example, after this stage elephants can be taught to juggle hula-hoop rings or to stand on its hind legs for circus show within a day. Elephant owners decide how much training they want their elephants to receive. According to the documenter, most trainers had a 'menu' of how much the different stages of training would cost and owners could pick and choose (Table 3).

Table 3: Training items and prices as offered to elephant owners by the trainers.

Training stage	A Commands and tricks	Price
Separation and control	Ensuring submission of calf and understanding of the hook and stick	5,000 - 10,000 THB
Basic commands	Come, stay, follow, stop, left/right	1,000 - 5,000 THB
Advanced commands	Pick up, bow/greet, sit, swing/dance	5,000 - 10,000 THB
Show commands	Standing on two legs, painting, hula-hoop, football	5,000 - 10,000 THB

Throughout this entire process the trainers are the only connection to the rest of the world for the elephant calf. They provide food, water, wash them, reward them or provide some comforting words. Despite the cruelty the calves undergo, there is no other choice for them but to eventually accept the trainers as their new masters and caretakers. Some of the trainers seemed to establish a seemingly good relationship with their trained calf.

It is the opinion of the trainers that if a calf has been trained to entirely submit in the first place, it will require less punishment in the future. However, during the documentation of the calf trainings, adult elephants of 14 and 15 years were returned to the trainers after being at tourism camps for a few years. These elephants had grown problematic and either attacked their owners or didn't allow safe handling. Consequently, the owners requested a 'retraining' of their elephants to reinforce the initial training and re-establish control.

One adult bull returned for his third retraining. The trainers expected it to be a difficult case, but after one day of tying the bull in a crush and testing his behaviour they concluded that "the elephant is too clever". They felt he understood that he needed to comply with the trainers because he knew about the process, but that outside of this environment he might chose to not do so.

The trainers explained that this retraining of adult elephants is relatively common and they tended to blame the owners for not managing their elephant properly. In the trainers' opinions it is too dangerous to not use the strict commands and tools established during the initial training when working with elephants if the elephants are to be used around people.

Training methods differ in other areas of Thailand or Asia and, depending on the nature of the elephant and the trainer, might include less or more cruel methods. But the methods we describe above have been documented to outline the common practices of the best-known trainer community in Thailand.

Image: As well as training the elephant to be 'safe' for humans to handle, 'cute' show tricks such as painting can be taught.



No alternatives unless demand changes

In recent years, efforts have been made to establish a training method that is often being referred to as ‘positive training’. Despite the name, it is important to distinguish this from training methods based on ‘positive reinforcement’^v, which are entirely cooperative.

The misleadingly named ‘positive training’ is based on aversive^{vi} methods derived from horse training. It aims to avoid the worst cruelty of the usual elephant training by establishing dominance through more subtle, aversive techniques in combination with rewards. This could be done, for example, through gradually increasing pressure on a body part of the calf until it complies to avoid the discomfort or pain. However, while this training may be less painful than that inflicted during traditional training, the principle of establishing dominance through discomfort will continue to lead to psychological discomfort. To date, very few elephants have been trained solely through this technique as elephant owners seem to remain sceptical about its reliability.

There is no doubt about the expertise and skill of the trainer that introduced this type of training. The intent clearly is good and it shows that young elephants can easily be trained with less force. Yet, there are concerns that this training will not ensure sufficient control over adult elephants intending to kill someone or that react aggressively in stressful situations. There is also a fundamental difference between relying on softer training for flight animals, such as horses or other domesticated species, and wild animal species. Elephants, for example, even when born in captivity, retain wild instincts and have considerably more strength and a high intellect.

Tim Desmond, one of the most renowned animal trainers with decades of experience in training of marine and terrestrial wild animals in zoos and aquariums gave his response to the proposed alternative training techniques^{vii}:

“Softer forms of training may work most of the time, but when they break down the results are catastrophic. There are no protocols for handling aggression other than to let the elephant run off. There is no solution when a panicked animal runs off in a crowded city street and starts hurting people. If a mahout has to confront true aggression or control panic with these tools, he will have to use the same restraint and dominance (as well as any positive options) to gain the upper hand as in conventional training.”

“What motivates an individual animal at any point in time is a fluid mix of a lot of different motives and its response will be driven by the totality of the impact of those motives/reinforcers. Food is a good strong reinforcer. So is avoiding a mild aversive stimulus as well as a warm pat on the head. However, so is the lightening in the sky, the snake in the grass, the scent of a sex partner, or the presence of another animal that it has issues with.

“In more cases than not, animals ‘being naughty’ are animals responding to other reinforcers that directly compete with the trainer’s reinforcement scheme and objectives which the trainer failed to see. Trainers have far less control than one may think.

“The use of aversive stimuli for command and control in animal training is the most reliable form in terms of getting the desired job done historically. It won’t work all the time, but it allows techniques to deal with all levels of loss of control.”

‘Positive training’ may be well intended and help reduce the initial physical cruelty of training elephant calves the usual way, but it will not significantly improve an elephant’s quality of life for the remainder of its life in captivity. If used in commercial tourism and to interact with visitors, an elephant will still face the same need for control, restraints, limited social interactions, unnatural environments and punishment when not complying.

Some elephant owners may choose to add a conventional training after such ‘softer’ training to achieve sufficient compliance by their elephants. This enables them to still benefit from the marketing bonus of being able to say that their elephant was trained using a ‘softer’ method.

There is a clear risk in branding such training as a solution to the inherent cruelty and inhumanity of keeping captive elephants in a commercial industry. Nothing could be further from the truth. As long as mahouts and tourists are required to directly interact with elephants there will be the need for cruel control methods to ensure relative safety. And even then, it is a sad reality that while such practices remain, mahouts and tourists will be injured and sometimes killed.

The only solution is phase-out of the demand for direct tourist interactions with elephants. Until this happens elephants should be kept in conditions where a loss of control of the elephant is minimised and does not endanger people.

^v Positive reinforcement uses positive experiences to reward wanted behaviour. It is entirely based on cooperative behaviour of the animal and control can’t be guaranteed. In zoos positive reinforcement training in elephants is only used in combination with protected contact environments, where keepers would not be at risk of injury in case of a loss of control.

^{vi} Aversive training methods are based on creating discomfort or pain in response to an unwanted behaviour or to trigger a wanted behaviour. They are the most classical form of training that often involves physical punishment.

^{vii} Pers comm., 2020



Image: Elephants perform circus-style tricks at a venue in Thailand.

Socio-economic study of Thai mahouts

Mahouts are traditionally the caretakers of captive elephants. Sometimes they own the elephant, but most commonly they are employed by an elephant owner to look after it. The mahout practice is thousands of years old and is underpinned by a wealth of knowledge about captive elephants and their management. Mahouts have a crucial role in the welfare of captive elephants. The mahout's character, experience and knowledge of his elephant have a huge influence on the day-to-day life of their elephant.

Traditional mahout practices have often been associated with spiritual procedures aimed to ensure not upsetting the spirits of elephants and praying for their and the mahouts' safety and health. In modern times, this traditional role of mahouts has more and more disappeared through the profit-driven nature of commercial captive elephant tourism. While traditional mahouts can still be found, today's captive tourism elephant industry is increasingly based on non-traditional workers that receive a short training in handling an elephant.

Through our visits to hundreds of elephant camps we encountered anecdotal stories of mahouts not receiving adequate training to safely work with elephants. We also found that some had little history of working with elephants, and others were experiencing inadequate living and working conditions.

To fully understand the situation of Thailand's mahouts, we worked with the Department of Sociology and Anthropology at Chiang Mai University. Together we undertook the first comprehensive research on the socio-economic situation of mahouts working in elephant camps across Thailand.

Two hundred mahouts were randomly selected from 80 elephant camps situated in the top six elephant tourism regions in Thailand. The camps were categorised as small, medium or large, depending on the number of elephants, and a representative number of mahouts was interviewed from each category.

We requested permission to interview mahouts before doing so and any camps/venues that requested not to be involved were removed from the study and another camp of equal size selected.

All mahouts were interviewed face to face in Thai language at their place of work by the researchers. The interviews contained quantitative questions and more semi-structured qualitative interviews. All interviews were recorded and later analysed.

Findings

The findings revealed that elephants are not the only ones suffering in low welfare wildlife entertainment venues - mahouts across Thailand are also being taken advantage of. They experience low pay for a high-risk job, and many suffer injuries and have little financial security.

A mahout's job is dangerous, but the compensation they receive for their hard work is minimal. The average monthly salary is around US\$270. This means mahouts must rely heavily on inconsistent tourist tips, which on average are US\$200 per mahout per month. Housing provided by employers is often basic, and most (84%) of mahouts do not receive any annual paid holiday from their employer.

Economically, mahouts are very vulnerable; 38.5% have no savings. This leaves them unable to plan for their future and heavily dependent on low salary employment. We found that 31% of interviewed mahouts had been sick or injured due to their work, and of those almost half (48%) were still in pain from their injuries when interviewed.

Sustaining injuries while working as a mahout is expected, and most sick or injured mahouts (62.9%) believe this will happen to them again in the future. Despite the inherent danger in their work, most (70.5%) receive no medical insurance from their employer.

Rather than a valued, traditional skill, mahoutship has become more of a labourer role. Many mahouts took up the job because they could not find alternative employment or believed it would be an easy job. Seventy four per cent of mahouts had other jobs before starting as a mahout. They had worked mostly within farming or as general labourers.

More than 50% of mahouts interviewed had no formal education or were only educated to primary education level; this limited their knowledge and ability to find alternative employment. The second biggest motivator, in becoming a mahout was their inability to find another job, attributed to their lack of education. Encouragingly, the biggest motivator to become a mahout was their love of elephants.

More than 90% of mahouts interviewed had received less than six months training while just over a half of the mahouts (56.8%) interviewed had received only a month's. The lack of comprehensive mahout training, particularly the training of just one month, puts both mahouts, and tourists interacting with elephants under their supervision, at serious risk of injury.

While the image of mahouts is often romanticised, suggesting that a mahout will provide life-long care for 'his' elephant, our research paints a much more sober and pragmatic picture. We found that of the elephants under the control of the interviewed mahouts, 87% already had one to three, sometimes more,

mahouts previously assigned to care for them. It appeared likely that they would have more mahouts in the future.

Changes occur when a mahout decides to change jobs, when an elephant owner may want to hire a different mahout, or in tragic cases, a mahout gets killed or severely injured by his elephant. A new mahout assigned to an elephant creates a stressful and dangerous situation for both.

The hardships and risks experienced by mahouts lead to them reflecting on their livelihood critically. When asked what occupation they ideally would like their children to work in, only 12.5% said they would want their children to become mahouts. If specifically prompted if they would want their child to be a mahout, only one in four (26.7%) said yes. This suggests many mahouts would like their children to have more secure and safer employment than they do.

Interestingly, many of the findings of our study in Thailand echoed trends identified in a similar study on mahouts' attitudes and experience in Myanmar. Mahout experience was found to be in decline, the mahouts were becoming younger, their employment in the profession was short-lived, and job attitudes less positive decreasing.⁶⁷ In Myanmar only between 26-29% of mahouts thought their children would become mahouts.

It is critical to address the disadvantageous situation of mahouts in Thailand today. They need to receive the recognition they deserve and be equipped with knowledge to manage elephants more humanely.

Enabling mahouts to find more secure and safer employment at elephant-friendly venues, or in the longer-term opening up opportunities away from mahoutship is crucial. It is an essential step in the transition to create better lives for elephants and mahouts by gradually moving away from using captive elephants for commercial tourism.

Image: A young mahout poses on his elephant calf at a venue in Thailand.



Tourist attitudes, motivations and behaviour

Since 2014 we have been commissioned two-yearly, representative public surveys to better understand tourist attitudes, behaviours and decision-influencing factors of tourists regarding wildlife encounters on their holidays.

We commissioned global surveys of more than 12,000 respondents from KANTAR TNS. The data was collected online and weighted to be representative by age, gender and region within each country. Fourteen countries were included in 2014 and 12 in 2017 and 2019.

Global totals are based solely on the 12 countries included across all years for comparability.

Table 4: Countries included in the global surveys since 2014 and number of interviews in each.

Country	Interviews 2014	Interviews 2016	Interviews 2019
Denmark	1,050	1,023	1,012
Germany	1,050	1,034	1,051
Netherlands	1,015	1,049	1,014
Sweden	1,030	1,012	1,021
UK	1,044	1,056	1,044
China	1,020	1,047	1,043
India	1,050	1,007	1,019
Thailand	1,008	1,054	1,051
Canada	1,001	1,050	1,016
USA	1,035	1,004	1,050
Australia	1,039	1,020	1,009
New Zealand	509	-	-
Brazil	1,039	1,022	1,032
South Africa	503	-	-
Global	12,381	12,378	12,362

We also conducted specific and separate surveys of tourists in Thailand, the global hotspot for captive elephant-based tourism. There were more than 2,800 elephants working in the industry and 39.8 million tourists visiting the country in 2019.

Surveys of between 1,748 to 2,501 tourists were conducted, every two years. The tourists were split into representative samples of each of the top nationalities travelling to Thailand. A representative sample of Thai nationals was also included to understand the domestic tourist trade.

Two companies – RapidAsia (2014) and ABN Impact (2016,2019) were commissioned with data collection. All interviews were conducted in person using a tablet-based survey in tourist hotspots across the country. Interview languages were English, Thai, Russian, South Korean, Japanese, Malaysian, German and Chinese.

Table 5: Number of interviews of tourists in Thailand from each nationality since 2014.

Country	Interviews 2014	Interviews 2016	Interviews 2019
Thailand	203	210	210
China	221	156	154
Malaysia	163	154	153
Russia	148	150	153
Japan	179	153	153
South Korea	145	150	153
India	175	151	153
Singapore	139	151	153
United Kingdom	213	154	153
Australia	163	156	153
Canada	-	150	153
Denmark	-	150	153
Germany	-	155	153
Netherlands	-	154	153
Sweden	-	153	153
United States	-	154	153
Total	1,748	2,501	2,500

The 2019 survey interviewed representatives from 15 of the key visiting nationalities. These nationalities accounted for 27 million tourists, or 71% of the total number of 38.2 million tourists that visited Thailand in 2018.

Table 6: 2018 Tourism arrivals of surveyed nationalities.
Source: Thai Ministry of Tourism and Sports- 2018 Arrival Data.

1	China	10,625,167
2	Malaysia	4,042,998
3	Korea	1,785,147
4	Japan	1,642,712
5	India	1,562,878
6	Russia	1,466,457
7	Singapore	1,168,112
8	USA	1,096,177
9	United Kingdom	954,404
10	Germany	872,185
11	Australia	802,234
12	Sweden	304,206
13	Canada	252,763
14	Netherlands	226,618
15	Denmark	170,044

Global public attitudes and motivators for wildlife tourism

Much work is needed to increase understanding about the wildlife entertainment industry and its impacts on the animals involved. Some 39% of people interviewed in 2019 still either have no opinion on, or believe that animals do not suffer when trained for entertainment purposes.

Almost half of respondents (45%) either agreed with, or did not have an opinion on the statement that using wild animals in entertainment helps protect wild animals. These beliefs were highest in India, Thailand, China, the USA and Australia.

Motivations for participating in wildlife activities further highlight the dissonance between beliefs and behaviour. The main driver for taking part in activities involving captive wild animals is, according to participants' responses, the love they have for animals (42%). Other key reasons cited were, to have fun (34%), and for the enjoyment of children (29%).

These figures suggest a lack of understanding, specifically about the training process and living conditions of wild animals used in the tourism entertainment industry.

Encouragingly however, elephant riding significantly declined in acceptability globally by 12% since 2014, with now 6 in 10 people finding riding an elephant unacceptable. And this positive trend is not just showing in countries within Europe, or Canada and Australia, where people might expect it most.

Only 37% of Chinese tourists agreed that elephant riding is acceptable in 2019. This was an 11% drop from 2014 and is below the global average. Chinese tourists represent 26% of Thailand's tourist arrivals.

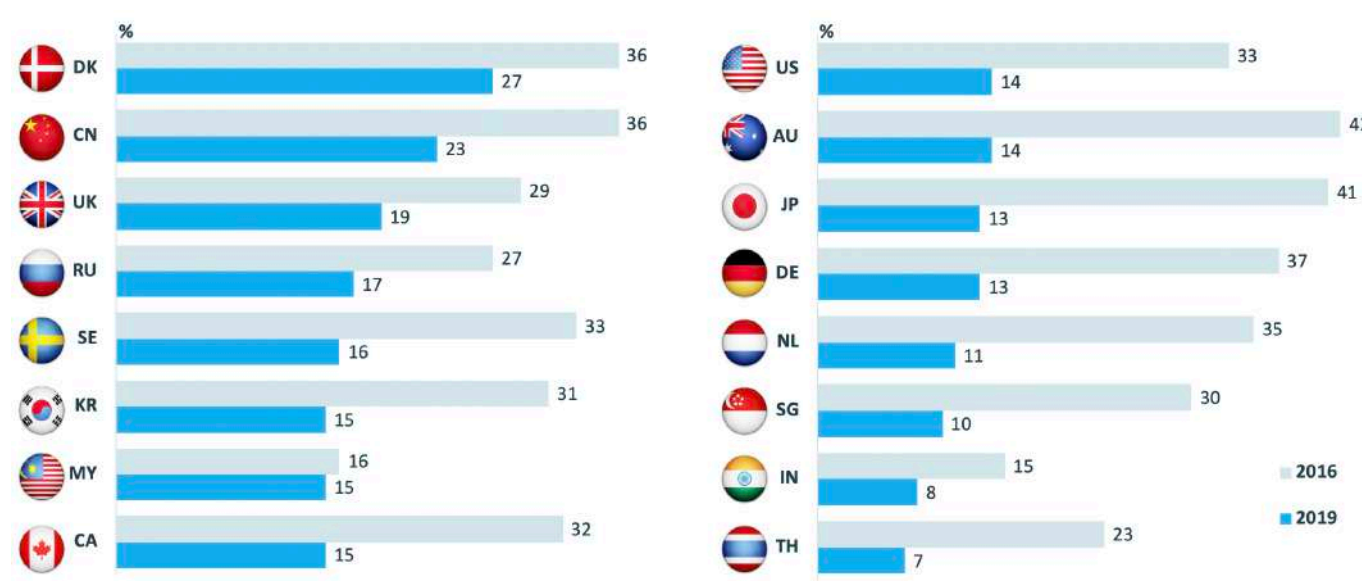
Attitudes and behaviours of tourists in Thailand

The results of the face-to-face survey confirmed the findings of the global poll. In Thailand, as they have globally, entertainment activities involving wild animals associated with poor welfare are slowly becoming less popular with visitors to the country.

In 2019, only 28% of tourists undertook or planned an elephant ride. This is a 12% drop in participation compared to 2016, when elephant riding was the most popular wildlife tourism activity in Thailand.

Figure 15: Percent of surveyed people that have taken an elephant ride in Thailand on the current holiday or on previous visits within the last three years.

Tourists by nationality having undertaken an elephant ride in 2016 vs 2019



Danish tourists were among the nationalities visiting elephant rides (27%) and shows (31%) the most (Figure 15). However, considering tourist arrival data in Thailand, Danish tourists represent a comparatively small number of visitors annually. Consequently they have not represented a significant number of the total number of elephant rides taken.

For example, in 2018, 170,000 Danish tourists visited Thailand, which when extrapolated would represent around 45,900 elephant rides. Although the percentage of Chinese tourists taking elephant rides is lower (23%) than Danish tourists (27%), the number and impact of elephant-riding Chinese tourists is enormous. For example, 10.6 million Chinese tourists to Thailand accounts for 2.44 million elephant rides.

Chinese tourists are the biggest consumer group of elephant riders in Thailand. Since 2012, the largest number of tourist arrivals from a single country to Thailand are from China; arrival numbers have continued to increase since then. From 2.7 million Chinese tourist arrivals in 2012 numbers increased almost five times to 10.6 million in 2018.

Chinese tourists visiting Thailand have shown a significant positive shift in not just attitude, but also in behaviour towards elephant rides. From 2016 to 2019, there has been a decrease of 13% in Chinese tourists taking part in elephant rides (23%) compared to 2016.

Thai (7%) and Indian tourists (8%) are among the nationalities that ride elephants the least in Thailand. However, Thai domestic tourists remain a potentially significant market. In 2018, Thai domestic tourists accounted for around 168 million tourism trips in Thailand.

It is difficult to translate the number of trips into the number of annual domestic tourists. However, we can assume that due to the large number of domestic trips, Thai tourists are significant consumers of elephant rides. Other Asian nationalities - South Korean (15%) and Malaysian (15%) - also represent a fair share of the elephant ride market.

10.6 million Chinese tourists to Thailand accounts for 2.44 million elephant rides.

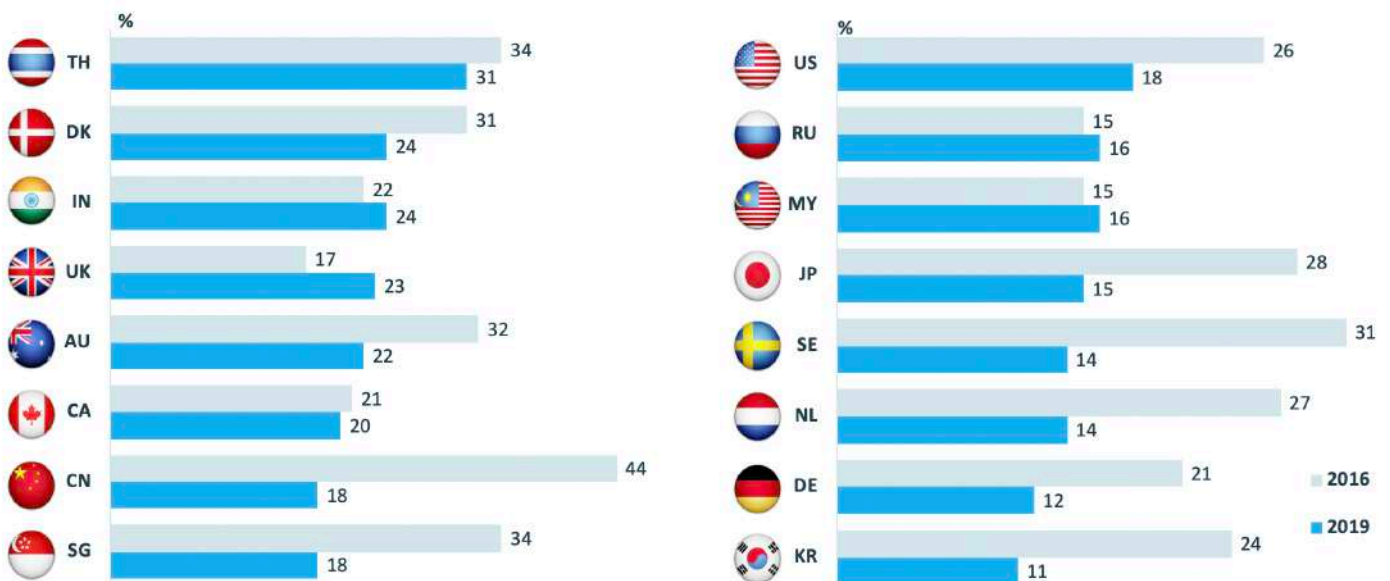
Outside Asia, Russians, British, American and Australian tourists also account for a significant number of elephant rides taken.

The number of people watching elephant shows in Thailand, significantly dropped between 2016 and 2019; with 6% fewer tourists participating than in 2016.

In 2019, 30% of tourists said they had attended an elephant show or were planning to do so, as opposed to 36% in 2016. Shows are popular among Thais and Danish (31%), Indian (24%), British (23%), Australians (22%), Canadian (20%), Chinese and American tourists (18%). (Figure 16)

Figure 16: Percent of surveyed people that have watched elephants perform in shows in Thailand on the current holiday or on previous visits within the last three years.

Tourists by nationality having watched an elephant show with elephants doing tricks 2016 vs 2019



It is worth noting the strong decrease (26%) in Chinese tourists watching elephant shows since 2016. The number of visitors coming to Thailand via tour operators also appears to have fallen, even among Chinese tourists (47% in 2016 vs 35% in 2019). This suggests an increase in independent travellers. This in turn could explain the overall decrease, particularly of Chinese tourists, in participation in both elephant rides and shows. Tourists travelling via tour operators showed a higher likelihood of participation in these activities.

Interestingly, in Thailand we see the same trend as in the global poll. While fewer people visited elephant shows and elephant rides, our research showed an increase (+4%) in tourists claiming to have witnessed elephants being treated cruelly in Thailand (15%) since 2014. This again could mean that tourists are more aware of animal welfare matters and more readily identify animal cruelty.

Visitor profile and motivations

According to the results of this survey, there is no typical visitor profile of tourists taking part in elephant rides. In terms of age, elephant-riding visitors are fairly evenly spread. However, people aged over 55 are more likely to participate in elephant shows.

The number of visitors to Thailand travelling independently has increased between 2016 and 2019. Eighty three percent of tourists interviewed in Thailand were independent travellers in 2019 (against 62% in 2016). Of those, 59% said they paid for their animal experience directly at the venue at the time of visit or booked online (20%). The rest said it was part of a pre-arranged day tour (12%), or booked through their hotel (24%), or through a local tour operator (10%).

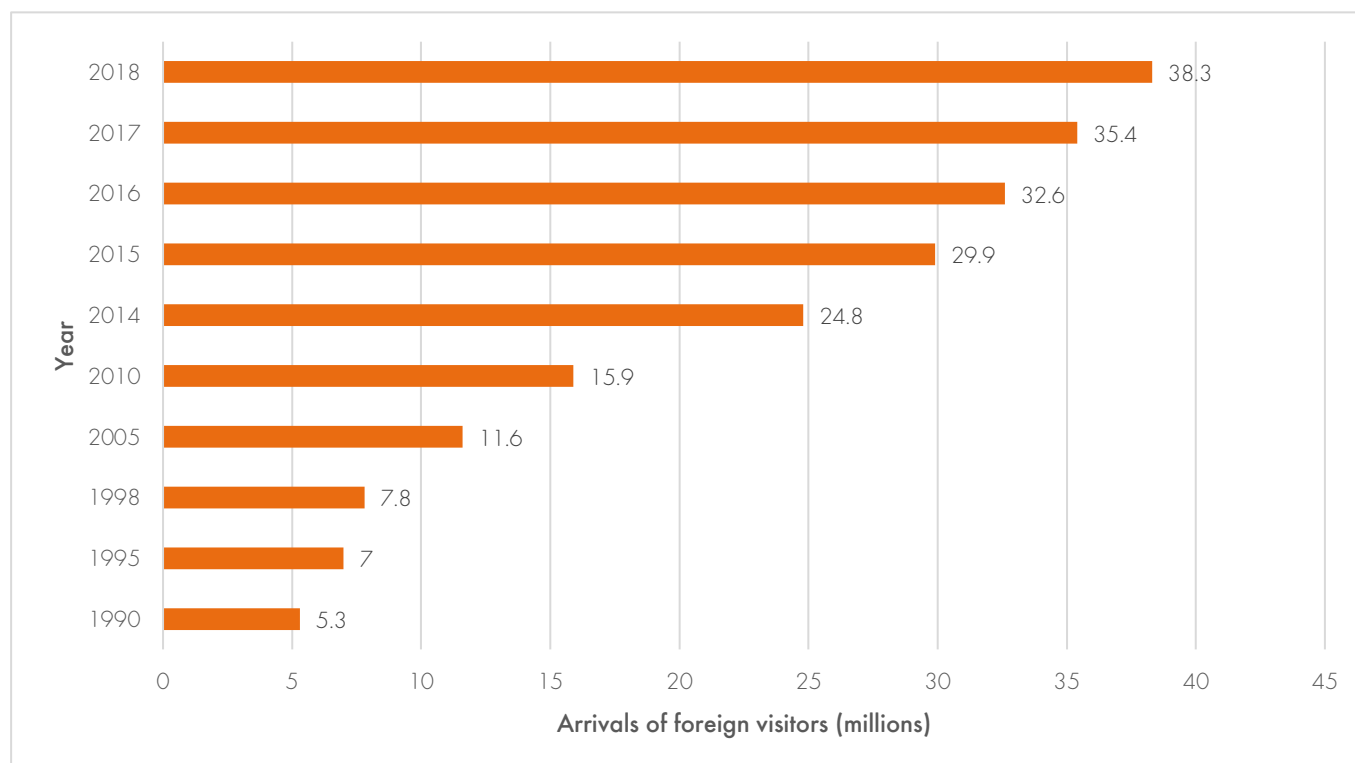
The survey also revealed that recommendations from friends were considered the main influences in joining a wildlife activity. This shows the power of word of mouth, and that it will be key in moving social norms to end elephants being held in captivity. If wild animal use for people's entertainment is seen as unacceptable by the majority, then fewer people will take part because of fear of others' negative perceptions.

The bigger picture

Unfortunately, a positive shift in attitudes and behaviours towards the use of elephants in entertainment in Thailand has not yet translated into meaningful changes to the welfare and lives of elephants there. Despite the percentage decrease in tourists taking elephants rides and watching elephant shows, the exponential increase in tourist numbers means actual demand for elephants used in entertainment is higher than ever before.

Pre-Covid-19, Thailand experienced years of high tourism growth. According to UNWTO data^{viii}, from 2015-2016 tourist arrivals increased by 8.6%; 9.4% the following year, and by 7.3% again between 2017-18. If we look back at tourist arrival data below, tourist arrivals in Thailand have increased by 622% between 1990 and 2018.

Figure 17: The growth of tourism in Thailand



^{viii} <https://www.unwto.org/country-profile-inbound-tourism>

Demand for high welfare elephant activities

The narrative about keeping wild animals for entertainment is shifting globally. People increasingly believe it is wrong to make an income from wild animals for entertainment if the animals suffer (81%). Most also believe wild animals belong living naturally in the wild (87%) and that if they had the chance they would rather see wild animals in their natural habitats. (85%).

The trend is confirmed by tourists in Thailand. In 2016, tourists interviewed in Thailand, cited riding an elephant as their favourite activity (36%), and observing elephants as their least preferred activity (14%). Other choices offered were: seeing wild animals in their natural habitats; observing elephants being taken care of in the best possible way (without riding or shows); riding an elephant, and seeing elephants performing tricks.

In 2019, things changed dramatically. Seeing wild animals in their natural habitat (37%) and observing elephants (24%) became the two most preferred activities.

Tourism demand for elephant-friendly alternatives is growing. Twelve percent of tourists interviewed in Thailand said they would pay US\$100 and more to participate in an elephant- and wildlife-friendly activity not involving any animal interaction or performances.

Globally, the sentiment is the same. Seventy nine percent of those who witnessed animal cruelty said they would pay more for an activity involving animals if they knew the animals did not suffer. This demonstrates a significant amount of economic potential for such elephant-friendly venues – a potential that has not been exploited yet.

In 2019, things changed dramatically. Seeing wild animals in their natural habitat (37%) and observing elephants (24%) became the two most preferred activities.

There is a significant amount of economic potential for elephant-friendly venues - a potential that has not been exploited yet.

The role of the travel industry

The travel industry can make true change

Travel companies worldwide are key in changing the demand and the supply for captive elephant experiences. Eighty five percent of tourists interviewed in our 2019 global poll believed that tour operators should avoid activities that cause wild animals suffering.

This point is critical. Reputable travel companies offering inhumane wildlife activities, can interfere with the behavioural judgement of tourists. This is because people tend to assume that if well-known travel brands offer wildlife entertainment activities, such activities are genuine and acceptable – when actually they are not.

As the world tries to recover from the Covid-19 pandemic, the travel industry's leadership has never been more important or timely. It can help avert future social and economic crises by addressing tourism's relationship to elephants and other wildlife.

Ecological, adventure and local experiences are most popular with travellers⁶⁸. So, it should be no surprise that an encounter with an elephant is high on some travellers 'once-in-a-lifetime' wish list when visiting a country like Thailand. The country receives almost 40 million tourists from around the world each year. This is equivalent to more than half its own population. It is in the travel industry's best interest to use their influence to protect elephants.

Travel companies, including booking platforms, (online) travel agencies, tour operators and destination management companies, and travel trade associations, can all improve elephant tourism and end inhumane practices that rely on captive elephants.

Hotels also have critical role to play in promoting and advocating for responsible tourism among their customers to enable them to be wildlife-friendly travellers. Twenty two percent of tourists to Thailand booked their animal experience through their hotel.

'Greenwashing' marketing, and rebranding low welfare venues as sanctuaries, rehabilitation and rescue centres make it challenging for consumers to recognise legitimate elephant-friendly venues. Travel companies have the responsibility to review the products they offer to make sure they are truly elephant-friendly. This means elephants free and able to exhibit a wide range of natural behaviours, in best-practice animal care conditions, with tourists only observing them from safe and respectful distances.

World Animal Protection has worked with the travel industry for more than a decade. In 2010, TUI Nederland became the first tour operator to stop all sales and promotion of venues offering elephant rides and shows.

By 2013 almost all other larger tour operators in the Netherlands had followed and by 2014, the Australian group, Intrepid Travel, had become the first to stop such sales and promotions globally.⁶⁹ In the years following, travel companies from around the world followed these examples.

In October 2016, the world's largest travel site, TripAdvisor, announced that it would stop selling tickets for elephant rides and other experiences featuring direct tourist contact with captive wild animals. This decision was in response to more than half a million people calling on the company to stop profiting from the world's cruellest wildlife attractions.⁷⁰

Today, more than 250 travel brands around the world have joined our elephant-friendly movement, including brands like Airbnb, Booking.com and a growing number of Chinese travel companies.

As the world tries to recover from the Covid-19 pandemic, the travel industry's leadership has never been more important or timely. It can help avert future social and economic crises by addressing tourism's relationship to elephants and other wildlife.

China on the move

While Chinese tourists' attitudes are changing⁷¹, many Chinese tourists still use a trip to Thailand as an easy way to ride or bathe an elephant or to watch them perform. Thailand received almost 11 million Chinese tourists in 2019. This represents 27.6% of the total share of tourists to the country that year. It demonstrates that the Chinese travel industry has a key role in changing the future for captive elephants.

Recently, the Chinese travel industry has started to show leadership in devising ethical animal welfare travel policies. In 2017, CAISSA Tourism Group, one of China's largest travel operators, was among the first Chinese travel companies to remove elephant riding and shows from its offers.⁷²

And in 2018 QYER.COM, China's leading outbound travel platform, stopped promoting elephant riding and shows. They

also labelled all these products with a warning to inform consumers of the cruelty involved. The company also saw an important role for itself in raising awareness, particularly among younger Chinese travellers. It updated its responsible travel guide to include a section on animal welfare. It also covers why travellers should not want to get involved in elephant entertainments.⁷³

While many parts of the world recognise that captive elephant entertainment is unacceptable, a tipping point has not yet been reached in China. However, Chinese tourists' attitudes are rapidly changing. So, it is likely that more Chinese major travel industry players, like Trip or Fliggy, will want to become leaders for elephants, something these sentient giants desperately need.

It is likely that more Chinese major travel industry players, like Trip or Fliggy, will want to become leaders for elephants, something these sentient giants desperately need.

Image: Chinese tourists waiting for an elephant ride at a venue in Thailand.



Demand but no supply

Many travel companies have changed their offers and joined World Animal Protection in calling for an elephant-friendly future. But this has not guaranteed that tourists visit venues that provide better care for their elephants than some of the riding camps.

Many travel companies and tourists replaced their elephant riding activities with what seemed like ethical elephant experiences. These are often venues where visitors can bathe, wash or feed elephants. Our 2019-2020 elephant camp survey results show an increase in the number of venues offering such activities compared to five years ago when we did our previous study. While this change in demand from travel companies and tourists show the right intention, our research shows it has unfortunately not always led to improved elephant welfare.

Travel companies and tourists often have difficulty identifying genuine higher welfare elephant venues. This is made even harder as there is a common practice within the elephant tourism industry of mislabelling poor welfare attractions as 'sanctuaries', 'rescue centres' or 'retirement homes'. Elephant camps have also been reluctant to become elephant-friendly, observation-only, as they are uncertain whether there is an actual demand for these activities.

In 2015, when this gap between demand and supply became apparent, World Animal Protection formed the Coalition for Ethical Wildlife Tourism (CEWT) with a group of committed travel companies.⁷⁴ One of the coalition's two objectives is: "to prove a strong demand and support for venues to become Elephant-Friendly (observation only)" to those on the supply side: the elephant camps.

Because of CEWT members' combined efforts, two former riding camps have transitioned themselves to observation-only models. These are ChangChill in the North of Thailand near Chiang Mai, and Following Giants in the South on the Thai island of Koh Lanta. With these transitions, the lives of elephants have changed for the better and tourists are getting a more meaningful experience. But most importantly these venues have become best practice models for other elephant camps to replicate.

Travel industry guidelines

The growing awareness among tourists and those who work within the travel industry has not simply resulted in more travel company commitments to protect elephants. A small but growing number of travel trade associations also see their role in protecting elephants and other wildlife from exploitation for tourism.

In 2018, research conducted by the University of Surrey, commissioned by World Animal Protection, found that almost all the world's travel trade associations were lagging in providing guidance on the use of animals in tourism. Out of the 62 entities that were studied, only two travel trade associations, ABTA in the UK and ANVR in the Netherlands, had set animal welfare guidelines for their members.⁷⁵

As early as 2016, ANVR was the first travel trade association to categorise all elephant shows, elephant riding and other forms of direct tourist contact with elephants as unacceptable.⁷⁶ In 2019, ABTA took a similar stance, launching its updated animal welfare guidelines. These classify elephant riding, and any direct contact with, or feeding of elephants without a barrier as 'unacceptable'.⁷⁷

Around the same time the Southern Africa Tourism Services Association (SATSA), announced similar positions in their new animal interaction guidelines. They categorised performing, riding and walking alongside elephants as unacceptable.⁷⁸ All three associations - ANVR, ABTA and SATSA - based their decisions on extensive consultation processes and evidence. They all concluded that these types of captive elephant activities involve unnatural behaviours, require harmful training and management techniques, and lack education or conservation value.

Out of the 62 entities that were studied, only two travel trade associations, ABTA in the UK and ANVR in the Netherlands, had set animal welfare guidelines for their members.

Elephant camp standards

Deriving from the same demand for more ethical elephant experiences, another industry initiative was launched in 2019 – the Asian Captive Elephant Standards (ACES). Like the travel trade associations' guidelines, its primary goal is to ensure good welfare of elephants at tourism venues and provide a tool for travel companies (and tourists) to find ethical elephant venues.

Unfortunately, the ACES certification initiative is failing to protect elephants.

The ACES certification system does not acknowledge key animal welfare needs of elephants when assessing elephant camps. It makes dangerous false claims that elephant welfare will be safeguarded at venues awarded ACES bronze, silver, gold or conservation level certification.

Of the four certified venues, one provided only poor welfare conditions based on the methodology used by our animal welfare conditions assessment. Two others ranged in the middle of our scoring spectrum, still providing only inadequate conditions.

None of these venues provided their elephants with sufficient time and space to roam or socialise on their own terms. One kept several elephants on inappropriate flooring when they were not interacting with tourists. Another had elephants performing in shows. All three allowed direct tourist interactions; these pose risks to human health and safety and require harsh training of the elephants and constant control.

Only the fourth venue, the Elephant Conservation Center in Laos, received both a gold and a conservation level certification from ACES. It also scored 'commendable' regarding their elephants' welfare conditions based on our methodology.

None of the ACES criteria addresses the need to restrict breeding or trade of elephants and in principle promotes the use of endangered elephants for commercial tourism. Thus the ACES accreditation system at this time is unfortunately of no added value to the travel industry. It does not reliably identify responsible elephant attractions that prioritise the elephant's welfare, or that even contribute to a phase-out of commercial captive elephant tourism.

Travel companies, tourists and elephants desperately need a system that accurately and effectively tracks and reports on the care of captive elephants in Asia. Steps must be taken to phase out the commercial use of captive elephants in tourism entirely. Such a system will ensure improvements are recognised by the travel industry.

Based on genuine animal welfare expertise, independent of the elephant industry, an elephant camp certification system can be a useful tool for those searching for a truly ethical elephant

experience. It could also improve the welfare of those elephants already at tourism venues and support efforts to gradually phase out such practices in the long run.

Build back better

The travel industry has benefitted from captive elephant entertainment for decades through commercial exploitation. Once born out of necessity to maintain the elephants previously employed in the logging industry, the industry is responsible for keeping more elephants in captivity for commercial purposes. The Covid-19 pandemic is affecting every country's tourism, so there is an incredible opportunity to build back better, as a stronger, more resilient and more responsible sector.

The pandemic has proven that placing complex, intelligent and endangered animals like elephants at the whim of a commercial industry vulnerable to economic fluctuations is unacceptable and inhumane. The situation clearly affects people who work directly with the animals too.

Consequently, everyone within the travel industry should take measures to:

- educate tourists and steer tourist demand toward truly ethical and meaningful experiences where elephants can roam around freely, and no visitor contact is allowed
- require suppliers to end commercial breeding while encouraging and supporting them to improve conditions for existing captive elephants
- support suppliers in offering wild-watching and true sanctuary experiences
- advocate with governments for a wildlife trade ban and to enact strict measures to prevent poaching.

Combined, these objectives can create real and lasting change for elephants and make this the last generation of captive elephants used for tourism entertainment.

Economics of the elephant tourism industry

The use of captive elephants in tourism is driven by commerce and profit. In Thailand and other countries elephants are legally traded as livestock; prices are as high as an expensive car. The revenue generated by the captive elephant industry is clearly significant and explains some of the resentment regarding phasing out these practices.

We have examined the economics of the elephant tourism industry in Thailand; the country is home to almost two thirds of captive Asian elephants used for tourism. The absence of accurate visitor numbers to venues means our calculations are based on figures and information obtained from venue staff, one-hour monitoring by our researchers, or personal estimates.

Elephant rides and shows

Two thirds of Thailand's elephants are used for riding activities; and our research shows the average price for a 30-minute ride is US\$21.40. If all 1,861 riding elephants were ridden four to eight times daily at the average 30-minute ride price, all riding venues would generate between US\$318,683 and \$637,376 in sales daily combined^{ix}.

At venues where customers can buy a package which includes seeing a show and a ride, the average revenue per visitor for the most basic package is US\$33.23. The activities at these venues

are typically designed with a quick turnaround in mind. The rides are short, lasting between 10 and 30 minutes and shows usually last 15 minutes or fewer.

During our research we estimated visitor numbers per day at each venue. By taking the medium footfall estimated for each venue, we calculated that at least 13,700 people visit venues offering both rides and shows every day. With each customer paying on average US\$33.23, that means all venues offering both rides and shows in Thailand generate more than US\$455,000 per day in sales combined.

Breaking this down further, table X shows a crude estimation of turnover for a fictitious large-scale elephant riding and show venue. It is based on known elephant rental prices, feeding costs, mahout bonuses for each ride, additional staff, and ticket sales income. There is a significant margin between income and expenditure estimates of several hundred thousand USD per month (Table 7).

This calculation does not cover all the costs a venue might have. For example, it does not include expenditure items such as insurance, supplies, maintenance, marketing or initial investment. It also does not include auxiliary income streams such as souvenir sales or beverages. Although crude, these estimates indicate that there are significant profits in running such large-scale venues, which clearly drives the trade in elephants.

Table 7: Expenditure estimate for a large-scale elephant riding and show venue with 50 rented elephants, US\$33 ticket price (1025 THB) as identified by our research, 500 visitors daily.

	Monthly (THB)	Monthly (US\$)
Expenses		
50 elephants and mahouts	1,250,000	40,386
Elephant food	1,500,000	48,463
Mahout ride bonus	600,000	19,385
50 staff for customer care, maintenance, transport	750,000	24,231
*Supplies	Unknown	Unknown
*Maintenance	Unknown	Unknown
*Marketing	Unknown	Unknown
Total expenditure (not including * expenses)	4,100,000	132, 465
Income		
Income from sales	15,375,000	495,000
Estimated profit (not including *expenses)	11,275,000	362,535

^{ix} Assuming as a minimum each elephant provides four 30 minutes rides daily, carrying two people, the calculated minimum earning per elephant adds up to US\$171 daily. Assuming eight 30-minute rides per day - representing just half the eight hours or more most (49%) of venues are open - this equals a daily earning of US\$342 per elephant.

Elephant washing and bathing venues

Elephant washing / bathing venues have increased dramatically in the last five years. Our calculations confirm that these contribute significantly to the money generated through captive elephant tourism. The average revenue per visitor when selecting the cheapest bathing activity is US\$57.20. This ranges from quick, US\$8 bathing activities to full-day bathing experiences worth well over US\$100.

When calculating visitor numbers per day per venue and using the medium footfall, we calculated at least 14,475 people buying bathing activities daily. Using the average price per person, this amounts to a revenue of over US\$828,000 per day for all elephant washing venues combined.

Image: An elephant bathing venue in Thailand.



Observation-only venues

Venues that are primarily observation only, including ones that offer some feeding activity through protective barriers, still make up the smallest proportion of tourist activities. This is despite an increasing demand from travel companies and tourists.

Unlike riding or show venues, which have quick turnaround times, observation-only venues aim to attract tourists for longer visiting periods of half-day to full-day or even multi-day visits. Unsurprisingly, multi-night packages tend to be the most expensive option ranging between US\$180-\$720, depending on the number of days.

Some venues have a minimum stay duration of two to seven days. These venues usually restrict visitor group sizes to smaller numbers to minimise any impact visitors could have on the elephants and their welfare (Figure 18). We found that 85% of primarily

observation-based venues cater for around 20-25 guests on average per day. Only two primarily observation venues cater for 50-200 tourists daily, while one well-established venue caters to 201-500 visitors per day.

We calculate the average cost of an observation-only activity to be US\$89. This is based on using the lowest-priced option for each venue including either half-day, full-day activities or the average daily price where multi-day activities were offered. The average full-day activity cost is US\$106.

The range of prices for observation or predominantly observation-only venues is large, ranging from US\$36 to \$180 USD for activities lasting a maximum of one day. Using the estimated medium footfall, we calculate that all observation-only venues in total generate more than US\$91,000 daily in sales.

Image: An observation-based venue in Thailand. Small groups of guests pay higher prices and the impact of visitors on the elephants is minimised.



High economic value drives exploitation

We estimate that the entire captive elephant tourism industry generates between US\$581.3 to US\$770.6 million of sales per year (Table 8). We arrived at this figure by comparing all these sales estimates and considering a +/- 14% variation to account for the differences in international tourist arrivals in Thailand^x Elephant washing and bathing activities are responsible for almost half of this income.

We have also identified a correlation between average animal welfare conditions scores for venues that offer a particular activity

and the possible income generated per elephant. Venues offering tourism activities that on average provide better welfare conditions seemed to generate more sales per elephant. These venues also depended on fewer elephants and fewer tourists. We estimate that a single elephant at an observation-only venue could earn as much as three times more than an elephant at a conventional riding venue (Table 9) – if consistent visitor footfall is achieved.

Table 8: Total estimated sales in US\$ per elephant tourism activity.

Elephant tourism activity	Estimated US\$ sales all venues / day	Estimated US\$ sales all venues / year in millions
Riding	478,000	150.0 – 198.9
Riding and shows	455,000	142.8 – 189.3
Washing or bathing	828,000	259.9 – 344.6
Observation-only	91,000	28.6 – 37.9
Total	1,852,000	581.3 – 770.6

Table 9: Income factor for different elephant tourism activities.

Elephant tourism activity	Estimated US\$ sales all venues / day	Estimated US\$ sales all venues / year in millions
Riding	1	3.9
Riding and shows	1.85	3.4
Washing or bathing	1.85	5.7
Observation-only	3.14	8.3

^x Source: Ministry of Tourism & Sports, Thailand; International Tourist Arrivals 2018; https://www.mots.go.th/mots_en/more_news_new.php?cid=329

Overall, these figures show a worrying amount of money generated by keeping an endangered species in inadequate conditions in a captive industry, that depends on tourism. The estimated earnings by the elephant tourism industry can also help explain why efforts to phase it out have not been very successful to date.

However, the findings also show that tourism activities associated with higher-welfare condition scores and lower visitor footfall

could generate more sales with fewer elephants than tourism activities catering to mass tourism. These numbers indicate the economic case for stopping the breeding of elephants and reducing the number of captive elephants. This can be done while they are increasingly kept at high-welfare, observation-only facilities.

Figure 18: Average price per activity and average daily customers in Thailand. Trekking is the lowest priced activity, followed by show/ride combination tickets and washing/bathing. Observation-only activities are the most expensive, but admit the fewest visitors per day.



Covid-19 impact: an opportunity to build back better

This report outlines research that was carried out until January 2020 and describes the situation of captive elephant-based tourism at its peak. Shortly after the data collection was completed, the Covid-19 pandemic led to a total stop of international tourism. It hit the popular travel destinations, that are home to these majestic animals, particularly hard.

Consequently, elephants at tourism venues have been facing serious risks including starvation and lack of appropriate care. This situation is not only threatening the health and welfare of these animals, but the livelihoods of many families. It highlights the elephant tourism industry's unsustainable nature and shows clearly why tourism is no appropriate place for captive elephants, and has no conservation value.

As this report details, captive elephants are ill-suited for a life in the tourism industry even during the best of times. Their size, strength and intelligence require management practices, such as chaining, cruel training and harsh punishment that are inhumane and lead to their suffering. Over the past decade the captive elephant population in Thailand has grown driven by profit from the growing demand from tourism. In 2020 the elephants' dependency on the venues' income through tourism became a serious threat to their wellbeing.

To place complex, intelligent and endangered elephants at the whim of a commercial industry so vulnerable to economic fluctuations is unacceptable and inhumane. Not only to the elephants, but also to their mahouts, a group of people often disadvantaged through low pay and high-risk employment.

We, as well as other international NGOs that have voiced their concern about this industry for many years, but also local organisations in Thailand, stepped in to help the captive elephants. However, the food costs for all elephants in Thailand

alone are estimated at more than US\$900,000 per month; a similar amount is needed for the salaries of their caretakers.

Risk of more elephants being bred into captivity

In reaction to the current crisis many elephant owners, particularly in Thailand, have had to take their elephants back to their home villages. These are often hundreds of kilometres away from the tourism camps.⁷⁹ Without any other use for their elephants there is a high risk that elephant owners will use this time to breed them. This is to generate further offspring for future use in tourism and to profit financially. The effects of this on existing captive elephants will be devastating as even more elephants will be competing for scarce resources.

In June 2020, with 190 other concerned animal welfare organisations, 10 prominent elephant welfare experts and university professors, we asked Thailand's government issue a temporary breeding ban on private elephants. A permanent ban is clearly required combined with a demand decrease for captive elephant tourism. However, a temporary ban would at least prevent a dramatic spike in further elephant births in two years' time. As of the publication of this report the Thai government has issued no response to this request.

The travel industry and the countries maintaining a captive elephant tourism industry must use this unprecedented situation to rethink our relationship with elephants. Tourism will come back – but it needs to come back better by recognising the threats to captive elephants and their wild relatives. Measures must be taken that lead to a responsible phase out of the commercial use of captive elephants. All efforts must be focussed on protecting elephants in the wild, where they belong.



Image: An elephant show at a venue in Thailand - elephants are trained to perform tricks which causes health problems in the long run and pose a risk of injury.

Conservation value and captive breeding

Some people closely associated with the elephant tourism industry argue that captive Asian elephants traded for commercial tourism are of value for species conservation. But such arguments rest on maintaining a commercial industry based on trading of endangered animals and treating and training them inhumanely. Here, we assess the validity of these arguments, particularly regarding the profitable captive elephant tourism industry in Thailand.

Since Thailand's logging restrictions, during the 1990s, that led to a shift of captive elephants from logging into tourism, the country's captive elephant population has risen consistently.

In 2017, its entire registered captive elephant population (including all elephants – not only tourism elephants) was 3,783 elephants. This was almost 30% more than at the time of the logging ban. More than half of today's elephants were born after the logging restrictions and were bred specifically for tourism. Their number has consistently increased. For example: in 2010, 1,644 elephants⁶ were used in tourism camps; five years later, this number increased to 2,198 elephants⁷.

By January 2020, more than 2,800 elephants in Thailand depended on commercial tourism by giving rides, performing in shows or participating in bathing activities with tourists. This reflects a 70% increase in elephants kept for tourism entertainment over 10 years. The increase highlights the inherent problem with this industry: breeding and trade for profit. Many people associated with the industry suggest that this is of benefit for species conservation.

In 2003 two renowned elephant experts, Kurt and Mar, produced a paper considering the role of the foremost conservation body of Asian elephants, the IUCN Asian Elephant Specialist Group. The authors stated that only where captive elephants can express natural behaviour patterns, socialise with others, and move free of chains could a value for conservation be considered.¹⁴

The authors scored different captive elephant management styles according to their potential significance for conservation. Intensive tourist camps that offered conventional entertainment ranked lowest with 4 out of 21 points. When looking at the conditions elephants commonly face in captivity, even this scoring appears overly positive. Captive breeding, cruel training and early separation of calves from their mothers outlines how far commercial tourism deviates from conditions that could be deemed natural.

Our 2019–2020 study identified 263 elephants below the age of five at the assessed tourism venues in Thailand. This calculates to an average of over 50 new-born elephants per year. When

questioned where their mothers were, most venues stated that the mother was in a different camp or in a completely different area of Thailand.

Also, our findings regarding the most common elephant training practices confirmed that the average separation age of calves from mothers and the start of training is just over two years old. This is a stark contrast to how elephants grow up in the wild, where females tend to stay within their close-knit family herd, and males leave only around aged 10–15 years.⁵⁰

Apart from the physical harm of the training, this complete neglect of the elephants' natural social development leaves severe psychological marks^{52,53}. These marks leave the elephant with a lifelong trauma and can also complicate or prevent natural socialisation later in an elephant's life. Separated far too early from their mothers, captive born calves grow up without learning any parenting skills from their mothers, which may lead to abnormal maternal behaviour as adults.⁸⁰ In Myanmar, the training procedure led to an increased mortality rate in the years following the training⁶¹. This further calls into question the practices associated with keeping elephants in captivity – and particularly its suggested value for conservation.

Two hundred and fifty elephant biologists and elephant professionals, many of whom are conservationists, recognise in the 'Elephant Charter' that "captive and confined elephants suffer from a host of physical and psychological conditions not observed in the wild". The Elephant Charter was put together to promote scientifically sound and ethical management and care of all elephants, provide guidance to any institution managing wild or captive elephants. It states: "We harm elephants when through human intervention we break close social bonds; in particular our management practices must strive not to break the bonds between mothers and their offspring."

But even beyond this traumatic separation from their mothers and cruel training, the lives of captive elephants in the tourism industry could not be more different from their lives in the wild. They are deprived of learning and socially interacting with family herds. They endure husbandry conditions dominated by chain restraints, must accept people as authorities and providers of food, must interact with strangers, and are commercially traded for profit-guided breeding.

The degree to which efforts of releasing formerly held captive elephants into natural habitat contribute to conservation is questionable. For example, it is unclear how elephants raised in such artificial captive environments could function if released back into the wild. The impact of their captive upbringing may influence their ability to perform their ecological role, or trigger human-elephant conflict. The abnormal social environment of calves separated from their maternal families at young age deprives them of the opportunity to learn essential parenting skills from their mothers, aunts and sisters. This will decrease their ability to take care properly of any offspring they may have when they become adults.⁸⁰ They may also contract diseases from people, such as tuberculosis²³, and introducing such disease to wild elephants could be catastrophic.

A few non-touristic projects have released captive-held elephants into natural habitats and monitored their well-being. Yet, this has been limited to a few dozen elephants over several decades. Conflicts with surrounding local communities made this work challenging.

Conservation projects that aim to release animals back into the wild usually put significant effort into preserving natural behaviours. They do this by trying to replicate the needs of the species in captivity and limiting interaction with people until the point of release. Captive breeding programmes with conservation aims must be scientifically managed to ensure genetic robustness. Inappropriate breeding can eradicate any potential DNA preservation value.

These considerations and efforts are not addressed by commercial captive elephant tourism that is entirely guided by profits. Consequently, the value of elephants bred in such industry for eventually reinforcing wild populations as part of a conservation programme is close to zero.

Using elephants in commercial tourism is highly lucrative as outlined in our chapter on economics. The entire tourism elephant population generates up to US\$770.6 million in sales per year. It has created elephant price tags ranging up to US\$50,000 for an elephant deemed useful for tourism. Such a price for a captive elephant creates a dangerous incentive to poach wild elephants or to trade them illegally within countries and across national borders.

Worldwide, we are not aware of successful conservation precedents for keeping an endangered wild animal species in a privatised, commercial tourism industry. Most animal conservationists are unlikely to seriously attribute any conservation value to using orang-utans for shows and tourist interactions, or tigers for selfies and cub-feeding. So, it is puzzling that captive elephants giving rides and performing in shows could be somehow considered different.

Members of the IUCN African Elephant Specialist Group (AfESG) reject such practices for elephants as a conservation tool. Instead a strong focus is put on efforts that contribute to species conservation that maintains the species' ecological function in the environment.

Dr Marion Garaï, member of the IUCN AfESG, chairperson of the Elephant Specialist Advisory Group, trustee of the Elephant Reintegration Trust and scientific advisor to the European Elephant Group EEG, states:

"Most of the captive tourism elephants have been heavily abused and are psychologically so broken, that even if breeding has occurred, they cannot just be released into the wild without a very elaborate rehabilitation program. Therefore, to stipulate that such facilities are acceptable conservation tools is totally inappropriate. They have absolutely no value for elephant conservation. Conservation efforts should rather focus on protecting the shrinking habitat in the wild, while encouraging and ensuring the best possible care for those elephants in captivity for the remainder of their lives."

It is clear from all the findings presented in this report that the captive elephant tourism industry is inherently misaligned with the principles of species conservation. Claiming that this industry must be maintained as a conservation tool tragically ignores the reality of commercial exploitation. It can only be explained as greenwashing the abuse of this endangered species.

However, it is a sad reality that most Asian elephant countries are unlikely to phase out keeping elephants in captivity in the immediate future. This generation of elephants will have several more decades of captive life ahead of them at least.

To stipulate that elephant tourism facilities are acceptable conservation tools is totally inappropriate.

Consequently, it is important to explore models that limit the suffering of these elephants and that could provide some limited contribution to the conservation of elephant habitat or species in the wild. They should also prevent a further increase of captive elephant numbers and ensure conditions for captive elephants that resemble their natural habitat as closely as possible. Furthermore, they should limit or entirely prevent interactions with people to prevent any impact on the elephants' behaviour and welfare.

Recently, researchers have been advocating for the rewilding of captive elephants through elephant-owning communities in remote areas. These communities would function as mahout-guardians by monitoring their elephants in the natural habitat close to their villages. Some low-level observation-based eco-tourism could be allowed to provide benefits to the communities.²⁰

Other authors suggest taking this model further by creating large-scale, rewilding initiatives. Within these, elephants would no longer be under direct control of mahouts but local communities would benefit from living with elephants in their vicinity.⁸¹ Such concepts could minimise the suffering of elephants in captivity while providing some incentive to protect them in their natural habitat.

However, these concepts are entirely different from the current, dominant form of commercial captive-elephant tourism across Asia which aims at profit generation above anything else.

Enabling more progressive concepts for the elephants currently in captivity will first require a complete rebuild of the tourism industry. The existing profit-driven practices focussing on direct contact with elephants must be abandoned.

Image: Guests observe elephants from a viewing platform at an observation venue in Laos. The venue is actively engaged in rewilding and releasing elephants into protected habitats.





Image: In 2020, World Animal Protection has been providing emergency funding to 11 elephant venues in Thailand, Laos, Cambodia and Nepal. These venues struggled to maintain their elephants due to the travel restrictions during Covid-19. Credit: Kindred Spirit Elephant sanctuary

Conclusions

Life in captivity

A life in captivity for elephants is inherently inhumane and leads to suffering throughout their long lives. The practices necessary to control elephants when in close interaction with people highlight how inadequate a life in tourism entertainment is for these magnificent, endangered wild animals.

These practices involve:

- premature separation of the elephant calves from their mothers
- social deprivation for the remainder of their lives
- restraints that restrict their movements
- cruel training to assure obedience in particular in the very early stage of their lives
- punishment or fear of punishment on a daily basis
- limited or inadequate veterinary care and nutrition.

This paints a very bleak picture about the conditions for elephants in captive-elephant tourism.

There are exceptions to the rule. Significant efforts are being made to enable elephants a life that allows them to be elephants. But the bigger picture and the trends we share in this report are cause for serious concern and require urgent action.

Unfortunately, there are deep trenches between the two main factions arguing for changes. One side argues that incremental improvements to the welfare of elephants in captivity is sufficient. This allows them to continue the practice of commercial captive-elephant tourism while claiming a conservation benefit.

The other side agrees with the need for improvement to the welfare of elephants, but only by phasing out the principal practice of keeping elephants within a commercial tourism industry. This seemingly small difference between accepting or rejecting the keeping elephants for commercial gain leads to fundamentally different approaches and solutions.

The captive elephant industry has received negative attention over the past years, but we have seen several arguments in favour of maintaining and promoting this industry. These include that chain restraints and hooks are not necessarily bad and that elephants are not trained cruelly anymore. There are also suggestions that observation-only experiences are bad for elephants (see chapter 'Captivity and Welfare').

This report disputes these claims. Our evidence is based on 10 years researching all aspects of this industry in Asia. During this time, we have conducted more than 1,000 visits to more than 300 elephant camps across eight countries. We have also documented the most common way of training elephants, and collaborated with renowned elephant and animal-welfare experts and academics worldwide.

Our 2019-2020 study found that over 3,800 elephants are held captive in at least 357 facilities catering to tourists across Thailand, India, Nepal, Sri Lanka, Laos, Cambodia and Malaysia. This is a 30% increase of the number of elephants in just five years. This is a worrying development as more than half are used for elephant rides, and only a very small minority given access to free-roaming, observation-only facilities.

As outlined in our elephant conservation chapter, the captive elephant tourism industry is inherently misaligned with the principles of species conservation. Claiming that this industry must be maintained as a conservation tool is tragically ignoring the reality of commercial exploitation and greenwashes the abuse of this endangered species.

Compared to five years ago a tripling of venues that offer elephant washing experiences in Thailand has been registered.

However, the study also showed that the tourism demand has changed and with it the type of tourism experiences. Compared to five years ago a tripling of venues that offer elephant washing experiences in Thailand has been registered. This reflects the growing awareness among tourists and in travel companies that conventional elephant entertainment is not acceptable anymore. But this trend must not stop here.

As shown in this report conditions at elephant washing places can at times mean a small improvement but remain fundamentally problematic. The close interaction between visitors and elephants risks the safety and health of the people interacting with the elephant and reinforces the need for constant control and cruel training.

Despite the positive change of consumer demand towards experiences with better animal welfare conditions scores, the situation remains grave. This is because of the overall growth of tourism, particularly from China. The change in demand has not yet reached its full potential in changing conditions for elephants.

Demand must shift further to encourage more facilities to enable elephants to be elephants. Such facilities involve letting elephants roam freely under remote supervision during the day, interact with other elephants where possible, and primarily observation-only experiences for visitors. However, even this is only a compromise to truly protect elephant welfare. An eventual phase-out of the use of captive elephants for commercial tourism entertainment is essential to address the inherent problems with this industry.

A way forward

Captive elephant use for tourism is inherently linked with the inhumane and cruel practices, necessary to safeguard the people closely interacting with elephants. The economic gain generated through this industry is estimated at more than half a billion USD per year in Thailand alone. Combined with legislation that classifies captive elephants as commodities in most Asian countries, this poses a threat to the elephants' wellbeing in captivity and their protection in the wild.

An increasing proportion of mahouts and elephant caretakers without heritage in elephant keeping are involved in this industry. Only a fraction want their children to take up this profession. This indicates concerns based on low income, high personal health risk and limited potential to develop further. The consistently increasing number of captive elephants within the industry is driven by the massive increase in overall number of international tourists over the past decade. Although the proportion of people rejecting such practices has also significantly increased, this is dwarfed by the overall increase in tourist numbers.

The Covid-19 pandemic has shown the vulnerability and dependency of captive elephants on tourism. While concerns about this industry have been raised for many years, it is clearer than ever that change must happen now. Such change must acknowledge the thousands of captive elephants in the industry and the people whose livelihoods depend on their elephant's use in tourism. Furthermore, the historical and cultural significance of people's traditional relationship with captive elephants and the related spiritual value needs to be acknowledged and respected when exploring solutions.

While there isn't a silver bullet here, three interlinked key elements are essential to address the concerns and end this inhumane practice. These are:

- reducing the number of captive elephants used for commercial tourism
- decreasing demand for captive elephant tourism entertainment attractions
- improving conditions for the current generation of captive tourism elephants and their caretakers.

Stopping the influx of new captive elephant into the tourism industry and reducing their number is crucial. There is already limited availability of resources such as skilled staff, adequate land, and high-quality veterinary care. The consistent increase is worsening the situation and creating further dependencies on commercial demand.

Countries with captive elephants must prevent captive breeding and intake of wild elephants for the purpose of commercial use. The current generation of captive elephants must be the last one facing these conditions.

Decreasing the demand for captive-elephant tourism entertainment is closely linked with reducing the number of captive elephants. If fewer people are willing to pay for elephant entertainment the motivation to breed and trade captive elephants or to launder wild elephants into the industry will decrease.

This demand decrease is not and should not happen overnight, to safeguard the welfare of the current generation of captive elephants. However, a clear signal to the elephant industry that tourism demand is decreasing is essential. An intermediate phase-out step can be the shift of the demand towards higher-welfare elephant attractions that require fewer visitors and fewer elephants, while providing more rewarding experiences.

Travel companies and individual travellers can make a real change here. They can choose to visit only elephant-friendly venues offering observation-only experiences, combined with best-

practice elephant management, or they can choose to observe elephants responsibly in the wild.

Improving conditions for the current generation of captive tourism elephants and their caretakers will decrease suffering and exploitation of elephants and mahouts. Tourism attractions based on observation-only experiences and monitored for best practice standards are the best possible options to achieve this.

Such attractions remove visitors from the immediate vicinity of captive elephants and allow the animals to have greater autonomy and behavioural diversity. As a result, the risks of injury of visitors is decreased and mahouts have a greater flexibility in supervising their elephants as they no longer have to control every movement. Experiencing elephants being elephants should inspire visitors to protect elephants and their natural habitat in the wild.

Mahouts must be an integral part of such improvements and given better employment packages. These should include better living conditions at the venues, provide their better education and a future in other professions. Such packages should also encourage career development beyond the lifespan of the elephant they are taking care of.

These three key elements combined will achieve a responsible phase-out of the unacceptable situation captive elephants are facing today. We strongly recommended that governments and dedicated elephant experts explore alternative ways to address these concerns.

They could shift the current generation of captive tourism elephants away from the commercial venues and into projects that support conservation initiatives for protecting wild elephants and their habitat. This must be done without further encouraging or sustaining the keeping of captive elephants in a commercial, privatised tourism industry.

Never has the time been more right to take action for elephants and change how we want our relationship with them to be in the future. Elephants are wild animals - not entertainment commodities. They need our protection to stay in the wild where they belong.

A clear signal to the elephant industry that tourism demand is decreasing is essential.

Appendix 1

A scientific bias towards intensive management of elephants

Chiang Mai University's veterinary faculty and the Smithsonian Institute have in recent years released studies that appeared to reject elephant management models that allow for increased autonomy and less interaction with visitors by asserting they are negative for elephants.⁶²⁻⁶⁴ It is disconcerting that an expansion of the commercial captive elephant industry is accepted by these institutions, while choosing methodologies that lead to discrediting or ignoring benefits of less intensive alternative elephant tourism attractions, such as observation-only models.

One study, for example, investigated the distance walked by elephants at five camps, one of which was an observation-only camp, to evaluate the amount of exercise the elephants engaged in.⁶⁴ The distance travelled by riding elephants was calculated based on the number of rides and distance of each ride. However, the study concluded that the distance walked by the elephants at the observation-only camp was '0 km'.

Here, the researchers apparently ignored the fact that free-roaming elephants will still move during the entire day and that movement at riding camps is always dependent on visitor availability. If there are no visitors, the elephants usually remain chained and be prevented from moving.

Another study measured faecal glucocorticoid metabolites (FGM) to assess stress levels of elephants at camps offering different tourist activities. While FGM can indeed be used to measure acute stress, it is considerably less reliable for situations where chronic poor welfare conditions might exist.

Several studies highlighted the varied responses to social isolation or general poor welfare states in animals, which even showed decreased glucocorticoid values in such cases.⁸²⁻⁸⁵ FGM measurements are also considered unreliable when it comes to correlating them with specific factors in uncontrolled environments. They should not be used in isolation to reflect on animal welfare.⁸⁶⁻⁸⁹

At any given moment, a multitude of factors influences the cortisol secretion in an individual animal. The sampling procedure can affect the measurement, as can whether an animal has grown habituated to specific low welfare conditions.

In the study on FGM in captive elephants mentioned above, samples from 59 elephants of 11 elephant-riding camps were collected. However, only four samples from one observation-only camp were included to represent this less intensive tourism activity

as a whole. The camp these samples were collected from houses a very high density of elephants and is surrounded by a large number of other camps with elephant groups.

Such density of elephants alone might affect stress levels, yet the study continues to use these four samples as representation for all observation-only tourism activities. It concludes that elephants at saddled riding, followed by elephants performing in shows show the lowest FGM concentrations (suggesting lowest stress). It asserts that elephants at observation-only activities show the second highest FGM concentration.

This rather unexpected result warrants scrutinising the study's methodology or principle assumptions about FGM measurements value as sole animal welfare indicator. The study also identified that elephants with behavioural problems, such as stereotypes, showed lower FGM concentrations.

This finding might possibly be caused due to the reduction of stress hormones through the coping function that stereotypes are often assumed to have. However, regardless of lower FGM, stereotypes indicate exposure to high stress situations or psychological trauma. The study does not disclose the kind of camps most of the stereotypes occurred. It also does not consider that this stereotype-induced reduction of FGM measurements might have affected the results regarding FGM values at different tourism activities offered at camps.

Our studies indicate that elephants are much more likely to show stereotypic behaviour at lower welfare venues, such as those offering rides and shows. This could be one factor that influenced the FGM study's results and further indicates the unreliability of FGM measurements in isolation for determining animal welfare.

Image: Two elephants at a sanctuary in Thailand.



Appendix 2

List of venues with best welfare conditions*

Country	Name	Offered visitor activities
Cambodia	Elephant Valley Project	No rides, observing elephants only, elephants free-roaming in natural habitat
India	Wildlife SOS - Elephant Conservation and Care Centre	No rides, observing elephants only
Laos	Laos Elephant Conservation Centre	No rides, observing elephants, following elephants free-roaming in natural habitat, occasional feeding
Laos	Mandalao	No rides, observing elephants, following elephants in forest and fields, limited feeding & touching of elephants
Nepal	Association Moey	No rides, observing elephants, following elephants in natural habitat
Nepal	Tiger Tops Tharu Lodge	No rides, observing elephants only, following elephants in forest and fields
Sri Lanka	Elephant Transit Home	No rides, observing elephants only
Thailand	BEES (Burm & Emily's Elephant Sanctuary)	No rides, observing elephants only, following elephants in forest and fields
Thailand	Boon Lott's Elephant Sanctuary	No rides, observing elephants only, following elephants in forest and fields
Thailand	Chang Chill	No rides, observing elephants only, following elephants in forest and fields
Thailand	Elephant Nature Park	No rides, observing elephants in forest and fields, feeding of elephants
Thailand	Elephant Valley Thailand**	No rides, observing elephants, following elephants in forest and fields, feeding of elephants once daily
Thailand	Following Giants	No rides, observing elephants only, following elephants in forest and fields
Thailand	Global Vision International (GVI) Huay Pakoot	No rides, observing elephants only, following elephants in forest, limited feeding of elephants
Thailand	Kindred Spirit Elephant Sanctuary	No rides, observing elephants only, elephants free-roaming in natural habitat
Thailand	Mahouts Elephant Foundation - LIFE	No rides, observing elephants only, following elephants in forest
Thailand	Phuket Elephant Sanctuary	No rides, observing elephants, following elephants in forest, limited feeding of elephants
Thailand	Tree Tops Elephant Reserve Phuket	No rides, observing elephants, following elephants in forest, limited feeding of elephants

Anantara Resort's Golden Triangle Asian Elephant Foundation (GTAEF) featured on our best scoring venues list in Taken for a ride 1. For this round of assessment, less than half of the 18 elephants present were involved in the observation-based activities, which allow for excellent conditions. However, all venues are assessed for the conditions present for the majority of animals.

Somboon Legacy is an observation-only venue that has also unfortunately barely missed a listing. As a new venue it is anticipated that they will further improve though and thus this should warrant a mention here.

* Assessment scores of 9 and 10. Some of the listed venues allow for some direct interaction with elephants while still providing excellent welfare conditions for them. We encourage those venues to consider abandoning such activities to become observation-only.

**This venue has now closed following the Covid-19 pandemic.

Appendix 3

Unassessed venues*

The following venues were identified during the study, but couldn't be visited or only opened after the field research was already completed.

Country	Name	Offered visitor activities
Cambodia	Elephant Sanctuary Cambodia	No rides, observing elephants in natural habitat only, forest restoration and site development, minimum 1 week volunteering
Thailand	Hope for Elephants	No rides, elephant bathing, feeding, following elephants in forest and fields
Thailand	Karen Elephant Oasis	No rides, elephant bathing, feeding, following elephants in forest and fields
Thailand	Pamper a Pachyderm	No rides, elephant bathing, feeding, following elephants in forest and fields
Thailand	Elephant Wellness	No rides, elephant bathing, feeding, following elephants in forest and fields
Thailand	Majestic Elephant Project	No rides, elephant bathing, feeding, following elephants in forest and fields
Thailand	Elephant Heaven	No rides, elephant bathing, feeding, following elephants in forest and fields
Thailand	Elephant Homestay Khun Chai Thong	No rides, elephant bathing, feeding, following elephants in forest and fields
Thailand	Wildlife Friends Foundation Thailand (WFFT)	No rides, elephant washing, elephant feeding, husbandry tasks, minimum 1 week volunteering or day visits
Thailand	Phuket Elephant Park	No rides, elephant feeding, petting, following elephants in forest and fields

*As identified through flyer/brochure, venue website or TripAdvisor photographs and comments.

References

1. Moorhouse TP, Dahlsjö CAL, Baker SE, D’Cruze NC, Macdonald DW. The Customer Isn’t Always Right—Conservation and Animal Welfare Implications of the Increasing Demand for Wildlife Tourism. *PLoS One*. 2015 Oct;10(10).
2. Higginbottom K. Wildlife tourism: impacts, management and planning. In: Higginbottom K, editor. *Wildlife Tourism: Impacts, Management and Planning*. Altona, Victoria: Common Ground Publishing; 2004.
3. Moorhouse T, D’Cruze NC, Macdonald DW. Unethical use of wildlife in tourism: what’s the problem, who is responsible, and what can be done? *J Sustain Tour*. 2017 Apr 3;25(4):505–16.
4. UNWTO. International tourism growth continues to outpace the global economy [Internet]. News. 2020. Available from: <https://www.unwto.org/international-tourism-growth-continues-to-outpace-the-economy>
5. UNWTO. UNWTO Tourism Highlights. UNWTO; 2016. Report No.: 2016 Edition.
6. World Animal Protection. Wildlife on a tightrope: An overview of wild animals in entertainment in Thailand [Internet]. World Animal Protection; 2010. Available from: http://www.worldanimalprotection.org/sites/default/files/int_files/wildlife-on-a-tightrope-thailand.pdf
7. Schmidt-Burbach J. Taken for a ride - the conditions for elephants used in tourism in Asia. World Animal Protection; 2017.
8. Clubb R, Rowcliffe M, Lee P, Mar KU, Moss C, Mason GJ. Compromised survivorship in zoo elephants. *Science*. 2008;322(5908):1649–1649.
9. Sukumar R. A brief review of the status, distribution and biology of wild Asian elephants *Elephas maximus*. *Int Zoo Yearb*. 2006;40(1):1–8.
10. IUCN Asian Elephant Specialist Group. The Asian Elephants (*Elephas maximus*) [Internet]. IUCN; 2018. Available from: <https://www.asesg.org/PDFfiles/The%20Asian%20Elephants%20new.pdf>
11. Fernando P, Pastorini J. Range-wide status of Asian elephants. *Gajah*. 2011;35:15–20.
12. Varma S. *Captive Elephants in India - Ecology, Management and Welfare*. Bangalore, India: Compassion Unlimited Plus Action (CUPA) and Asian Nature Conservation Foundation (ANCF); 2015.
13. Nijman V. An assessment of the live elephant trade in Thailand. TRAFFIC International; 2014.
14. Kurt F, Mar KU. Guidelines for the management of captive Asian elephants and the possible role of the IUCN/SSC Asian Elephant Specialist Group. *Gajah*. 2003;22:22–30.
15. Roots C. *Domestication*. Greenwood Press; 2007.
16. Zeder MA, Emshwiller E, Smith BD, Bradley DG. Documenting domestication: the intersection of genetics and archaeology. *Trends Genet*. 2006 Mar;22(3):139–55.
17. Price EO. Behavioral aspects of animal domestication. *Q Rev Biol*. 1984;1–32.
18. Russell N. The Wild Side of Animal Domestication. *Soc Anim*. 2002;10(3):285–302.
19. Lair R. *Gone Astray - The Care and Management of the Asian Elephant in Domesticity* [Internet]. FAO; 1997. Available from: <http://www.fao.org/docrep/005/AC774E/AC774E00.HTM>

20. Baker L, Winkler R. Asian elephant rescue, rehabilitation and rewilding. *Anim Sentience*. 2020;5(28):1.
21. Douglas-Hamilton I, Barnes RFW, Shoshani H, Williams AC, Johnsingh AJT, Beck R, et al. Elephants. In: *The new encyclopedia of mammals* Oxford University Press, Oxford, UK. 2001. p. 436–445.
22. Lyashchenko KP, Greenwald R, Esfandiari J, Olsen JH, Ball R, Dumonceaux G, et al. Tuberculosis in Elephants: Antibody Responses to Defined Antigens of *Mycobacterium tuberculosis*, Potential for Early Diagnosis, and Monitoring of Treatment. *Clin Vaccine Immunol*. 2006 Jan 7;13(7):722–32.
23. Maslow JN, Mikota SK. *Tuberculosis in elephants—a reemergent disease: diagnostic dilemmas, the natural history of infection, and new immunological tools*. SAGE Publications Sage CA: Los Angeles, CA; 2015.
24. Angkawanish T, Wajjwalku W, Sirimalaisuwan A, Mahasawangkul S, Kaewsakhorn T, Boonsri K, et al. *Mycobacterium tuberculosis* infection of domesticated Asian elephants, Thailand. 2010 [cited 2016 Sep 2]; Available from: <http://www.repository.up.ac.za/handle/2263/15912>
25. DNPWC. *Nepal Elephant Tuberculosis Control and Management Action Plan (2011-2015)* [Internet]. Kathmandu, Nepal: Government of Nepal, Ministry of Forests and Soil Conservation, Department of National Parks and Wildlife Conservation; 2011. Available from: <http://www.ntnc.org.np/sites/default/files/publications/Nepal%20Elephant%20TB%20Control%20and%20Mgt%20Action%20Plan.pdf>
26. Mikota SK, Peddie L, Peddie J, Isaza R, Dunker F, West G, et al. Epidemiology and diagnosis of *Mycobacterium tuberculosis* in captive Asian elephants (*Elephas maximus*). *J Zoo Wildl Med*. 2001;32(1):1–16.
27. Michalak K, Austin C, Diesel S, Bacon MJ, Zimmerman P, Maslow JN. *Mycobacterium tuberculosis* infection as a zoonotic disease: transmission between humans and elephants. *Emerg Infect Dis*. 1998;4(2):283.
28. Orloski K. *Epidemiology of tuberculosis in elephants, 1994-201, United States. Tuberculosis in Elephants: Science, Myths and Beyond*; 2011; USDA, APHIS Center for Animal Welfare, Kansas City.
29. Ong BL, Ngeow YF, Razak MFAA, Yakubu Y, Zakaria Z, Mutalib AR, et al. Tuberculosis in captive Asian elephants (*Elephas maximus*) in Peninsular Malaysia. *Epidemiol Infect*. 2013 Jul;141(7):1481–7.
30. Anon. Report shows elephants giving rides to tourists at Amer suffer from TB, blindness [Internet]. *Hindustan Times*. 2018 [cited 2020 Apr 22]. Available from: <https://www.hindustantimes.com/jaipur/report-shows-elephants-giving-rides-to-tourists-at-amer-suffer-from-tb-blindness/story-4I2At1a78YfC3qmivBMzCN.html>
31. Ganguly SB, Valliyate M, Krishnamurthy J, Saxena N, Mathur A. Report on evaluation of applications for registration of captive elephants for performance in Jaipur. *Animal Welfare Board of India*; 2018.
32. Jones KE, Patel NG, Levy MA, Storeygard A, Balk D, Gittleman JL, et al. Global trends in emerging infectious diseases. *Nature*. 2008;451(7181):990–993.
33. Schmidt-Burbach J, Watkins V, D’Cruze N. *The Disease Costs of Wildlife Markets - A Perilous Price to Pay*. *Commonw Vet J* [Internet]. 2014;(July). Available from: https://www.academia.edu/29022375/The_Disease_Costs_of_Wildlife_Markets_-_A_Perilous_Price_to_Pay
34. Kido N, Tanaka S, Omiya T, Kamite Y, Sawada K, Komatsu Y, et al. Emotion estimation using a wearable heart rate monitoring device in Asian elephants (*Elephas maximus*) during veterinary clinical procedures. *J Vet Med Sci*. 2020;19–0637.
35. Sukumar R. *The living elephants: evolutionary ecology, behaviour, and conservation*. Oxford University Press; 2003.
36. Rowell ZE. Locomotion in captive Asian elephants (*Elephas maximus*). *J Zoo Aquar Res*. 2014;2(4):130–135.

37. Thapa K, Kelly MJ, Pradhan NMB. Elephant (*Elephas maximus*) temporal activity, distribution, and habitat use patterns on the tiger's forgotten trails across the seasonally dry, subtropical, hilly Churia forests of Nepal. *PLoS One*. 2019;14(5).
38. Hii N. Asian elephants' social structure and mineral lick usage in a Malaysian rainforest using camera traps [PhD Thesis]. University of Nottingham Malaysia Campus; 2017.
39. Borah J, Deka K. Nutritional evaluation of forage preferred by wild elephants in the Rani Range Forest, Assam, India. *J Gajaha*. 2008;28:41–43.
40. Lihong W, Liu L, Qian H, Jinguo Z, Li Z. Analysis of nutrient components of food for Asian elephants in the wild and in captivity. *Front Biol China*. 2007;2(3):351–355.
41. Koirala RK, Raubenheimer D, Aryal A, Pathak ML, Ji W. Feeding preferences of the Asian elephant (*Elephas maximus*) in Nepal. *BMC Ecol*. 2016;16(1):54.
42. Santra AK, Pan S, Samanta AK, Das S, Halder S. Nutritional status of forage plants and their use by wild elephants in South West Bengal, India. *Trop Ecol*. 2008;49(2):251.
43. Rizvanovic A, Amundin M, Laska M. Olfactory discrimination ability of Asian elephants (*Elephas maximus*) for structurally related odorants. *Chem Senses*. 2013;38(2):107–118.
44. Holland C. Olfactory Cognitive Enrichment Training for a Male Asian Elephant. *GAJAH*. 2018;34.
45. McKay GM. Behavior and ecology of the Asiatic elephant in southeastern Ceylon [Internet]. Smithsonian Institution Press Washington, DC; 1973 [cited 2016 Nov 14]. Available from: <http://indianmedicine.eldoc.ub.rug.nl/root/M/66526/>
46. Pokharel SS, Seshagiri PB, Sukumar R. Influence of the number of calves and lactating adult females in a herd on the adrenocortical activity of free-ranging Asian elephants. *Wildl Res*. 2020;46(8):679–689.
47. Mumby HS, Plotnik JM. Taking the elephants' perspective: Remembering elephant behavior, cognition and ecology in human-elephant conflict mitigation. *Front Ecol Evol*. 2018;6:122.
48. Ahmed J, Ahmed N. Successful chemical restraining and management of an Asian elephant (*Elephas maximus*) during musth. *J Ent Zool Stud*. 2017;5:2072–2073.
49. Petraccione J, Root-Gutteridge H, Cusano DA, Parks SE. Exploring the early social affiliations and behaviour of a captive Asian elephant (*Elephas maximus*) calf. *J Zoo Aquar Res*. 2017;5(3):131–136.
50. Vidya TNC, Sukumar R. Social and reproductive behaviour in elephants. *Curr Sci*. 2005;1200–1207.
51. Foerder P, Galloway M, Barthel T, Moore III DE, Reiss D. Insightful problem solving in an Asian elephant. *PLoS One*. 2011;6(8).
52. Bradshaw GA, Lindner L. Post-Traumatic Stress and Elephants in Captivity. 2009.
53. Rizzolo JB, Bradshaw GA. Prevalence and patterns of complex PTSD in Asian elephants (*Elephas maximus*). In Kelaniya, Sri Lanka: Centre for Asian Studies, University of Kelaniya; 2016. p. 291–7.
54. Shermin de Silva C, Weerathunga US, Pushpakumara TV, Weerakoon DK, Wittemyer G. Demographic variables for wild Asian elephants using longitudinal observations. *PLoS One*. 2013;8(12).
55. Asher L, Williams E, Yon L. Developing behavioural indicators, as part of a wider set of indicators, to assess the welfare of elephants in UK zoos. United Kingdom: School of Veterinary Medicine & Science, University of Nottingham; 2015. Report No.: Defra Project WC1081.

56. Veasey JS. Assessing the Psychological Priorities for Optimising Captive Asian Elephant (*Elephas maximus*) Welfare. *Animals*. 2020 Jan;10(1):39.
57. Mellor DJ. Positive animal welfare states and reference standards for welfare assessment. *N Z Vet J*. 2015;63(1):17-23.
58. Mellor DJ. Operational details of the five domains model and its key applications to the assessment and management of animal welfare. *Animals*. 2017;7(8):60.
59. Green TC, Mellor DJ. Extending ideas about animal welfare assessment to include 'quality of life' and related concepts. *N Z Vet J*. 2011;59(6):263-271.
60. Dwyer CM. Welfare of sheep: Providing for welfare in an extensive environment. *Small Rumin Res*. 2009;86(1-3):14-21.
61. Crawley JA, Lahdenperä M, Oo ZM, Htut W, Nandar H, Lummaa V. Taming age mortality in semi-captive Asian elephants. *Sci Rep*. 2020;10(1):1-8.
62. Bansiddhi P, Brown JL, Thitaram C, Punyapornwithaya V, Somgird C, Edwards KL, et al. Changing trends in elephant camp management in northern Thailand and implications for welfare. *PeerJ*. 2018;6:e5996.
63. Bansiddhi P, Brown JL, Khonmee J, Norkaew T, Nganvongpanit K, Punyapornwithaya V, et al. Management factors affecting adrenal glucocorticoid activity of tourist camp elephants in Thailand and implications for elephant welfare. *PLoS One*. 2019;14(10):e0221537.
64. Norkaew T, Brown JL, Thitaram C, Bansiddhi P, Somgird C, Punyapornwithaya V, et al. Associations among tourist camp management, high and low tourist seasons, and welfare factors in female Asian elephants in Thailand. *PLoS One*. 2019;14(6).
65. Welfare Quality Network. Assessment Protocols [Internet]. Reports. 2018. Available from: <http://www.welfarequalitynetwork.net/en-us/reports/assessment-protocols/>
66. Botreau R, Veissier I, Butterworth A, Bracke MB, Keeling IJ. Definition of criteria for overall assessment of animal welfare. *Anim Welf*. 2007;16(2):225.
67. Crawley JA, Lahdenperä M, Seltmann MW, Htut W, Aung HH, Nyein K, et al. Investigating changes within the handling system of the largest semi-captive population of Asian elephants. *PLoS One*. 2019;14(1).
68. Kow N, Kutschera S, Wernet F, Mittiga A, Silva B. Travel Trends Report 2019 [Internet]. Trekksoft; 2019. Available from: <https://www.trekksoft.com/en/resources/ebooks/travel-trends-report-2019>
69. Intrepid Travel. How we changed the elephant riding industry [Internet]. The Journal - By Intrepid Travel. 2018. Available from: <https://www.intrepidtravel.com/adventures/change-elephant-rides/>
70. Bale R. TripAdvisor Halts Ticket Sales to Cruel Wildlife Attractions. *National Geographic* [Internet]. 2016 Oct 12; Available from: <https://www.nationalgeographic.com/news/2016/10/wildlife-watch-tripadvisor-animal-tourism-ticket-sales/>
71. Yanli Y. Tourists more aware of need to protect wildlife, survey says. *ChinaDaily* [Internet]. 2019 May 21; Available from: <https://www.chinadailyhk.com/articles/14/10/10/1558413853738.html?newsId=83360>
72. ECNS. 3 Chinese companies stop elephant entertainment programs. *China.org.cn* [Internet]. 2017 Aug 11; Available from: http://www.china.org.cn/travel/2017-08/11/content_41392646.htm
73. QYER.COM. Responsible Travel 负责任的旅行 [Internet]. QYER.COM; 2018 Nov. (Responsible Travel). Available from: <http://guide.qyer.com/responsible-travel/>

74. World Animal Protection. The Coalition for Ethical Wildlife Tourism [Internet]. The Coalition for Ethical Wildlife Tourism – proving the demand for animal-friendly tourism. 2017. Available from: <https://www.worldanimalprotection.org/cewt>
75. World Animal Protection. Associated with cruelty - How travel trade associations are ignoring wild animal abuse [Internet]. London, UK: World Animal Protection; 2018. Available from: https://www.worldanimalprotection.org/sites/default/files/media/int_files/how_travel_trade_associations_are_ignoring_wild_animal_abuse_-_report_november_2018.pdf
76. ANVR. Dierenbeschermingsorganisaties blij met ANVR-training dierenwelzijn [Internet]. 2016. Available from: <https://www.anvr.nl/lists/nieuws/artikel.aspx?ID=7987>
77. ABTA. ABTA launches second edition of its Animal Welfare Guidelines [Internet]. News. 2019. Available from: <https://www.abta.com/news/abta-launches-second-edition-its-animal-welfare-guidelines>
78. SATSA. Evaluating Captive Wildlife Attractions & Activities. Southern African Tourism Services Association (SATSA); 2019 p. https://www.satsa.com/wp-content/uploads/SATSA_HumanAnimalInteractions_Final5_Interactive.pdf.
79. Anon. Coronavirus causes Thailand's captive elephants to be released to avoid starvation. ABC News [Internet]. 2020 May 6 [cited 2020 Jun 12]; Available from: <https://www.abc.net.au/news/2020-05-07/thai-elephants2c-out-of-work-due-to-coronavirus2c-trudge-home/12222414>
80. Lee PC. Allomothering among African elephants. *Anim Behav.* 1987;35(1):278-291.
81. van de Water A, Henley M, Bates L, Slotow R. Future of Thailand's captive elephants: commentary on Baker & Winkler on elephant rewilding. *Anim Sentience.* 2020;5(28):1-6.
82. Pawluski J, Jegou P, Henry S, Bruchet A, Palme R, Coste C, et al. Low plasma cortisol and fecal cortisol metabolite measures as indicators of compromised welfare in domestic horses (*Equus caballus*). *PLoS One.* 2017;12(9).
83. Van Reenen CG, Mars MH, Leushuis IE, Rijsewijk FAM, Van Oirschot JT, Blokhuis HJ. Social isolation may influence responsiveness to infection with bovine herpesvirus 1 in veal calves. *Vet Microbiol.* 2000;75(2):135-143.
84. Fisher AD, Crowe MA, Prendiville DJ, Enright WJ. Indoor space allowance: effects on growth, behaviour, adrenal and immune responses of finishing beef heifers. *Anim Sci.* 1997;64(1):53-62.
85. Ladewig J, Smidt D. Behavior, episodic secretion of cortisol, and adrenocortical reactivity in bulls subjected to tethering. *Horm Behav.* 1989 Sep;23(3):344-60.
86. Millspaugh JJ, Washburn BE. Use of fecal glucocorticoid metabolite measures in conservation biology research: considerations for application and interpretation. *Gen Comp Endocrinol.* 2004;138(3):189-199.
87. Palme R. Non-invasive measurement of glucocorticoids: advances and problems. *Physiol Behav.* 2019;199:229-243.
88. Wolfensohn S, Shotton J, Bowley H, Davies S, Thompson S, Justice WS. Assessment of welfare in zoo animals: Towards optimum quality of life. *Animals.* 2018;8(7):110.
89. Mormède P, Andanson S, Aupérin B, Beerda B, Guémené D, Malmkvist J, et al. Exploration of the hypothalamic-pituitary-adrenal function as a tool to evaluate animal welfare. *Physiol Behav.* 2007;92(3):317-339.


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/UC8R1T31518211111111111111)

Copyright © World Animal Protection

07.20