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SOUTHEAST ASIA

AT THE HEART OF WILDLIFE TRADE



USAID
FROM THE AMERICAN PEOPLE



TRAFFIC
the wildlife trade monitoring network

TRAFFIC REPORT

SOUTHEAST ASIA: AT THE HEART OF WILDLIFE TRADE

TRAFFIC is a leading non-governmental organisation working globally on trade in wild animals and plants in the context of both biodiversity conservation and sustainable development.

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LIST OF ACRONYMS

| | |
|--------------|--|
| AEG-CITES | ASEAN Expert Group on CITES |
| AMLAFTA | The Anti-Money Laundering and Anti-Terrorism Financing and Proceeds of Unlawful Activities Act |
| APEC | Asia Pacific Economic Cooperation |
| ASEAN | Association of Southeast Asian Nations |
| ASEAN-WEN | ASEAN-Wildlife Enforcement Network |
| ASEANAPOL | ASEAN Chiefs of National Police |
| AWG CITES-WE | ASEAN Working Group on CITES and Wildlife Enforcement |
| BMB | Biodiversity Management Bureau |
| BOC | Bureau of Customs |
| CITES | Convention on International Trade in Endangered Species of Wild Fauna and Flora |
| CITES MA | CITES Management Authority |
| CoP | Conference of the Parties |
| CWR | Certificate of Wildlife Registration |
| DENR | Department of Environment and Natural Resources, Philippines |
| DNP | Department of National Parks |
| ETIS | Elephant Trade Information System |
| EU | European Union |
| HCMC | Ho Chi Minh City |
| ICCWC | The International Consortium on Combating Wildlife Crime |
| IDR | Indonesian Rupiah |
| INTERPOL | International Police Organization |
| INTESA | International Trade in Endangered Species Act 2008, Malaysia |
| IUCN | International Union for Conservation of Nature |
| IUCN-SSC | IUCN Species Survival Commission |
| LAK | Laotian Kip |
| Lao PDR | Lao People's Democratic Republic |
| LEMIS | Law Enforcement Management Information System |
| MYR | Malaysian Ringgit |
| NBI | National Bureau of Investigation |
| NDF | Non-Detriment Finding |
| NGO | Non Governmental Organisation |
| NIAP | National Ivory Action Plan |
| OP-NICC | Office of the President-National Intelligence Coordinating Council |
| PHP | Philippine Peso |
| PNP | Philippine National Police |
| POGI | Philippine Operations Group on Ivory |
| RGK | Royale Gendarmerie Khmere [of the Cambodian Ministry of Defense] |
| SBCC | Social and Behavioural Change Communications |
| SEA | Southeast Asia |
| SEZ | Special and Specific Economic Zone (Lao PDR) |
| SOMTC | Senior Officials Meeting on Transnational Crime |
| TCM | Traditional Chinese Medicine |
| THB | Thai Baht |
| TM | Traditional Medicine |
| UNCAC | United Nations Convention against Corruption |
| UNEA | United Nations Environmental Assembly |
| UNGA | United Nations General Assembly |
| UNODC | United Nations Office on Drugs and Crime |

| | |
|-------|--|
| USD | U.S. Dollar |
| USAID | U.S. Agency for International Development |
| USFWS | United States Fish and Wildlife Service |
| WARPA | Wild Animal Reservation and Protection Act |
| WCA | Wildlife Conservation Act 2010 |
| WCO | World Customs Organization |
| WEN | Wildlife Enforcement Network |
| WIFOS | Wildlife Forensic Science Unit |
| WFP | Wildlife Farm Permit |
| WRRT | Wildlife Rapid Rescue Team |

Countries:

| | |
|----|--|
| BN | Brunei Darussalam |
| ID | Indonesia |
| KH | Cambodia |
| LA | Lao PDR (People's Democratic Republic) |
| MM | Myanmar |
| MY | Malaysia |
| PH | Philippines |
| SG | Singapore |
| TH | Thailand |
| VN | Viet Nam |

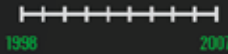
An Incredible Scale of Trade

Southeast Asia is a biodiversity hotspot that sits at the heart of wildlife trade – both legal and illegal. The reported legal trade in terrestrial wildlife takes place on an astounding scale, as does the illegal trade as poaching, trafficking and consumption of wildlife and its parts continues to grow. The region is a source, consumer and entropet for wildlife that threatens species far beyond its borders and calls for substantial and enduring change.

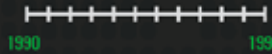
- Legal
- Illegal



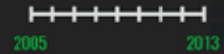
180 million - 1 billion frogs from Indonesia to EU/US exported over 9 years



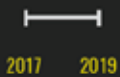
9 million freshwater turtles and tortoises from Indonesia, Malaysia, Thailand exported in late 1990s



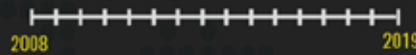
10 million reptile skins from South East Asia exported globally from



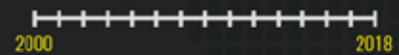
Over 96,000 kg pangolin scales seized in Malaysia, Singapore and Viet Nam



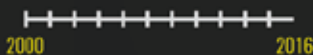
Over 225,000kg African ivory seized, implicating almost all ASEAN countries



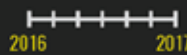
Over 2,200 tigers seized across range states



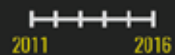
More than 3,800 bear equivalents seized in ASEAN countries



Over 4,500 African rhino horns entered illegal trade globally, many linked to ASEAN countries



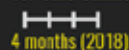
1,100 Helmeted Hornbill parts seized in Indonesia



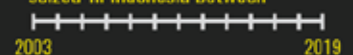
Over 45,000 live birds seized in Indonesia



Up to 1,189 otters observed for sale online in 4 ASEAN countries



Over 100,000 pig-nosed turtles seized in Indonesia between



BRUNEI DARUSSALAM



Entry into CITES:
2 AUGUST 1990

TI Corruption perception index 2019:
Score: 60
Rank: 35/183

CAMBODIA



Entry into CITES:
2 OCTOBER 1997

TI Corruption perception index 2019:
Score: 20
Rank: 162/183

INDONESIA



Entry into CITES:
28 MARCH 1979

TI Corruption perception index 2019:
Score: 40
Rank: 85/183

LAO PDR



Entry into CITES:
30 MAY 2004

TI Corruption perception index 2019:
Score: 29
Rank: 130/183

MALAYSIA



Entry into CITES:
18 JANUARY 1978

TI Corruption perception index 2019:
Score: 53
Rank: 51/183

MYANMAR



Entry into CITES:
11 SEPTEMBER 1997

TI Corruption perception index 2019:
Score: 29
Rank: 130/183

PHILIPPINES



Entry into CITES:
16 NOVEMBER 1981

TI Corruption perception index 2019:
Score: 34
Rank: 113/183

MYANMAR



Entry into CITES:
28 FEBRUARY 1987

TI Corruption perception index 2019:
Score: 85
Rank: 4/183

SINGAPORE

THAILAND



Entry into CITES:
21 APRIL 1983

TI Corruption perception index 2019:
Score: 36
Rank: 101/183

VIET NAM



Entry into CITES:
20 APRIL 1994

TI Corruption perception index 2019:
Score: 37
Rank: 96/183



EXECUTIVE SUMMARY

Southeast Asia, perhaps more than any other region, encapsulates the full range of global challenges facing the management of biodiversity and trade in wildlife. Political and socio-economic disparities are large. Rapid development of infrastructure—often backed by foreign investments—and land conversion continues to challenge the region’s biodiversity hotspots. Levels of poaching, trafficking and consumption of wildlife products in Southeast Asia are persistent, if not increasing. The region’s endemic species and local populations of more widely distributed taxa remain under severe threat from hunting and illegal trade. This is particularly acute for many of the region’s terrestrial fauna.

The 10 countries of the Association of Southeast Asian Nations (ASEAN) function as source, consumer and as entrepôts for wildlife coming from within the region as well as the rest of the world—for trade that is both legal and illegal, with many inadequacies and loopholes concerning regulation, law enforcement and overall levels of sustainability. This globally connected trade feeds a demand for wild animals, parts and products for use as trophies and trinkets (or luxury goods), traditional medicine (TM) ingredients (including formal prescriptions and informal ‘health tonics’), and the multi-billion-dollar live animal trade.

These categories of trade and demand broadly involve:

- species that are protected and prohibited from national or international commercial trade;
- species that can be traded nationally or internationally, and for the latter, where national regulatory controls should frame implementation of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) for any international commerce of CITES-listed species; or
- species that are not protected domestically but national and international trade occurs with little or no regulatory controls, often in large volumes and in violation of CITES provisions.

To contextualise this issue for the Southeast Asian region, TRAFFIC undertook an assessment to profile the illegal and unsustainable wildlife trade implicating the region, focusing on some of the

most traded taxonomic groups of terrestrial fauna. The overall analysis illustrates the main problems facing the region in two priority aspects: 1) where trade is prohibited and illegal, and 2) where legal trade is permitted but conducted in either an illegal and /or unsustainable manner (including where trade regulations are not robust enough, ambiguous or poorly regulated and enforced, which allows illegal trade to occur).

This assessment presents an overview of the trade dynamics and broadly contextualises common patterns, challenges and potential solutions to overcome these threats. Country profiles for the 10 ASEAN countries have been generated, summarising pressing local circumstances that enable illegal and unsustainable trade. The country profiles further propose a range of solutions to counter these challenges to reduce the prevalence of illegal trade coming to or through the Southeast Asian region.

The statistics for terrestrial fauna in trade are revealing; examples of historical trade data for reported legal trade gives some insight into the magnitude of transactions, including:

- between 180 million and 1 billion wild-caught Asian frogs were exported annually from Indonesia to Europe and USA over a decade from 1998–2007;
- about 10 million wild-caught tortoises and freshwater turtles were exported from Indonesia, Malaysia and Thailand alone collectively, in the late 1990s;
- over 10 million reptile skins from Southeast Asia exported and re-exported globally from 2005–2013.

In parallel, illegal trade statistics reinforce the position and significance of Southeast Asia's footprint on biodiversity use and management:

- about 225,000 kg of African Elephant *Loxodonta africana* ivory seized implicating Cambodia, Indonesia, Lao People's Democratic Republic (PDR), Malaysia, Myanmar, Philippines, Singapore, Thailand and Viet Nam for the period 2008–2019; 71% of these were seized by Viet Nam, while another 14% by Singapore;
- some 895,000 pangolins estimated to have been trafficked globally from 2000–2019, while over 96,000 kg of pangolin scales mostly African were seized from 2017–2019 across Malaysia, Singapore and Viet Nam, representing about 94% of the total amount of scales confiscated in Southeast Asia during this period;
- more than 100,000 Pig-nosed Turtles *Carettochelys insculpta* seized in just Indonesia from 2003–2019. In Southeast Asia, the species only occurs in the Papua Province of Indonesia;
- over 45,000 songbirds seized in just Sumatra and Java from 2018–2019;
- more than 6,000 Indian Star Tortoises *Geochelone elegans* – from south Asia – seized in just 10 incidents in 2017 alone, with all of them heading to either Malaysia, Thailand or Singapore;
- more than 3,800 bear equivalents seized in Asia, implicating almost all ASEAN countries, from 2000–2016;
- at least 4,500 African rhino horns entered illegal trade globally from 2016–2017, but only 1,093 seized by enforcement agencies; many of which implicated almost all ASEAN members as a destination or transit country;
- more than 3,000 Helmeted Hornbill *Rhinoplax vigil* parts and products seized in Asia from 2010–2019, with more than 1,100 seized just in Indonesia; online platforms and markets continuing to offer hundreds of helmeted hornbill products illegally including Lao PDR, Myanmar and Thailand;
- more than 2,200 equivalent Tigers seized in just the 13 Tiger range states from 2000–2018;
- at least 1,189 otters observed for sale online in four ASEAN countries over a four month period in 2018, with at least 356 individuals seized in eight ASEAN countries from 2002–2019, largely in Indonesia and Viet Nam

Given the clandestine nature of such trade, these data represent a small fraction of the true scale of the overall magnitude of illegal wildlife trade, particularly when considering two factors. First, seizures represent only a segment of trafficking incidents that were successfully intercepted and reported, meaning a higher degree of trafficking goes undetected and/or unreported. Second, the complex and often ambiguous systems that are meant to regulate industrial-scale commercial trade, such as captive breeding operations, are in fact riddled with loopholes, which leads to a mix of misdeclaration, misreporting and/or laundering of wild-caught animals declared as captive bred. Additionally, seizures and illegal trade do not often result in successful convictions or tough penalties that would act as a deterrent in what remains a low-risk, high profit world of wildlife crime.

Despite years of evidence stacked against the open markets and outlets that unlawfully sell wildlife products across the region, these outlets continue to operate blatantly with impunity in several locations across Southeast Asia, under various degrees of regulation and law enforcement. Some of these markets increasingly cater for specific clientele—for example, in Lao PDR and Myanmar, some outlets are operated by Chinese nationals with transactions conducted in Chinese Yuan and catering predominantly to Chinese buyers. Elsewhere, domestic trade of wildlife occurs on a large scale, such as wildlife-based medicinal items sold in violation of laws or without adequate regulatory systems in place, or native species hunted to supply demand for the pet or wild meat trades. Illicit online marketplaces, including through social media, have mushroomed over the past decade and cater to both opportunistic and highly organised buyers and sellers. Anything considered a luxury product such as ivory and rhino horns to live animals such as Tigers *Panthera tigris*, Sun Bears *Helarctos malayanus* and Ploughshare Tortoises *Astrochelys yniphora* can be ordered, bought and shipped with the click of a button without either the buyer or seller leaving their homes or place of business.

There is no shortage of collaborative tools and platforms to be employed to deal with this problem, yet the overall progress made to stem illegal wildlife trade is slow, and often lacks co-ordination. Pervasive corruption and a lack of political will fundamentally undermines whatever systems are in place, allowing illegal and unsustainable wildlife trade to persist and often flourish. The high profit, low risk combination makes wildlife trade a lucrative business and attracts organised criminality. While all Southeast Asian countries have enacted legislation to implement CITES, many of the laws are inadequate and outdated to combat this problem effectively. This, despite all of the ASEAN countries being Parties to CITES—most for over four decades—there remains a long way to go in the efforts to stem illegal trade and ensure compliance with the Convention.

Aside from the obvious illegal trade which contravenes existing regulations, a lack of robust science behind the setting of any harvest and trade quotas for legal wildlife commerce inhibits the potential of any efforts to achieve sustainability. The laundering of wild animals through captive-breeding operations is one such example which affects declines of wild populations. Organised illegal trading networks are adept at taking advantage of the region's well-organised transportation and logistical systems; armed with the knowledge of legislative shortcomings, poorly implemented and/or enforced regulatory systems and corruption, the weak points in the trade chain are targeted by traffickers. What must be addressed are enabling factors and drivers of illegal wildlife trade and the demand that fuels it. There is a multiplicity of actors across the supply chain from source to end-user—ranging from tacit to complicit levels of risk exposure—from both public and private sector interests. Action, for example, by increasing knowledge, compliance and vigilance by businesses in the transportation and logistics sectors has a crucial role to play in deterring and preventing movement of illicit shipments of wildlife. Additionally, work with financial institutions and anti-money laundering agencies that target “follow the money” approaches has the ability to constrict opportunities to intercept and seize criminal proceeds within ASEAN and globally.

A multi-pronged approach is needed to tackle the various complexities involved in combating illegal wildlife trade. At a structural level, this involves ensuring comprehensive legislative frameworks at the national level, ideally with similar coverage of issues and penalties across the ASEAN to ensure there are no “soft spots” where wildlife crime can thrive. Given the consistent and high level of

organised criminality, intelligence-led law enforcement is paramount to increase deterrents to illicit activity along the entire trade chain from source to market. In terms of targeting end-use demand, efforts to change behavioural norms of consumers needs to be pursued in parallel with effective regulation and law enforcement. At the national level, collaborative engagement between agencies is the building block of regional co-operation across jurisdictions. Partnerships that link government agencies, civil society organisations, the private sector and research institutions have the potential to bring both innovation as well as collective action, but ultimately depend on political will and adequate resourcing (human, financial, and technical).

Trade patterns continue to change and adapt, which emphasises the importance of continued research and monitoring to map the dynamics of illegal wildlife trade. Ultimately the challenge is putting together the right mix of interventions to be pursued in an organised strategy, at sufficient scale and duration, in order for Southeast Asia to achieve substantial change.

Recommendations

A selection of priority interventions to support strategic decision-making and actions by ASEAN governments and other partners have been drawn from the breadth of existing literature reviewed for this assessment. These interventions are grouped under five main thematic areas as follows:

- **Policy** – interventions focused on ensuring that national legal frameworks and regulations are fit for purpose and that it considers trends on illegal wildlife trade over time and is improved accordingly to prevent and deter wildlife traffickers;
- **Law enforcement** – interventions where frontline law enforcement authorities and the judiciary can optimise their impact for the disruption of wildlife trafficking;
- **Demand reduction** – interventions aiming to influence the purchasing preferences, buyer behaviour and use, by current and intending consumer groups;
- **Cross-sector co-operation** – interventions where external parties such as the private sector and professional bodies (anti-money laundering, financial investigation), civil society organisations, conservation practitioners and research institutions can assist and facilitate effective actions;
- **Research gaps** – interventions to address knowledge gaps to improve anti-wildlife trafficking decisions and policy.



| | Area of intervention | Required interventions |
|------------------------|--|--|
| Policy | Close loopholes and harmonise national legislation | <ul style="list-style-type: none"> • Update legislation in Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia (Sabah and Sarawak), Myanmar, Philippines, Thailand, and Viet Nam to include all CITES-listed species in national protection lists; • Increase penalties to a harmonised level of deterrent across the different national laws in which wildlife offences are dealt with across ASEAN, including provisions empowering enforcement officers to pursue necessary investigations; • Criminalise online advertisements and offers for sale of protected wildlife species or products, through specific provisions in the law; • Where a particular rare or threatened or endemic species with a restricted range is heavily impacted by international trade, consider the inclusion of that species in CITES Appendix III; • Ensure appropriate resources and budget allocation to support law enforcement actions, along with facilities for rescued wildlife and repatriation, which also helps ensure these specimens do not leak back into the illegal trade chain. |
| Law Enforcement | From seizures to successful convictions | <ul style="list-style-type: none"> • Identify and shut down open markets¹ selling protected wildlife and their products; • Prevent the establishment of any further captive tiger and bear facilities (including farms), and ensure that current stock is not augmented to allow sale/leakage into illegal trade; current facilities found to be conducting business illegally should be shut down. • More robust regulations and controls to assess the management of other farms and breeding facilities for commercial trade, such as those for reptiles and birds; • Severely constrict illegal online availability of wildlife on commercial trade platforms and trade via social media, working with online businesses—including through the <i>Coalition to End Wildlife Trafficking Online</i>, and transport/logistics companies; • Utilise existing national anti-money laundering and anti-corruption frameworks to process wildlife trafficking cases as predicate offences by initiating financial investigations, application of harsher penalties and recovery of proceeds. This includes preventing, identifying and addressing corruption-related cases; • Conduct proactive intelligence-led and in-depth investigations, including the use of social network analysis, controlled deliveries, and financial investigations along the trade chains; • Improve detection of illegal shipments with systematic and regular monitoring, and enhanced equipment (e.g. use of sniffer dogs and scanner machines) and techniques (e.g. risk profiling) to identify geographical or logistical nodes as monitoring targets; |

¹ Here, open markets are taken to refer to establishments that sell wildlife parts and products that are prohibited from trade, either by national legislation or non-native species listed in CITES Appendix I and prohibited from commercial trade such as rhino horns, tigers, pangolins, reptiles, birds and others. These open markets are slightly different from local-level stalls or markets selling wild meat, predominantly for local consumption where in many cases legislation permits trade, but falls short in its licensing and permitting enforcement.

| | | |
|--|--------------------------|---|
| | | <ul style="list-style-type: none"> • Enhance reporting and communications mechanisms by customs and other relevant agencies in countries of import, transit and • (re-) export regarding suspicious practices both at national level as well as at port of entry and exit, including illegal trade reporting as mandated by CITES; • Establish a standardised system to track law enforcement incidences, such as the Law Enforcement Management Information System (LEMIS) database utilised in the USA or the EU-TWIX (Trade in Wildlife Information Exchange) programme in Europe, for the purposes of enhancing law enforcement efforts; • Work with civil society organisations to harness public participation initiatives to support law enforcement actions, such as through hotlines or reporting apps; • Promote inter-agency co-operation on intelligence and data sharing across national law enforcement agencies and between countries; • Support where available the use and advancement of wildlife DNA forensic techniques to identify provenance, and authenticity of wildlife parts and products traded to strengthen enforcement actions and prosecutions; where this is done, results must be shared with all the relevant countries to strengthen national-level efforts; • Capacity building and training with enforcement and judiciary bodies, including joint training sessions, bringing together prosecutors and judges. |
| | Monitoring and reporting | <ul style="list-style-type: none"> • Continue monitoring at known and emerging physical and online markets to catalyse evidence-based action by law enforcement interventions, identification of emerging threats and keeping watch on trends over time, including shifts in consumer market availability as a response to stricter law enforcement; • Improve regulations, transparency and accountability of the many captive breeding facilities in the region to ensure that laundering of wild-caught species does not occur and that trade is not detrimental to wild populations; stricter scrutiny and periodic science-based assessments by CITES on country operations for trade in CITES-listed species is imperative; • Establish a transparent reporting and monitoring system on captive breeding operations, including making information publicly accessible by species, quotas and trading partners; |



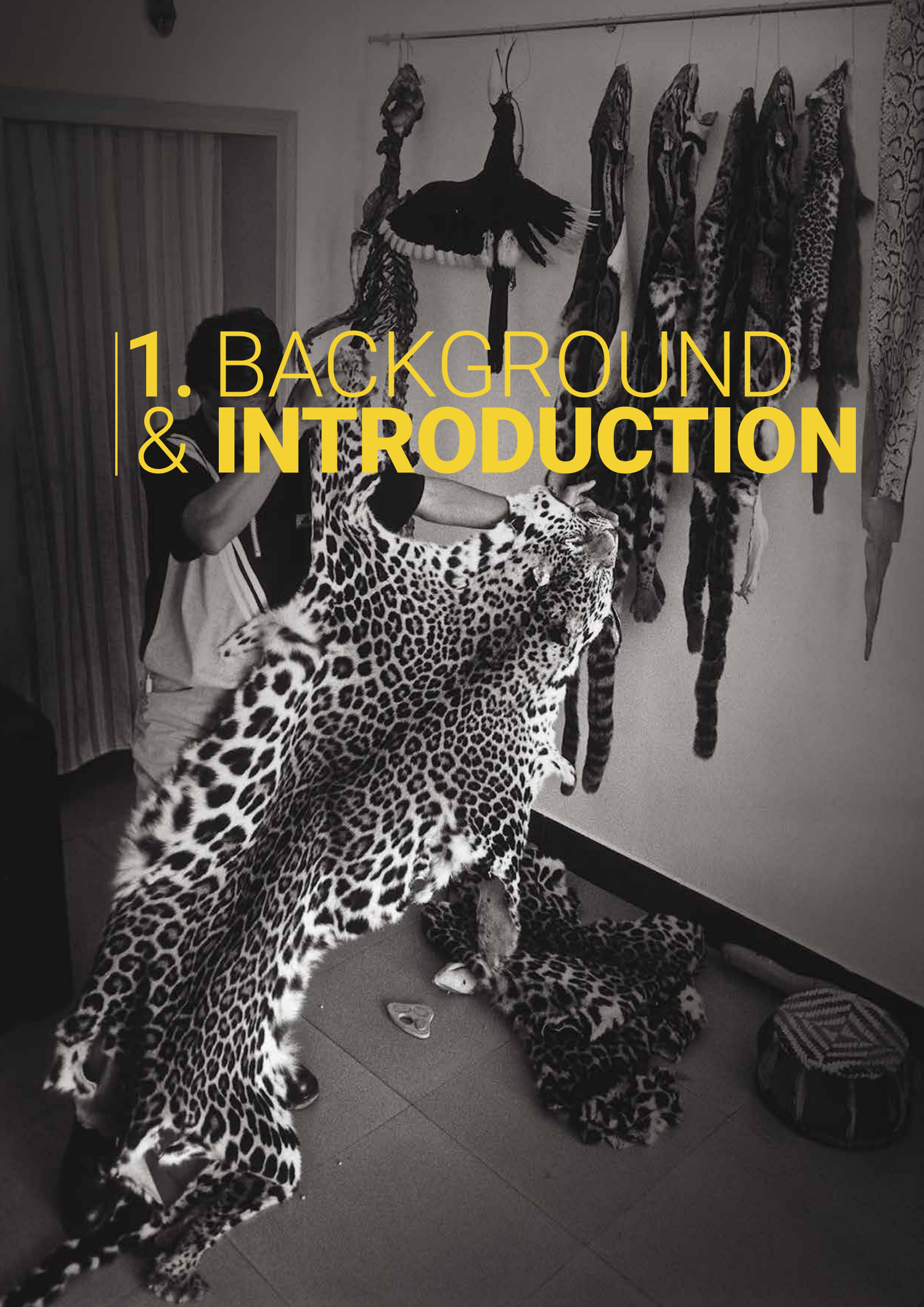
| | | |
|---|-------------------------------------|--|
| <p>Demand Reduction</p> | <p>Use of a twin-track approach</p> | <ul style="list-style-type: none"> • Ensure that efforts to constrict supply and remove illegal-sourced wildlife products from the market are complemented by campaigns targeting priority high-risk groups of consumers with messaging that addresses their underlying motivations to consume illegal wildlife commodities, achieves changes in their behaviour, thereby reducing demand; • Develop strategic Social and Behavioural Change Communications (SBCC) approaches to influence the behaviour of key target audience segments effectively related to their purchase and use of illegal wildlife commodities. The SBCC approaches should be informed by evidence and insight into consumers' attitudes, values and motivations; • Align government-led actions to change behaviour with implementation of CITES Resolution (Res.Conf 17.4) on Demand Reduction, and relay success factors and lessons learned back to www.changewildlifeconsumers.org in line with Guidance; • Work with priority industry sectors including e-commerce and social media, travel and tourism, and transport and logistics, medical practitioners and the traditional medicine community to influence supply chains, market availability and consumer preference; • Foster increased leadership on these issues amongst champions for each target audience and enable them to influence the intentions of their peers and followers. |
| <p>Cross-Sector Co-operation</p> | | <p>Continue engagement with the private sector (e.g. tourism, transport and logistics, e-commerce, banks) to be the eyes and the ears of enforcement agencies by:</p> <ul style="list-style-type: none"> • Facilitating the tracking of bank accounts and transactions of businesses and individuals linked to wildlife crime to enable deeper investigations into trade chains and potential money laundering operations; shutting down operations/accounts where there is clear evidence of illegality; • Establishing and/or improving corporate policies and standard operating procedures around zero tolerance for wildlife trafficking; • Promote do's and don'ts and red flags to business partners to prevent and/or detect illegal activities. <p>Continue engagement with NGOs, civil society, academia to:</p> <ul style="list-style-type: none"> • Continue monitoring of physical and online markets (linked to law enforcement above); • Assist with species or wildlife product identification and information, and intelligence sharing, including support with investigations as required. <p>Expand inter-governmental collaboration particularly at national levels:</p> <ul style="list-style-type: none"> • Establish joint engagement platforms involving a range of sectors, such as those responsible for national security, customs and immigration, multimedia and communication and others, to develop mitigation measures along all points of the illegal trade, such as the LEMIS or TWIX approaches in the US, Europe and Africa. |

| | |
|-----------------------------|--|
| <p>Research Gaps</p> | <p>Undertake periodical research tasks—including through collaboration with NGOs, research institutions and other relevant partners—to establish contemporary knowledge and understanding of trade threats and dynamics that require interventions, such as:</p> <ul style="list-style-type: none"> • Review and update ASEAN countries' rate of prosecutions and convictions against arrests and seizures, including judicial capacity, to identify and address needs to ensure stiffer sentencing and penalties are meted out; • Analyse information on market availability, CITES trade data as reported by governments and seizures to assist in the identification of emerging trends or common problems facilitating illegal wildlife trade to inform policy and regulatory needs; • Conduct consumer research to understand the motivations of consumers of specific species, and gain insight into the most effective ways to influence their choice and reduce their demand for illegal wildlife commodities using SBCC initiatives; • Ensure a comprehensive approach to impact measurement is undertaken—for example, by contextualising fluctuations in consumer expressed intent to purchase illegal wildlife products in the future, against market monitoring data of wholesale price, volume of offers for sale and throughput of product in the market. Also consider e.g. retailer perception surveys and other social science methods, share learning and insights with the Community of Practice working on demand reduction (www.changewildlifeconsumers.org). |
|-----------------------------|--|

**specific target audiences for the above-mentioned interventions are provided in Table 7 of this report*



| 1. BACKGROUND & INTRODUCTION



Renowned not only for its animal and plant species richness, but also for cultural, linguistic, political and religious diversity, Southeast Asia encompasses a range of actors that all rely in some way upon wildlife resources. This region covers four of the world's 25 biodiversity hotspots: Indo-Burma, the Philippines, Sundaland, and Wallacea, forming some of the world's most biodiverse geographical regions with high species endemism. Southeast Asia, with the world's highest per-country proportion of endemic birds and mammals in a tropical region, also has the highest proportion of threatened birds, mammals, and reptiles.

Vertebrates in Southeast Asia have the highest extinction rate compared to any other region globally, giving rise to the "empty forest" syndrome where forests are void of wildlife (The Asian Species Action Partnership, 2014; Sodhi *et al.*, 2010; Duckworth *et al.*, 2012; ASAP, 2016; Hughes, 2017; Corlett, 2007; Wilkie *et al.*, 2011). Many of the region's fauna species are now closer to the brink of extinction, with at least 221 terrestrial and freshwater vertebrates now considered Critically Endangered; these numbers continue to rise as more information comes to the fore (www.speciesonthebrink.org). Although some of this is attributed to habitat loss due to economic development and population growth, which has seen at least a 70% decline in natural habitat across the region, others are trade driven (Myers, *et al.*, 1999; Sodhi *et al.*, 2010; Squires, 2013; Hughes, 2017). Wildlife trade is today a key driver of the decline in many species globally, and nowhere is this more apparent than in Southeast Asia.

At the epicentre of the global wildlife trade, Southeast Asia plays a key role as source, consumer and transit in the trade of a variety of species (Anon, 2002; Carpenter, 2007; Nijman and Shepherd, 2009; Scheffers *et al.*, 2012; Burgess *et al.*, 2014; Rao *et al.*, 2014; Milliken, 2014; Chng *et al.*, 2015; Luiselli *et al.*, 2016; Poole and Shepherd, 2016; Hughes, 2017; Heinrich *et al.*, 2017; Nijman and Shwe, 2017; Leupen, 2018; Livingstone *et al.*, 2018; Nguyen *et al.*, 2018; Wong and Krishnasamy, 2019). Over a 10-year period from 1998 to 2007, some 35 million animals and plants listed by CITES—the Convention on International Trade in Endangered Species of Wild Fauna and Flora—were traded from Southeast Asia (Nijman, 2010). Of these, 388,000 were mammals, 1.04 million were birds and 17.43 million were reptiles, 79% of which were declared as wild-caught. Another analysis of CITES trade data from 2002–2015 showed that 1.39 million live individuals, 1.58 million skins and 2 million kg of meat, from 975 taxa, were exported from Africa to East and Southeast Asia (Outhwaite and Brown, 2018). Close to 500 of these taxa were sourced from the wild and these figures underscore the significance of the region's biodiversity feeding the international wildlife trade, where an overwhelming volume originates from the wild.

Although hunting and the use of wildlife has existed throughout Southeast Asia for thousands of years, the levels of harvest and exploitation have intensified tremendously today. This level of harvest is unlikely to be sustainable for many species in the wild, particularly when a significant volume of Southeast Asian species is entering international markets, both through illegal and legal, and often unsustainable means (Nijman and Shepherd, 2009; Shepherd and Bonggi, 2010; Rowley *et al.*, 2010; Koch *et al.*, 2013; Nijman and Shepherd, 2015; Auliya *et al.*, 2016; Janssen and Chng, 2017). Illicit trade is rife in many parts of the region and often carried out openly, indicating low levels of enforcement, and weak legal and regulatory systems (Shepherd, 2010; Milliken, 2014; Chng *et al.*, 2015; Stoner *et al.*, 2016; Janssen and Chng, 2017; Utermohlen and Baine, 2017; Vigne and Martin, 2017; Krishnasamy *et al.*, 2018; Nguyen *et al.*, 2018).

Much of the demand for wildlife is driven by reasons which can be broadly grouped into four main categories i.e. collectibles, pets, traditional medicine and food (Figure 1). Traffickers that launder their illicit goods through legal commercial systems have access to substantially larger demand markets than those relying on the black market exclusively (UNDOC, 2016). The situation is made worse by the existence of highly-organised international wildlife trading syndicates and the expansion of online platforms, which are fast becoming an increasing challenge for enforcement agencies and conservation organisations as a whole (Stoner *et al.*, 2017; Crosta *et al.*, 2017). Underlying all this are the low rates of detection, arrests, prosecution and subsequent convictions (Claridge, 2005; Akella and Allan, 2012; WWF, 2012; DLA Piper, 2014; Homes and Davies, 2016) which make wildlife trafficking a high profit-low risk business (Stoner *et al.*, 2016; Weru, 2016; WWF, 2016).

HOW WILDLIFE IS COMMONLY USED



COLLECTIBLES / TROPHY

Wildlife products valued for decorative, ornamental and status values.

Big cat skins, canines and claws, elephant ivory and bones, Helmeted Hornbill *Rhinoplax vigil*, ivory, rhino horn, ungulate horns (such as serow, *Capricornis* spp., Sambar Deer *Rusa unicolor*, pangolin scales and claws *Manis* spp. *Phataginus* spp., and *Smutsia* spp., corals, giant clams *Tridacna* spp.), Hawksbill Turtle shell *Eretmochelys imbricata*.



PETS

Live animals used as pets.

Birds (such as songbirds, parrots, owls and raptors), tortoises and freshwater turtles, other reptiles, amphibians, mammals including primates such as Slow Loris *Nycticebus* spp., gibbons, otters and other carnivores.



MEDICINE

Wildlife products and derivatives that are consumed for their perceived medicinal properties.

Birds (such as songbirds, parrots, owls and raptors), tortoises and freshwater turtles, other reptiles, amphibians, mammals including primates such as Slow Loris *Nycticebus* spp., gibbons, otters and other carnivores.



FOOD

Not solely for sustenance, but also prized as rare delicacies.

Birds (such as songbirds, parrots, owls, waterfowl and raptors), tortoises and freshwater turtles, other reptiles, amphibians, mammals including primates such as Slow Loris *Nycticebus* spp., gibbons, otters and other carnivores.

Figure 1: Overview of type of uses of wildlife

For some species, the trade has moved to trans-continental supply as Asia's wild populations have become depleted—for example, CITES trade data records show that an estimated 809,723 whole pangolins were traded globally over a 38-year period from 1977, and a significant proportion since 2000 involved African species (Heinrich *et al.*, 2016; Challender and Waterman, 2017). Viet Nam's population of Javan Rhino *Rhinoceros sondaicus annamiticus* was poached out of existence—this also saw increasing pressure on the rhino population in African range states: more than 7,100 rhinos have been killed for their horns in Africa over the past decade, facilitated by resilient, highly-adaptive criminal networks and endemic corruption driven by consumers in Viet Nam and China (Milliken, 2014; Moneron *et al.*, 2017; South Africa DEA, 2017). Local demand and consumption is also prevalent throughout the region. For example, demand for wild meat in Lao PDR has resulted in many “empty forests” and depleted native wildlife populations, while other research highlights the extent of wild animals consumed for meat, including their potential links to zoonotic diseases: approximately 33,000 animals were recorded in 93 markets in Lao PDR between 2010–2013, of which about 6,400 were considered near extinct or threatened with extinction such as the Marbled Cat *Pardofelis marmorata*, Pgmy Slow Loris *Nycticebus pygmaeus*, Bengal Slow Loris *Nycticebus bengalensis* (Greatorex *et al.*, 2016; Cantlay *et al.*, 2017). Research elsewhere highlight the scale of wild meat consumption in the region (Drury, 2009; Or and Tang, 2011; Cantlay *et al.*, 2017).

Indonesia's highly popular cagebird trade has recorded tens of thousands of birds offered for sale in a single day, with almost all species being native to the country. Indonesia has been identified as one of the most significant exporting countries of wild-sourced animal specimens, often fraudulently declared as captive-bred with grave consequences for wild populations (Nijman and Shepherd, 2015; Janssen and Blanken, 2016; Janssen and Chng, 2017). TRAFFIC's research on the trade in tortoises and freshwater turtles in the region has shed light on the exploitation of a range of species highly sought after for the pet trade, often headed to or through Southeast Asia—For example, at least 2,667 tortoises and freshwater turtles were recorded in Bangkok's Chatuchak market, mainly derived from the wild (Nijman and Shepherd, 2014). Close to half were considered/classified as globally threatened species and 97% of all species recorded were not native to Thailand (Nijman and Shepherd, 2014). In addition, hundreds of thousands of freshwater turtles and tortoises continue to be seized from illegal trade (Burgess *et al.*, 2014; Chng, 2014a; Chng, 2014b; Leupen, 2018).

Asia's increasing affluence and its subsequent access to global consumer markets has taken the issue of illegal and unsustainable wildlife trade to a whole new level. The growth in purchasing power over the past decade has contributed to consumers seeking products associated with luxury goods, such as ivory and rhino horn. This wealth growth, combined with the longstanding wildlife trade relationship between Southeast Asia and the rest of the world presents an ongoing complicated challenge for the region to improve its regulatory governance and monitoring of wildlife trade to ensure species survival (Altherr, 2014; Altherr, 2016; Janssen and Blanken, 2016; Rowley *et al.*, 2016; Ohler and Nicolas, 2017; Krishnasamy *et al.*, 2018). It is motivated or influenced by various socio-economic factors (Table 1). The prevalence and influence of these motivations vary across communities, commodities and countries in the region, but commonly include those either “emotional” (e.g. status-oriented desires to demonstrate a new-found wealth or social standing), or “functional” in nature (e.g. the ingestion of traditional medicine treatments featuring wildlife derivatives, for a perception that they treat illness or promote wellness). TRAFFIC's research, including those conducted collaboratively with others have gleaned some insights into consumer patterns (Figure 2).

Table 1: Consumer motivations for wildlife products (Source: Burgess, 2016)

| | Motivations | Description |
|----|--------------|---|
| 1 | Cultural | Behaviours that represent the purchase or use of products in recognition or celebration of a specific facet of cultural heritage or tradition |
| 2 | Emotional | Behaviours that represent the purchase or use of products to fulfil hedonistic pleasure—i.e. for personal adornment or household display |
| 3 | Financial | Behaviours that represent the purchase or use of products for investment purposes, as a financial security strategy or similar |
| 4 | Functional | Behaviours that represent the purchase or use of products to fulfil an everyday purpose or function |
| 5 | Nutritional | Behaviours that represent the purchase or use of products to fulfil a simple need for protein or food |
| 6 | Medicinal | Behaviours that represent the purchase or use of products for perceived treatment of illness or promotion of wellness (i.e. curative or preventative) |
| 7 | Recreational | Behaviours that represent the purchase or use of products as part of a leisure or pastime activity |
| 8 | Reputational | Behaviours that represent the purchase or use of products for reputational gain—or “face”; to gain currency in a business transaction |
| 9 | Social | Behaviours that represent the purchase or use of products for social gain—to impress a peer group with a newfound status or wealth |
| 10 | Spiritual | Behaviours that represent the purchase or use of products to bring “good Luck” or “good fortune” in business or life |

Figure 2: Examples of consumer behaviour surveys undertaken in Southeast Asia

- 2018: Research commissioned by TRAFFIC on behalf of USAID, covering elephant, rhino and pangolin products consumed in Viet Nam, established a baseline for the Saving Species and Wildlife Asia projects being delivered in that country in 2017–2021 and 2018–2020 respectively. The percentage of consumers who had purchased products from the surveyed species in the past 12 months were: elephant (13%), rhino (6%) and pangolin (6%). The portion of those intending to buy in the future was similar to that of the previous 12 months buyers at 12%, 8% and 7% of the total sample.
- 2018 Research conducted by GlobeScan in Thailand on behalf of USAID Wildlife Asia, in relation to the use of elephant and tiger products in country revealed that among the general population 2% owned or used ivory products and 1% owned or used tiger parts or products. 10% and 7% of the general population respectively perceived ivory and tiger trade as socially acceptable, and 3% intended to purchase either ivory or tiger products in the future.
- 2017 Follow-up study by Ipsos to their 2013 baseline in Viet Nam identified a reduction in those expressing an interest in purchasing rhino horn in the future—from 16% to 9% of the sample.
- 2017 Study conducted by TRAFFIC identified that almost 7% of 1,060 respondents residing in Hanoi and Ho Chi Minh City identified themselves as “users” of tiger products.
- 2016 Research commissioned by TRAFFIC in Viet Nam, conducted by IndoChina Research showed that 6% of 527 urban males in Hanoi and Ho Chi Minh had consumed rhino horn in the past 2 years and, 2% of the sample size had consumed in the last 12 months (TRAFFICc, unpublished).
- 2015/ 2016 A five-country study commissioned by National Geographic, conducted by GlobeScan identified that 14% of the 1,000 members of the general Thai public surveyed could be considered “likely buyers” of ivory in the future. In Vietnam, the study showed that 14% of the participants surveyed fell into the “likely buyer” segment, i.e. those who show the greatest intent to purchase ivory in the near future and for whom affordability was not a reported obstacle to purchase.
- 2014 Research commissioned by TRAFFIC in Thailand and conducted by Ipsos revealed that 12% of the 600 Thai nationals surveyed indicated they had purchased ivory previously. 12% of the overall sample further indicating they might buy ivory in the future (TRAFFICb, unpublished).
- 2013 Research commissioned by TRAFFIC in Viet Nam and conducted by Ipsos showed that more than 5% of 570 respondents aged 30+ years identified themselves as rhino horn users/buyers. Only 35% of the overall sample indicating that they would never buy/use such products in the future (TRAFFICa, unpublished).

Intergovernmental frameworks governing wildlife trade in Southeast Asia

With wildlife trade in the global spotlight like never before, the issue of wildlife trafficking today is placed on similar ranks as other serious crimes such as narcotics, arms and human trafficking (UNGA, 2015). It has also been elevated by the ASEAN security ministers of the Senior Officials Meeting on Transnational Crime (SOMTC) as one of their priority areas to combat transnational organised crime (Kuala Lumpur Declaration, 30th Sept 2015). Numerous international, regional and sub-regional frameworks have been established over the past decades to manage and regulate international wildlife trade. CITES is considered to be the most significant one; coming into force in 1975 (www.cites.org).

CITES has the sole purpose of regulating commercial international trade in wildlife to prevent species from becoming both economically and ecologically extinct due to illegal and/or unsustainable trade. Trade is regulated through listing species in one or more of three appendices. Implementation can prohibit (Appendix I/III) or regulate (Appendix II/III) trade in listed species, based on export, import or re-export permits². Under ASEAN, a number of intergovernmental law enforcement bodies have also been set up to deal with wildlife trafficking as part of a larger crime-tackling effort, such as the Association of Southeast Asian Nations – Expert Group on CITES and Wildlife Enforcement (AWG CITES-WE and the ASEAN Chiefs of National Police³ (ASEANAPOL). These international and regional initiatives are further described in Table 2.

Table 2: Summary of key intergovernmental initiatives established to tackle crime, including those dealing with wildlife trafficking

| Name of Body | Geographic Scope | Role | Key functions as they relate to wildlife crime |
|--|------------------|---|--|
| ASEAN Expert Group on CITES and Wildlife Enforcement (AWG CITES-WE)* <i>*Previously divided into two separate bodies: ASEAN Expert group on CITES (AEG-CITES) and ASEAN Wildlife Enforcement Network (ASEAN-WEN) set up in 2005</i> | ASEAN | A regional intergovernmental network responsible to enforce CITES and to share best practices to combat illegal wildlife trade. | <ul style="list-style-type: none"> • Develop regional mechanisms on preventing wildlife trafficking in the region; • Review and adapt national strategies, plans and programmes for the conservation and sustainable use of biological diversity; • Strengthen networking among relevant law enforcement authorities to curb illegal trade in wildlife fauna and flora. |
| ASEAN Chiefs of National Police (ASEANAPOL) | ASEAN | Enhance police professionalism; Forge stronger regional co-operation in policing. Promote lasting friendship amongst police officers of member countries. | <ul style="list-style-type: none"> • Facilitate and co-ordinate cross-border co-operation on intelligence and information sharing and exchange including those involving criminal investigations, the building and maintenance of the ASEANAPOL database, training, capacity building, the development of scientific investigative tools, technical support and forensic science. |

² <https://cites.org/eng/app/index.php>

³ <http://www.aseanapol.org/>

| | | | |
|--|----------|---|--|
| ASEAN Senior Officials Meeting on Transnational Crime (SOMTC) | ASEAN | Strengthen regional co-operation to countering transnational crime. | <ul style="list-style-type: none"> • Mobilise resources and execute interventions to strengthen ASEAN's response to the growing threat of wildlife and timber trafficking; • Step up collaboration with environmental authorities. |
| Asia Pacific Economic Cooperation (APEC) | Regional | Regional economic forum established to leverage the growing interdependence of the Asia-Pacific, by promoting balanced, inclusive, sustainable, innovative and secure growth and regional economic integration. | <ul style="list-style-type: none"> • Joint Ministerial Statement reaffirming the commitment to conserve wildlife resources and combat illicit transnational trade in protected wildlife, including timber. |
| Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) | Global | Regulation of commercial international trade in wildlife with the aim of preventing species from becoming both economically and ecologically extinct due to illegal and/or unsustainable trade. | <ul style="list-style-type: none"> • Sets wildlife species trade parameters and procedures to ensure sustainable international trade in wild animal and plants; • In addition to listings through the Appendices, sets Resolutions and Decisions on specific issues such as improving reporting mechanisms, traceability and transparency, captive breeding and demand reduction. More specific accountability mechanisms have also been established such as the National Ivory Action Plan (NIAP) process to strengthen controls on the trade in ivory and ivory markets, and help combat the illegal trade in ivory. |
| International Police organization (INTERPOL) | Global | Intergovernmental organisation facilitating international police co-operation to prevent and curb crime. | <ul style="list-style-type: none"> • Leading global and regional operations to dismantle the criminal networks behind environmental crime using intelligence-driven investigations; • Co-ordinating and developing international law enforcement best practice manuals, guides and other resources; • Providing environmental law enforcement agencies with access to INTERPOL tools and services by enhancing their links with INTERPOL National Central Bureaus; • Working with the Environmental Compliance and Enforcement Committee to shape strategy and direction. |

| | | | |
|--|--------|---|--|
| United Nations Office on Drugs and Crime (UNODC) | Global | The UNODC Global Programme for Combating Wildlife and Forest Crime (GP) aims to link existing regional efforts in a global system, enhancing capacity-building and wildlife law enforcement networks at regional and sub-regional levels. | <ul style="list-style-type: none"> • Supporting Member States in the development of legal and policy tools to address wildlife trafficking through the criminal justice system; • Law enforcement, forensics, prosecution and judiciary capacity building; • Promotion of international co-operation at ASEAN and Africa-Asia level among relevant agencies of the criminal justice system. |
| The World Customs Organization (WCO) | Global | Promoting increased awareness and capacity for customs around the world to counter wildlife and timber trafficking. | <ul style="list-style-type: none"> • Awareness and capacity building of customs officers on international trade in wildlife, CITES regulations, also the illegal trade. |
| International Consortium on Combating Wildlife Crime (ICWC) | Global | ICWC's mission is to strengthen criminal justice systems and provide co-ordinated support at national, regional and international level to combat wildlife and forest crime. | <ul style="list-style-type: none"> • ICCWC is the collaborative effort of five inter-governmental organisations working to bring co-ordinated support to the national wildlife law enforcement agencies and to the sub-regional and regional networks that, on a daily basis, act in defence of natural resources. The ICCWC partners are the CITES Secretariat, INTERPOL, the UNODC, the World Bank and the WCO. |
| United Nations General Assembly (UNGA) | Global | Main deliberative, policymaking and representative organ of the United Nations. Comprising all 193 Member States of the UN, it provides a unique forum for multilateral discussion of international issues including peace and security. | <ul style="list-style-type: none"> • Member states passed Resolution 69/314⁴ on <i>Tackling illicit trafficking in wildlife</i> that among others, encourages partnership and collaborative efforts. |
| United Nations Environmental Assembly (UNEA) | Global | Main governing body of UNEP with the function to set the global environmental agenda. | <ul style="list-style-type: none"> • Resolution 2.14: Illegal trade in wildlife and wildlife products. |



2. AIMS & METHODS

Aims

This study was undertaken to assess Southeast Asia's role in the global terrestrial wildlife trade scenario, focusing on trade that is detrimental to long-term species survival, including status, trends and associated trade chains. The study is intended to aid and guide governments, conservation organisations and other partners in tackling wildlife trade concerns. The report is based largely on a vast body of work already available in the public domain, which has been consolidated here to present a concise interpretation of what the authors consider to be the most significant issues and threats concerning select terrestrial wildlife trade involving Southeast Asia. It aims not just to contextualise the issue, but provide a series of recommendations to prioritise future work to tackle wildlife trade concerns—both at a regional and a country level.

Key terrestrial taxa traded (covering trade that is illegal and that is legally permitted but considered to be unsustainable and/or where trade controls are considered poor and/or conducted in an illegal manner), geographical hotspots and their cross-continental points of confluence, players involved and the enabling factors for wildlife trade are presented and discussed. Discussions are considered from the perspective of governance, loopholes as well as associated consumer demand. It highlights priority interventions that would be most effective in improving trade controls, disrupting criminal activities and networks along with reducing demand for wildlife parts and products sourced and/or traded illegally.

Methodology

While recognising that the trade in all wildlife, including timber and marine parts and products, is significant in the region, this rapid assessment concentrated on the trade in selected key terrestrial wildlife species, their parts and products involving Southeast Asia (thus excluding flora and fisheries products) (Table 3). The identified taxa illustrate a representative overview of the trade dynamics for some of the most trafficked and traded (illegally and/or unsustainably) wildlife in Southeast Asia, including an identification of common patterns, challenges and potential solutions in addressing these threats. It assumes that the identified taxa and scope of the analysis are sufficient to present the problem and the requirements to address it. It heavily relies on existing published information from a representative sample of pre-determined species groups to contribute to the understanding of the scale of wildlife trafficking involving Southeast Asia. Noting that law enforcement efforts and subsequent reporting efforts varies from country to country, these findings presented therefore reflect a proportion of actual trade activity.



Table 3: Terrestrial wildlife taxa considered in the assessment

| |
|---|
| Bears (parts, products and derivatives) |
| Elephants (ivory and other parts) |
| Otters (live) |
| Pangolins (meat, scales, whole) |
| Rhinoceros (horns) |
| Saiga (horns) |
| Serow |
| Asian big cats |
| Birds (live, meat) |
| Helmeted Hornbill (casques) |
| Amphibians (frogs, newts) |
| Tortoises and freshwater turtles |
| Reptiles (chameleons, lizards, snakes) |

The geographical region of the assessment is Southeast Asia, although detailed analysis is centred on the 10 countries that make up the Association of Southeast Asian Nations (ASEAN) and therefore excludes Timor-Leste. Timor-Leste is currently not yet a member of ASEAN nor a Party to CITES and little, if anything, is known about its involvement in illegal wildlife trade.

This study examines the issue based on past trends and current information, derived from published and unpublished literature on the topic from governments and intergovernmental bodies, NGOs, academia and other open source media. A selection of literature on market availability and trends, reported seizure data, consumer research insight and dynamics of trade routes were reviewed to describe the scale of the problem and allow contextualisation of Southeast Asia's role in wildlife trade. Synthesised trade and trafficking data as well as market observations over a 23-year period from 1997–2019 were used to contextualise past trends and current trade links. Reported seizure data and analyses over this period was used in this assessment. Seizure information, as much as possible, was verified, or is based upon previously analysed seizure information contained within published documents. Where relevant, seizure data until December 2019 are also used to illustrate more current patterns of the trade. Case studies were also selected and presented to exemplify the current situation. Individual profiles for the 10 ASEAN countries further serve to illustrate national-level involvement and interventions regarding wildlife trade, underlining an array of issues applicable within national jurisdictions. For these, information related to national legislative and policy status are updated to May 2018. Targeted consultations with international and national experts were held to solicit additional feedback.



3. REGIONAL OVERVIEW

3.1 Roles, routes and issues on key terrestrial wildlife traded

This biodiversity-rich region is a hotspot for wildlife trade from within the region and elsewhere in the world. Trade dynamics vary according to the commodity, routes and networks sometimes converge and interact based on three integral elements: **source**, **consumer** and **transit** roles. Native species are consumed and used throughout the region, for wild meat, traditional medicine, as well as the keeping of live animals as pets. A significant portion of Southeast Asian native species, such as reptiles and amphibians, are exported to other end-use destinations outside the region, often involving a wide array of species that are either legitimately captive bred, or fraudulently declared as such when they are in fact wild-caught. Southeast Asia is an important transit node, connecting importers and exporters, for legal trade as well as commodities smuggled to or through the region such as ivory, rhino horn, pangolins, tortoises and freshwater turtles. Figure 3 illustrates Southeast Asia's pivotal role as a source, transit and consumer region with the rest of the world.



SOUTHEAST ASIA

At the heart of wildlife trade

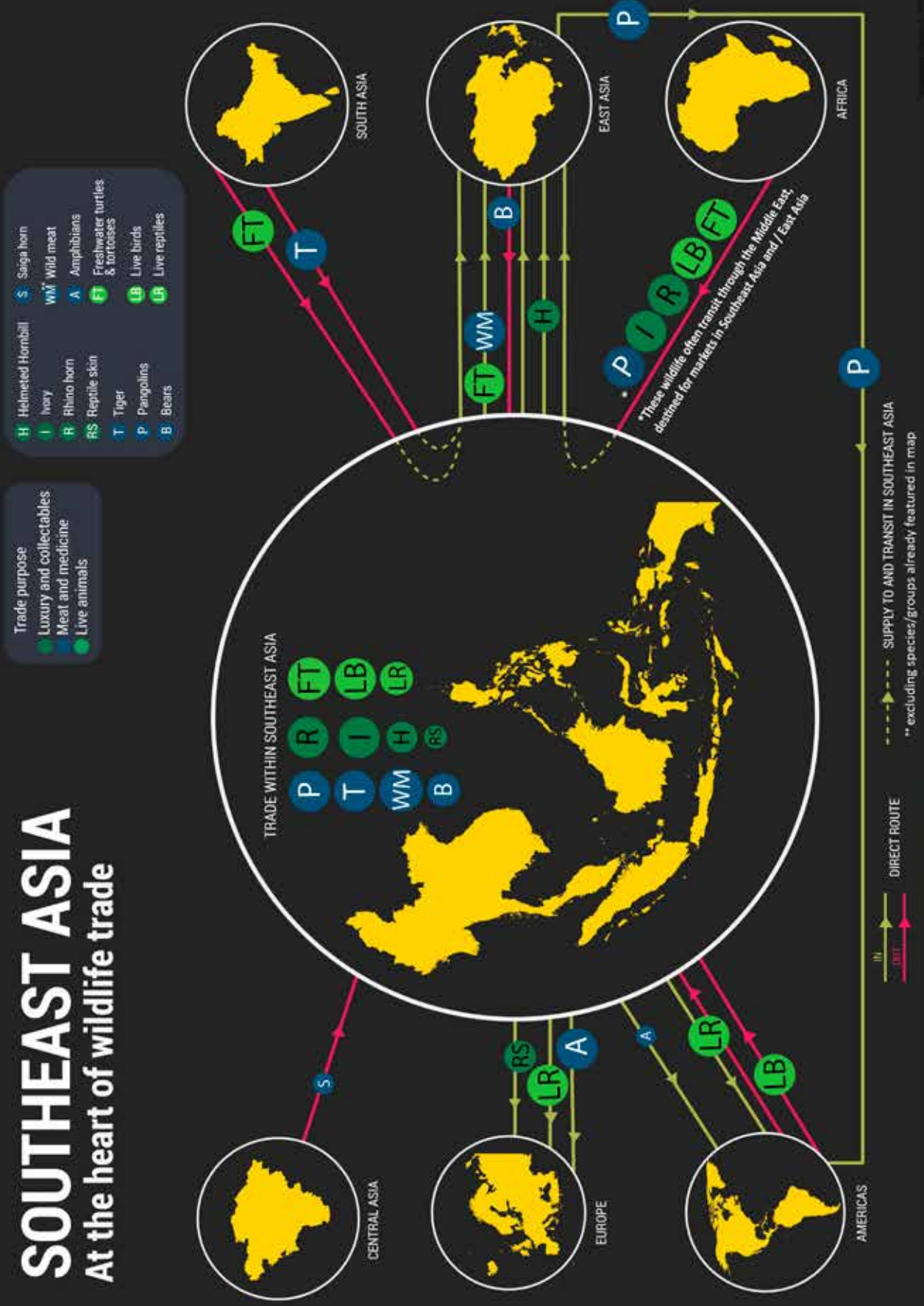


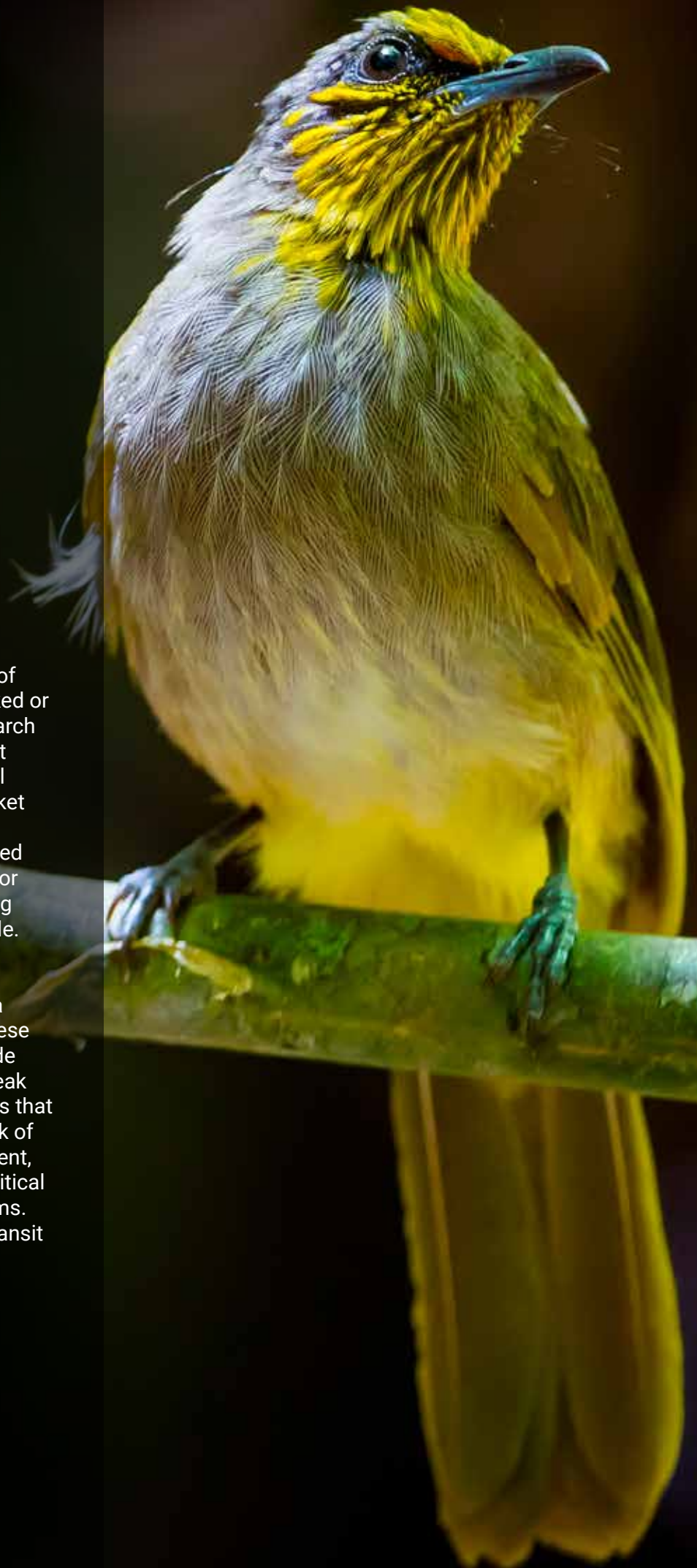
Figure 3: Summary of trade flow relationships between Southeast Asia and other regions for those species groups considered under this assessment; the size of wildlife commodities "bubble" varies depending on their significance based on traded volume

S Source

C Consumer

T Transit

This section introduces a selection of terrestrial wildlife commonly trafficked or encountered in trade, or where research has been conducted on the taxa that highlights its trade dynamics. Global trade data, seizure records and market observations are used to illustrate trade that is illegal or legally permitted but considered to be unsustainable or conducted in an illegal manner, along with additional insights into each role. This includes volumes and roles the countries play, described through a range of case studies based on taxa identified in Table 3. In almost all these cases, illegal and unsustainable trade has persisted for decades due to weak legislation (including those countries that are unable to implement CITES), lack of a regulatory system, poor enforcement, corruption, and a general lack of political will to reverse long-standing problems. Southeast Asia's role as a source, transit or consumer is noted for each taxa



| Key species/groups (common names) referred to in the report | | CITES Appendix | IUCN Status | Primary Uses | |
|---|--|----------------------------|----------------|---|---------------------------|
|  | Bears | Asiatic Black Bear | I | Vulnerable | Medicine, meat |
| | | Sun Bear | I | Vulnerable | Medicine, meat |
|  | Elephants | African Elephant | I/II | Vulnerable | Trophy and Trinket |
| | | Asian Elephant | I | Endangered | Trophy and Trinket |
|  | Pangolins | Asian Pangolin | I | Critically Endangered, Endangered | Meat and Medicine |
| | | African Pangolin | I | Vulnerable | Meat and medicine |
|  | Rhinoceros | Asian Rhinoceros | I/II | Critically Endangered, Vulnerable | Medicine, trophy |
| | | African Rhinoceros | I/II | Critically Endangered, Near Threatened | Medicine, trophy |
|  | Antelope | Saiga Antelope | II | Critically Endangered | Meat and medicine |
|  | Capricornis | Sumatran Serow | I | Vulnerable | Meat and medicine |
| | | Chinese Serow | I | Near Threatened | Meat and medicine |
|  | Asian big cats | Tiger | I | Critically Endangered, Endangered | Trophy, medicine, meat |
| | | Leopard / Clouded Leopard | I | Vulnerable | Trophy |
|  | Birds | Helmeted Hornbill | I | Critically Endangered | Trophy |
| | | African Grey Parrot | I | Endangered | Pet |
| | | Songbirds & others | Various | Various | Pet |
|  | Frogs & Newts | Lao Warty Newt | II | Vulnerable | Pet |
| | | Indian Bullfrog | I | Least concern | Meat |
|  | Tortoises and freshwater turtles | Ploughshare Tortoise | I | Critically Endangered | Pet |
| | | Radiated Tortoise | I | Critically Endangered | Pet |
| | | Black Spotted Turtles | I | Vulnerable | Pet |
| | | Indian Star Tortoise | I | Vulnerable | Pet |
| | | Pig-nosed Turtle | II | Vulnerable | Pet, meat |
| | | Southeast Asian Box Turtle | II | Vulnerable | Pet, meat |
| | | Philippine Forest Turtle | Not listed | Critically Endangered | Pet, meat |
|  | Lizards & snakes | Reticulated Python | Various | Not assessed | Fashion, meat, medicine |
| | | Water Monitor Lizard | II | Least Concern | Fashion, meat, medicine |
| | | Earless Monitor Lizard | I | Not assessed | Pet |
| | | Oriental Rat Snake | II | Not assessed | Fashion, meat, medicine |
| | | Tokay Gecko | II | Not assessed | Medicine |



MAMMALS

Asian Bears



Two species of bear, the **Asiatic Black Bear** *Ursus thibetanus* and **Sun Bear** *Helarctos malayanus*, are native to Southeast Asia. Both are heavily poached to supply illegal trade, including international trade, despite being listed in CITES Appendix I. The longstanding bear bile trade in Asia—almost all of which occurs illegally—for TM (in the form of pills, powder and bile) and trade for meat are the primary reasons that wild Asian bears are severely hunted, resulting in their threatened status (Mills and Servheen, 1994; Animals Asia, 2011; Burgess *et al.*, 2014; Foley *et al.*, 2014; Krishnasamy and Or, 2014; Krishnasamy and Shepherd, 2014). In Southeast Asia, Cambodia, Lao PDR, Malaysia, Myanmar, Singapore, Thailand, and Viet Nam all have an active bear bile trade (Shepherd and Nijman, 2007; Shepherd and Nijman, 2008c; Foley *et al.*, 2011; Krishnasamy and Shepherd, 2014; Burgess *et al.*, 2014; Lee *et al.*, 2015; Wilcox *et al.*, 2016; Crudge *et al.*, 2018; Gomez and Shepherd, 2018). A study across 13 countries and territories in Asia documented widespread trade in bear bile products in traditional medicine shops, with mainland China reported as the most common source (70% to 100%) of products available in Cambodia, Lao PDR, Malaysia, Singapore and Thailand (Foley *et al.*, 2011, Lee *et al.*, 2015). Markets and outlets openly sell bear parts, such as gall bladder, pills, teeth, and paws, reinforcing that illicit trade continues to occur due largely to a combination of weak legislation riddled with loopholes and poor enforcement efforts (Nijman and Shepherd, 2007; Wilcox *et al.*, 2016; Nijman *et al.*, 2017; Livingstone *et al.*, 2018; Krishnasamy *et al.*, 2018).

Further, facilities that keep live bears to extract bile, such as farms, are a major conservation threat, with an estimated 10,000 bears in China, 122 in Lao PDR, about 200 in Myanmar and 1,200 in Viet Nam (Animals Asia, 2015; Livingstone and Shepherd, 2016; Livingstone *et al.*, 2018). They have been known to act as laundering facilities, with consumer preference for wild-caught specimens being a stimulant for poaching (Livingstone and Shepherd, 2014; Livingstone and Shepherd, 2016; Crudge *et al.*, 2018). In Southeast Asia, the issue of bear farming is more pronounced in the Mekong countries of Lao PDR, Myanmar, and Viet Nam. Farming for bile extraction in Viet Nam has been prohibited since 2005, though it is legal to keep registered bears as pets, which presents a loophole. In 2017, the government committed to rescue all bears from the bile farms that have persisted despite legislative prohibitions (Anon, 2017). Yet, challenges remain. For example, bear bile farmers in Viet Nam reported consumers' strong preference and willingness to pay more for wild-sourced products, suggesting that the industry relies on restocking from the wild (Crudge *et al.*, 2018).

For decades, various forms of national regulation existed in Lao PDR and Myanmar supporting the existence of these facilities. Although a new Prime Ministerial Order in Lao PDR passed in May 2018 outlawed the farming of protected species for commercial gains, it suggested that existing facilities holding animals for such purposes be converted to zoos (Anon, 2018); this move has severe implications for illegal trade, potentially opening the door for laundering of wild-caught specimens

and illegal trade. The use of bears in the exotic pet trade persists, and promotes the illegal capture and trade in bears, such as in Lao PDR, Malaysia, and Thailand, despite national protection prohibiting such activities (Burgess *et al.*, 2014; Krishnasamy and Stoner, 2016a, Krauz, 2017).

Analysis of past seizure data highlights that at least 2,800 bears from 700 seizures were recorded in Asia from 2000–2011 (Burgess *et al.*, 2014). The highest number of seizures from 2000–2011 were made by Cambodia. Cambodia and Viet Nam are key source countries for live bears, having high trade volumes over the years. Seizures highlight a clear role of cross-border trade by both land and air, with significant routes being: Lao PDR and Myanmar into China and Viet Nam; China into Republic of Korea; Viet Nam into Japan and Singapore; Cambodia and Lao PDR into Viet Nam; Viet Nam into Republic of Korea; Indonesia into Thailand; Myanmar into China and Thailand (Burgess *et al.*, 2014). Since 2012, at least 3,800 more bear equivalents have been seized or surrendered to enforcement agencies in Asia (Chin and Krishnasamy, in prep.).

Elephants (ivory and other parts)



African Elephants *Loxodonta africana* (except populations from Botswana, Namibia, South Africa and Zimbabwe) and Asian Elephants *Elephas maximus* are listed in Appendix I of CITES and all international trade in ivory has been prohibited since 1990, excluding the two one-off sales permitted by CITES in 1999 and 2008. The poaching of African Elephants has reached unprecedented levels, with an estimated 20,000–30,000 animals poached per year since the early 2010s to supply a relentless demand in Asia for their ivory. A monumental 393,100 kg of ivory has been seized globally from 2008–2017 (Milliken *et al.*, 2018). Decades of research have also confirmed that this trade is closely linked to organised crime, including African-based Asian syndicates who are responsible for moving large volumes of ivory—either through containers via sea, air cargo or hand-carried—to end-use markets in Asia (Milliken *et al.*, 2013; Milliken, 2014; Krishnasamy, 2016; Milliken *et al.*, 2016; Milliken *et al.*, 2018).

TRAFFIC's long-standing work that tracks elephant and ivory trade since 1989 through ETIS—the Elephant Trade Information System—has been fundamental to assessing country positions, their roles and involvement in this problem (Milliken *et al.*, 2009; Milliken *et al.*, 2013; Milliken *et al.*, 2016). ASEAN countries play a critical role in the global ivory trade—eight of them, with the exception of Brunei Darussalam and Malaysia, have open domestic ivory markets. Cambodia, Lao PDR, Myanmar, the Philippines, Singapore, Thailand, and Viet Nam currently allow trade in some form, either ivory from pre-CITES convention or from domesticated Asian Elephants within their respective countries (Martin and Stiles, 2002; Shepherd, 2002; Shepherd and Nijman, 2008b; Stiles, 2008; Stiles, 2009a; Stiles, 2009b; Martin and Martin, 2013; Webber *et al.*, 2013; Doak, 2014; Krishnasamy *et al.*, 2016; Vigne and Martin, 2016; Nguyen *et al.*, 2018). Ivory trade is also open in Indonesia, though ambiguity and loopholes within national legislation encourages illegal trade (Indraswari *et al.*, in prep.). Thailand, for some 30 years had the largest unregulated domestic market globally that allowed the laundering of African Elephant ivory into its market. Although legislation was in place earlier which allowed ivory from domesticated Asian Elephants to enter the local marketplace, there was no regulation or registry of what was available and permitted for trade. This changed when new laws were introduced in 2014 and 2015 (Doak, 2014; Krishnasamy *et al.*, 2016a). TRAFFIC's 30-month monitoring of the Bangkok ivory market showed that when the *Elephant Ivory Act* was finally introduced, coupled with a rigorous ivory registration process, open availability of ivory reduced drastically in the city: from a high of 14,500 products in December 2013 to less than 300 products in June 2016 (Krishnasamy

et al., 2016a). The landslide reduction in the latter five months was attributed to legislative reform. Nationwide surveys in 2019, however, have recorded thousands of items elsewhere in the country, which require scrutiny to ensure compliance with national regulations (TRAFFIC, in prep.).

Weak regulatory processes and law enforcement efforts have undermined efforts to stem illegal trade, in many ways facilitated by these open and widespread markets. Open ivory markets in Cambodia, Myanmar and Viet Nam however, have no strict legal or regulatory procedures in place at present, particularly to eliminate trade of African Elephant ivory and to comply with CITES. This is a loophole which ivory traders, suppliers and buyers exploit, evident from the thousands of ivory products available for sale (Shepherd and Nijman, 2008b; Nguyen and Willemsen, 2015; Krishnasamy *et al.*, 2016a; Nguyen and Frechette, 2017; Nguyen *et al.*, 2018). Up until May 2018, Lao PDR was in the same category, until a new Prime Minister Order was passed to prohibit the trade of ivory and to shut down outlets operating illegally, though evidence shows this is not effectively enforced (Anon, 2018, TRAFFIC, in prep.). Ivory outlets in the Mekong countries are also known to function as an extension of the market in neighbouring China, where transactions are conducted in Chinese Yuan and involving Chinese nationals who are both buyers and sellers (Shepherd and Nijman, 2008b; Krishnasamy *et al.*, 2016a; Milliken *et al.*, 2016; Nguyen and Frechette, 2017; Vigne and Martin, 2017; Krishnasamy, unpublished). TRAFFIC surveys in 2019 in Cambodia, Lao PDR and Myanmar highlight more than 3,500 ivory products for sale openly (TRAFFIC, in prep). These surveys also show that other elephant products, such elephant skin powders and skin jewellery are openly offered. Online markets are rife in some countries: e.g. more than 8,500 individual products were offered for sale in Indonesia, Thailand, and Viet Nam on Facebook and Instagram during a 25-day survey in 2016 (Indraswari *et al.*, in prep.).

Seven ASEAN countries – Cambodia, Lao PDR, Malaysia, the Philippines, Singapore, Thailand, and Viet Nam—have been (or are) subjected to global scrutiny for their role in this trade since 2013, based on evidence in the ETIS analysis. This resulted in the introduction of a National Ivory Action Plan (NIAP) process which began at CITES CoP16 in 2013. A number of key countries were identified as having an important role in the illegal ivory trade, some of which were required to submit a plan of steps they would take to address their prominent role in the illegal trade⁵. Their respective categorisations since 2013 are provided in Table 4.



5 <https://www.cites.org/eng/niaps>

Table 4: Countries or territories and their roles in the global ivory trade, as recognised by CITES (Southeast Asian countries underlined>

| Category* | CoP16 (2013) Cluster Analysis | CoP17 (2016) Cluster Analysis | CoP18 (2019) draft Cluster Analysis |
|---|---|---|--|
| Category A (Category A Parties consist of Parties most affected by the illegal trade in ivory) | China, Hong Kong SAR, Kenya, Malaysia , the Philippines , South Africa, Tanzania, Thailand , and Viet Nam | China, Hong Kong SAR, Kenya, Malawi, Malaysia , Singapore , Tanzania, Togo, Uganda, and Viet Nam | Malaysia , Mozambique, Nigeria, Viet Nam , and Togo** |
| Category B (Category A Parties consist of Parties markedly affected by the illegal trade in ivory) | Cameroon, Congo, Democratic Republic of the Congo, Egypt, Ethiopia, Gabon, Mozambique, Nigeria, Taiwan Province of China, and Uganda | Cambodia , Cameroon, Congo, Ethiopia, Gabon, Nigeria, Sri Lanka, South Africa and Thailand | Kenya***, United Republic of Tanzania***, Uganda***, China*** and Hong Kong SAR |
| Category C (Category A Parties consist of Parties affected by the illegal trade in ivory) | Angola, Cambodia , Japan Lao PDR , Qatar, and United Arab Emirates | Angola, Democratic Republic of the Congo, Egypt, Japan, Lao PDR , Mozambique, the Philippines , Qatar, and United Arab Emirates | Angola, Burundi***, Cambodia, Cameroon, Congo, Democratic Republic of the Congo, Ethiopia, Gabon, Lao PDR , Qatar**, Singapore ***, South Africa***, Turkey***, United Arab Emirates***, and Zimbabwe*** |

Table updated as off November 2019

* Prior to 2018, these were recorded as "countries of primary concern, secondary concern or countries important to watch", as reflected in past ETIS and CITES records.

** As identified by ETIS Analysis prepared for CoP17

***Parties currently not participating in a NIAP process

Among the Southeast Asian countries, Malaysia is an exception with no domestic ivory market. In the past, it functioned solely as a transit country for ivory shipments from Africa to Asia. This was first identified in 2009, with Malaysia now being implicated with at least 63,419 kg of ivory from 2003–2014, representing 19% of the total volume of ivory seized globally during this period (Krishnasamy, 2016a). Today, Malaysia's role has been established as an ivory entrepôt in the region, considered a point of collection and/or consolidation and distribution onwards to end-use destinations, with Malaysian nationals linked to these operations (Krishnasamy, 2016; Krishnasamy and Shepherd, 2017; EIA, 2018; Milliken *et al.* 2018).

Hunting of domesticated **Asian Elephants** to feed the ivory trade is not as prevalent in the region, however a number of countries have seen notable cases in recent years. In Indonesia, there are recorded instances of Sumatran Asian Elephants *Elephas maximus sumatranus* being killed, some of which were found with missing tusks. In February 2017, Malaysian authorities thwarted an elephant poaching ring, comprising seven local men, and found among others, two elephant tusks, dried elephant meat, chainsaws, guns and over 160 bullets⁶. Authorities believe this gang killed at least 15 Asian Elephants in recent times, signalling the heightened threat of Asian Elephant poaching to feed the demand for their parts. In Bornean Sabah, poached elephants, some with missing tusks, are increasingly making headlines, with at least 28 recorded killings between January 2018–October 2019 (Joibi, 2018; Lee, 2019). Other elephant parts such as the teeth, bones (for jewellery, trophy), skin and trunk (for meat and TM) are also traded in the region. Although elephant skins have been

⁶ <http://www.traffic.org/home/2017/2/13/malaysia-busts-wanted-elephant-poaching-gang.html>

documented in trade over decades in Southeast Asia typically for use in traditional medicine, it has recently gained more publicity with cases of elephants being skinned for production of items such as jewellery, observed in some markets in the region such as Lao PDR (Anon, 2002; Shepherd and Nijman 2008; Nijman and Shepherd, 2012; Nijman, 2014; Htay and Henshaw, 2017, TRAFFIC, in prep.).

Otters



Southeast Asia is home to four species of otters - Eurasian Otter *Lutra lutra*, Hairy-nosed Otter *L. sumatrana*, Small-clawed Otter *Aonyx cinereus* and Smooth-coated Otter *Lutrogale perspicillata*. While information on the prevalence of all four species in this region is sparse, it is generally considered that populations are in decline due to increasing habitat loss, the impact of pesticides on their wetland biomes and human-otter conflicts caused by a perceived or actual threat from fisheries activities (Gomez and Bouhuys, 2018). The threat of trade to wild otters in Asia became more evident in 2006. A study by the Environmental Investigation Agency (EIA) and the Wildlife Protection Society of India recorded remarkable quantities of otter skins while researching the big cat trade—no fewer than 1,800 otter skins were recorded openly for sale over two years in local markets, such as in a single market in Linxia, China (Banks *et al.*, 2006). These were often sold alongside tiger and Leopard *Panthera pardus* skins (Banks *et al.*, 2006). Trade is a rising threat to otters in Southeast Asia, largely to meet the demand for pets, and to a lesser extent, for their fur and for parts used in TM (de Silva, 2011; IOSF, 2014; Gomez *et al.*, 2016a; Gomez and Bouhuys, 2018). In Southeast Asia, otter trade has been recorded in all ASEAN countries in recent times, except Brunei Darussalam and Singapore (Gomez and Bouhuys, 2018). The **Small-clawed Otter** is the most frequently encountered species exploited for the pet trade, followed by the **Smooth-coated Otter**. In August 2019, these two species were listed on CITES Appendix I, prohibiting any international commercial trade (TRAFFIC, 2019d).

TRAFFIC analysis of otter seizures from 1980–2017 highlight that at least 5,940 otters were seized in 173 incidents in 15 countries across Asia (Gomez *et al.* 2016a; Gomez and Bouhuys, 2018). Analysis of data from the most recent period (2015–2017) showed that Indonesia, Malaysia, Thailand and Viet Nam played more prominent roles in Southeast Asia, with Japan implicated as an end destination (Gomez and Bouhuys, 2018). In 2016, 32 live otters were seized in Thailand, and were on their way to Japan (Gomez and Bouhuys, 2018). Research by TRAFFIC in Japan shows a rising popularity in pet otter cafes, particularly Small-clawed Otters, which is thought to be an important driver of this illegal international trade (Kitade and Naruse, 2018). Online trade research in Southeast Asia recorded a minimum of 560 posts over a four-month period (January–April 2018), with a minimum of 734 and a maximum of 1,189 otters observed for sale – all of these involved juvenile animals being offered as pets in four Southeast Asian countries (Gomez and Bouhuys, 2018). Most of these were from Indonesia (averaging 711 otters offered for sale), followed by Thailand (averaging 204 otters offered for sale), Viet Nam (averaging 27 otters offered for sale) and Malaysia (averaging 19 otters offered for sale) (Gomez and Bouhuys, 2018). From 2018-2019 alone, another 178 otters were seized from just Cambodia, Indonesia, Thailand and Viet Nam.

Pangolins



The four species of pangolins in Asia and another four in Africa are collectively considered the world's most trafficked wild mammals. Between August 2000 and July 2019, an estimated equivalent of 895,000 pangolins were trafficked globally, involving both Asian and African pangolins and predominantly destined to Asian markets, mainly China and Viet Nam (Challendar *et al.*, 2019). The meat of the animals is considered a delicacy, while pangolin scales are used in TM and their skins were once popular in the fashion industry (Pantel and Chin, 2008; Challender *et al.*, 2014; Heinrich *et al.*, 2016; Challender *et al.*, 2017). Asian markets are known to be the largest consumers of pangolin parts. An estimated 500,000 pangolins were traded from 1977 to 2012—despite a zero-quota for wild harvest imposed by CITES in 2000⁷, mostly the **Sunda Pangolin** *Manis javanica* and **Chinese Pangolin** *M. pentadactyla* (Pantel and Chin, 2008; Challender *et al.*, 2014). Tens of thousands of pangolins were imported into China, (both legally and illegally) mostly from Southeast Asia in the early 1990s (Zhang, 2008; Challender *et al.*, 2014; Heinrich *et al.*, 2016; Heinrich *et al.*, 2017). This trade contributed to population declines of up 90%, with the Chinese Pangolin and Sunda Pangolin categorised as Critically Endangered on the IUCN Red List of Threatened Species™ in 2014, while the Philippine Pangolin *Manis culionensis* listed as Critically Endangered in 2019⁸. Consumption and demand is present in many other countries in Southeast Asia including Cambodia, Lao PDR, Myanmar, Malaysia, Indonesia, the Philippines and Viet Nam (Challender *et al.*, 2014; Gomez *et al.*, 2016b; Gomez *et al.*, 2017; Heinrich *et al.*, 2016; Heinrich *et al.*, 2017; Sy and Krishnasamy, *in prep.*).

Population depletions in Asia due to high trade levels have sparked an increase of African pangolin trafficking since 2001, where prior to this, trade incidences in African pangolins were negligible (CITES, 2016b; Heinrich *et al.*, 2016). This may have been triggered by the zero-quota established in 2000 for Asian pangolins, as well as persistent demand and other variables facilitating trafficking, including Chinese investments in many African countries⁹, corruption and others (Pantel *et al.*, 2008; Challender *et al.*, 2016; Heinrich *et al.*, 2016; Challender and Waterman, 2017; Heinrich *et al.*, 2017). Analysis of CITES trade data—mostly consisting of seizures—over 38 years from 1977 to 2014 reinforces trafficking peaks since 2000—a staggering 809,723 pangolins were trafficked, where two thirds of all cases involved whole (dead and live) African pangolin species (Heinrich *et al.*, 2016). This analysis also showed that the USA was a primary importer of pangolin products, with 78% of its trade records (that were records based on seizures) being imports into the country. CITES trade data also showed that the most frequently traded commodities were leather and skins pre-2000, in contrast to scales, meat and the whole animal (dead and alive) reported through seizures over the past decades (Heinrich *et al.*, 2016; Heinrich *et al.*, 2017).

Analysis of global pangolin trafficking routes from 2010–2015 showed that Indonesia, Lao PDR, Malaysia, Thailand, and Viet Nam featured among the top 10 countries most implicated in international pangolin trafficking—these five Southeast Asian countries alone were implicated in the smuggling of more than 30,000 pangolins from 290 incidents (Heinrich *et al.*, 2017). In October 2016, all eight African and Asian pangolins were listed in CITES Appendix I and the international trade in live pangolins or any of their parts is banned, though this has not reduced trade levels. In 2017, Malaysia emerged as an important transit/redistribution/consolidation point for African pangolin scales, much like the role it plays in the ivory trade. Between May–November 2017, the country seized over 17,000 African pangolin scales from just 7 incidents, with new ports of entry recorded from two seizures involving over 8 tonnes of pangolin scales and 5 tonnes of ivory (TRAFFIC, 2018). Preliminary analysis of seizure data also shows that over 211,000 kg more pangolin scales and over 40,000 whole pangolins (live and dead) were seized globally from 2012–2019 (TRAFFIC *in prep.*). Seizures aside, TRAFFIC's research in open markets in the Greater Mekong region in 2019 highlights a consistent open availability of pangolin products, largely in Lao PDR (TRAFFIC, *in prep.*).

7 <http://www.iucnredlist.org/details/12763/0>

8 <https://www.iucnredlist.org/search?query=pangolin&searchType=species>

9 <https://www.traffic.org/site/assets/files/7234/focac-briefing-paper.pdf>

Rhino horn



All **Asian rhinos** are listed in CITES Appendix I, prohibiting any commercial international trade, while **African Rhinos** are listed in both CITES Appendix I and II. Today, the two Critically Endangered Asian rhinos—the **Sumatran Rhinoceros** *Dicerorhinus sumatrensis* and the **Javan Rhinoceros** *Rhinoceros sondaicus*—exist in Indonesia (the latter's only stronghold), with habitat loss, poaching and low reproduction rates causing drastic declines, close to extinction in the wild. The Sumatran Rhino possibly exists in Myanmar^{10,11} though the Malaysian population is considered functionally extinct. The last Javan Rhino in Viet Nam was shot dead (and its horn removed) in 2010 inside a national park¹². When CITES came into force in 1976, African rhino horn trade saw a drop (Milliken, 2013). The re-emergence of poaching in Africa was documented in 2008, with Viet Nam being identified as a major consumer of rhino horn (Milliken and Shaw, 2012; Milliken, 2013). More than 7,000 African rhinos have been poached in the past decade alone, with some 25,000 estimated to remain in the wild (Emslie, 2016; Moneron *et al.*, 2017). The illegal supply of rhino horns from Africa predominantly to Asia, highly prized for medicinal use and representing a symbol of status for luxury goods, is reported to be over 30 times greater than what was observed in the early 2000s (Gao *et al.*, 2016; Milliken & Shaw, 2012; Milliken, 2013), but this trade has evolved to include handicraft products such as pendants and other carvings.

Between 2010 and June 2016, 2,149 rhino horns were seized globally, with all ASEAN countries except Brunei Darussalam implicated in hundreds of seizures (Moneron *et al.*, 2017). Most of these horns are transported by air using carry-on or check-in luggage, with shipments leaving South Africa, Kenya, Mozambique, and Tanzania, via the Middle East (most commonly in Dubai, Doha and Abu Dhabi) before reaching or passing through major Southeast Asian airports in Lao PDR, Malaysia, Singapore, Thailand, and Viet Nam (Milliken, 2013; Moneron *et al.* 2017; TRAFFIC, 2017). These Southeast Asian countries are the very countries implicated in African Elephant ivory and African pangolin trade flows into Asia, and there is a resemblance in trade flows for all three commodities (Milliken *et al.*, 2013; TRAFFIC, 2014; Krishnasamy 2015; Milliken *et al.*, 2016; Krishnasamy and Shepherd, 2017; TRAFFIC, 2017a). Between 2017–2019, at least 172 rhino horns and pieces were seized from nine reported seizures in Asia, with Malaysia, Thailand, and Viet Nam alone seizing 154 of these horns (TRAFFIC, 2017a). In all cases, the horns were transported from Africa to Asia by air, including through a postal aviation centre in Malaysia (TRAFFIC, 2018). Investigations in Africa also show another worrying occurrence involving organised criminality, much like the ivory trade—criminal syndicates of Chinese origin who are operating in South Africa are manufacturing rhino horn bracelets, beads and even powder, where they are being packaged locally to be smuggled to Asian consumers undetected (Moneron *et al.*, 2017).

Open markets selling rhino horn products, particularly in Myanmar and Lao PDR, exacerbate this problem with markets in Lao PDR also observed to be selling pieces of rhino horn cross-sections and carvings (Shepherd *et al.*, 2017; Krishnasamy *et al.*, 2016; EIA, 2015; Krishnasamy, unpublished; TRAFFIC, in prep.). A number of these markets have been known to cater to specific Chinese clientele, where almost all outlets are operated by Chinese nationals, with transactions observed to be in Chinese Yuan or prices advertised in Chinese Yuan; similar trade patterns have now fully developed in all Mekong countries (EIA, 2015; Krishnasamy *et al.*, 2016; TRAFFIC, in prep.). Surveys since 2016 highlight that rhino horn products continue to be openly offered for sale in Lao PDR, Myanmar and Thailand (TRAFFIC, in prep.).

10 <http://www.iucnredlist.org/details/6553/0>

11 <http://www.iucnredlist.org/details/19495/0>

12 <http://www.traffic.org/home/2011/10/25/javan-rhino-extinct-in-viet-nam.html>

Saiga horn



Two species of Saiga Antelope *Saiga tatarica* and *Saiga borealis* are recognised under CITES and both species were listed in CITES Appendix II in 1995. All Saiga range countries in Europe and Central Asia have banned hunting and trade of the species at different times between 1999 to 2014, meaning no legal horn export was permitted from range countries (Theng and Krishnasamy, 2017). In August 2019, CITES Parties agreed to a zero export quota for wild specimens traded for commercial purposes for both Saiga species¹³. Saiga populations plummeted over the past century largely due to hunting for its meat and horns, and climate instability (Bekenov *et al.*, 1998; Mallon, 2008; Milner-Gulland and Singh, 2015), though more recently, populations reduced drastically due to disease outbreaks (Convention on Migratory Species, 2016; Saiga Conservation Alliance, 2017).

Saiga horns are prized ingredients in traditional Chinese medicine (TCM) used in several Asian countries, with products ranging from whole horns to “cooling water” and derivatives including shavings and powder. In Southeast Asia, this is more common in Singapore and Malaysia, promoted for its “cooling effect” despite limited evidence of its efficacy (Chan, 1995; von Meibom *et al.*, 2010). Analysis of CITES trade data from 1995–2015 showed that Singapore was the world’s largest re-exporter of Saiga horns, surpassing those of Saiga range countries, although its legal exports appeared to decline over the past decade (Theng and Krishnasamy, 2017). Trade data analysis showed that Singapore re-exported 42,603 kg of horns, compared to the 13,036 kg of horns it imported, revealing discrepancies in the data which could not be accounted for (Theng and Krishnasamy, 2017). Surveys across Singapore in 2015 found that 97% of the 188 TCM shops surveyed offered Saiga horn and horn products, including a minimum of 2,077 whole horns (Theng and Krishnasamy, 2017).

Surveys in Peninsular Malaysia between April and May 2018 found that 68% of the 228 TCM shops surveyed sold Saiga horn products including whole horns, shavings and powder (Gomez and Krishnasamy, 2019). Malaysia, in contrast to Singapore, reported the import of some 3,667 kg of Saiga horns, while it re-exported 3,534 kg from 1995–2017 (Gomez and Krishnasamy, 2019). Although these reported trade figures in the CITES trade database were significantly lower than Singapore, they do indicate an active level of trade involving Malaysia. In both countries, the volume of stocks registered for trade over the years, or its turnover, was not made available in the studies.

Serow



Six species of Serow *Capricornis* spp. are currently described, all in Asia. All Southeast Asian serows are threatened with poaching for trade almost everywhere they occur—particularly the Sumatran Serow *Capricornis sumatraensis* and Chinese Serow *C. milneedwardsii*—either for their meat and purported medicinal use while its horns are also coveted as trophies (Duckworth *et al.* 1999; Duckworth *et al.*, 2008; Drury, 2009; Shepherd and Krishnasamy, 2014; Krishnasamy *et al.*, 2019). This trade is largely domestic and against national legislation. Observations in markets across Lao PDR, Malaysia, Myanmar, Thailand and Viet Nam highlight that thousands of serow items—comprising horns, gall bladders, skeletal items, meat, hooves, skin pieces and ointments—are hunted, consumed or openly sold (Shepherd, 2001; Phan *et al.*, 2014; Krishnasamy *et al.*, 2019). For example, a survey in 2016 in Lao PDR found more than 1,000 serow items offered for sale across 59 outlets (Leupen *et al.*, 2017). Surveys in 2019 in several locations across the Mekong countries, along with seizures by law enforcement agencies, show that trade persists (TRAFFIC, in prep.).

Tigers



Tigers *Panthera tigris* are listed in CITES Appendix I, effectively banning all international commercial trade since 1987. With population estimates suggesting fewer than 3,900 tigers left in the wild today, the illegal hunting to supply the Asian markets is their single biggest and most immediate threat (Nowell and Xu, 2007; CITES, 2015; Stoner and Krishnasamy, 2016). Tiger parts and products have long been used throughout Asia, mostly in TM or prized for trophies and sometimes as pets (Nowell and Xu, 2007; Verheij *et al.*, 2010). Analysis of seizures over a 19-year period from 2000–2018 showed that a minimum of 2,359 tiger equivalents were seized from over this period (Wong and Krishnasamy, 2019). These seizures occurred in 32 countries globally from 1,142 incidents, though more than 2,200 tigers were seized in just the 13 Tiger range states (Wong and Krishnasamy, 2019). The study found that on average, 60 seizures were recorded annually, accounting for almost 124 tigers seized each year, with about 40% of seized commodities being tiger skins, followed by whole animals (dead and alive) and tiger bones.

Of the seven tiger range countries in Southeast Asia (Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Thailand, and Viet Nam), their stronghold today is Indonesia, Malaysia, and Thailand. These three countries hold an estimated 19% of the global tiger populations (Wong and Krishnasamy, 2019), yet are the very countries that face unrelenting pressure from poaching and illegal trade (Ng and Nemora, 2007; Shepherd *et al.*, 2013; Stoner and Krishnasamy, 2016). Of these three countries, Thailand is the only one where a number of tiger farms exist and have long been implicated in illegal trade. Close to 70% of tiger seizures in Thailand from 2000–2018 came from captive sources (Wong and Krishnasamy, 2019). Indonesia, on the other hand is unique in that it has had a long-standing local market for tiger taxidermy (Ng and Nemora, 2007). In 1990, when the country's new wildlife law came into place, the Indonesian government registered 1,081 stuffed and mounted tigers, including 600 tigers that were held privately by government officials and businessmen (Shepherd and Magnus, 2004). Analysis of Indonesian tiger seizures from 2015–2018 shows that at least 55 seizures took place in the country and involved whole stuffed tigers or their parts involving an estimated 72 tigers (Wong and Krishnasamy, 2019). Of these three strongholds in Southeast Asia, Indonesia also recorded the highest number of seizures in 2017 and 2018, where 78% of the 45 seizures during this period occurred in Indonesia (Wong and Krishnasamy, 2019).

Tigers in Cambodia, Lao PDR, and Viet Nam are thought to be functionally extinct (Goodrich *et al.*, 2015; Stoner *et al.*, 2016; WWF, 2016). These three countries as well as Thailand, play a critical role in captive tiger establishments that have been long implicated in illegal trade. The high number of tiger seizures originating from captive sources confirm this, particularly in Viet Nam and Thailand about 60% of whole carcasses and live Tigers seized from 2012–2018, equivalent to 282 animals, came from suspected captive sources (Wong and Krishnasamy, 2019). With little scrutiny to regulate and control the leakage of tigers from captive facilities, despite numerous requests from CITES to do so, their existence is a major concern for tiger conservation. These four countries in the Greater Mekong, along with Myanmar, also play a source, consumer and transit role for tiger parts and products heading elsewhere in Asia (Nowell and Xu, 2007; Shepherd and Nijman, 2008a; Education for Nature-Viet Nam, 2010; Oswell, 2010; EIA, 2015; CITES, 2016; Stoner *et al.*, 2016). Markets openly selling tiger parts, especially intensify the problem by encouraging demand and consumption, much of which also caters to Chinese clientele (Shepherd, 2008a; Education for Nature-Viet Nam, 2010; EIA, 2015; Shepherd and Nijman, 2015, TRAFFIC, in prep.). The existence of tiger farms in South Africa is further thought to have a role in the illegal trade—in 2015, two seizures were reported in China and Viet Nam, having originated from Africa (General Administration of Chinese Customs, 2015; Robin Des Bois, 2015).

BIRDS



Songbirds and parrots



Trapping for the domestic and international cage-bird trade is a major threat to one in 20 threatened and near-threatened bird species globally, with many being close to extinction¹⁴. This trade involves millions of birds annually from hundreds of species (Lee *et al.*, 2016; Eaton *et al.*, 2017). As a popular pastime in several Asian cultures, Southeast Asia has an extensive history of bird trade and bird keeping, particularly songbirds. The Greater Sunda region alone (comprising Brunei Darussalam, western Indonesia, Malaysia, southernmost Myanmar, Singapore, and southern Thailand) is home to more than 850 species of birds with high levels of endemism, many of which are targeted for the Southeast Asian songbird trade (Lee *et al.*, 2016). This pastime has resulted in many of the region's songbirds becoming increasingly threatened, and some already being extirpated from most of their former range (Lee *et al.*, 2016).

Surveys carried out by TRAFFIC in key markets in Indonesia, Singapore, Thailand, and Viet Nam from 2014–2018 recorded more than 86,000 individual birds for trade in pet stores and bird markets (Chng *et al.*, 2015; Chng *et al.*, 2016a; Chng *et al.*, 2016; Eaton *et al.*, 2017a; Eaton *et al.*, 2017b; TRAFFIC, 2019a; Chng *et al.*, 2019). These were recorded during snapshot inventories recording all species spanning between 2–5 days of survey days each. In Indonesian and Vietnamese markets an overwhelming majority of traded birds were native, but in some locations such as Singapore and Thailand, non-native species featured more prominently. The three largest bird markets in Jakarta alone, surveyed over three days, sold over 19,000 birds, with 98% of them being native to the country (Chng *et al.*, 2015). Similarly, in five of the major markets in eastern and central Java, 98% of the 22,900 birds documented over the three-day survey period were native species. In both cases, these native species are largely protected by law, meaning that trade is generally prohibited. More recent studies in Balinese bird markets showed that from one year to another, more birds from eastern Indonesia and less accessible areas including montane habitats were sourced to feed this unrelenting demand, noting how quickly markets were adapting when species depletions occur (Chng *et al.*, 2019). A separate study across Kalimantan from 2015–2017 recorded more than 25,000 birds offered for sale during this period, in over 200 shops (Rentschlar *et al.*, 2020).

Much of this widespread trade is not well regulated, occurs illegally and at unsustainable levels. This resulted in profiling an **Asian Songbird Trade Crisis**, that later identified key threats facing what is considered to be the region's 28-most threatened species requiring urgent action as part of the *Conservation Strategy for the Southeast Asian Songbirds in Trade* in 2016 (TRAFFIC, 2015b; Lee *et al.*, 2016). Just three years later, at least another 16 species of birds are thought to be at risk due to trapping to feed a relentless market (Krishnasamy and Chng, 2019). Analysis of bird seizures from 2018 to 2019 highlighted an astounding 45,000 birds seized from 58 incidents in only the

14 <http://www.birdlife.org/worldwide/policy/wild-bird-trade-and-cites>

Lampung and Banten provinces in Indonesia (Guciano, *et al.*, *in prep.*). More than 25,000 of these birds, from just 45 seizures, took place at Bakauheni Port in Lampung (Guciano, *et al.*, *in prep.*). A vast majority of the seized birds were heading for Javanese bird markets, comprising large numbers of tailorbirds and prinias, a group of birds not conventionally targeted in huge volumes to feed the songbird trade. This group of birds however have become more popular as a competition class species in bird singing competitions and as training birds. This is indicative of a rapidly changing trade that constantly involves a new and wider range of species being put at risk (Om Kicau, 2012).

On the cross-continental international trade front, analysis of CITES trade records highlights the lack of a transparent and accountable system from both exporting and importing countries to regulate any trade effectively and prevent illegal activities. For example, Singapore alone legally imported 225,561 CITES-listed birds from 212 species over a 10-year period from 2005–2014 (Poole and Shepherd, 2016). This research revealed Singapore’s crucial position as a trans-shipment hub in the transport of avifauna from Europe and Africa to East Asia and the Middle East. Scrutiny of these data also highlighted two major findings: a discrepancy in trade records that could not account for at least 86,000 birds after entering Singapore; and that 18% of the birds involved are the Endangered **African Grey Parrot** *Psittacus erithacus*. The species was listed in CITES Appendix I in 2016 due to high levels of illegal trade (CITES, 2016c). CITES export records between 2000 and 2010 also showed that 68,479 birds largely parrots and cockatoos, from the Solomon Islands were traded with Singapore and Malaysia being the largest importers (representing 93%) (Shepherd *et al.*, 2012). Captive facilities in the Solomon Islands did not exist at the time, yet a vast majority of these birds were declared as captive-bred. This was a clear indication of wildlife crime where illegally caught specimens were being laundered into trade.

Helmeted Hornbill



The trade in Helmeted Hornbill *Rhinoplax vigil* goes back in history, with its prized solid casque gifted to heads of states. However, since 2012 an unprecedented surge in the demand for Helmeted Hornbill casques as collectible trinkets by the rising upper class has pushed Southeast Asia’s largest hornbill species to a Critically Endangered status in 2015, with a subsequent establishment of a dedicated IUCN-SSC working group to tackle this problem (Collar, 2015). From 2010–2019, more than 3,000 Helmeted Hornbill casques and parts were confiscated in 60 seizures—most seizures took place in the species’s stronghold of Indonesia, and in China, the primary consumer country (TRAFFIC, 2017a; Ling, 2019). Of these, the Indonesian government alone seized over 1,100 Helmeted Hornbill parts (mostly casques) that were headed for China, 70% of which originated from the province of West Kalimantan. In August 2016 in Malaysia, authorities seized over 200 wildlife parts in a series of raids, which included one Helmeted Hornbill casque and over 45 tips of hornbill beaks for which the species has not been confirmed (Krishnasamy *et al.*, 2016). This is the first time a seizure of this nature has been reported by the government, illustrating that this trade could be expanding to other countries. Then in October 2019, the authorities in Sarawak, Malaysia seized 148 Helmeted Hornbill casques, reinforcing concern regarding the hunting and trade of the species (Ling, 2019).

Surveys in China, Lao PDR, Myanmar and Thailand have found Helmeted Hornbill products for sale, both in physical markets and online outlets (Beastall *et al.*, 2015; EIA, 2015; Yu and Jia, 2015; Krishnasamy *et al.*, 2016), with recent surveys in 2019 confirming the active and open availability of this trade (TRAFFIC, *in prep.*). Online trade research on Facebook in Thailand revealed that hornbill trade in the country was active—at least 452 of the 546 hornbill items offered for sale on Facebook between January 2014 and April 2019 were of Helmeted Hornbill parts and products (Phassaraudomsak *et al.* 2019).



AMPHIBIANS

Frogs and newts

(S) (C) (T)

The trade in amphibians is very often overlooked in the context of global wildlife trade. This trade, largely to supply the demand for the pet and wild meat trade is widespread, involving hundreds of wild-harvested species and is reported to be a major cause of amphibian population decline, after habitat loss (Rowley *et al.*, 2016; Warkentin *et al.*, 2008). The trade in amphibians involves billions of animals annually, with trade occurring both legally (trade is not prohibited by governments) and illegally (most notably laundered through a lack of government regulation or a lack of adequate protection for the amphibian species). Southeast Asia has a high diversity of amphibians, though a vast majority of them are not nationally protected, nor their international trade regulated. About 25 species of frogs are currently listed on CITES, and similarly low number of newt species are listed on CITES. The high diversity and a lack of protection or regulation mechanism has contributed to amphibian trade in exceedingly high volumes that is behind population declines. The lack of accurate and complete data on the trade, for both pets and meat, makes it impossible to monitor and accurately assess this threat, including the levels at which legal trade in wild-caught specimens would be considered sustainable (Kusrini, 2005; Kusrini and Alford 2006,). Lack of regulatory and control processes at national levels, including harvest quotas that ensure wild species are not over-harvested, are major contributing factors to the high levels of trade. A significant proportion of this trade is thought to be unsustainable, and may even involve laundering of wild-caught specimens as captive-bred. For example, recent research scrutinising Indonesia's Captive Breeding Production Plan revealed mismatches in the biological breeding capabilities and the maximum quota for 129 mammal, reptile and amphibian species. For instance, the Plan sets a quota for the White-lipped Tree-frogs *Nyctimystes infrafrenatus* which is 67 times higher than what is biologically possible for the species considering the declared parent stock and the species' reproductive capabilities (Janssen and Chng, 2017).

The European Union and the USA are the world's largest importers of frogs' legs for the gourmet food industry (Carpenter *et al.*, 2007; Altherr, 2011). This trade has been ongoing for decades. From 1998 to 2007, between 180 million and one billion specimens of frogs were collected annually from the wild in Indonesia, with one eighth (or a minimum of 22.5 million) exported to Europe (Ohler and Nicolas, 2017). Markets in the USA and France were initially supplied by domestic harvest, but overexploitation and consequently a decline in stocks led to external sourcing. In the last 20 years, Indonesia has become the world's leading exporter of frogs' legs, though in the past, frogs from Bangladesh and India were the primary source, producing some 4,000 tonnes per year for 30 years since the 1950s (Warkentin *et al.*, 2008; Altherr, 2011). A CITES Appendix II listing for Bangladesh

and India's major frog export species, the Indian Bullfrog *Hoplobatrachus tigerinus*, and a subsequent trade ban in both countries due to illegal and unsustainable trade in wild-caught specimens meant that Indonesia rose as the primary exporter of frogs' legs, contributing to 84% of the European markets imports—Belgium, France, and the Netherlands are the main importers.

Aside from the wild meat trade, hundreds of wild-caught species of newts prized as pets have also contributed to population declines, with trade being the primary threat to all Southeast Asian newts. For example pet trade was the primary driver for population declines of Lao PDR's endemic and Endangered Lao Warty Newt *Laotriton laoensis*. Research has documented the scale of the trade in the past. For example, villagers in Xiengkhouang Province, Lao PDR, sold 300–400 Lao Warty Newts to visiting European or Japanese collectors in 2008. The following year, they reportedly sold hundreds to Chinese collectors in Luang Prabang, unsustainable numbers for a small and range-restricted population. The USA is the largest importer of newts from Southeast Asia: CITES trade data and those from USFWS LEMIS showed that between 2005 and 2014, 7,508 live individuals from four species of Southeast Asian newts were imported live into the USA (Rowley *et al.*, 2016). Research into CITES-listed poison arrow frog Dendrobatidae trade from Central and South America found more than 63,000 individuals of 32 species were traded internationally between 2004 and 2008 (Nijman and Shepherd, 2010). This unveiled some suspicious discrepancies: that the trade into Thailand involved potential laundering through non-range countries. During the period, Kazakhstan reported no trade whatsoever in poison arrow frogs, but between 2004 and 2008, Thailand claimed to have imported more than 2,500 originating from Kazakhstan, via Lebanon. It is probably highly significant that exports from Kazakhstan to Thailand went via Lebanon, a non-Party to CITES who, therefore, would be under no obligation to report the transfer (Nijman and Shepherd, 2010).





REPTILES

Tortoises and freshwater turtles

(S) (C) (T)

A widespread consumer base for tortoise and freshwater turtles exists in Asia, for the pet trade, meat trade and for use in TM. This involves species whose trade is either prohibited or regulated through national protection and/or listing in the CITES appendices. Excessive volumes of freshwater turtles have been sourced for trade over the past few decades in Asia, causing a steep decline in many species (van Dijk *et al.*, 2000, Hance, 2011). For example, Indonesia alone exported 828 tonnes of freshwater turtles, representing at least 369,719 animals in 1998 and in 1999, with an estimated 25 tonnes of live turtles exported each week from Sumatra alone (AC17 Inf. 7; Shepherd, 2000). Malaysia exported 2,469,504 live turtles in just nine months in 1999, while Thailand's exports peaked in the 1990s, exceeding six million animals (AC17 Inf. 7). Between 1998 and 1999, an estimated 541,500 CITES Appendix II **Southeast Asian Box Turtles** *Cuora amboinensis* were exported from Indonesia alone (Schoppe, 2009). These high levels of overexploitation of Asian tortoise and freshwater turtles resulted in a landmark decision at the CITES CoP11 in 2000, at which a Resolution was passed calling on all countries, especially range states and those exporting and importing the species, to enhance and increase enforcement efforts as a matter of urgency (CITES, 2011). Almost two decades later, the pace of the trade has not ebbed, with seizures concerning illegal shipments continuing in the region, in the tens of thousands. Thailand alone for example, reported the seizure of close to 20,000 tortoise and freshwater turtles from just 53 cases between January 2008 and December 2013, with the Southeast Asian Box Turtle being the most commonly seized species (Chng, 2014b). An analysis of available data of seizures from January 2014–September 2018 showed that more than 100,000 tortoises and freshwater turtles were seized from illegal trade in just 363 seizures globally (Stoner, 2018).

The **Pig-nosed Turtle** *Carettochelys insculpta*, (restricted to the river systems of northern Australia and southern New Guinea and the Papua Province in Indonesia), is highly prized in the exotic pet trade, wild meat and traditional medicine practices. This CITES Appendix II species is totally protected in Indonesia, meaning that any trade is prohibited. Despite this, almost 80,000 turtles were seized in just Indonesia (Java and Papua) between 2003 and 2012, an average of 3,100 animals per seizure (Burgess and Lilley, 2014). More than 30,000 were also seized between 2013–2018 in just Malaysia and Indonesia (Krishnasamy and Chng, in prep.). A conservative estimate of 1.5-2million eggs are collected each year to feed the demand, signifying the large scale of this illegal trade (Burgess and Lilley, 2014). The turtles were smuggled from remote villages via motorboat or small airplanes to more centralised locations in Papua Province for domestic trade and international export. From Papua Province, turtles are reportedly smuggled to western Indonesia using cargo ships, as well

as aircraft and passenger ferries, and onwards to international markets in mainland China, Hong Kong SAR, Malaysia, Singapore, and Thailand (Burgess and Lilley, 2014). More than 30,000 were also seized between 2013–2018 in Malaysia and Indonesia; and over 10,000 were seized from only three incidents in a one-month period in February and March 2019 (Krishnasamy and Chng, in prep.).

Of the six species of freshwater turtle native to the Philippines, only the Critically Endangered **Philippine Forest Turtle** *Siebenrockiella leytensis* is endemic to the country (Schoppe and Shepherd, 2013). Found only on the Palawan group of islands, it is one of the world's 25 most endangered tortoises, prized as a collector's item (Turtle Conservation Coalition, 2011; Schoppe and Shepherd, 2013). In 2015, a massive haul of 3,907 turtles were seized in the Philippines—the largest in its history and thought to have been collected over a six-month period for the Chinese market (TRAFFIC, 2015). According to media in the Philippines, the government was preparing to file charges against a Chinese national connected to the case in 2015, who was believed to be the owner of the warehouse in which the turtles were found. The outcome of this case remains unknown.

Indonesia, Malaysia, and Thailand are countries with persistent availability of highly threatened tortoise and freshwater turtles species for the pet trade, including those from Madagascar and South Asia (Shepherd, 2000; Shepherd and Bonggi, 2005; Shepherd and Nijman, 2007; TRAFFIC, 2010a; TRAFFIC, 2013; Chng, 2014a; Chng, 2014b; Chng and Bouhuys, 2015; Nijman and Shepherd, 2015; Morgan and Chng, 2017; Morgan, 2018)). From 2008–2016, at least 8,000 Critically Endangered and CITES Appendix I **Ploughshare Tortoise** *Astrochelys yniphora* and **Radiated Tortoise** *Astrochelys radiata* (96% of these were Radiated Tortoises) have been seized in more than 10 countries, including four Southeast Asian countries (Indonesia, Malaysia, Thailand, and Singapore) (TRAFFICb, in prep.). Most of these were transported by air—a common method is to conceal in luggage or personal baggage—which is the fastest mode to transport live animals from one point to another and reduce mortality rates. An analysis of 18,853 tortoises and freshwater turtles seized in Thailand from 2008–2013, showed that turtles from 23 of the 53 cases were transported by air (Chng *et al.*, 2014).

An influx of illegal shipments of tortoise and freshwater turtles into Southeast Asia from South Asia has occurred in large volumes, involving organised criminal operations in both regions. Investigations by the Wildlife Justice Commission (WJC) between 2016–2018 recorded more than 20,000 turtles offered for trade from eight major networks. This trade is largely dominated by two species—the nationally protected **Indian Star Tortoise** *Geochelone elegans* and the **Black Pond Turtle** *Geoclemys hamiltonii*, both of them CITES Appendix I listed (D'Cruze *et al.*, 2015). More than 35,000 Indian Star Tortoises (native to India, Pakistan, and Sri Lanka) have been seized since 2007, and in 2017 alone, more than 6,000 Indian Star Tortoises were seized in just 10 incidents, largely from India, all of them heading to either Malaysia, Thailand, or Singapore (TRAFFIC, 2017c), with tens of thousands more traded illegally since 2004 in Southeast Asia (Chng, 2014a; Chng and Bouhuys, 2015; D'Cruze *et al.*, 2015). The species was recently listed in CITES Appendix I at the 18th CITES CoP in August 2019. Similarly, Black Pond Turtles are a common observation in seizures across Asia: from 2014–2016, more than 10,000 Black Pond Turtles were seized in the range countries of Bangladesh, India, and Pakistan as well as transit and consumer locations (mainland China, Hong Kong SAR, Indonesia, Malaysia, Thailand, and Singapore) (Leupen, 2018). While a consumer base exists in Malaysia, Thailand, and Indonesia, these countries function primarily as transit countries that supply the end-use markets in Hong Kong SAR and mainland China.

Lizards and snakes



Southeast Asia is a major source of reptile skin heading to the European fashion industry that produces high-end luxury products, with more than 20 species of reptile skins (from snakes, monitor lizards and crocodiles) utilised for this trade. Over 10 million skins from Southeast Asian reptiles were exported between 2005 and 2013, representing 42% of the global export total (UNODC, 2016). The skin trade is regulated under national and international controls, with most of these species being listed in CITES Appendix II. Between 2004 and 2013, 75% of the global exports in python skins originated from Indonesia and Malaysia alone, the two countries that are the world's largest sources of wild reptile skins. The **Reticulated Python** *Python reticulatus* is the most heavily traded species. Between 2004 and 2013, Malaysia exported 1,433,076 Reticulated Python skins and 1,175,167 **Water Monitor Lizard** *Varanus salvator* skins (TRAFFIC, unpublished). Indonesia has an annual mean of 164,000 wild python skins exported between 1999 and 2008, with reports noting that some 300,000 Reticulated Python skins were exported in just 2008 (TRAFFIC, unpublished). The Javan Spitting Cobra *Naja sputatrix* skins sold in a domestic market in Central Java alone may likely exceed Indonesia's entire annual harvest quota of 150,000 animals (TRAFFIC, unpublished).

Similarly, the Oriental Rat Snake *Ptyas mucosa* has been used in the international skin trade since the early 20th century. High levels of trade, including 250,000 skins from Indonesia alone, resulted in a CITES trade ban in 1993 (Auliya, 2010). Reports suggest that 50,000 to 100,000 skins and gall bladders, along with 30 to 60 tonnes of meat, were exported annually from Indonesia during the 1993–2005 trade suspension (Auliya, 2010). Snake traders interviewed in 2007 were unaware of any quota or regulation systems introduced by the government, despite the 100,000 skin quota it had set that year (Auliya, 2010). The lack of a robust regulation system from source to market in Indonesia, including quota-setting protocols based upon sound non-detriment findings (NDFs) to ensure harvest is not a threat to wild populations, has cast doubt on this trade being conducted in a legal and sustainable manner.

In 2000, the EU instituted a zero-quota trade ban for Reticulated Python skins from Peninsular Malaysia due to concerns that harvests were having a detrimental impact on wild populations. However, trade records following the ban reveal that it only led to Malaysia channelling its skins to the EU via Singapore. Owing to its geographic location, efficient infrastructure, well-established shipping routes and low corporate taxes, Singapore has been able to dominate the import or re-export business of Southeast Asian python skins, moving the commodity from elsewhere in Southeast Asia to importing countries in the EU (Nossal *et al.*, 2016). The vast majority (60%) of skins re-exported from Singapore are shipped to the EU, while just over a quarter of the total figure is re-exported within Asia, and the remainder to the Americas.

TRAFFIC's research into the **Tokay Gecko** *Gecko gecko* trade highlighted the role of captive breeding in facilitating illegal trade. Research into six companies that were permitted by the Indonesian government to export over three million captive-bred Tokay Geckos only for the pet trade cast a doubt on the legitimacy of practices involved in the business (Nijman and Shepherd, 2015). The biological requirements, coupled with financial and resource investments needed to make this a profitable and legal captive breeding business were highly questionable. Based on this, such large quantities entering the trade chain can only be sustained through the routine laundering of wild-caught individuals exported as dead specimens, rather than live for the pet trade. However, there is no legal trade in dead Tokay Geckos from Indonesia, meaning that the entire trade involving this species is occurring illegally, with little, if any, regulation or scrutiny from government agencies. In August 2019, the species was listed in CITES Appendix II, whereby international commercial trade in the species will need to be regulated.

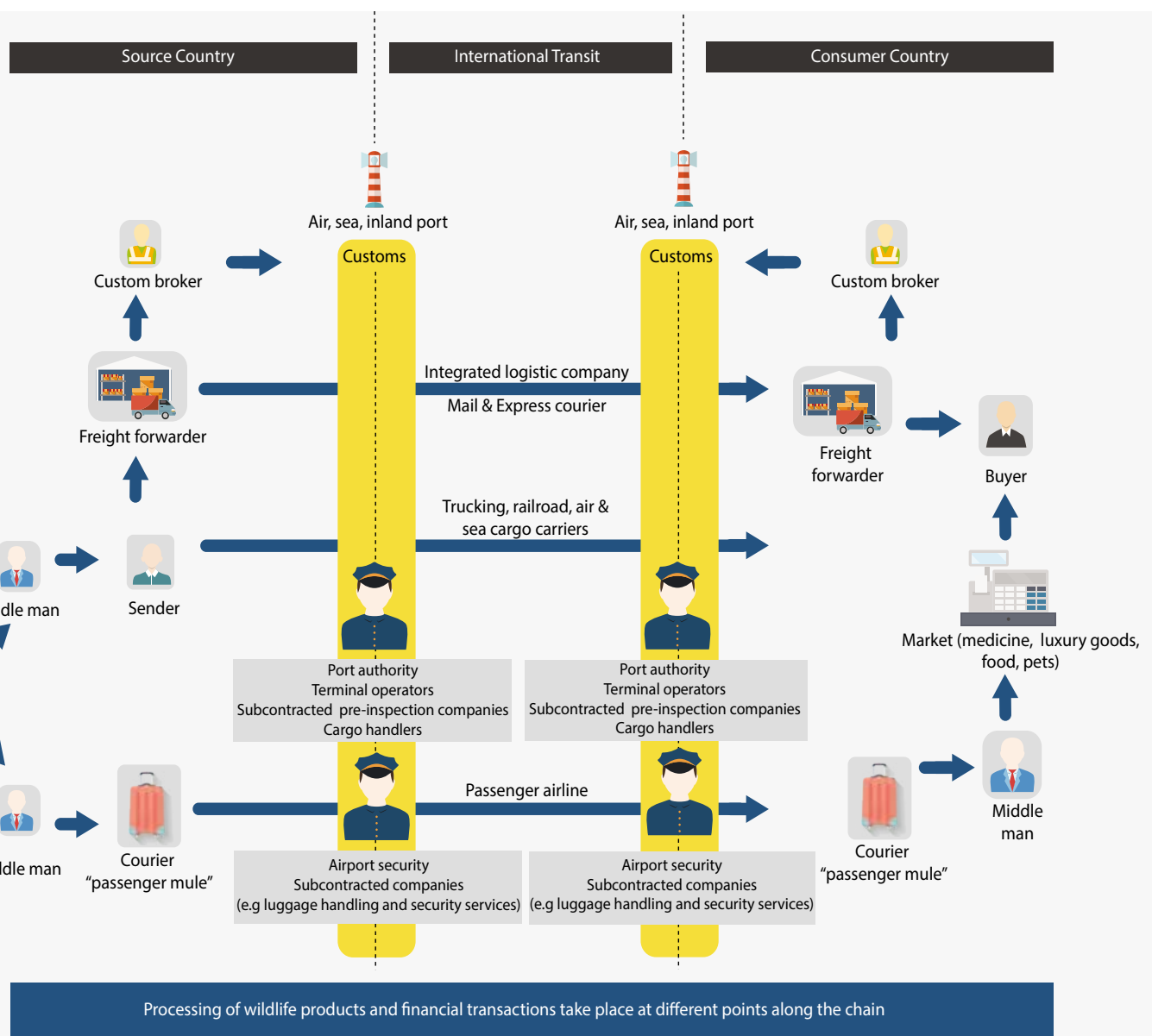
The **Bornean Earless Monitor Lizard** *Lanthanotus borneensis* is a victim of the loopholes that exist due to mismatches in local and international legislation. Despite its protected status in its range countries of Brunei Darussalam, Indonesia and Malaysia since 1978, a market was created in the international pet trade in 2013 as an exotic and novelty pet (Stoner and Nijman, 2015). The legal protection meant that any collection or trade was illegal. Following announcement of its rediscovery, there was widespread demand for *L. borneensis* from specialist collectors in Japan, EU and the USA among others and at the time, the species was not listed in any of the CITES Appendices. However, the import of an animal not CITES-listed, but protected under the national laws of its source country is prohibited under USA's Lacey Act of 1900. In order for collectors to obtain specimens in the USA, the traders bypassed the established national protection status of Bornean Earless Monitor Lizards from its source. Since the EU has no equivalent law to the Lacey Act, traders from Germany could import specimens and re-export them to the USA claiming the specimens as captive bred. As CITES management authorities do not verify such claims, these specimens are permitted entry into the USA. Between October 2015-February 2017, more than 100 animals were offered for sale online in 13 countries (Janssen and Krishnasamy, 2018). All specimens that entered trade at the time were all likely from illegally acquired parental stocks given that none of the range states allowed export or captive breeding (Janssen and Krishnasamy, 2018).

The Bornean Earless Monitor Lizard has since been listed in CITES Appendix II with a zero export quota in January 2017, but illegally-acquired individuals held in captivity could now be easily laundered into legal trade. Similar loopholes are exploited for trade in a range of species, particularly reptiles, from Southeast Asia, Madagascar, and South America (AC27 Doc 17; Janssen and Chng, 2017).



3.2 Transporting and smuggling techniques

The trade of wildlife products is a logistics and transport intensive activity that relies heavily on legitimate services; wildlife often follows a long journey from the source, passing through multiple countries and multiple hands before it finally reaches its destination. Traffickers typically use the same multimodal transport networks as legal exporters and importers. Illegal wildlife trade chains naturally involve a complex range of players working in source, transit and consumer countries, as summarised in Figure 4 (Zavagli, 2015). Facilitated by corruption, traffickers falsify documentation, mis-declare commodities, exploit regulatory loopholes and take advantage of under-resourced law enforcement agencies to bypass controls.



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Figure 4 : Examples of trade chains and players involved in the illegal trade of wildlife

3.2.1 Transport modalities

Traffickers often determine their delivery strategies based on a number of factors including cost-effectiveness and efficiency in terms of time, volume and product perishability, as well as risk of detection and arrest.

By sea

Containerised shipments are typically used to transport large volumes of illicit wildlife, such as elephant ivory (from Africa), frozen pangolins (from Indonesia and Viet Nam) and pangolin scales (from Africa and Indonesia) and others. This is the most efficient method financially and logistically, although traders risk losing a large proportion of the product when seizures occur. Countries with the busiest sea ports are often also the countries with the most seizures in Southeast Asia: Malaysia, Indonesia, Singapore, Viet Nam, and Thailand. Freeports (ports exempt from customs duty) such as those in Malaysia and Singapore, operate on the premise of moving goods in the fastest and easiest manner, with business being the priority. These are the very systems that traffickers exploit, banking on their simplified procedures, weak oversight and reduced inspections for export, transit, trans-shipment and import. These factors create the perfect conditions for traffickers to avoid detection and move goods with ease. The region's geographical position with respect to the world's major wildlife consumers that includes East Asia, along with efficient and well-developed port infrastructure are key reasons wildlife is smuggled to or through them. The sheer quantity and speed of cargo moving through these major seaports involves tens of millions of containers each year, making the detection of illicit cargoes low, unless aided by intelligence-led profiling and investigations.

By air

The top 10 countries with the most instances of flight-related trafficking of ivory, rhino horns, birds, reptiles, pangolin, other mammals and marine products from 2009–2017 include four of the 10 ASEAN countries: Thailand, Viet Nam, Indonesia, and Malaysia (Utermohlen and Baine, 2018). Although the cost of transporting by air is higher than by sea, trafficking via air is an increasingly common choice for smuggling wildlife products. The cost of flying is justified when the profit margin is high, which is why seized products commonly trafficked by air tend to be expensive and include rhino horn, elephant ivory, and live wildlife specimens. Transporting by air is also becoming more logistically feasible and practical owing to the rapidly growing frequency of flights, number of airline routes, and the lower costs. An airport's exposure to trafficking of illicit goods can generally be determined by a number of factors such as the airport's size, routes, inspection procedures and protocols (Utermohlen and Baine, 2017). Seizure incidences point to large international hubs with high passenger traffic and cargo volumes, which are known to be particularly vulnerable as they provide traffickers with a variety of flight options and lower risk of interdiction.

Wildlife traders can consign an air freight service provider, or use passenger flights. Especially in the latter case, security screening, though stringent, may not be best adapted to detecting wildlife products. Air transport is the mode of choice for both legal and illegal reptile traders. To live animal traders, transport via air is preferable. This is because it is time efficient and there is stricter control over environmental conditions compared to shipping by sea where the animals will be vulnerable to confined conditions for long periods which increases risks for mortality and its impact on profits (Mbohoahy and Manjoazy, 2016). Loss of such a product can affect the long-term business of the trader. Apart from the financial loss, the trader stands to lose a rare specimen, their customer and their reputation. A report released in 2017 highlighted that at least 114 countries had at least one instance of trafficking of ivory, rhino horn, reptiles and birds in the air transport sector between January 2009 and August 2016 (Utermohlen and Baine, 2017). The report also noted that Indonesia, Thailand, and Malaysia are among the top five countries involved in this trade.

By road

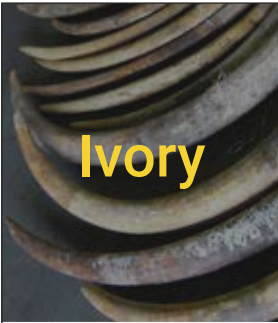

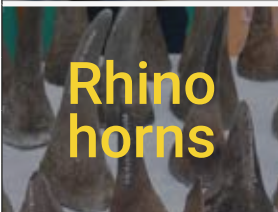
Smuggling by road is a common strategy employed by wildlife traffickers, and overland is often the first mode of transportation in the smuggling of terrestrial wildlife. An existing network of highways already connects all ASEAN countries that share land borders, making land routes a time-efficient transport choice that is comparable with shipping locally. The low-cost and availability of third party logistics service providers also help to streamline transportation. This is particularly important for traffickers as it distances them from law enforcement agencies and lowers detection risks.

In addition, land border controls throughout the region have the lowest level of security measures and enforcement capacity out of all three transport methods, given the extensive borders that Southeast Asian countries share. The porous borders of Southeast Asian countries, a lack of law enforcement effectiveness, and a high level of corruption and collusion throughout the region further enable trafficking operations.

3.2.2 Common concealment methods

Successful seizures have shed light on a number of specific techniques to smuggle wildlife products. Typical methods include concealing contraband in hidden compartments of containers or in luggage, disguising illegal wildlife products as legal products, forging legal documents, and mis-declaring the legality of transported goods. In these scenarios, it is not uncommon for ivory and African pangolin scales, for example, to be declared as other goods—Table 5 provides an example of common declarations for ivory, rhino horn and pangolin scale shipments. More extreme examples, however, include wrapping rhino horns in reflective material in preparation for screening, disguising ivory pieces as chocolate complete with packaging, sedating or physically immobilising live animals, and tailoring clothing to hold live animals on persons (TRAFFIC, 2010; Utermohlen and Baine, 2017).

Table 5: Common false declarations for shipments of ivory, rhino horns and pangolin scales from Africa to Asia

| | |
|---|--|
|  <p>Ivory</p> | Timber / processed wood / plywood / wooden floor tiles / white wood |
| | Sunflower seeds |
| | Scrap plastic / recycled crushed plastic/ used plastic / plastic waste |
| | Dried anchovies / frozen fish |
| | Dried seaweed, snail shells |
| | Red beans |
|  <p>Pangolin scales</p> | Oyster shell, frozen beef, frozen meat |
| | Fish maw |
| | Dry herbs |
| | Cassia seeds, cashew nuts |
| | Timber |
| | General products |
| | Marine products |
|  <p>Rhino horns</p> | Cashew Nuts |
| | Coffee |
| | Art work |
| | Tea bags |

In recent years enforcement authorities have improved detection by targeting cargo from suspiciously declared goods and from notable origins and destinations known to be implicated in illegal trade. To avoid being targeted, traffickers are exploiting less common and convoluted trade routes, using ports not typically associated with wildlife. Such a pattern can be observed across trade routes on land, by sea, and by air.

3.3 Vulnerabilities and enabling factors of wildlife trafficking

Shortcomings within the legal and regulatory frameworks in Southeast Asia including weak legislation, lax enforcement, high levels of corruption, and low rates of prosecution or convictions have been primary factors allowing/enabling illegal wildlife trade to thrive. The high profit + low risk combination makes wildlife trade a lucrative business and attracts elements of organised crime. Smugglers are adept at taking advantage of legislative weaknesses and combined with the ease of moving illicit shipments through the region's transportation hubs. They evade law enforcement scrutiny and profit from the trade. Pervasive corruption and a lack of political will underscore much of the fundamental constraints in overcoming the identified problems associated with wildlife trade. Inadequate action to tackle social and behaviour change considerations around wildlife use and consumption remains a challenge too. While these issues here are observed specifically for Southeast Asia, many of them are worldwide common denominators. Table 6 summarises these enabling factors and highlights further issues, gaps and loopholes that continue fuelling criminality around the trade in wildlife.

Table 6: Summary of enabling factors for illegal wildlife trade in Southeast Asia

| Issue | Description |
|--|---|
| Policy | |
| <p>Inadequacies and loopholes in national legislation that is unable to prevent and prohibit illegal wildlife trade; Inadequate protection and accountability by CITES and national Management Authorities</p> | <p>Most countries in Southeast Asia do not have satisfactory legislation to implement CITES, therefore making CITES ineffective. These flaws have existed for decades in many countries including Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Thailand, and Viet Nam.</p> <p>The wildlife protection and trade regulation framework in the region as a whole is generally weak and has significant gaps. This includes: the lack of inclusion of non-native CITES-listed species within national legislation, weak penalties or low fines, poor requirements for monitoring and regulating captive facilities (for breeding and zoos) and operations. Legal loopholes render local law enforcement agencies powerless or disinclined to act against illegal activity. Notably, these loopholes undermine any effort to uphold international and national commitments to prevent illegal wildlife trade and provides a cover for inaction. These are also major contributing factors for selected countries in the region having open and unregulated wildlife markets that have persisted for decades.</p> <p>CITES has recognised the deficiencies of the legislation under its CITES National Legislation Project. In order for wildlife crime to be tackled effectively, the relevant legislations must be reviewed and updated as CITES Parties are accountable for the implementation of their international obligations under the Convention. In some cases, rare and threatened species have adequate national protection, but not international protection under CITES. This allows the species concerned to be traded internationally despite local protection—a more prevalent problem for lesser known groups such as reptiles and amphibians.</p> |
| Law enforcement | |
| <p>Open markets</p> | <p>Open markets selling wildlife products illegally exist in almost all 10 ASEAN countries. Here, open markets are taken to refer to establishments that sell wildlife parts and products that are prohibited from trade, including those listed in CITES Appendix I such as ivory, rhino horns, tigers, pangolins, birds, reptiles and others (these open markets are slightly different from local-level stalls or markets selling wild meat, predominantly for local consumption where in many cases legislation permits trade, but falls short in its licensing and permitting scrutiny). These open markets embody the challenges of jurisdiction, law enforcement effort, and corruption, faced by government agencies in preventing illegal trade.</p> <p>These markets do two things: open availability of wildlife, their parts and products for sale, which could appeal to opportunistic shoppers, particularly tourists that did not specifically intend to purchase wildlife commodities. Secondly, they often cater to specific clientele unique to the commodities in question, particularly where these markets have been in existence for some years and have over time acquired a reputation for selling particular wildlife commodities. Some of these markets are also border towns and special economic zones (SEZs), most notably in Myanmar and Lao PDR. These areas are often designated tourist towns built under substantial financial investments from foreign businesses with close ties with local governments and are given the power and freedom to manage these areas. Establishments in them are often operated by Chinese nationals with transactions conducted in Chinese Yuan, catering to Chinese buyers. These border towns and SEZs are often exploited for illicit industries and trades, which include wildlife trafficking. Conversely, bird markets in Indonesia, Singapore, Thailand, and Viet Nam cater specifically to their respective domestic markets, feeding a local demand. In either scenario, monitoring, law enforcement and robust regulation is generally lacking.</p> |

| | |
|--|--|
| <p>Laundering of wild-caught species through captive breeding and harvest quotas</p> | <p>To allow legal trade, some countries in Southeast Asia have set harvest quotas for a number of taxa. These systems however lack two fundamental requirements: firstly, they lack robust science behind the setting of any harvest and trade quotas. Secondly, they lack any strong compliance monitoring mechanism from point of collection through to the point of trade, enabling not only the exceeding of quotas but also easy laundering of wild-caught animals through captive-breeding operations. Two main factors underscore illegal and unsustainable trade: i) The absence of any compliance monitoring to reduce levels of laundering of wild-caught specimens that are exported as captive-bred and ii) adequate resources and investments (by breeders) required to make this a sustainable and legitimate business.</p> <p>Most importing countries do not question legislations of other countries, or documentation accompanying a wildlife shipment, especially when it involves declared captive-bred specimens. As a result, shipments from source countries that could be illegal and wild-caught specimens laundered into the system can be excluded from scrutiny, making illegally acquired wildlife a legal commodity in the country of import.</p> |
| <p>Low rates of prosecution and lack of strong convictions</p> | <p>Generally, prosecution rates and the ensuing conviction success in securing deterrent penalties is tied to the strength of the law under which wildlife cases are tried and linked to the views of the judiciary in fighting wildlife crime. Collectively, when any part of this puzzle—investigative capacity, fines for wildlife crime, political will linked perhaps to anti-corruption measures, awareness by the judiciary of the seriousness of wildlife crime—are defective, the outcomes of prosecutorial attempts will be undermined and remain poor.</p> |
| <p>Pervasive Corruption</p> | <p>Despite all 10 ASEAN countries being signatories to the United Nations Convention against Corruption (UNCAC), corruption is still a pervasive force. In fact, with the exception of Singapore, Brunei Darussalam, and Malaysia, all other ASEAN countries sit in the bottom half of Transparency International’s 2019 perception corruption index.</p> <p>A series of international agreements have highlighted the role of corruption in facilitating wildlife crime, including:</p> <ul style="list-style-type: none"> • The London Declaration on the Illegal Wildlife Trade (2014); • The Kasane Statement (2015); • The African Common Strategy on Combatting Illegal Exploitation and Illegal Trade in Wild Fauna and Flora and its Action Plan (2015); • The Doha Declaration on Integrating Crime Prevention (2015); • The UN General Assembly’s (UNGA) resolution (A/RES/69/314) on Tackling Illicit Trafficking in Wildlife (2015) • The 2030 Agenda for Sustainable Development (A/RES/70/1) • The CITES Resolution 17.6 on “Prohibiting, Preventing and Countering Corruption-Facilitating Activities Conducted in Violation of the Convention”. <p>The CITES Secretariat has also identified captive breeding facilities and operations as being particularly vulnerable to corruption (CITES Secretariat,2015). A number of cases and occurrences illustrate corruption takes place where wildlife crime is concerned: allegations of wrongdoing in cases linked to rhino horn trade in the Philippines, Thailand¹⁵, and Viet Nam^{16,17}, the existence of open markets selling prohibited goods within key cities in the region and a high corruption perception index, year on year.</p> |

15 <http://www.thestar.com.my/news/environment/2017/03/17/thais-probe-offical-escort-for-rhino-horn-smugglers/>
16 <http://globalinitiative.net/wp-content/uploads/2016/07/Global-Initiative-Tipping-Point-Part1-July-2016.pdf>
17 <http://www.traffic.org/home/2012/8/21/loose-horns-surgin-demand-and-easy-money-create-perfect-sto.html>

| Shifting markets | |
|---|--|
| Changing trends with open availability of wildlife products | In response to global scrutiny and calls for accountability, some countries are putting in place stricter measures to control domestic wildlife trade, for example mainland China and Hong Kong SAR's policy in shutting down domestic ivory markets. While these measures are commendable, it is important to watch for illegal trade in these locations, and also for displacement of these stocks to neighbouring countries, or a measure of increased availability in other countries that have open ivory markets, notably Lao PDR, Myanmar, Viet Nam, Thailand, and Cambodia. TRAFFIC's surveys in these countries recorded over 10,000 ivory products from just September–December 2019, along with hundreds of other products from rhino horns, tigers, pangolins, and Helmeted Hornbills (TRAFFIC, in prep.). |
| Thriving online platforms | The escalating use of internet platforms has enabled speedy growth of an online marketplace, especially for opportunistic wildlife buyers and sellers, where anything from luxury products such as ivory and rhino horns to live animals such as tigers, Sun Bears and gibbons can be acquired ¹⁸ . The online trade of wildlife or wildlife products is not only increasing in popularity, it is also becoming more accessible as social media and new e-commerce channels and technologies emerge. Online trading is often preferred by wildlife traders for the anonymity it provides, and has already been documented across a number of platforms including social media networks, discussion forums, auction sites and private chat groups. The entire process can be kept among the traders with conversations occurring in encoded online channels, financial transactions wired online, and the delivery outsourced to courier services. Southeast Asia has some of the highest penetration of social network usage anywhere in the world, with Facebook usage forecasted to escalate in the next few years ¹⁹ for example. With such a pattern, a rise in online wildlife trade is to be expected. |
| Transportation routes | |
| | As the world reaches new heights of interconnectivity enabled by communication technologies and improvements in global infrastructure, wildlife traders will be better equipped to establish networks and expand their trade. Diversification in trade operations and channels via ways that will provide anonymity, makes law enforcement implementation more difficult. Adaptations by criminals in the transportation of wildlife parts and products are frequently noted, often shifting routes to avoid detection from law enforcement pressure. For example, it has been reported that traffickers appear to pay attention to the opening of new flight routes, perhaps believing that law enforcement efforts will be less effective in their infancy stage of operation, based on the perception that new staff are not as well established or aware of wildlife trafficking risks at relevant locations. The proliferation of third party logistics service providers will likely further enable traders to distance themselves from their operations and evade prosecution, altogether posing a challenge in effective detection and law enforcement. |
| Consumers and retailers | |
| | Consumers are the driving factor for a variety of wildlife products and parts as described in Figure 2 of this report (including ivory, rhino horns, live reptiles and birds, pangolin, tiger, and bear products). Retailers that encourage demand by providing a ready supply of products pose a major threat both to effective conservation and law enforcement efforts. Open and ready physical markets as well as online platforms cater to the demand, and must be eliminated where they exist illegally. As captured in the CITES review of demand reduction activities to date (in paragraph g, Working Document 4 CITES CoP18) "It is critical that Parties understand the difference between well-targeted demand reduction strategies through behaviour change and mass campaigns to raise awareness of the plight of endangered species and the various negative impacts of poaching and wildlife trafficking. Although both approaches have their merits, the former is more imperative in order to address the urgent needs." In line with a twin track approach to demand reduction, efforts to eliminate supply must therefore be complemented by communications and activities to change behaviour, alongside campaigns to raise awareness of the illegality, and by extension, repercussions for being involved in illegal activity, as part of the suite of efforts to reduce demand |

18 <http://www.traffic.org/home/2016/3/3/facebook-groups-malysias-new-wildlife-trade-marketplace.html>

19 (<https://www.emarketer.com/Article/Southeast-Asia-Has-Among-Highest-Social-Network-Usage-World/1013275>)

4. ASEAN countries at a glance

All ASEAN countries are Parties to CITES, the newest Southeast Asian member being Lao PDR which joined in 2004. All ASEAN countries have also recognised, in some manner, that illegal wildlife trade (animals and timber) is a serious crime²⁰. However, the strength of their legislation is largely weak where terrestrial wildlife is concerned and has implications for efforts to enforce, implement and regulate wildlife trade.

In this section, an introductory profile is provided for each of the 10 ASEAN countries, regarding their role and function from a national perspective on wildlife trade. Without being an exhaustive list of issues or occurrence, the profiles give a representative sample of the overall circumstances pertinent to each country, covering:

- legal and policy framework
- markets selling wildlife
- seizures it has been implicated in
- primary land, air and sea transportation hubs
- taxa commonly recorded in trade or trafficking
- strengths, challenges and recommendations



Brunei Darussalam

CITES entered into force on 2 August 1990



Pangolins, bears, otters, reptiles

SOURCE



Birds and reptiles

TRANSIT



Pangolins, birds,

CONSUMER



- Key Airports
- Online market
- Key border crossing: Various with Sarawak, Malaysia
- Key Seaports

Facebook

2019 Transparency International Corruption Perception Index: Score: 60 (Rank: 35/183 countries)

FACTS AND FIGURES



Based on open source information, Brunei Darussalam appears to have a minor role in wildlife trade. However, due to its geographical position it could have a potential source and transit role;



A small-scale online trade is believed to be ongoing; otters, Sunda Pangolins and Malayan Sun Bears were found on sale on Facebook in 2014.²¹

CHALLENGES

Some species listed in the IUCN Red list, such as the Sunda Pangolins, Malayan Sun Bear and otters, are not yet listed under the Brunei Wildlife Protection Act 1984. Only some 34 species are listed in the Act, though it has been announced that an amendment to the Act is underway. This legislation denoted species that are protected in the country, though trade is governed by the Wild Fauna and Flora Order (2007);

The Wild Fauna and Flora Order (2007) that governs trade, has penalty exemptions for personal possession or household effects of dead specimens of CITES Appendix I and II-listed species. This exemption creates a potential loophole to launder wildlife products, such as ivory and rhino horn, into and out of Brunei Darussalam.

STRENGTHS

The Wild Fauna and Flora Order (2007) covers CITES Appendix I and II listed species²²;

Brunei Darussalam has relatively robust laws and penalties on anti-money laundering activities and wildlife trafficking is considered a predicate offence.

RECOMMENDATIONS

Harmonise the legislation so that CITES Appendix I listed species, and those threatened by trade—both native and non-native—are protected under all relevant laws and close loopholes around “personal possession” of wildlife products;

Revise and pass a strengthened law, offering protection for highly endangered species that are affected by illegal and unsustainable trade

Several cross-border locations exist where it would be useful to monitor trade or provide an opportunity for law enforcement action;

Increase monitoring of the long land border with Sarawak, Malaysia and the use of social media for wildlife trafficking.



Cambodia

CITES entered into force on 2 October 1997



Big cats such as Clouded Asian big cats such as Clouded Leopard *Neofelis nebulosa*, pangolins, bears, tortoises and freshwater turtles, reptiles, birds, otters, ungulates (wild meat, trophies and traditional medicinal use), otters

Ivory, tiger, rhino horn, tortoises and freshwater turtles and, bears, pangolins

Ivory, tiger tortoises and freshwater turtles, lizards, snakes, birds, bear bile, serow, slow loris

TRANSIT

CONSUMER

SOURCE



- Key Airports
- Key physical markets: Phnom Penh; Siem Reap, Sihanoukville provinces such as Stung Treng, Ratanakiri for wild meat
- Online market
- Key border crossing
- Key Seaports

Facebook, Whatsapp, Instagram

2019 Transparency International Corruption Perception Index: Score: 20 (Rank: 162/183 countries)

FACTS AND FIGURES



More than 17,000 kg of ivory seized implicated the country from 2009-2018, including a seizure of more than 3.2 tonnes of ivory in 2018 that came from Mozambique;

More than 780 ivory products recorded in just 10 shops in Phnom Penh and Siem Reap in 2015²³, with hundreds more recorded in 2019;



Almost 25,000 live mammals, birds and reptiles were seized from 2007-2015. This was in addition to confiscations of dead animals (>26,000 individuals) and wildlife meat (>9,500 kg) and body parts (>7,500 items);

At least 253 bears seized from 2000-2011²⁴;



About 80 kg of rhino horn in six seizures, all from the international airports of Phnom Penh and Siem Reap international since December 2012²⁵;

CHALLENGES

Although the Natural Resource Environmental Code is being updated in some regards, penalties being proposed are considered too low to be a deterrent.

Currently, the Forestry and Protected Area Law does not adequately protect (or prohibit) or clearly regulate the trade in non-native CITES listed species, making it difficult to effectively implement CITES. The law also references international or regional conventions, protocols, and agreements, there is no money laundering provision in the Act²⁶;

Seizures point to transnational organised crime groups targeting Cambodia as a transit point for ivory and rhino horn from Africa likely en route to Viet Nam or China;

Potential emerging market for ivory and rhino horn for Chinese tourists with a number of shops in Phnom Penh and Siem Reap openly selling ivory and rhino horn parts and products such as jewellery²⁷;

Conviction rates and penalties meted out are generally low for wild animal related offences²⁸;

Identified as Category C by CITES for its role in ivory trafficking and is currently subjected to the NIAP process²⁹.

STRENGTHS

The Wildlife Rapid Rescue Team (WRRRT), a multi-agency unit between the Forestry Administration, the Royale Gendarmerie Khmère (RGK) of the Ministry of Defense and the NGO Wildlife Alliance is recognised as one of the most effective anti-wildlife trafficking units in Southeast Asia³⁰;

Wildlife trafficking is a predicate crime under Cambodia's Penal Code, although the law has not yet been used to trace and seize the assets acquired from illegal timber and wildlife trade³¹;

As of March 2018, the Ministry of Environment was reported to be revising all environment protection related legislation (on matters related to forestry, fishery and wildlife) with the intent of aligning laws to international standards, as well as raise penalties related to possession of protected wildlife; a wide range of civil society and stakeholders were involved in the revision of draft legislation. Key to this is the Natural Resource and Environmental Code that when passed, will be able to protect wildlife, improve regulations and be able to implement CITES by regulating and prohibiting trade in non-native CITES-listed species.



RECOMMENDATIONS

Expedite the finalisation, and implement, the new Environmental Code that should strengthen the penalties for trafficking, possession and illegally traded wildlife and their derivatives. The same penalties should be applied to products claiming to be from wildlife, parts or products;

Strengthen implementation of the current National Ivory Action Plan with a focus on implementation of effective enforcement procedures as well as inventory and management of seized items;

Establish and implement a robust protocol to deal with wildlife seizure that includes the collection and processing of DNA samples for forensics analysis, stockpiles and chain of custody management;

Increase enforcement efforts at air- or sea-ports along with land borders to improve rates of detection and pursue intelligence-led investigations to;

Improve criminal investigative capacity, including establishing transboundary collaboration especially with Viet Nam; increasing communication between provincial enforcement officers and the judiciary; as well as capacity building of provincial judicial police on the Criminal Procedure Code and other laws and procedures to ensure proper filing of court cases;

Target education and SBCC efforts at Chinese tourists and tour companies visiting Cambodia, and combine with law enforcement targeting to ensure no export of purchased ivory or rhino horn products from the country;

Undertake research to understand the drivers for wildlife consumption and use, and design appropriate demand reduction or consumer behaviour change interventions to address them in Cambodia



INDONESIA

CITES entered into force on 28 March 1979

Tigers, pangolins, birds, bears, otters, primates such as slow loris, ungulates and small mammals, tortoises and freshwater turtles, snakes, lizards, frogs

Ivory, rhino horn, African pangolins, tortoises and freshwater turtles

Tiger, birds, bears, otters, small mammals and primates such as slow loris, tortoises and freshwater turtles, snakes, lizards, ungulates

TRANSIT

SOURCE

CONSUMER



- Key Airports
- Key physical markets: wildlife and bird markets, restaurants and outlets (wild meat)
- Online market
- Key Seaports

Facebook, Twitter, Instagram, Blackberry Messenger

2019 Transparency International Corruption Perception Index: Score: 40 (Rank: 85/183 countries)

FACTS AND FIGURES



A quota of 4.2 million specimens for captive breeding by just 13 companies was allowed for 129 species of mammals, reptiles and amphibians in 2016³². Many of these exceeded the quantities that can be biologically bred, highlighting a flaw in the system that permits laundering of wild-caught animals. Similarly, in 2014, the government allowed six companies commercially to captive breed and export three million live Tokay Geckos within the year, which was neither biologically nor financially viable;



At least 1,123 Helmeted Hornbill casques were seized from 2012–2018, mostly heading to China;



More than 261,000 birds from over 300 species were recorded in bird markets in Medan from 1997–2001³³; More than 19,000 birds in three Jakarta markets were recorded over a three-day survey in 2014;



More than 52,000 birds recorded for sale—largely illegally—over 11 days of surveys during 2014–2017 in Jakarta, Central and East Java, Bandung, Sumatra and Bali;



More than 45,000 birds, mostly live, seized from 2018–2019, largely by Quarantine agencies in ports at Lampung southern Sumatra and Banten (western Java);

Implicated in the trafficking of more than 40,000 kg and more than 11,000 whole pangolins from 2010–2015;

Over 100,000 Pig-nosed Turtles were seized between 2003 and 2019, averaging more than 3,100 individuals per seizure. The largest single seizure took place in 2009 involving 12,247 animals seized in Timika, Papua. Further, 8,368 animals were discovered in several suitcases in connected seizures in Papua and Jakarta in January 2014³⁴. In the first three months of 2019 alone there were at least 3 seizures of Pig-nosed turtles, involving over 10,500 individuals;



At least 1,009 ivory products from 37 Facebook groups and 35 Instagram accounts recorded for sale over a 25-day period in 2016³⁵;

More than 570 pieces of ivory, including seven tusks that were suspected to be from Asian Elephants from Sumatra seized from 2015–2016; Globally, Indonesia was also implicated in the seizure of 3,500 kg of ivory from 1996–2014;



An average of 710 live otters offered for sale by at least 221 individuals (traders) over a four month period in 2018³⁶.

Parts of a minimum of 266 Tigers seized between 2000–2018, with almost 100 of them seized since 2015;



A minimum estimated 254 Sun Bears seized in Indonesia from 2011–2018³⁷;

At least 145 Ploughshare Tortoises observed for sale during 2008–2016 in Jakarta; between September 2015 and April 2016, 13 Ploughshare Tortoises observed for sale in Jakarta's animal markets;

CHALLENGES

National legislation does not provide adequate regulation for many native species that are harvested in large quantities for trade;

National legislation does not provide adequate protection or regulation for CITES-listed non-native species. For example, there is evidence of decades-long open sales of tortoises and freshwater turtles particularly those involving CITES Appendix I listed Critically Endangered non-native tortoises, such as Ploughshare and Radiated Tortoises³⁸,

Maximum penalties under the main wildlife law are relatively low: imprisonment for a maximum of five years or a fine of up to IDR100 million (USD7,400);

Long-standing presence of unregulated wildlife markets, particularly those selling large volumes of native birds and mammals openly, despite national legislation prohibiting such trade; research and investigations over decades highlights discrepancies and the improbability of captive breeding operations involving reptiles, mammals and amphibians being legal and/or sustainable or preventing exploitation of wild populations^{39,40,41,42},

Commercial captive breeding quotas often based on incorrect and unrealistic biological parameters, and include species with no reported breeding stock;

Limited follow up following seizures—preliminary analysis of Indonesian seizure data for terrestrial species shows less than half of seizures lead to arrests and ever fewer that result in successful prosecutions. When suspects are charged, the penalties are far lower than the maximum penalty and even lower than the value of the contraband. For example, in 2014 a dealer was arrested for attempting to smuggle 90 pangolins from Central Borneo through Java, mainland China and finally to Taiwan. The dealer was sentenced to 3 months imprisonment and a IDR500,000 (USD45) fine - the maximum possible penalty of 5 years imprisonment and a IDR100 million (USD7,400) fine.

STRENGTHS

In two separate landmark court cases, Indonesian judges convicted two men caught with Malagasy tortoises under Indonesia's quarantine law, for the first time involving a non-native CITES Appendix I listed species;

Consistently large number of seizures involving selected taxa, including tortoises and freshwater turtles, tigers, birds and pangolins as demonstration of government law enforcement action;

Government Regulation (No. 20) of 2018 (P.20/2018) was introduced in July 2018, and revised again in December 2018⁴³, which saw expansion of its protected species list from 677 to 921 plants and animals.

Indonesian President Joko Widodo has committed to protecting Indonesian wildlife, particularly birds and rhinos,^{44,45} though plans to implement this have yet to be developed;

Wildlife and forest crime is recognised as a serious crime under the anti-money laundering legislation, though provisions are mostly applicable to forest and fisheries crimes rather than wildlife crimes⁴⁶;

A sentence of 2 years imprisonment and a fine of IDR100 million (USD6,500), the highest penalty under the current wildlife law, passed. This sentence marks an important milestone within the judiciary system of Kalimantan, as it is a staggering 800% increase in the fine allocated from previous pangolin cases (averaging only IDR11 million, equivalent to USD700) and the average jail time across cases between 2012–2018 (not just pangolin cases) was only 4 months⁴⁷.

RECOMMENDATIONS

Shut down illegal trade in Indonesia's unregulated markets which continue to sell protected wildlife openly;

Establish a system of compliance monitoring to reduce levels of laundering wild-caught reptiles through captive-breeding facilities. Such systems should take into account the breeding biology and life history characteristics of species that are exported as captive-bred. This should include regular monitoring, site visits of captive breeding facilities and checking all stock against records. Specifically, the country's Captive Breeding Production Plan must be modified to ensure that calculations made on a scientific basis are appropriate and accurate. Quotas for species where no breeding stock is available should be withdrawn;

Take action against companies found to be fraudulently exporting wild-caught specimens under the guise of captive-bred specimens. Such cases should be prosecuted to the full extent of the law with their business licences suspended or revoked;

Conduct continued monitoring and research into physical and online markets, scrutiny of CITES trade data and trade regulation practices declared by government, to establish baselines, document scale and trends including species not previously documented in trade and other emerging issues. Market monitoring should be tied closely to the provision of information and enforcement support to the relevant authorities, particularly where protected species are concerned;

Enhance legal protection for species threatened by trade particularly for non-native species, in alignment with CITES Appendices. In cases of taxonomic uncertainty, listing the whole genus would ensure better legislative protection and also provide protection should taxonomic changes be made in the future;

Ensure seizures lead to the effective prosecution and conviction of criminals;

Social media platforms and online commercial portals should adopt a "zero tolerance" policy against the trading of endangered wildlife on their platforms. In addition, they should work with agencies at a national level to identify, prevent and remove posts selling wildlife illegally and detect criminals involved in such activities to support law enforcement actions;

Conduct awareness raising and behaviour change initiatives (for local communities and law enforcement agencies) to reduce the threat of bird trapping and trade.



Lao PDR

CITES entered into force on 30 May 2004



Pangolins, bears, tigers, serow, ivory, small mammals, birds, snakes and lizards, frogs

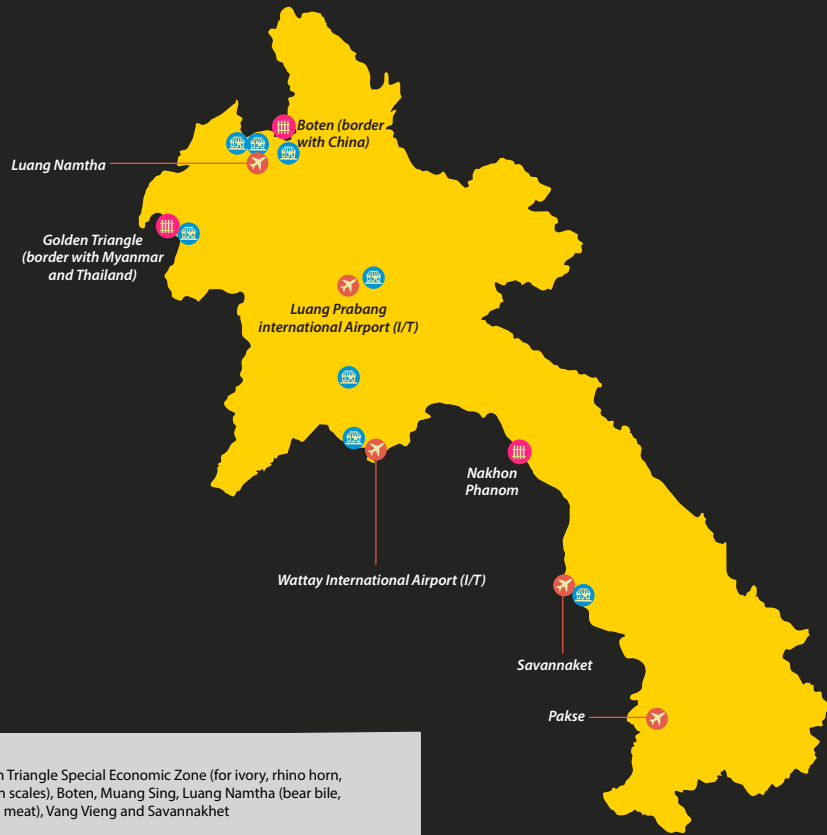
SOURCE

Ivory, rhino horn, Helmeted Hornbill

TRANSIT

Ivory, rhino horn, tiger, serow
Helmeted Hornbills, pangolins,
bear bile, small mammals, birds,
snakes and frogs

CONSUMER



- Key Airports
- Key physical markets: Vientiane, Luang Prabang, Golden Triangle Special Economic Zone (for ivory, rhino horn, Helmeted Hornbill parts, pangolin scales), Boten, Muang Sing, Luang Namtha (bear bile, serow parts, pangolin scales, wild meat), Vang Vieng and Savannakhet
- Online market
- Key border crossing

Facebook, Whatsapp, Alibaba, WeChat

2019 Transparency International Corruption Perception Index: Score: 29 (Rank: 130/183 countries)

FACTS AND FIGURES



Two ivory snapshot surveys found thousands of products openly for sale in 2016, close to 8,000 ivory pieces and 87 individual rhino horn pieces recorded in three cities (Vientiane, Luang Prabang and the Golden Triangle) over six days. In 2018, more than 13,000 products recorded in seven cities throughout the country. Surveys in 2019 confirmed the persistent open illegal trade in these markets;



At least 3,800 ivory products seized Luang Prabang and Don Sao between July 2018–January 2019;

Biggest importer of lion bones from South Africa between 2007–2016: 4,828 lion bones and parts were reportedly exported to Lao PDR during this period, including 2,098 whole skeletons. A further 278 skeletons were also reportedly exported in 2017. For its part, Lao PDR did not report a single import.⁴⁸

More than 6,600 wildlife, comprising mammals, birds and reptiles were recorded in seven markets in 2012;



More than 5,600 pangolins were seized involving Lao PDR from 2010 to 2015;

More than 2,700 pangolin scales recorded on sale in 2016, about half of which were in Luang Prabang;

Some 980 wildlife, parts and products recorded in Boten in April 2016. Bear products that were mostly manufactured in China, and catering largely to Chinese clientele dominated market observations, with 78% of these being bear bile powder;



A nationwide bear bile survey in 2016 recorded 908 individual bear parts and products being openly sold in 14 of the 25 towns surveyed;



Seven commercial facilities holding bears and tigers recorded in 2017, where the highest numbers (60) were recorded in the town of Boten, a kilometre away from the China border. Overall, at least 116 Asiatic Black Bears *Ursus thibetanus* and over 100 tigers were recorded in these facilities;

From 2010–2016, implicated in 51 bear seizure incidents, most (30 incidents) of which occurred in Lao itself—there was an increase in average number of incidents per year as well as number of bears involved (i.e. 7–8 seizures/year, estimated at 173 bears, averaging 25 bears/year);



At least 74 Helmeted Hornbill parts and products recorded in three locations, at least half of which were in Luang Prabang between April and July 2016;

More than 40 tigers seized since 2000, with most of them coming from suspected captive sources.

CHALLENGES

The presence of open markets that sell non-native CITES-listed products as well as native species prohibited from trade – this includes ivory, rhino horn, tigers, Helmeted Hornbill, pangolin scales and bear parts and products, particularly within the lax-controlled Special Economic Zones (in Lao PDR, these are designated as Special and Specific Economic Zones, both essentially functioning in the same manner). In these markets, traders were Chinese nationals; transactions observed in 2016 were in Chinese Yuan and prices were also advertised in Chinese Yuan, signalling that cross-border international trade in prohibited wildlife commodities takes place;

Presence of thriving Special and Specific Economic Zones that do not specifically prohibit the sale of prohibited wildlife parts or products, and unclear level of law enforcement to prevent illegal trade;

Wildlife farming and potentially fraudulent claims of captive breeding for specimens of CITES-listed species (such as macaques, pythons, freshwater turtles and pangolins) were authorised for export, when the related captive-breeding operation either does not seem to exist in the country or appears to be producing larger quantities of specimens that seem technically feasible⁴⁹;

Although a new Prime Minister's Order (PMO No. 5) outlaws the establishment of farms involving protected species (which would support its announcements in September 2016 to phase out commercial tiger farms), it calls for existing farms to be turned into zoos instead, without strict controls to prevent fraudulent activities that contribute to illegal trade;

Although the Wildlife and Aquatic Law 2007 criminalises all trade in elephant or ivory products (African or Asian Elephants), the government reported the development of an ivory registration regulation and the management of hunting of elephant trophies in the country⁵⁰, for which appropriate controls do not appear to be in place at present;

The current CITES-implementing legislation, the Wildlife and Aquatic Law 2007, does not list most non-native CITES-listed species in the Act and therefore is unable effectively to implement the Convention, though some part of CITES trade may be addressed by the Penal Code;

Additionally, the new Agreement on the Establishment and Management of Zoos, Wildlife Farms, Centres for Rehabilitation and Breeding of Wildlife and Wild Flora Farm, that was passed in early 2019, contains ambiguity with regards to licensing, permitting and management of all captive facilities, including for commercial breeding and trade.

Maximum penalty under the Wildlife Aquatic Law 2007 for a hunting or trafficking violation is three to five years imprisonment, and depending on the severity of the offence, may also carry a fine of LAK200,000 (USD24); second-time or repeat offenders may be fined up to LAK600,000 (USD72); the Penal Code was updated in 2018, where fines for any violations can reach USD1,225;

Unclear division of responsibilities among investigating agencies in relation to Police vs Department of Forest Inspections (Ministry of Forestry);

STRENGTHS

A new Order issued by the Prime Minister, No.05/PM, in May 2018 that directs the National Wildlife Trade Committee (Lao-WEN), the Provincial Wildlife Trade Committees (P-WEN) to “prohibit the import, trade of ivory and ivory products, rhino horns and products made of animal parts under category I and II and listed as prohibited animals of the Law on wildlife and to also order to close markets, shops that sell and factories that process wildlife products in Lao PDR”. As a result, in August 2018, authorities seized almost 400 items and reported shutting down operations at four shops in the Don Sao Market in the Golden Triangle; authorities are testing to check if the items were made from endangered species⁵¹;

A revision of the Penal Law was initiated in 2016, approved by the National Assembly in May 2017 and came into force in November 2018. The new Law considers higher fines compared to the Wildlife and Aquatic Law and higher jail times for wildlife trafficking violations (from 3 months–5 years imprisonment);

Establishment of the “Wildlife Working Group 15.7”—an informal group of governments, development partners, embassies and NGO representatives who share information on wildlife and timber trafficking;

Initiation of bilateral co-operation between Lao PDR and China in August 2016;

Establishment of a specialised department for wildlife investigation within the police forces, which has seen some notable confiscations of wildlife since 2018.

RECOMMENDATIONS

Shut down open markets selling wildlife, parts and products illegally, particularly those in Vientiane, Luang Prabang and Boten, and the Golden Triangle Special Economic Zone;

Joint law enforcement efforts with China, given the close political and economic ties between both countries, in terms of the traders involved and currency of transactions;

Conduct periodical spot-checks on key markets where it is known that wildlife parts are being sold illegally, especially those within the Special and Specific Economic Zones, and conduct periodical monitoring of open markets to determine levels and trends of illegal wildlife trade;

See through to the closure of tiger farms, as pledged during CITES CoP17. In line with current CITES Resolutions and Decisions, and the new Prime Minister’s Order No.05/PM, investigate all captive tiger facilities and where there is evidence of illegal activity, shut the facilities down; Further, and also consistent with the new Prime Minister’s Order, this should be extended to bear farms, consistent with an IUCN World Congress Motion to ensure that wild bears are not being laundered into such facilities. It is important to ensure that captive facilities that are being recognised as zoos instead are subjected to strict controls to prevent illegal trade;

Revise the Law on Investment and Promotion (No. 02/NA dated 8th July 2009) as well as the Prime Minister’s Decree on Special Economic Zones and Specific Economic Zones in Lao PDR (No 443/PM dated 26th October 2010) to prohibit any illegal wildlife trade and include penalties for businesses violating their privileges within these zones;

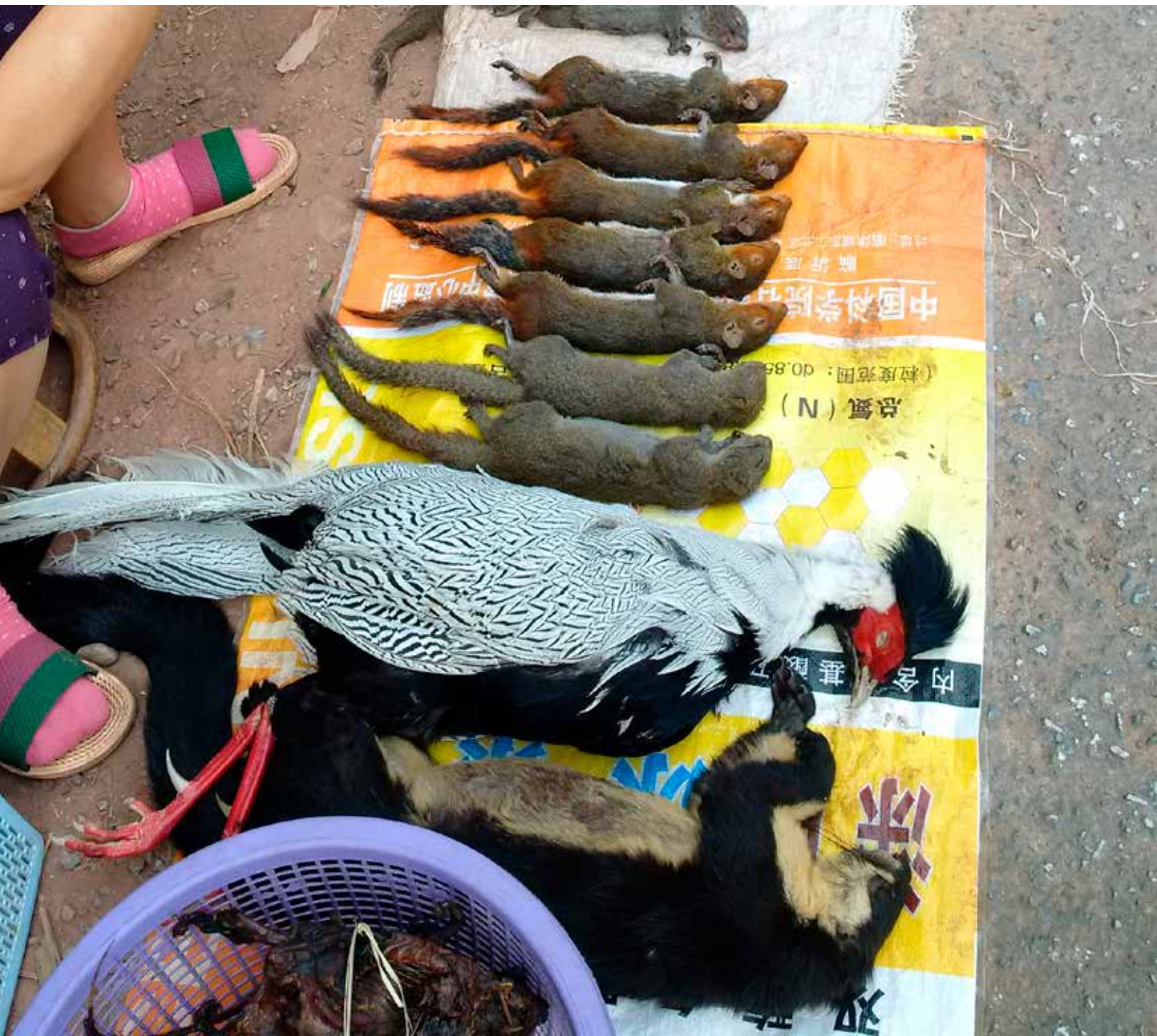
Conduct continued monitoring and research into physical and online markets, scrutiny of CITES trade data and trade regulation practices declared by the government, to establish baselines, document scale and trends including species not previously documented in trade and other emerging issues. Market monitoring should be tied closely to the provision of information and enforcement support to the relevant authorities, particularly where protected species are concerned;

RECOMMENDATIONS

Social media platforms and online commercial portals should adopt a “zero tolerance” policy against the trading of endangered wildlife on their platforms. In addition, they should work with agencies at a national level to identify, prevent and remove posts selling wildlife illegally and detect criminals involved in such activities to support law enforcement actions;

Review legal framework in view of the upcoming new Penal Code and consider reviewing the Criminal Procedure Code to promote division of responsibilities and co-ordination among different enforcement agencies, e.g. a clear definition of the police’s responsibilities when dealing with severe wildlife crimes.

Develop outreach campaigns in the Lao language and Mandarin Chinese to raise awareness among nationals, traders, visitors and consumers from neighbouring countries about the national laws and regulations for protection of fauna and flora. Campaigns should focus on international airports, main ports, markets and SEZs.



Malaysia

CITES entered into force on 18 January 1978

Tigers, pangolins, bears, otters, primates such as gibbons and slow lorises, small mammals, birds, tortoises and freshwater turtles, snakes and lizards

Ivory, rhino horn, African pangolins, birds, tortoises and freshwater turtles

Birds, bears, otters, ungulate, primates such as gibbons, slow lorises, small mammals, snakes, lizards, tortoises and freshwater turtles



SOURCE

TRANSIT

CONSUMER



- ✈ Key Airports
- 🏪 Key physical markets: TCM shops (bear bile), pet shops (birds), restaurants and outlets (wild meat)
- 📱 Online market
- 🚧 Key border crossing
- 🚢 Key Seaports

Facebook, Whatsapp, Instagram

2019 Transparency International Corruption Perception Index: Score: 53 (Rank: 51/183 countries)

FACTS AND FIGURES



At least 63,419 kg of illegal ivory seizures have implicated Malaysia as part of the trade route from 2003–2014, with Malaysia itself seizing some 19,000 kg of ivory during this period. More than 50% of these had passed through Malaysia undetected and were seized by other countries. An additional 5,400 kg of African ivory was seized by Malaysia from 2015–2017, all of which transited the Middle East;



Close to 30,000 kg of pangolins seized in Sabah in February 2019 from two locations—a warehouse and a factory⁵²;

More than 17,000 kg of African pangolin scales seized from May–November 2017, with new ports of import/export developing in Sabah and Sarawak;

Implicated in at least 10,534 kg of pangolin scales and more than 8,460 whole pangolins that were trafficked globally from 2010–2015⁵³;



At least 3,640 Indian Star Tortoises seized from 2011–October 2019⁵⁴; online surveys from 2006–2015 found that at least 1,023 Indian Star Tortoises were offered for sale in 185 separate advertisements;



More than 2,000 CITES Appendix I Black-spotted Turtles in seizures from 2009–2016 where Malaysia was implicated;

At least 1,700 Critically Endangered and CITES Appendix I listed Radiated and Ploughshare Tortoises seized from 2010–2017 in Malaysia;



Parts of a minimum equivalent of 103 tigers seized from 2000–2018; the most significant of which occurred in 2012 when one man was arrested with parts equivalent to 22 tigers;

At least 87 rhino horn pieces seized in the country from 2017–2019;



About 70% of Traditional Chinese Medicine shops surveyed in Peninsular Malaysia from 2017–2018 openly offered bear bile products for sale in traditional Chinese medicine shops, compared to 48% of the shops surveyed previously in 2012⁵⁵;



Over 67% of the 228 traditional Chinese medicine surveyed in 2018 openly sold Saiga horn products⁵⁶;

From 2014–2016, 48 successful seizures and arrests of at least 54 illegal traders saved over 67 wildlife species from being traded illegally on Facebook;



From 2003–2011, more than 63,000 python parts and products seized by authorities in the country. The largest of these occurred in 2010, when authorities confiscated over 26,000 pieces of python gall bladders, and 35,000 pieces of python skins in two operations;



From 2001–2011, 21,076 monitor lizards seized, the largest of which occurred in 2008 when authorities seized 7,000 Clouded Monitor Lizards *Varanus nebulosus* in two operations.

CHALLENGES

Utilisation and exploitation of air- and sea-ports that continuously facilitate large volumes of ivory, pangolins and rhino horns from Africa being trafficked through the country.

Identified by CITES as Category A with a key role in the ivory trade as large amounts of ivory implicate the country as a transit hub, as well as a consolidator and redistributor. It is currently under the CITES-mandated NIAP process⁵⁷. A similar trade pattern—where Malaysian ports are being used for smuggling—is observed in the trade in African pangolins;

Domestic wildlife protection laws for the three administrative regions of Peninsular Malaysia, Sabah and Sarawak are not harmonised. For example, more than 1,900 species are considered totally protected in Peninsular Malaysia from any form of hunting or trade, though only 12 and 76 species are considered totally protected in Sabah and Sarawak respectively. Corresponding fines are similarly low particularly in Sarawak (maximum of MYR25,000 or USD5,800), compared to Peninsular Malaysia, which reaches up to MYR500,000 (USD116,200) fine and a jail term of up to five years, per offence;

Traditional Chinese medicine shops openly selling prohibited items such as bear bile - the authenticity of these items unverified, though traders claim them to be bear bile, against national legislation;

Widespread illegal trade activity taking place online and difficulty in tackling this as perpetrators need to be caught with the contraband;

The presence of restaurants and outlets selling wild meat.

STRENGTHS

At least three strong legislations (Wildlife Conservation Act 2010, WCA), International Trade in Endangered Species Act 2008 (INTESA), and Customs Prohibition (2012) Act that clearly criminalise illegal wildlife trade. Significantly, 28 sections (of violations including import and export) of the WCA and INTESA are recognised as serious crimes under the Anti-Money Laundering and Anti-Terrorism Financing and Proceeds of Unlawful Activities Act (AMLAFTA) 2014 Amendment⁵⁸. AMLAFTA carries “a fine of not less than five times the sum or value of the proceeds of an unlawful activity or instrumentalities of an offence at the time the offence was committed or MYR5 million (USD1.2 million), whichever is higher” for those involved in money-laundering;

Lauch of *Operasi Bersepadu Khazanah* – a national level enforcement task force set up to tackle wildlife crime – in September 2019 that is led by the Royal Malaysian Police and the Department of Wildlife and National Parks Peninsular Malaysia. Successes from September – December 2019 include the arrest of 83 people from 8 nationalities, at least 460 traps removed and the initiation of anti-money laundering investigations into an ivory smuggling case;

High penalties for wildlife crime, with fines reaching MYR5 million (almost USD1.6 million) or imprisonment of up to five years, upon conviction;

Improved track record for penalties from serow poaching and trade: from January 2003–April 2019, at least 18 serow seizure incidents took place, involving a minimum of 27 serows. Overall convictions since 2017 resulted in a cumulative fine of MYR1.1 million (USD275,000) and imprisonment of 87 months, with the fine of MYR600,000 (USD70,756) or six months imprisonment or in default 24 months jail being the highest penalty meted out for a serow related offence⁵⁹;

A string of arrests and seizures have taken place in Peninsular Malaysia since 2014 for illegal trade on Facebook, with a minimum of 54 traders arrested and over 60 species rescued; more effort also taking place in Sabah and Sarawak

Reliable and professional forensics capacity and facility within the Department of Wildlife and National Parks Peninsular Malaysia that frequently conducts tests for seized items. This capacity is also being used to support effort in the region.



RECOMMENDATIONS

Investigate, including through collaboration with neighbouring countries, to interdict and prosecute those involved in organised criminality that move containerised shipments of high-profiled commodities (such as ivory, rhino horns and pangolin scales from Africa). This should include the building of regional portfolios on shippers and seizures (profiling), investigations into anti-money laundering, potential locally-based operators enabling the trade as well as carefully planned controlled delivery operations;

Given that Malaysia does not have open physical wildlife markets at the scale of those elsewhere in the region, conducting investigations into individuals involved in hunting and supplying wildlife is paramount, especially so for trade on social media;

Primary wildlife protection laws in Peninsular Malaysia, Sabah and Sarawak needs to be standardised and harmonised; wildlife protection laws in Sabah (Wildlife Conservation Enactment 1997) and Sarawak (Wildlife Protection Ordinance 1998) should be updated to improve the coverage of native and non-native species. These species should be afforded protection within the legislation, while improvements should be made for penalties and regulation governing the issuance of harvest licences and trade permits. Similarly, penalties must also be standardised, particularly an increase in penalties for violations in Sabah and Sarawak;

Law enforcement agencies in Peninsular Malaysia have been making significant progress in apprehending illegal traders over the past two years, and authorities in Sabah and Sarawak are encouraged to do the same – significant progress has already been observed since the launch of Operasi Bersepadu Khazanah;

Improve prosecution and conviction rates, particularly through the utilisation of the strong AMLAFTA to criminalise offenders;

Application of forensics DNA testing for seized wildlife parts and products, including ivory (to determine provenance), rhino horns, tigers, pangolins, bears and other specimens;

Conduct monitoring and research for online markets, scrutiny of CITES trade data and trade regulation practices declared by the government to establish baselines, document scale and trends including species not previously documented in trade and other emerging issues. Market monitoring should be tied closely to the provision of information and enforcement support to the relevant authorities, particularly where protected species are concerned;

Social media platforms and online commercial portals should adopt a “zero tolerance” policy against the trading of endangered wildlife on their platforms. In addition, they should work with agencies at a national level to identify, prevent and remove posts selling wildlife illegally and detect criminals involved in such activities to support law enforcement actions.

MYANMAR

CITES entered into force on 11 September 1997



Tigers and Asian big cats, pangolins, elephant parts, bears, primates, small mammals, snakes, lizards, tortoises and freshwater turtles, birds

SOURCE

Ivory, rhino horn, pangolins, Asian big cats, tortoises and freshwater turtles

TRANSIT

Tiger and Asian big cats, pangolins, bears, otters, primates, small mammals, snakes, lizards, birds

CONSUMER



- Key Airports
- Land border crossings
- Key physical markets: open markets selling live and dead birds, mammals, reptiles and amphibians, TCM shops (bear bile), restaurants and outlets (wild meat)
- Online market

Facebook, Whatsapp
2019 Transparency International Corruption Perception Index: Score: 29 (Rank: 130/183 countries)

FACTS AND FIGURES



A total of 1,320 wild cat parts, representing a minimum of 1,158 individual animals were observed during 12 surveys carried out in Myanmar between 1991 and 2006⁶⁰; a further minimum of 155 Asian big cats (tiger, Leopard *Panthera pardus*, Clouded Leopard *Neofelis nebulosa*, Golden Cat *Catopuma temminckii*) from selected market surveys from 2000–2014 during two surveys from 2009–2014⁶¹;



Forty-two bags of scales, 32 whole skins, 16 fetuses or pangolin parts in wine, and 27 whole pangolins were found for sale during four visits to the Mong La market between 2006 and 2015⁶²;



At least two rhino horns recorded for sale in Mong La in 2014 and 2015, with shops specialising in high-end and high-value wildlife, such as whole elephant tusks, carved elephant ivory, carved hippopotamus *Hippopotamus amphibius* canines, and tiger skins⁶³;



Some 9,000 pieces of ivory and 16 whole tusks for sale in 2006 from 14 markets in Myanmar and three border markets in Thailand and China⁶⁴, with consistent patterns observed from more recent surveys in December 2017, where close to 15,000 ivory products observed for sale including in Yangon, Mandalay, Mong La and Tachileik;



In 2006, three border markets—Tachileik and Three Pagoda Pass on the Myanmar-Thailand border and Mong La on the Myanmar-China border—sold parts representing a minimum of 215 bears, with buyers moving items across borders with little to no problem. A further 105 bears were found in markets in Keng Tung (Tyaing Tong), Mandalay, Mong La, Mong Sat, Panghsang, Sop Lwe, and Tachileik in 2010⁶⁵;



- Survey of bear farms in 2010 found at least 52 bears; all bears were reportedly wild-caught from China, Lao PDR and Myanmar;
- At least 62 Bengal Slow Lorises *Nycticebus bengalensis* observed for sale in the Mong La market, between 2007 and 2014⁶⁶.

CHALLENGES

Jurisdictional challenge where the central government is unable to get traction in border areas controlled by semi-autonomous authorities, which are the areas where open markets selling wildlife illegally exist;

Long-standing presence of unregulated markets—such as Golden Rock, Three Pagodas Pass (border with Thailand), Mandalay, Mong La (sharing a border with China), Mae Sai and Tachilek (sharing a border with Thailand). These markets specialise in selling large volumes of species prohibited by trade, including those listed in CITES Appendix I (ivory, tigers, rhino horns, pangolins, bears and others). In markets in Tachilek and Three Pagoda Pass, prices were quoted in Thai Baht while in Mong La, in Chinese Yuan—this clearly indicates the existence of a market that caters predominantly to foreigners, and the mere presence of these markets in border areas indicates potential cross-border trade which is a clear CITES violation for species listed in Appendix I;

Generally low levels of apprehension of wildlife criminals or their prosecution and/or conviction.

STRENGTHS

The Conservation of Biodiversity and Protected Areas Law (CBPA) was passed in May 2018, which includes provisions for increased fines of up to MMK1 million (USD680) and /or an imprisonment term of up to 10 years, for violations concerning illegal hunting and trade, including import, export and re-export. A set of subsidiary rules have been drafted since, and is pending approval from the government;

A specialised department—Forestry Police—has been established within the Myanmar Police Force to investigate environmental crime cases including illegal wildlife trade;

Wildlife and forest crime is recognised as a serious crime under the anti-money laundering legislation, though provisions are mostly applicable to forest and fisheries crimes compared to wildlife crimes⁶⁷;

Declaration by the Myanmar government in 2016 to close its wildlife markets⁶⁸.

RECOMMENDATIONS

Shutting down and taking firm enforcement action against those operating open markets that sell numerous prohibited species for sale, including a high number of CITES Appendix I-listed species. Given that these markets share borders with China, India, Lao PDR, and Thailand, collaboration and political will from these countries is vital in shutting down illicit trade;

Regarding ivory, Myanmar needs to adopt comprehensive internal legislative, regulatory, and enforcement measures to comply with CITES Resolution Conf. 10.10 (Rev. CoP14). All importers, manufacturers, wholesalers, and retailers dealing in raw, semi-worked or worked ivory products need to be registered or licensed. Similarly, possession of ivory must be regulated and licensed; periodic forensics analysis of ivory products in the market must be undertaken to ensure no African Elephant ivory is in the market, and if found, strong legal action is taken against those responsible;

Long-term intelligence gathering and law enforcement assistance should be expanded to investigate individuals involved in the hunting, trade and transportation of wildlife, both within the country and across international borders. Those found violating the national legislation should be prosecuted;

Investigate all captive tiger facilities. If found to be conducting illegal operations, they should be closed and strong legal action taken. This should be extended to bear farms, consistent with an IUCN World Congress Motion to ensure that wild bears are not being laundered into such facilities to feed the demand;

Authorities in airports and other points of international entry and exit should be more vigilant to prevent parts and derivatives of protected wildlife from being carried across Myanmar's borders. Myanmar should ensure that staff based at these checkpoints are sufficiently trained in CITES implementation, law enforcement and identification of species and their parts;

Conduct continuous monitoring and research into physical and online markets, scrutinise CITES trade data and government declared trade regulation practices to establish baselines, document scale and trends including species not previously documented in trade and other emerging issues. Market monitoring should be tied closely to the provision of information and enforcement support to the relevant authorities, particularly where protected species are concerned;

Social media platforms and online commercial portals should adopt a "zero tolerance" policy against the trading of endangered wildlife on their platforms. In addition, they should work with agencies at a national level to identify, prevent and remove posts selling wildlife illegally and detect criminals involved in such activities to support law enforcement actions;

Target education and social and behavioural change communications efforts at tourists and tour companies visiting Myanmar, combined with targeted law enforcement to ensure no illegal trade or export (via consumers) of prohibited wildlife products from the country.



Philippines



CITES entered into force on 16 November 1981

Pangolins, birds, snakes, lizards, tortoises and freshwater turtles

SOURCE



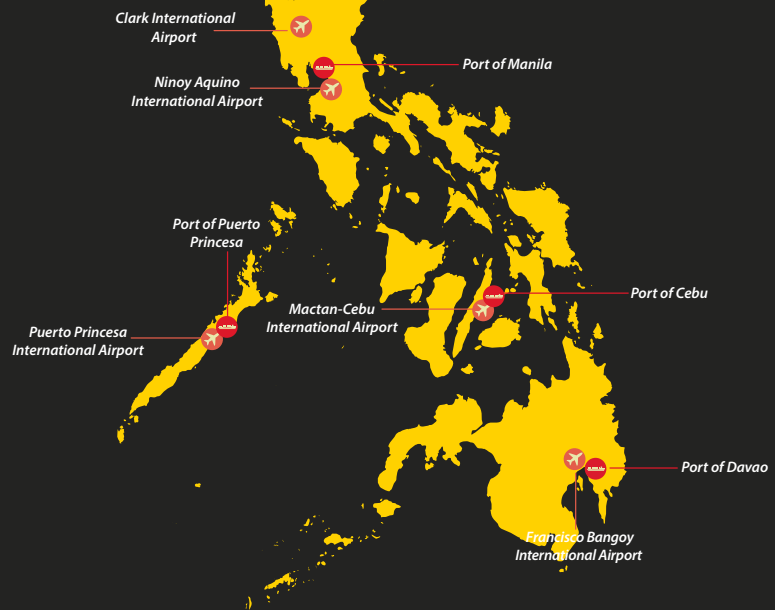
Ivory, rhino horn, birds, freshwater turtles and tortoises

TRANSIT



Ivory, birds, snakes, lizards, pangolins, tortoises and freshwater turtles

CONSUMER



- Key Airports
- Key physical markets: wildlife and bird markets, restaurants and outlets (wild meat)
- Online market
- Key Seaports

Facebook, Whatsapp, Instagram

2019 Transparency International Corruption Perception Index: Score: 34 (Rank: 113/183 countries)

FACTS AND FIGURES



The Bureau of Customs arrested a smuggler returning from a trip in Bangkok and seized more than 1,500 non-native freshwater turtles and tortoises in March 2019;



More than 300 smuggled Indonesian wildlife were seized from a trafficker's facility in Pasay City in March 2018. Subsequently, various Indonesian wildlife species were documented being offered for sale in Facebook;



Between 2001–2017, there were 30 pangolin trafficking incidents implicating the Philippines involving at least 3,537 pangolins. In 2018, at least 10 Endangered Philippine Pangolins *Manis culionensis*, endemic to Palawan Province, were rescued in Metro Manila and Cavite Province;

A total of 2,245 live reptile advertisements representing a minimum of 5,082 individual animals were posted by 1,046 unique users on Facebook, during a four-month period in 2016⁶⁹;

At least 3,907 Critically Endangered Philippine Forest Turtles *Siebenrockiella leytensis* were seized in 2015 in the country in a single shipment;



Almost 200 animals including Critically Endangered Yellow-crested Cockatoos *Cacatua sulphurea* and long-beaked echidnas *Zaglossus* spp. and wallabies seized in 2014 in Mindanao, southern Philippines⁷⁰;

Three rhino horns from Mozambique, hidden inside sacks of cashew nuts, seized at the Manila Port in 2012⁷¹;



In 2010, 794 kg of elephant ivory reported missing from the government stockpile, replaced by pipes that were covered in plastic⁷²;

In 2009, 3.5 tonnes of elephant ivory from Tanzania seized in Manila; in November 2009, police in the Philippines lodged a complaint against two Filipino suspects over the alleged illegal importation⁷³;



Over 10 tonnes of frozen Sunda Pangolins, suspected to be from Indonesia, seized in 2013^{74, 75};

Between 2008 and 2013, at least 197 animals recorded for sale in Metro Manila, Cebu and Davao including Critically Endangered Ploughshare Tortoise, Radiated Tortoise, and Siamese Crocodile *Crocodylus siamensis*⁷⁶.

CHALLENGES

The Philippines is known to have an active domestic market for ivory, having had a historic trade for over 400 years, though this trade has never been comprehensively documented. In 2013, it was identified as a country of primary concern and subjected to a NIAP process, but is no longer part of the process, or identified by CITES as a concern, largely based on reports that domestic trade was being regulated and the country was no longer a major transit route for African ivory. However, although an Administrative Order to regulate raw and worked ivory trade in the country was drafted in 2013⁷⁷, this has not yet been approved or implemented, meaning that ivory trade is not currently regulated in the country;

The availability of non-native species without legal importation records, including for species listed in CITES Appendix I, suggests loopholes in the implementation of national legislation;⁷⁸

Frequent records (based on seizures) of Indonesian wildlife entering the Philippines to feed a thriving pet trade and wildlife laundering operations for international trade;

Open and large trade of live animals on Facebook, with little being done to curb this problem;

Law enforcement trainings for government personnel conducted in the last few years are not translating into greater law enforcement actions in most regions of the country.



STRENGTHS

Wildlife Resources Conservation and Protection Act of 2001/Republic Act No. 9147, the country's CITES-implementing legislation includes provisions to tackle wildlife trade; any violation of the Act, upon conviction, carries imprisonment of up to 12 years and/or a fine up to PHP1,000,000 (USD21,555) depending on the threat status of species involved;

Department of Environment and Natural Resources (DENR) formed the Philippine Operations Group on Ivory (POGI) in 2013, in partnership with the Bureau of Customs (BOC), the National Bureau of Investigation (NBI), the Office of the President-National Intelligence Coordinating Council (OP-NICC), and the Philippine National Police (PNP). The POGI was set up in response to the country's role as an important ivory transit country and its tasks include investigating ivory smuggling, poaching and illegal trading of wildlife as well as to file appropriate cases against violators in court;

Recognition of wildlife crimes under the Money Laundering Act of 2001⁷⁹.

RECOMMENDATIONS

The Biodiversity Management Bureau (BMB) should conduct regular physical and paper audits on wildlife inventories based on the Certificate of Wildlife Registration (CWR) and Wildlife Farm Permit (WFP) issued to detect fraudulent activities such as adding illegally-acquired specimens into existing private collections and wildlife laundering. The prevalent practice of using legal documents by permit holders as a cover to conduct illicit trading activities warrants in-depth investigation;

Commit resources and effort into investigating illegal trade and trafficking of wildlife, particularly through enhanced vigilance at entry and exit points at air and sea ports where cross-border trade with neighbouring countries have persisted over time;

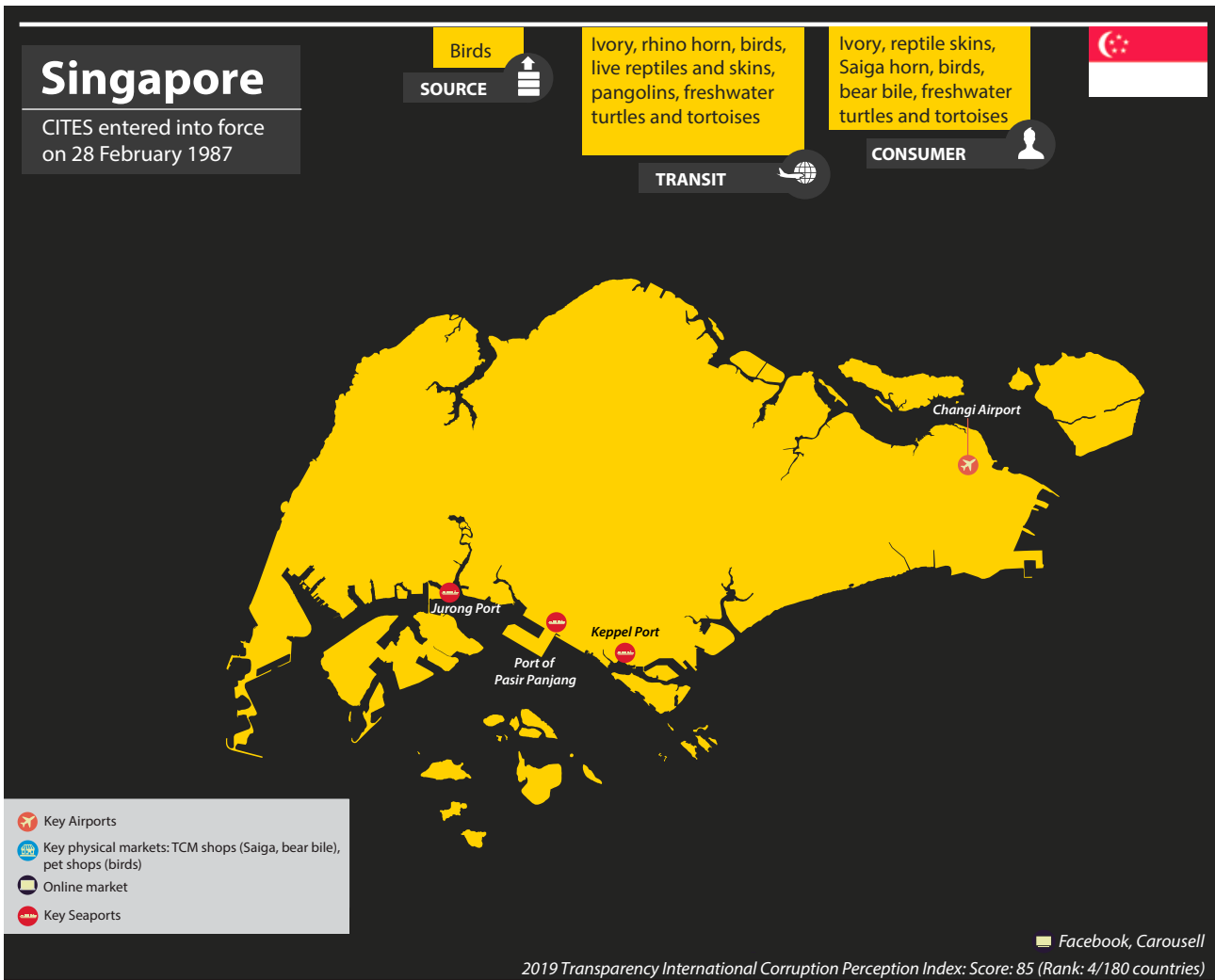
Individuals involved in poaching and trafficking of wildlife, particularly those categorised as critically endangered in the Philippines, should be prosecuted to fullest extent of the law to serve as a deterrent;

Given that very little consolidated information exists on the scale, nature and volume of wildlife trade in the Philippines, monitoring and research into physical and online markets, scrutiny of CITES trade data and government declared trade regulation practices is important to establish baselines, and guide any necessary policy or regulatory interventions.

Trade monitoring activities should be tied closely to the provision of information and enforcement support to the relevant authorities, particularly where protected species are concerned;

Social media platforms and online commercial portals should adopt a "zero tolerance" policy against the trading of endangered wildlife on their platforms. In addition, they should work with agencies at a national level to identify, prevent and remove posts selling wildlife illegally and detect criminals involved in such activities to support law enforcement actions.





FACTS AND FIGURES



More than 25,000 kg of African pangolin scales seized within a week of each other in April 2019, from Nigeria heading to Viet Nam, including the largest pangolin scale seizure ever recorded⁸⁰ ;



In 2002, Singapore made the world's largest seizure of illegal ivory (>7,000kg seized). More recently in July 2019, it seized 8800 kg of ivory and 11,900 kg of pangolin scales which were on their way to Viet Nam;

About 365 ivory products were recorded in 29 retail outlets in 2012, down from the 8,121 products recorded for sale in 2002;



In 2014 and 2017, Vietnamese nationals were arrested with eight Black Rhino horns in each incident;

High volumes of birds sold in local markets - more than 14,000 birds recorded in pet stores in four days in 2015 particularly non-native species, especially those from South and Central America, and elsewhere in Asia⁸¹ ;

At least 2,077 whole Saiga horns recorded in 96% of the 188 shops surveyed in 2015, and reported to be the world's leading Saiga horn re-exporter in 2015;



Approximately a quarter of a million Reticulated Python skins traded annually since 2000. The bulk of these skins are wild-caught from Indonesia (43%) and Malaysia (40%). Viet Nam supplies 16% of the Reticulated Python skins which are then re-exported by Singapore—all of which are declared as sourced from captive breeding facilities

CHALLENGES

Functions as one of the key transit hub for legal commodities moving throughout the world such as birds and reptiles from Southeast Asia. There is a lack of clarity on regulation in place for this trade, including details on the reporting of import and export data to CITES. For example, from 2005 to 2014, 212 bird species listed in Appendices I and II of CITES were traded, involving 225,561 birds; trade records highlighted that 86,000 of them could not be accounted for after entering the country, calling attention to a combination of discrepancies in trade data recording, misreporting by both importing and exporting Parties as well as concerns regarding trade practices;

Identified by CITES as an important country affected by ivory trade, as large amounts of seized ivory implicate Singapore as a notable transit hub. In similar fashion, country's large pangolin scale seizures in recent times is indicative of smugglers using its ports to move such commodities within the region;

Although fines are high, it has the lowest maximum imprisonment sentence (two years) for wildlife crime among all ASEAN Member States (regional average is about eight years).

STRENGTHS

In August 2019, the Singapore government announced a domestic ivory trade ban as part of its effort to control and prevent illegal ivory trade. The ban will take effect in 2021;

Legislation is generally adequate: fines under the Endangered Species Act for import and export violations reach SGD50,000 (USD36,800) per specimen and not exceeding an aggregate of SGD500,000 (368,000), while fines for illegal possession, trade and advertisements reaching SGD10,000 (USD 7,360) per specimen for violations and not exceeding an aggregate of SGD100,000 (USD73,600); additionally, Singapore's principal legislation governing trade in wildlife, the Endangered Species Act, is currently being reviewed;

Successful conviction rates are high. A speedy and effective prosecution and conviction process is in place, including for ivory and rhino horn cases. For example, a Vietnamese man was arrested with eight Black Rhino horns and ivory at Changi Airport in 2014. Six days after his arrest, he was sentenced to 15 months in jail. Three years later in 2017, another Vietnamese man who flew from Angola via Dubai and Singapore and was heading to Lao PDR was arrested in Singapore, also with eight Black Rhino horn pieces. The man was later sentenced to 15 months in jail;

Wildlife crime is recognised as a serious crime under the country's Corruption, Drug Trafficking and Other Serious Crimes Act⁸²;

The Wild Animals and Bird Act, Singapore's primary domestic wildlife protection legislation is being revised, with proposed fines ranging up to SGD10,000 (USD7,360), compared to the current maximum fine of SGD1,000 (USD736);

Singapore was awarded the UN Asia Enforcement Awards 2019 that recognises outstanding efforts and achievements by public organisations to combat transboundary environmental crime.

RECOMMENDATIONS

Increase penalties under its legislation for wildlife crime, particularly for imprisonment terms, to be brought in line with ASEAN standards;

Greater transparency on the process of monitoring, regulation and reporting of trade in CITES-listed species; this includes: reporting the actual quantity of CITES species and individuals registered for import and export, captive breeding activities within Singapore, including information on registered breeders and the volumes of species meant for domestic and/or international trade, processes and protocols in place to regulate non-CITES, non-protected species that are being imported and exported from Singapore;

Stockpile information (e.g. Saiga horns and python skins) is made accessible to ensure transparent management of stockpiles, international trade and domestic sales;

Regular inspections on outlets permitted to trade wildlife to ensure that shops have the correct permits for all imported and captive-bred species, and when applicable, CITES permits for CITES-listed species;

Continue to pursue intelligence-led investigations including through collaboration with implicated countries, to interdict and prosecute those involved in organised criminality that move containerised shipments of high-profiled commodities (such as ivory and pangolin scales). This should include the building of regional portfolios on shippers and seizures (profiling) with INTERPOL, investigations into potential locally-based operators enabling the trade as well as carefully planned controlled delivery operations;

Work with relevant agencies to ensure social media platforms and online commercial portals adopt a “zero tolerance” policy against the trading of endangered wildlife on their platforms. Alongside, this should also include the identification, prevention and removal of posts selling wildlife illegally and to detect criminals involved in such activities;

Targeted interventions to reduce demand for specific products in use such as Saiga horn.



Thailand

CITES entered into force on 21 April 1983



Pangolins, bears, tigers, serow, ivory, primates, small mammals, tortoises and freshwater turtles, snakes, lizards and birds

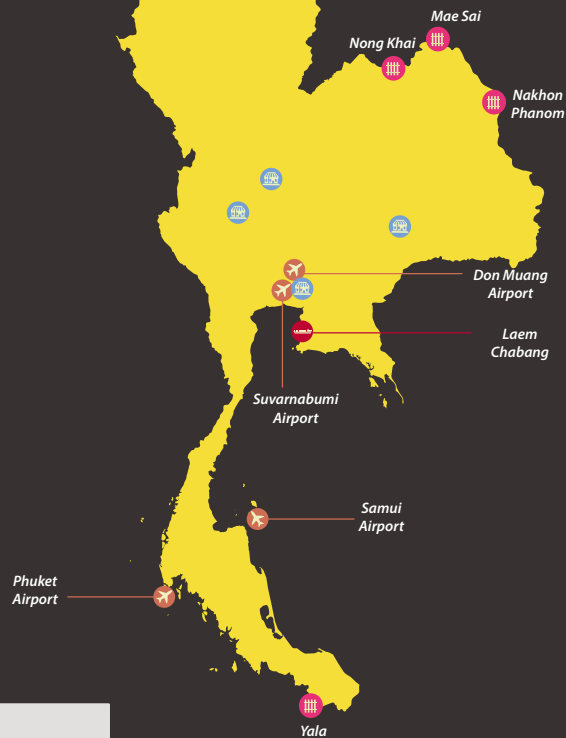
SOURCE

Ivory, rhino horn, pangolins, birds, mammals, and tortoises and freshwater turtles

TRANSIT

Ivory, birds, tigers, bears, primates, ungulates, small mammals, tortoises and freshwater turtles, snakes, lizards

CONSUMER



- Key Airports
- Key physical markets: Chatuchak market in Bangkok (ivory, birds, tortoises and freshwater turtle) Surin, Uthai Thani and Nakhon Sawan provinces (mainly for ivory)
- Online market
- Key land border crossing
- Key Seaports

Facebook, Whatsapp, Instagram, Line, and e-commerce sites

2019 Transparency International Corruption Perception Index: Score: 36 (Rank: 101/183 countries)

FACTS AND FIGURES



More than 22,300 kg of ivory seized between 2009-2019 implicated Thailand;

Over 14,500 ivory products were observed for sale in Bangkok in 2013. This figure dropped to an average of some 200 odd products during surveys and visits between 2016-2019, though surveys outside Bangkok in 2019 show thousands more for sale elsewhere in the country;



At least 111 rhino horns and pieces were seized in Thailand from 2012-2017;

More than 4,500 kg of pangolin scales were seized from 2017-2019; the largest seizure was in 2017 of almost three tonnes that came from the Congo and was bound for Lao PDR via Turkey⁸³;



In January 2019, 1,600 bear claws and tiger parts were seized in a smuggling attempt to Lao PDR⁸⁴;

Online trade research found at least 546 hornbill parts and products offered for sale between January 2014 and April 2019 in 32 Facebook groups in Thailand. The vast majority (83%) were of Helmeted Hornbills⁸⁵;

An average of 204 live otters were offered for sale online from 80 Facebook posts between January to May 2017, 99% of which involved Small-clawed Otters⁸⁶;



At least 351 tigers were seized from 2000-2018, with at least 172 of them being from captive facilities;



In November 2015, 14 orangutans *Pongo* spp. were repatriated to Indonesia, 12 of which had been smuggled into the country; more than 50 orangutans were recorded in captive facilities in the country then – 10 times more than what CITES trade-records for legal imports show⁸⁷;

More than 1,500 live animals from over 200 species were recorded for sale in Facebook from just 30 minutes of monitoring a day for 25 days in 2016⁸⁸. More than half of all animals and species were legally prohibited from trade;



Thailand made the largest seizure of CITES Appendix I and Critically Endangered Ploughshare Tortoises – 54 animals were seized in March 2013. From 2008–2013, at least 417 CITES Appendix I and Critically Endangered Radiated Tortoises seize. None of these animals were known to have been repatriated to Madagascar and status of the animals is unknown.

CHALLENGES

Generally, a low rate of successful conviction of illegal wildlife traders; for example, of the 53 seizures of tortoises and freshwater turtles from 2008–2013, only six successful prosecutions were recorded or reported⁸⁹;

Illegal trade of native and non-native CITES listed species in open markets.

Presence of captive tiger facilities throughout the country, including some that have been linked to illegal operations and lack of transparency that allows tiger trafficking, such as the case of the Tiger Temple that was closed down in 2016⁹⁰.

Lack of a clear process to manage, regulate and control the trade in CITES species, particularly non-native species;

A widespread illegal wildlife trade taking place online, with thousands of live animals, parts and products offered for sale.

STRENGTHS

The newly revised WARPA (Wild Animal Reservation and Protection Act B.E 2562) – Thailand’s primary wildlife protection legislation - was passed in 2019. This includes a new category for “Controlled Wild Animal” which covers CITES listed species that will be regulated under the law. It currently includes 50 non-native CITES listed species considered “controlled” that will be subjected to immediate regulation for possession, breeding and trade. The law will also be supplemented by a series of subsidiary legislations that are being developed to direct its implementation and enforcement. The WARPA 2019 also considers internet trade a violation.

Penalties under WARPA 2019 have increased: a maximum of THB1 million (USD32,415) and / up to 20 years imprisonment under WARPA 2019, compared to a maximum of THB40,000 (USD1,290) and/ up to four years imprisonment under the WARPA 1992;

Wildlife and timber trafficking is a predicate offence under the law governing anti-money laundering activities, which also includes provisions for asset recovery. This law was used in 2014 to arrest the kingpin of an illegal syndicate trading in pangolins, elephant ivory and Siam Rosewood across Southeast Asia;

Thailand introduced two key legal reforms since December 2014 which effectively bans the sale of African Elephant *Loxodonta africana* ivory and regulates its domestic ivory market through its Elephant Ivory Act. Violating the Elephant Ivory Act carries a maximum fine of THB6 million (USD200,000) and/or up to three years imprisonment. These changes resulted in the country exiting from the NIAP process in 2018. While this has resulted in a considerable reduction of open ivory availability in Bangkok, there is evidence indicating trade activity shifting to online trading platforms (more than 2500 products recorded in 2016) as well as elsewhere in the country;

Thai authorities have made a number of successful enforcement outcomes including a four-year jail sentence meted out to former Saraburi prosecutor and associates in 2018, for attempting to smuggle 21 rhino horns into the country⁹¹. Numerous seizures continue to take place, while online traders are arrested for illegally selling wildlife⁹².

STRENGTH

The Department of National Parks's (DNP's) Wildlife Forensic Science Unit (WIFOS) is recognised as one of the leading wildlife forensics labs in Southeast Asia, supporting law enforcement and investigations;

In May 2016, the popular Tiger Temple Wat Pa Luang Ta Bua was raided and 137 tigers removed; investigations into the temple, including its Abbot, are ongoing;

Strong social mobilisation occurred around ivory issues in 2015/6, through extensive awareness-raising initiatives and social and behavioural change communications, such as the WWF "Chor Chang" campaign, efforts by WildAid, and public government messaging on ivory trade at major airports. Since 2017, USAID Wildlife Asia in partnership with the government and other NGOs have been developing and running demand-reduction campaigns targeted to consumers of ivory and tiger products, with more in the pipeline in the coming years.

RECOMMENDATIONS

Ensure that robust subsidiary regulations are put in place soon to effectively control the trade in non-native CITES listed species – this needs to be expanded to include more than the current 50 species under the "controlled" list. Close engagements with civil society organisations should be held with as part of this process to ensure a more holistic and effective implementation of CITES in the country;

Continue pursuing using anti-money laundering related investigations connected to wildlife crime including collaborating with the banking, transportation and logistics sectors;

Tighten the enforcement at choke points for wildlife trafficking such as major commercial airports and seaports; enhance investigations, prosecutions and convictions;

Shut down markets selling wildlife illegally, including live animals, meat and medicine. This should be complemented by periodic monitoring of both online and physical markets to detect and act upon illegal trade;

Continued regulation and monitoring of physical ivory markets nationwide, including random DNA sampling of ivory to ensure that no African Elephant ivory is being sold;

In line with CITES decisions, investigate all captive tiger facilities and where there is evidence of illegal activity, the facilities should be shut down;

Scrutiny of CITES trade data and government declared trade regulation practices to establish baselines, document scale and trends including species not previously documented in trade and other emerging issues. Market monitoring should be tied closely to the provision of information and enforcement support to the relevant authorities, particularly where protected species are concerned;

Social media platforms and online commercial portals should adopt a "zero tolerance" policy against the trading of endangered wildlife on their platforms. In addition, they should work with agencies at a national level to identify, prevent and remove posts selling wildlife illegally and detect criminals involved in such activities to support law enforcement actions;

Enhance targeted social behaviour change communications (SBCC) that aim to reduce demand for specific products, such as ivory, building on the momentum achieved around this, and delivering through social mobilisation and advocacy activities under an SBCC auspice;

Target education and SBCC efforts at Chinese tourists and tour companies visiting Thailand;

Explore the potential of progress around ivory issues to benefit other species; i.e. adopting a systems approach, tackling motivational clusters for consumption, where possible through SBCC initiatives.



Viet Nam

CITES entered into force on 20 April 1994

Pangolins, bears, primates, small mammals, ungulate, tortoises and freshwater turtles, snakes, lizards and birds

SOURCE

Reptiles, ivory, rhino horn, pangolins

TRANSIT

Rhino horn, ivory, tigers, pangolins, bears, serow, small mammals, snakes, lizards, tortoises and freshwater turtles, birds

CONSUMER



- Key Airports: Hanoi, Ho Chi Minh City (HCMC), Da Nang
- Key markets: ivory – Nghi Khe, Hanoi; birds – Hoang Hoa Tham, Hanoi; traditional medicine – Lan Ong, Hanoi and Hai Thuong Lan Ong, HCMC
- Online markets
- Key Land border crossings: Dak Lak (border with Cambodia); Móng Cai (border with China)
- Key Seaports: Haiphong, Danang, HCM

Facebook, Whatsapp, Instagram, Zalo and other e-commerce sites

2019 Transparency International Corruption Perception Index: Score: 37 (Rank: 96/183 countries)

FACTS AND FIGURES



From 2018-2019 alone, more than 17,000kg of ivory was seized in the country, representing over 70% of the ivory seized in Southeast Asia during this period; over 9,000 kg of ivory that came from the DRC was seized at Da Nang Port in March 2019, marking the largest ivory seizure to date;



Almost 37,000 kg of African pangolin scales seized in Singapore in 2019 were reportedly destined for Viet Nam; all through sea ports⁹³;



Viet Nam seized more than 40,000kg African pangolin scales from 2017-2019, over 50% of which were seized in 2019;

Viet Nam is one of the largest rhino horn consumer markets—over the 2010–2015 period, Viet Nam was implicated in more than 75 seizures involving the trafficking of over one tonne of rhino horn⁹⁴; in July 2019, 55 rhino horn pieces via UAE was seized at the Noi Bai International Airport in Hanoi;



At least 216 equivalent tigers were seized from 2000-2018, with a significant proportion linked to captive-sources;



Between 2010–2015, about 18,000 kg of ivory, 55 tonnes of pangolins, and more than 235 kg of rhino horn seized from illegal shipments⁹⁵.

A rapid assessment conducted in June 2016 found wildlife sale advertisements on five out of eight e-commerce sites. Of 180 advertisements, 74% offered live birds, 16% ivory products; 62% of the overall advertisements were potentially offering wildlife commodities illegally⁹⁶;



A three-day survey carried out in bird shops in Hanoi and Ho Chi Minh City (HCMC) in April 2016 recorded a total of 8,047 birds of 115 species for sale, 99% of which were native to Viet Nam; about 90% of these bird species fall outside of any legal protection in the country. Most species originated from northern Viet Nam indicating an intense movement of birds within the country⁹⁷;



A six-month survey in 2016 found 1,618 bear products on sale in more than 212 Facebook advertisements⁹⁸. Surveys of traditional medicine shops in 2012 and 2016 both also showed that over 60% of the shops surveyed sold bear products, in both years, contravening national legislation;

Growing evidence suggests ivory processing in Viet Nam, especially for cross border ivory markets primarily catering to Chinese tourists⁹⁸.

CHALLENGES

Long standing occurrence of large volumes of trafficked ivory, pangolin scales and rhino horns moving to or through the country, and operated by organised criminal networks;

Despite the strengthened and newly amended Penal Code in 2018, few cases of wildlife crime have been successfully prosecuted in Viet Nam's courts due to a range of challenges, such as inadequate preparation and presentation of evidence and legal loopholes⁹⁸;

Since the beginning of the CITES NIAP process, Viet Nam has remained a country of importance, implicated in large volumes of trafficked ivory;

Even with the existence of numerous laws and regulations, there is little opportunity to address the unsustainable trade of bird species in Viet Nam - only a few bird species are fully protected under Decree 32 from any exploitation. The majority of bird species observed in trade do not fall under any protection as there is no framework to regulate the trade in wild caught birds;

The growth of tiger farming in Viet Nam is a serious problem. Since 2007, captive tiger populations have increased from 55 to more than 250 on private farms and at zoos as a result of uncontrolled breeding, with no demonstrated value to conservation of the species.

STRENGTHS

The revised Penal Code No. 100/2015/QH13 that came into force in 2018, will further extend protection under criminal law to species in Group II and CITES Appendices I and II; in addition, five new Decrees have been issued in 2019 to boost the implementation of wildlife protection legislation. These decrees are meant to regulate the management of endangered forest and aquatic animals, guide CITES implementation including prosecution and penalties for violations concerning forestry and fisheries;

Although bear bile farming has been illegal since 1992, 2005 legislation made it more explicit, prohibiting farmers from extracting bile from bears they kept;

The Vietnamese Traditional Medicine Association has also pledged to stop the prescription of bear bile in 2020, while the Viet Nam Administration of Forestry and Animals Asia signed a Memorandum of Understanding outlining a "Road Map" to end all bear farming in in the country by 2020⁹⁹, and the number of bears on farms has seen a decrease: from 4,300 in 2005 to less than 600 animals as of 2019;

Significant traction available from existing SBCC initiatives focused on rhino horn demand reduction, upon which initiatives for other species could be built. For example, by adopting a systems approach, or one focused on using SBCC approaches to erode the motivations for consumption of illegal wildlife products; such as to enhance status, or for TM to treat illness/promote wellness.

RECOMMENDATIONS

Pursue intelligence-led investigations connected to the shipment of large volumes of ivory and pangolins from Africa to or through Viet Nam, that lead to the arrest of Vietnamese-operated syndicates;

Tighten vigilance and monitoring at official and unofficial cross-border checkpoints – land, air and sea - both for importation and exportation of contraband wildlife;

In addition to strengthening the laws, it is vital to enforce them. Vietnamese law enforcement agencies should take action to investigate, confiscate and prosecute wildlife criminals;

Ensure seizures lead to investigations, arrests, prosecutions and successful convictions;

Conduct forensics DNA testing on seized items such as ivory, rhino horns and pangolins, which should be used to pursue intelligence led investigations from source to market;

Develop regulations and enhance protection for the trade in wild-caught species, including birds;

Re-establish the CITES Scientific Authority to ensure that permitting and regulation of all CITES listed species is done in accordance to prescribed standards by national laws and international regulations, any new permits should not be issued until a Scientific Authority has been established, which would be in contravention of CITES regulations

Implement the set of 50 recommendations identified by the UNODC mission report in Viet Nam based on ICCWC's wildlife and forest crime analytical toolkit¹⁰⁰;

Permanently ban any form of trade in rhino horn, including the trade in trophies, to reduce and eliminate Viet Nam's role as both consumer and transit state in the present rhino poaching crisis;

Permanently ban any form of commercial farming of tigers, and any other species listed as fully protected under Vietnamese law. Restrict permits for possession of these species to legitimate and licensed zoos, conservation and rescue centres, and scientific institutions;

All references to pangolin scales and endangered species in the Vietnamese government authorised TM Pharmacopeia need to be deleted in accordance with national or international laws and regulations;

Improve bear chip identification systems, increase the capacity of enforcement officials to monitor "sanctuary" farms properly, identify current bear populations in such farms and confiscate trafficked animals to send to refuges; bear farms that have voluntarily transferred or had their bears confiscated by enforcement agencies should be regularly monitored to ensure that the cages are not re-used—cages should be broken down and sold for scrap;

Shut down markets consistently found to be selling wildlife, parts and products illegally;

· Consumer research, and subsequent SBCC initiatives and approaches should be conducted to build on the insights and expertise gained through previous consumer behavioural change work;

· Target education and SBCC efforts at Chinese tourists and tour companies visiting Viet Nam;

· Collaborations with NGOs, private sector and civil society to be explored as much as possible, as part of the implementation model for SBCC approaches to reduce the demand for the full range of endangered species consumed, purchased or used in the country.

Footnotes

- 21 borneobulletin.com.bn/petition-act-illegal-wildlife-trade/
- 22 <http://www2.ecolex.org/server2neu.php/libcat/docs/LI/MON-090732.pdf>
- 23 Nguyen and Frechette, 2017
- 24 Burgess et al., 2014.
- 25 Pers comm. Tom Gray/Wildlife Alliance
- 26 UNODC, 2015.
- 27 Nguyen et al., 2017.
- 28 Preliminary study on low conviction rate for wildlife and forest crime in Cambodia. WWF. (Internal document)
- 29 <https://cites.org/eng/niaps>
- 30 <http://www.wildlifealliance.org/wildlife-trafficking/>
- 31 UNODC, 2015.
- 32 Janssen and Chng, 2017
- 33 <https://portals.iucn.org/library/sites/library/files/documents/Traf-088.pdf>
- 34 <http://www.traffic.org/home/2014/10/4/intensive-collection-threatens-peculiar-pig-nosed-turtle-in.html>
- 35 Indraswari et al., (in prep.).
- 36 Gomez and Bouhuys, 2018
- 37 Gomez and Shepherd, 2019
- 38 Morgan, 2018
- 39 Janssen and CHng, 2017
- 40 <http://www.traffic.org/home/2015/11/6/tokay-gecko-captive-breeding-doesnt-add-up.html>
- 41 http://www.trafficj.org/publication/09_Wildlife_Trade_from_ASEAN_EU.pdf
- 42 <http://ec.europa.eu/environment/cites/pdf/reports/Indonesia.pdf>
- 43 http://graccess.co.id/assets/document/Permen_P106.pdf
- 44 <https://coconuts.co/jakarta/news/jokowi-supports-protecting-indonesian-wild-life-buying-190-birds-market-infamous-illegal/>
- 45 <https://www.pressreader.com/indonesia/the-jakarta-post/20160126/282132110461635>
- 46 https://www.unodc.org/documents/southeastasiaandpacific//Publications/wildlife/Legal_Study_WTT_12_13June2015.pdf
- 47 <https://www.internationalanimalrescue.org/news/pangolin-poachers-arrested-west-borneo>
- 48 <https://cites.org/sites/default/files/eng/com/ac/30/Inf/E-AC30-Inf-15x.pdf>
- 49 CITES, 2016a.
- 50 <https://cites.org/sites/default/files/common/prog/niaps/E-NIAP-LaoPDR-2015-16.pdf>
- 51 http://wwf.panda.org/our_work/forests/deforestation_fronts/deforestation_in_greater_mekong/?332217/Laos-Closes-Down-Illegal-Wildlife-Trade-Shops-at-Don-Sao-Market-in-the-Golden-Triangle
- 52 <https://www.traffic.org/news/record-setting-30-tonne-pangolin-seizure-in-sabah-ahead-of-world-pangolin-day/>
- 53 Heinrich et al., 2017.
- 54 <https://www.traffic.org/news/big-indian-star-tortoise-seizure-malaysia/>
- 55 Gomez, 2019
- 56 Gomez and Krishnasamy, 2019
- 57 <https://cites.org/eng/niaps>
- 58 [http://amlcft.bnm.gov.my/document/List%20of%20Serious%20Offences%20\(3%20Dec%2014\).pdf](http://amlcft.bnm.gov.my/document/List%20of%20Serious%20Offences%20(3%20Dec%2014).pdf)
- 59 Krishnasamy et al., 2019
- 60 http://www.traffic.org/species-reports/traffic_species_mammals40.pdf
- 61 <http://www.sciencedirect.com/science/article/pii/S0006320714004121>
- 62 <http://www.sciencedirect.com/science/article/pii/S2351989415300342>
- 63 <http://www.traffic.org/home/2017/3/31/new-study-finds-rhino-horn-openly-for-sale-in-notorious-myanmar.html>
- 64 http://wildlifetraderesearch.org/files/r14_shepherdnijman_ivorytrade_traffic_2008.pdf
- 65 <https://link.springer.com/article/10.1007/s10531-007-9228-9>



66 https://cmsdata.iucn.org/downloads/traffic_species_mammals65.pdf
67 https://www.unodc.org/documents/southeastasiaandpacific/Publications/wildlife/Legal_Study_WTT_12_13June2015.pdf
68 <http://www.dw.com/en/global-ideas-biodiversity-poaching-wildlife-myanmar-tigers-thailand/a-19314767>
69 Sy, 2018.
70 <https://phys.org/news/2014-02-haul-exotic-animals-seized-philippines.html>
71 <http://newsinfo.inquirer.net/265918/philippines-seizes-smuggled-rhino-horns>
72 <http://news.asiaone.com/News/AsiaOne%2BNews/Crime/Story/A1Story20100303-202243.html>
73 <http://www.traffic.org/seizures-journal-legacy/2009/5/20/35-tonnes-of-ivory-seized-in-the-philippines.html>
74 <https://www.theguardian.com/environment/2013/apr/15/chinese-vessel-philippine-reef-illegal-pangolin-meat>
75 Luczon et al., 2016.
76 http://www.academia.edu/13335633/CHECKLIST_OF_EXOTIC_SPECIES_IN_THE_PHILIPPINE_PET_TRADE_II_Reptiles
77 http://www.bmb.gov.ph/images/fronttabs/proposed_policy/Draft.DAO_on_Ivory_Registration.April_2015.pdf
78 Sy, E. (in prep.).
79 <http://www.amlc.gov.ph/laws/money-laundering/2015-10-16-02-50-56/republic-act-10365>
80 <https://www.reuters.com/article/us-singapore-wildlife-trafficking/singapore-makes-second-huge-seizure-of-pangolin-scales-in-days-idUSKCN1RMOVN>
81 Eaton et al. 2017a
82 https://www.unodc.org/documents/southeastasiaandpacific/Publications/wildlife/Legal_Study_WTT_12_13June2015.pdf
83 <http://www.nationmultimedia.com/detail/national/30362745>
84 Phassaraudomsak and Krishnasamy, 2019
85 <http://www.traffic.org/home/2016/11/28/inadequate-thai-legislation-failing-to-prevent-trafficking-o.html>
86 Serene c. L. Chng & James a. Eaton. BirdingASIA 25 (2016): 24–29
87 <http://static1.1.sqspcdn.com/static/f/157301/27268598/1475147740703/TRAFFIC-Report-Bangkok-Ivory.pdf?token=JeuM1TQDT7GoKpTptte5gm4%2BXZI%3D>
88 <http://www.bbc.com/news/world-asia-39268084>
89 <http://www.freemalaysiatoday.com/category/world/2017/02/02/thai-cops-seize-record-three-tonnes-of-pangolin-scales/>
90 Chng, 2014b.
91 <http://www.bbc.com/news/world-asia-38030482>
92 Bangkok Post, 2015; CITES, 2015; Wildlife Conservation Society, 2015; Anon, 2016; Samart, 2016
93 UNODC, 2015.
94 <https://www.asiatimes.com/2019/03/article/nine-tonnes-of-elephant-tusks-seized-in-vietnam/>
95 CITES COP 17 Doc.68 Annex 5 <https://cites.org/sites/default/files/eng/cop/17/WorkingDocs/E-CoP17-68-A5.pdf>
96 Nguyen & Willemsen 2016.
97 <https://www.traffic.org/site/assets/files/1580/caged-in-the-city.pdf>
98 <https://www.facebook.com/WildActvn/photos/a.1238421432900270/1255058864569860/?type=3&theater>
99 Liu, 2015.
100 ENV wildlife crime bulletin. February 2017 <https://drive.google.com/file/d/0B-fWbouKlqKbbjNBNFZpYmxTSTQ/view>
101 <https://www.animalsasia.org/uk/media/news/news-archive/breaking-news-vietnam-agrees-plan-to-close-all-bear-bile-farms.html>
102 UNODC 2015, Wildlife and forest crime analytical toolkit – Report of UNODC mission in Vietnam https://www.unodc.org/documents/southeastasiaandpacific/Publications/wildlife/Vietnam_Toolkit_Report_EN_-_final.pdf





5. CONCLUSIONS **RECOMMENDATIONS**

This report highlights the expansive and complicated nature of wildlife trade. While the challenges to overcome these problems remain, some of which are complicated, there exists some notable efforts, enabling environment and platforms at local, national, regional and international levels. These present an opportunity for all actors—either those involved in or have a stake in the trade—to address this problem. Concerted effort at all levels, political will and a deployment of adequate resources are necessary to combat the illegal wildlife trade in Southeast Asia.

A range of key priority interventions and recommendations are made below to support ASEAN governments, partners and stakeholders in their decision-making processes and strategic action. These are drawn and refined from the breadth of existing literature reviewed for this assessment. While more country-specific recommendations are included in the country profiles in Chapter 4 of this report, broader interventions below, applicable region-wide, are grouped in Table 7 under five main thematic areas as follows:

- **Policy** – interventions where local and international legal frameworks can be strengthened to stop and deter wildlife traffickers;
- **Law enforcement** – interventions where enforcement authorities and prosecutors at the frontline can optimise their output for the disruption of wildlife trafficking;
- **Demand reduction** – interventions aiming to influence the purchasing preferences and buyer behaviour of potential and actual consumer groups;
- **Cross-sector co-operation** – interventions where external parties such as the private sector, civil society organisations, and conservation practitioners can assist and facilitate effective actions;
- **Research gaps** – interventions to address knowledge gaps to improve anti-wildlife trafficking decisions and policy.

Table 7: Summary of Interventions to tackle wildlife trafficking involving Southeast Asia (BN: Brunei; KH: Cambodia; ID: Indonesia; LA: Lao PDR; MM: Myanmar, MY: Malaysia, PH: Philippines, SG: Singapore; TH: Thailand; VN: Viet Nam)

| Area of intervention | Required interventions | Target audience | Priority country |
|--|---|-------------------|---|
| Close loopholes and harmonise national legislation | <ul style="list-style-type: none"> • Revise legislation in Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia (Sabah and Sarawak), Myanmar, Philippines, Thailand, and Viet Nam to include all CITES-listed species in national protection lists; • Increase penalties to a harmonised level of deterrent across the different national laws in which wildlife offences are dealt with across ASEAN, including provisions that empowering enforcement officers to pursue necessary investigations; • Criminalise online advertisements and offers for sale of protected wildlife species or products, through specific provisions in the law; • Where a particular rare or threatened or endemic species with a restricted range is heavily impacted by international trade, consider the inclusion of that species in CITES Appendix III; • Ensure appropriate resources and budget allocation to support law enforcement actions, along with facilities for rescued wildlife and repatriation, which also helps ensure these specimens do not leak back into the illegal trade chain. | ASEAN Governments | <ul style="list-style-type: none"> • BN, KH, ID, LA, MY (Sabah and Sarawak), PH, TH, VN • All • BN, KH, LA, MM, SG, VN • All • All |

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| <p>From seizures to successful convictions</p> | <ul style="list-style-type: none"> Identify and shut down open markets⁹⁶ selling protected wildlife and their products; Prevent the establishment of any further captive tiger and bear facilities (including farms), and ensure that current stock is not augmented to allow sale/leakage into the illegal trade; current facilities found to be conducting business illegally should be shut down; More robust regulation and controls to assess the management of other farms and breeding facilities for commercial trade, such as those for reptiles and birds; Severely constrict illegal online availability of wildlife on commercial trade platforms and trade via social media, working with online businesses—including through the Coalition to End Wildlife Trafficking Online, and transport/logistics companies; Utilise existing national anti-money laundering and anti-corruption frameworks to process wildlife trafficking cases as predicate offences by initiating financial investigations, application of harsher penalties and recovery of proceeds. This includes preventing, identifying and addressing corruption-related cases; Conduct proactive intelligence-led and in-depth investigations, including the use of social network analysis, controlled deliveries, and financial investigations along the trade chains; Improve detection of illegal shipments with systematic and regular monitoring, and enhanced equipment (e.g. use of sniffer dogs and scanner machines) and techniques (e.g. risk profiling) to identify geographical or logistical nodes as monitoring targets; Enhance reporting and communications mechanisms by customs and other relevant agencies in countries of import, transit and (re-)export regarding suspicious practices both at national level as well as at port of entry and exit, including illegal trade reporting as mandated by CITES; | <p>CITES Management Authorities, Customs, Police, Prosecutors and the judiciary; ASEAN bodies such SOMTC; NGOs</p> | <ul style="list-style-type: none"> ID, LA, MM, PH, TH, VN VN, TH, LA, MM All All All All All |
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⁹⁶ Here, open markets are taken to refer to establishments that sell wildlife parts and products that are prohibited from trade, either by national legislation or non-native species listed in CITES Appendix I and prohibited from commercial trade such as rhino horns, tigers, pangolins, reptiles and others. These open markets are slightly different from local-level stalls or markets selling wild meat, predominantly for local consumption where in many cases legislation permits trade, but falls short in its licensing and permitting enforcement.

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| <p>From seizures to successful convictions</p> | <ul style="list-style-type: none"> • Establish a standardised system to track law enforcement incidences, such as the Law Enforcement Management Information System (LEMIS) database utilised in the USA or the EU-TWIX (Trade in Wildlife Information Exchange) platform in Europe, for the purposes of enhancing law enforcement efforts; • Work with civil society organisations to harness public participation initiatives to support law enforcement actions, such as through hotlines or reporting apps; • Promote inter-agency co-operation on intelligence and data sharing across national law enforcement agencies and between countries; • Support where available the use and advancement of wildlife DNA forensic techniques to identify provenance, and authenticity of wildlife parts and products traded to strengthen enforcement actions and prosecutions; where this is done, results must be shared with all the relevant countries to strengthen national-level efforts; • Capacity building and training with enforcement and judiciary bodies, including joint training sessions, bringing together prosecutors and judges. | <p>CITES Management Authorities, Customs, Police, Prosecutors and the judiciary. ASEAN bodies such SOMTC, NGOs</p> | <ul style="list-style-type: none"> • All • All • All • All |
| <p>Monitoring and Reporting</p> | <ul style="list-style-type: none"> • Continue monitoring at known and emerging physical and online markets to catalyse evidence-based action by law enforcement interventions, identification of emerging threats and keeping watch on trends over time, including shifts in consumer market availability as a response to stricter law enforcement; • Improve regulations, transparency and accountability of the many captive breeding facilities in the region to ensure that laundering of wild-caught species does not occur and that trade is not detrimental to wild populations; stricter scrutiny and periodic science-based assessments by CITES on country operations for trade in CITES-listed is imperative; • Establish a transparent reporting and monitoring system on captive breeding operations, including making information publicly accessible by species, quotas and trading partners. | <p>CITES Management Authorities, Customs, NGOs, business and industries</p> | <ul style="list-style-type: none"> • All • All • All |

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| <p>Use of a twin-track approach</p> | <ul style="list-style-type: none"> • Ensure that efforts to constrict supply and remove illegal wildlife products from the market are complemented by campaigns targeting priority high-risk groups of consumers with messaging that addresses their underlying motivations to consume illegal wildlife commodities, achieves changes in their behaviour, thereby reducing demand; • Develop strategic Social and Behavioural Change Communications (SBCC) approaches to influence effectively the behaviour of key target audience segments related to their purchase and use of illegal wildlife commodities.. The SBCC approaches should be informed by evidence and insight into consumers' attitudes, values and motivations; • Align government-led actions to change behaviour with implementation of CITES Resolution (Res.Conf 17.4) on Demand Reduction, and relay success factors and lessons learned back to www.changewildlifeconsumers.org in line with guidance; • Work with priority industry sectors including e-commerce and social media, travel and tourism and transport and logistics, medical practitioners and the traditional medicine community to influence supply chains, market availability and consumer preference; • Foster increased leadership on these issues amongst champions for each target audience and enable them to influence the intentions of their peers and followers. | <p>Private sector, individuals / public figures, NGOs, academia</p> | <ul style="list-style-type: none"> • ID, KH, LA, MM, MY, SG, TH, VN • Bear bile (MY, TH, VN, MM), tigers (VN, LA, MM, TH), rhino horn (VN), live reptiles and birds (ID, MY, SG, TH, VN), ivory (KH, LA, MM, TH, VN) • All • All • All |
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| <p>Cross-sector co-operation</p> | <p>Continue engagement with the private sector (e.g. tourism, transport and logistics, e-commerce, banks) to be the eyes and the ears of enforcement agencies by:</p> <ul style="list-style-type: none"> Facilitating the tracking of bank accounts and transactions of businesses and individuals linked to wildlife crime to enable deeper investigations into trade chains and potential money laundering operations; shutting down operations / accounts where there is clear evidence of illegality; Establishing and/or improving corporate policies and standard operating procedures around zero tolerance for wildlife trafficking; Promote do's and don'ts and red flags to business partners to prevent and/or detect illegal activities. <p>Continue engagement with NGOs, civil society, academia to:</p> <ul style="list-style-type: none"> Continue monitoring of physical and online markets (linked to law enforcement above); Assist with species or wildlife product identification and information, and intelligence sharing, including support with investigations as required. <p>Expand inter-governmental collaboration particularly at national levels:</p> <ul style="list-style-type: none"> Establish joint engagement platforms involving a range of sectors, such as those responsible for national security, customs and immigration, multimedia and communications and others, to develop mitigation measures along all points of the illegal trade, such as the LEMIS or TWIX approaches in the US, Europe and Africa. | <p>Private sector, NGOs, civil society, academia, experts</p> | <ul style="list-style-type: none"> All |
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| <p>Research Gaps</p> | <p>Undertake periodical research tasks—including through collaboration with NGOs, research institutions and other relevant partners—to establish contemporary knowledge and understanding of trade threats and dynamics that require interventions, such as:</p> <ul style="list-style-type: none"> • Review and update ASEAN countries' rate of prosecutions and convictions against arrests and seizures, including judicial capacity, to identify and address needs to ensure stiffer sentencing and penalties are meted out; • Analyse information on market availability, CITES trade data as reported by governments and seizures to assist in the identification of emerging trends or common problems facilitating illegal wildlife trade to inform policy and regulatory needs; • Conduct consumer research to understand the motivations of consumers of specific species, and gain insight into the most effective ways to influence their choice and reduce their demand for illegal wildlife commodities using SBCC initiatives • Ensure a comprehensive approach to impact measurement is undertaken – for example, by contextualising fluctuations in consumer expressed intent to purchase illegal wildlife products in the future, against market monitoring data of wholesale price, volume of offers for sale and throughput of product in the market. Also consider e.g. retailer perception surveys and other social science methods, share learning and insights with the Community of Practice working on demand reduction (www.changewildlifeconsumers.org). | <p>NGOs, academia, civil society, judiciary</p> | <ul style="list-style-type: none"> • ID, KH, LA, MM, PH, TH, VN • All • ID (birds, reptiles), KH (ivory, wild meat), LA (wild meat), MM (wild meat, TM), MY (live birds, reptiles, traditional medicine), SG (TM, live birds), TH (ivory, live birds, live reptiles, wild meat, TM), VN (rhino horn, live reptiles, ivory, wild meat, TM) |
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References

- Altherr, S. (2014). *Stolen Wildlife II :Why The EU Still Needs To Tackle Smuggling Of Nationally Protected Species*. Report by Pro Wildlife, Munich, Germany, 40 pp.
- Akella, A.S. and Allan, C. (2012). *Dismantling Wildlife Crime: Executive Summary*. <http://www.changewildlifeconsumers.org/wp-content/uploads/2016/03/Dismantling-Wildlife-Crime.pdf>
- Animals Asia. (2011). *Bear Farming Industry in China*. Animals Asia Foundation, Chengdu, China.
- Animals Asia. (2015). *Bear numbers fall on Vietnam's bile farms*. Animals Asia [online] Available at: <https://www.animalsasia.org/hk-en/media/news/news-archive/bear-numbers-fall-on-vietnams-bile-farms.html> Viewed 26 March 2017.
- Anon. (2002). *An Assessment of the Illegal Trade in Elephants and Elephant Products in Viet Nam*. TRAFFIC.
- Anon. (2017). *Vietnam agrees plan to close all bear bile farms*. Animals Asia, Press Release: 19 July. <https://www.animalsasia.org/uk/media/news/news-archive/breaking-news-vietnam-agrees-plan-to-close-all-bear-bile-farms.html>
- Anon. (2018). *Lao Prime Minister Tightens Regulations Against Wildlife Trafficking*. The Laotian Times (Lao PDR): May 31. <https://laotiantimes.com/2018/05/31/lao-prime-minister-tightens-wildlife-trafficking/>
- Auliya, M. (2010). *Conservation status and impact of trade on the Oriental Rat Snake *Ptyas mucosa* in Java, Indonesia* TRAFFIC Southeast Asia, Petaling Jaya, Selangor, Malaysia.
- Altherr, S., Goyenechea, A. and Schubert, D. (2011). *Canapés to Extinction—the International Trade in Frogs' Legs and its Ecological Impact*. Pro Wildlife, Defenders of Wildlife and Animal Welfare Institute, Munich and Washington DC.
- Banks, D., Desai, N., Gosling, J., Joseph, T., Majumdar, O., Mole, N., Rice, M., Wright, B. and Wu, V. (2006). *Skinning the Cat: Crime and Politics of the Big Cat Skin Trade*. Environmental Investigation Agency, London, UK and Wildlife Protection Society of India, New Delhi, India.
- Beastall, C., Shepherd, C.R., Hadipraksarsa, Y. and Martyr, D. (2016). Trade in the Helmeted Hornbill *Rhinoplax vigil*: the 'ivory hornbill'. *Bird Conservation International* 26(2): 137–146
- Bekenov, A.B., Grachevand, Iu. A., Milner-Gulland, E.J. (1998). The ecology and management of the Saiga Antelope in Kazakhstan. *Mammal Review* 28: 1–52.
- Bennett, E., Nyaoi, A. and Sompud, J. (2000). *Saving Borneo's bacon: The sustainability of hunting in Sarawak and Sabah*. In: Robinson, J. and Bennett, E. (Eds), *Hunting for Sustainability in Tropical Forests*. Columbia University Press, New York, USA.
- Bennett, E.L. and Rao, M. (2002). *Wild meat consumption in Asian tropical forest countries: Is this a glimpse of the future for Africa?* In: Mainka, S. and Trivedi (Eds), *Links Between Biodiversity, Conservation, Livelihoods and Food Security: The Sustainable Use of Wild Species for Meat*. Occasional Papers of the IUCN Species Survival Commission 24: 39-44.
- Burgess, E. A. and Lilley, R. (2014). *Assessing the Trade in Pig-nosed Turtles *Carettochelys insculpta* in Papua, Indonesia*. TRAFFIC Southeast Asia Regional Office, Petaling Jaya, Selangor, Malaysia.
- Burgess, E.A., Stoner, S.S. and Foley, K.E. (2014). *Brought to Bear: An Analysis of Seizures across Asia (2000–2011)*. TRAFFIC Southeast Asia Regional Office, Petaling Jaya, Selangor, Malaysia.
- Burgess G. (2016). Powers of persuasion - Conservation Communications, Behavioural Change and Reducing Demand for Illegal Wildlife Products. *TRAFFIC Bulletin* 28 (2): 65-73. Cambridge, United Kingdom.
- Carpenter, A. et al., (2007). Overharvesting. In: C. Gascon et al., (Eds), *Amphibian Conservation Action Plan*. IUCN, Gland, Switzerland.
- Cantlay, J.C., Ingram, D.J. and Meredith, A.L. (2017). *A Review of Zoonotic Infection Risks Associated with the Wild Meat Trade in Malaysia*. EcoHealth.

- Challender, D., Nguyen Van, T., Shepherd, C., Krishnasamy, K., Wang, A., Lee, B., Panjang, E., Fletcher, L., Heng, S., Seah Han Ming, J., Olsson, A., Nguyen The Truong, A., Nguyen Van, Q. & Chung, Y. (2014). *Manis javanica*. The IUCN Red List of Threatened Species 2014: e.T12763A45222303. <http://dx.doi.org/10.2305/IUCN.UK.2014-2.RLTS.T12763A45222303.en>.
- Challender, D.W.S., Baillie, J.E.M., Waterman, C., Pietersen, D., Nash, H., Wicker, L., Parker, K., Thomson, P., Nguyen, T.V., Hywood, L., Shepherd, C.R. (2016). On Scaling Up Pangolin Conservation. *TRAFFIC Bulletin* 28(1): 19–21. Cambridge, United Kingdom.
- Challender, D and Waterman, C. (2017). *Implementation of CITES Decision 2 17.239 b) and 17.240 on Pangolins (Manis spp.)*. Prepared by IUCN for the CITES Secretariat. SC69 Doc.57 Annex 1.
- Challender, D.W.S., Heinrich, S., Shepherd, C.R.S. and Katsis, L.K.D. Chapter 19 - *Addressing trade threats to pangolins in the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)*, in *Pangolins: Science, Society and Conservation*. (2019). Academic Press. Pp 305–320.
- Chin, S.T. and Krishnasamy, K. in prep. An analysis of bear seizures in Asia from 2000–2019.
- Chan, S. (1995). *A survey of markets for Saiga horns in East and Southeast Asia*. In: Chan, S. Maksimuk, A.V., Zhirnov, L.V. and Nash, S.V. (Eds), *From Steppe To Store: The Trade In Saiga Antelope Horn*. TRAFFIC International, Cambridge.
- Chng, S.C.L. (2014a). *Escalating Black Spotted Turtle Geoclemys hamiltonii trade in Asia: a study of seizures*. TRAFFIC. Petaling Jaya, Selangor, Malaysia.
- Chng, S.C.L. (2014b). *Seizures of tortoises and freshwater turtles in Thailand 2008 – 2013*. TRAFFIC Southeast Asia Regional Office, Petaling Jaya, Selangor, Malaysia.
- Chng S.C.L. and Bouhuys J. (2015). Indian Star Tortoises: Shop sales fall as internet trade increases. *TRAFFIC Bulletin* 27(2): 73–78. Cambridge, United Kingdom.
- Chng, S.C.L., Eaton, J.A., Krishnasamy, K., Shepherd, C.R. and Nijman, V. (2015). *In the Market for Extinction: An inventory of Jakarta's bird markets*. TRAFFIC Southeast Asia Regional Office, Petaling Jaya, Selangor, Malaysia.
- Chng, S.C.L., Guciano, M. and Eaton, J.A. (2016). In the market for extinction: Sukahaji, Bandung, Java, Indonesia. *BirdingASIA* 26:22–28.
- Chng, S.C.L. and Eaton, J.A. (2016a). Snapshot of an on-going trade: an inventory of birds for sale in Chatuchak weekend market, Bangkok, Thailand. *BirdingASIA* 25: 24-29.
- Chng, S.C.L. and Eaton, J.A. (2016b). *In the Market for Extinction: Eastern and Central Java*. TRAFFIC. Petaling Jaya, Selangor, Malaysia.
- Chng, S.C.L., Krishnasamy, K. and Eaton, J.A. (2018). In the market for Extinction: the cage bird trade in Bali. *Forktail* 34: 35–41.
- CITES. (2011). *Tortoise and freshwater turtles (Decision 15.59)*. AC25 Doc. 19. Twenty-fifth meeting of the Animals Committee Geneva (Switzerland), 18-22 July 2011. Gland, Switzerland. <https://cites.org/sites/default/files/eng/com/ac/25/E25-19.pdf>
- CITES. (2014). *Poaching levels remain alarmingly high at over 20,000. More large ivory seizures in Africa than Asia for the first time*. PRESS RELEASE: 13 June. Gland, Switzerland. https://www.cites.org/eng/elephant_poaching_and_ivory_smuggling_figures_for_2013_released
- CITES. (2015). *Questionnaire on the implementation of recommendations (f) - (n) on Asian big cats, endorsed by the 65th meeting of the CITES Standing Committee. SC65, Geneva, July 2014*. Notification to the Parties No. 2015/006 Annex I. Geneva, Switzerland. <https://cites.org/sites/default/files/notif/E-Notif%202015-006-A1.pdf>
- CITES. (2016a). *Application of Article XIII in the Lao People's Democratic Republic. SC67 Doc.12.1*. Sixty-seventh meeting of the Standing Committee Johannesburg (South Africa), 23 September 2016. Gland, Switzerland.
- CITES. (2016b). *Consideration of proposal for Amendment of appendices I and II. CoP17 Prop.12*. Seventeenth meeting of the Conference of the Parties Johannesburg (South Africa), 24 September – 5 October 2016. Gland, Switzerland. <https://cites.org/sites/default/files/eng/cop/17/prop/060216/E-CoP17-Prop-12.pdf>

- CITES. (2016c). *Consideration of proposals for amendment of Appendices I and II. CoP17 Prop.19*. Seventeenth meeting of the Conference of the Parties Johannesburg (South Africa), 24 September – 5 October 2016. <https://cites.org/sites/default/files/eng/cop/17/prop/060216/E-CoP17-Prop-19.pdf>
- Claridge, G., Chea-Leth, V., Chhoan, I.V. (2005). *The effectiveness of law enforcement against forest and wildlife crime: A Study of Enforcement Disincentives and Other Relevant Factors in Southwestern Cambodia*. Report prepared for East–West Management Institute, Conservation International and USAid. 2005. http://pdf.usaid.gov/pdf_docs/pnadf439.pdf
- Collar, N.J. (2015). Helmeted Hornbills *Rhinoplax vigil* and the ivory trade: the crisis that came out of nowhere. *BirdingASIA* 24: 12–17.
- Convention on Migratory Species. (2016). *Signs of hope for Saiga Antelope after mass die-off in 2015*. Saiga Antelope: Memorandum of Understanding concerning Conservation, Restoration and Sustainable Use of the Saiga Antelope. 15 June 2016. <http://www.cms.int/saiga/en/news/signs-hope-saiga-antelope-after-mass-die-2015>
- Crosta, Z., Sutherland, K., and Talerico, C. (2017). *Grinding rhino – An Undercover Investigation on Rhino Horn Trafficking in China and Vietnam*. Elephant Action League. California, USA.
- Crudge, B., Nguyen, T. and Cao, T.T. (2018). The challenges and conservation implications of bear bile farming in Viet Nam. *Oryx* (10): 1-8. Flora and Fauna International. Cambridge, United Kingdom.
- D’Cruze, N., Singh, B. Morrison, T. Schmidt-Burbach, T., Macdonald, D.W. and Mookerjee, A. (2015). A star attraction: The illegal trade in Indian Star Tortoises. *Nature Conservation* 13: 1.
- de Silva, P., Khan, W.A., Kanchanasaka, B., Reza Lubis, I., Feeroz, M.M. and Al-Sheikhly, O.F. (2015). *Lutrogale perspicillata*. The IUCN Red List of Threatened Species 2015: e.T12427A21934884. Online at: <http://dx.doi.org/10.2305/IUCN.UK.2015-2.RLTS.T12427A21934884.en>. Viewed on 25th July 2017.
- Hughes, A. (2017). Understanding the drivers of Southeast Asian biodiversity loss. *Ecosphere* 8(1).
- Doak, N. (2014). *Polishing off the Ivory Trade: Surveys of Thailand’s Ivory Market*. TRAFFIC International, Cambridge, UK
- Duckworth, J.W., Batters, Belant, G.J.L., Bennett, E.L., Brunner, J., Burton, J., Challender, D.W.S., Cowling, V., Duplaix, N., Harris, J.D., Hedges, S., Long, B., Mahood, S.P., McGowan, P.J.K., McShea, W.J., Oliver, W.L.R., Perkin, S., Rawson, B.M., Shepherd, C.R., Stuart, S.N., Talukdar, B.K., van Dijk, P.P., Vié, J.C., Walston, J.L., Whitten, T. and Wirth, R. (2012). Why South-East Asia should be the World’s Priority for Averting Imminent Species Extinctions, and a Call to Join a Developing Cross-Institutional Programme to Tackle this Urgent Issue. *Sapiens* 5 (2).
- Warkentin, I.G., Bickford, D., Sodhi, N.S. and Bradshaw, C.J.A. (2008). Eating Frogs to Extinction. *Conservation Biology*. doi: 10.1111/j.1523-1739.2008.01165.x
- Eaton, J.A., Leupen, B.T.C. and Krishnasamy, K. (2017a). *Songsters of Singapore: An Overview of the Bird Species in Singapore Pet Shops*. TRAFFIC Southeast Asia Regional Office, Petaling Jaya, Selangor, Malaysia
- Eaton, J.A., Nguyen, M.D.T., Willemsen, M., Lee, J., and Chng, S.C.L. (2017b). *Caged in the city: An inventory of birds for sale in Ha Noi and Ho Chi Minh City, Viet Nam*. TRAFFIC, Southeast Asia Regional Office, Petaling Jaya, Selangor, Malaysia.
- Education for Nature – Vietnam. (2010). *Summary of Tiger Trade Investigation Findings, Vietnam 2010*. Education for Nature – Vietnam. Ha Noi, Vietnam.
- Emslie, R.H., Milliken, T., Talukdar, B., Ellis, S., Adcock, K. and Knight, M.H. (2016). *African and Asian Rhinoceros - Status, Conservation and Trade*. Report to CITES Secretariat pursuant to Resolution Conf. 9.14, CoP17, Doc. 68 Annex 5. CITES Secretariat, Geneva, Switzerland.
- EIA. (2015). *Sin City: Illegal wildlife trade in Laos’ Golden Triangle. SEZ Special Economic Zone*. Environmental Investigation Agency, London, UK.
- EIA (2018). *Exposing The Hydra: The Growing Role Of Vietnamese Syndicates In Ivory Trafficking*. Environmental Investigation Agency, London, United Kingdom.
- Foley, K.E., Stengel, C.J. and Shepherd, C.R. (2011). Pills, Powders, Vials and Flakes: the bear bile trade in Asia. TRAFFIC Southeast Asia, Petaling Jaya, Selangor, Malaysia.

- Gao, Y., Stoner, K.J., Lee, A.T. and Clark, S.G. (2016). Rhino horn trade in China: an analysis of the art and antiques market. *Biological Conservation* 201: 343–347.
- General Administration of Chinese Customs. (2015). *Kunming Customs Cracks Down on Smuggling of Endangered Animal Products*. Press Release. 14 May. <http://english.customs.gov.cn/statics/3f079475-db2a-4b03-82e0-86c8557ade44.html>
- Greatorex, Z.F., Olson, S.H., Singhalath, S., Silithammavong, S., Khammavong, K., Fine, A.E. et al., (2016). Wildlife Trade and Human Health in Lao PDR: An Assessment of the Zoonotic Disease Risk in Markets. *PLoS ONE* 11(3): e0150666. doi:10.1371/journal.pone.0150666
- Grey, N.E., Marx, N., Khem, V., Lague, D. and Gauntlett, S. A holistic approach for tackling Illegal Wildlife Trade. (in prep.).
- Gomez, L., Leupen, B.T.C., Theng, M., Fernandez, K., and Savage, M. (2016a). *Illegal Otter Trade : An analysis of seizures in selected Asian countries (1980-2015)*. TRAFFIC, Petaling Jaya, Selangor, Malaysia.
- Gomez, L., Leupen, B.T.C. and Tiau, K.H. (2016b). The trade of African pangolins to Asia: a brief case study of pangolin shipments from Nigeria. *TRAFFIC Bulletin* 28 (1): 3-5 Cambridge, United Kingdom.
- Gomez, L., Leupen, B.T.C., Krishnasamy, K. and Heinrich, S. (2017). *Scaly Nexus: Mapping Indonesian pangolin seizures (2010–2015)*. TRAFFIC, Southeast Asia Regional Office, Petaling Jaya, Selangor, Malaysia.
- Gomez, L. and Bouhuys, J. (2018). *Illegal otter trade in Southeast Asia*. TRAFFIC, Petaling Jaya, Selangor, Malaysia.
- Gomez, L. and Shepherd, C.R. (2018). Trade in bears in Lao PDR with observations from market surveys and seizure data. *Global Ecology and Conservation* 15.
- Gomez, L. and Krishnasamy, K. (2019). A rapid assessment of the trade in Saiga Antelope horn in Peninsular Malaysia. *TRAFFIC Bulletin* 31 (1): 35–38. Cambridge, United Kingdom.
- Gomez, L. (2019). *An update on the bear bile trade in Peninsular Malaysia*, Southeast Asia Regional Office, Petaling Jaya, Peninsular Malaysia.
- Gomez, L. and Shepherd, C.R. (2019). Bearly on the radar – an analysis of seizures of bears in Indonesia. *European Journal of Wildlife Research* 65: 89
- Goodrich, J., Lynam, A., Miquelle, D., Wibisono, H., Kawanishi, K., Pattanavibool, A., Htun, S., Tempa, T., Karki, J., Jhala, Y. and Karanth, U. (2015). *Panthera tigris*. The IUCN Red List of Threatened Species 2015: e.T15955A50659951. <http://dx.doi.org/10.2305/IUCN.UK.20152.RLTS.T15955A50659951.en> .
- Guciano, M., Wong, Chng, S.C.L. Krishnasamy, K. Anatory, R. and Muh J (in prep). *Seizures at Bakauheni and Merak ports*.
- Hance, J. (2011). *Top 25 most endangered turtles: Asian species in crisis*. Mongabay: 23 February. <https://news.mongabay.com/2011/02/top-25-most-endangered-turtles-asian-species-in-crisis/>
- Heinrich, S., Wittmann, T.A., Prowse, T.A.A., Ross, J.V., Delean, S., Shepherd, C.R., and Cassey, P. (2016). Where did all the pangolins go? International CITES trade in pangolin species. *Global Ecology and Conservation* 8: 241–253.
- Heinrich, S., Wittman, T.A., Ross, J.V., Shepherd, C.R., Challender, D.W.S. and Cassey, P. (2017). *The Global Trafficking of Pangolins: A comprehensive summary of seizures and trafficking routes from 2010–2015*. TRAFFIC, Southeast Asia Regional Office, Petaling Jaya, Selangor, Malaysia.
- Huang, W. and Sun, X. (2013). *Tropical Hardwood Flows in China: Case Studies of Rosewood and Okoumé*. Forest Trends. United Kingdom. http://www.forest-trends.org/documents/files/doc_4138.pdf
- Htay, H. H., and Henshaw, C. (2017). *The skin cure fad threatening Myanmar’s elephants*. January 21: <https://phys.org/news/2017-01-skin-fad-threatening-myanmar-elephants.html>
- Indraswari, K. Leupen, B.T.C., Nguyen, M.D.T. and Phassaradomsak, M. (in prep.). *Trading Faces: A snapshot of the illegal online ivory trade in Indonesia, Thailand and Viet Nam*.
- International Otter Survival Fund (IOSF). (2014). *The Shocking Facts of the Illegal Trade in Otters*. International Otter Survival Fund (IOSF), Broadford, Isle of Skye, Scotland, United Kingdom. 16pp.
- Janssen, J. and Blanken, L.J. (2016). *Going Dutch: An analysis of the import of live animals from Indonesia by the Netherlands*. TRAFFIC Southeast Asia Regional Office, Petaling Jaya, Selangor, Malaysia.

- Janssen, J. and Chng, S.C.L. (2017), Biological parameters used in setting captive-breeding quotas for Indonesia's breeding facilities. *Conservation Biology* doi:10.1111/cobi.12978
- Janssen, J. and Krishnasamy, K. (2018). Left hung out to dry: How inadequate international protection can fuel trade in endemic species – The case of the earless monitor. *Global Ecology and Conservation*. 16. DOI: 10.1016/j.gecco.2018.e00464
- Joibi, N. (2018). *Elephant deaths: Sabah offers RM120,000 rewards to catch poachers*. The Star (Malaysia). 29 August: <https://www.thestar.com.my/news/nation/2018/08/29/elephant-deaths-sabah-offers-rm120000-reward-to-catch-poachers/>
- Koch, A., Ziegler, T., Böhme, W., Arida, E. and Auliya, M. (2013). Pressing Problems: Distribution, Threats, and Conservation Status of the Monitor Lizards (Varanidae: *Varanus* spp.) of Southeast Asia and the Indo-Australian Archipelago. *Herpetological Conservation and Biology*. Monograph 3. March 2013. ISSN: 1931-7603.
- Krauz, T. (2017). *Free the Bears strengthens fight against bile trade with new Laos sanctuary for rescued moon bears*. South China Morning Post (China). 29 July. <https://www.scmp.com/lifestyle/article/2104040/free-bears-strengthens-fight-against-bile-trade-new-laos-sanctuary-rescued>
- Krishnasamy, K and Shepherd, C.R. (2014). A Review of the Sun Bear Trade in Sarawak, Malaysia. *TRAFFIC Bulletin* 26(1): 37–40. Cambridge, United Kingdom.
- Krishnasamy, K. and Or, O.C. (2014). Sun Bear Snaring Highlights an Enforcement Bane in the Belum-Temengor Forest Complex, Malaysia. *International Bear News* 23(1).
- Krishnasamy, K., Leupen, B.T.C. and Or, O.C. (2016a). *Observations of the Helmeted Hornbill Trade in Lao PDR*. TRAFFIC Southeast Asia Regional Office, Petaling Jaya, Selangor, Malaysia.
- Krishnasamy, K., Milliken, T. and Savini, C. (2016b). *In Transition: Bangkok's Ivory Market – An 18-month survey of Bangkok's ivory market*. TRAFFIC, Southeast Asia Regional Office, Petaling Jaya, Selangor, Malaysia.
- Krishnasamy, K. (2016). *Malaysia's invisible ivory channel: An assessment of ivory seizures involving Malaysia from January 2003–May 2014*. TRAFFIC, Southeast Asia Regional Office, Petaling Jaya, Selangor, Malaysia.
- Krishnasamy, K. and Stoner, S. (2016a). *Trading Faces: A Rapid Assessment on the use of Facebook to Trade Wildlife in Peninsular Malaysia*. TRAFFIC. Petaling Jaya, Selangor, Malaysia
- Krishnasamy, K. and Stoner, S. (2016b). *Reduced to skin and bones re-examined: An analysis of Tiger seizures from 13 range countries from 200-2015*. Briefing paper. TRAFFIC, Southeast Asia Regional Office, Petaling Jaya, Selangor, Malaysia.
- Krishnasamy, K. and Shepherd, C.R. (2017). Seizures of African pangolin scales in Malaysia in 2017. *TRAFFIC Bulletin* 29(2): 52–55. Cambridge, United Kingdom.
- Krishnasamy, K., Or, Shepherd, C.R. and Or, O.C. (2018). Observations of illegal wildlife trade in Boten, a border town with China in a Specific Economic Zone in northern Lao PDR. *Global Ecology and Conservation* 14.
- Krishnasamy, K. and Chng, S.C.L. (2019). Safeguarding Asian Songbirds: Inaugural meeting of the IUCN Asian Songbird Trade Specialist Group. *TRAFFIC Bulletin*. 31(1): 4–6. Cambridge, United Kingdom.
- Krishnasamy, K., Or, O.C. and Saaban, S. (2019). *From seizures to convictions – stronger penalties for serow offences in Peninsular Malaysia*. TRAFFIC, Southeast Asia Regional Office, Petaling Jaya, Selangor, Malaysia
- Krishnasamy, K. (unpublished). Pachyderms for sale: Observations of illegal ivory and rhino horn trade in Lao PDR.
- Krishnasamy, K and Chng, S.C.L. (in prep.). An analysis of Pig-nosed Turtle seizures from 2012–2019.
- Kusrini, M.D. (2005). Edible frog harvesting in Indonesia: Evaluating its impacts and ecological context. Thesis, School of Tropical Biology, James Cook University.
- Kusrini, M.D. and Alford, R.A. (2006). Indonesia's exports of frogs' legs. *TRAFFIC Bulletin* 21(1): 13–24. Cambridge, United Kingdom.
- Lee, S.L., Burgess, E.A. and Chng, S.C.L. (2015). *Hard to bear: An assessment of trade in bear bile and gall*

bladder in Malaysia. TRAFFIC. Petaling Jaya, Selangor, Malaysia.

- Leupen, B. (2018). *Black Spotted Turtle Geoclemys hamiltonii Trade in Asia II: A Seizure Analysis (2014–2016)*. TRAFFIC Southeast Asia Regional Office, Petaling Jaya, Selangor, Malaysia.
- Leupen, B.T.C., Krishnasamy, K. Shepherd, C.R. Chng, S.C.L. Bergin, D., Eaton, J.A., Yukin, D.A., Koh, S.P.H., Miller, A., Nekaris, K.A.I. Nijman, V., Salman, S. Muhammed, A.I. Trade in White-rumped Shamas *Kittacincla malabarica* demands strong national and international responses. *Forktail* 34: 1–8.
- Lee, S. (2019). *Another pygmy elephant found dead with tusks missing*. The Star (Malaysia). 20 October. <https://www.thestar.com.my/news/nation/2019/10/20/another-pygmy-elephant-found-dead-with-tusks-missing>
- Li, T.C. (2018). *Saving rhinos: Our fatal blunders*. The Star (Malaysia). 2 June: <https://www.thestar.com.my/news/environment/2014/06/02/our-fatal-blunders/>
- Ling, S. (2019). *Sarawak Forestry Corp seizes large haul of wildlife parts, arrests man over weekend*. The Star (Malaysia). 9 October: <https://www.thestar.com.my/news/nation/2019/10/09/sarawak-forestry-corp-seizes-large-haul-of-wildlife-parts-arrests-man-over-weekend>.
- Liu, H. (2015). *Trafficking market goes wild in Vietnam*. Oxpeckers. <http://oxpeckers.org/2015/11/trafficking-market-goes-wild-in-vietnam/>
- Livingstone, E. and Shepherd, C.R. (2016). Bear farms in Lao PDR expand illegally and fail to conserve wild bears. *Oryx* 50(1): 176–184. Flora and Fauna International. Cambridge, United Kingdom.
- Livingstone, E. Gomez, L and Bouhuys, J. (2018). Asiatic black bears are still threatened as illegal bear farms continue to flourish in Lao PDR. *Global Ecology and Conservation* 13.
- Luczon, A.U., Ong, P.S., Quilang, J.P. and Fontanilla, I.K.C. (2016). Determining species identity from confiscated pangolin remains using DNA barcoding. *Mitochondrial DNA Part B: Resources* 1(1): 763–766.
- Luiselli, L., Starita, A., Carpaneto, G.A., Segniagbeto, G. and Amori, G. (2016). A Short Review of the International Trade of Wild Tortoises and Freshwater Turtles Across the World and Throughout Two Decades. *Chelonian Conservation and Biology* 15(2): 167–172.
- Luskin, M.S., Christina, E.D., Kelley, L.C. and Potts, M.D. (2014). Modern hunting practices and wild meat trade in the oil palm plantation-dominated landscapes of Sumatra, Indonesia. *Human Ecology* 42: 35-45.
- Mallon, D.P. (2008). *Saiga tatarica* ssp. *tatarica* . The IUCN Red List of Threatened Species 2008. <http://dx.doi.org/10.2305/IUCN.UK.2008.RLTS.T19834A9022431.en>. Accessed on 10th September 2018.
- Marano, N., Arguin, P.M., Pappaioanou, M. (2007). Impact of globalization and animal trade on infectious disease ecology. *Emerging infectious diseases* 13: 1807.
- Martin, E. and Martin, C. (2013). The decline in Cambodia's Ivory Trade. *TRAFFIC Bulletin* 25(2): 43-45. Cambridge, United Kingdom.
- Martin, E. and Stiles, D. (2002). *The Ivory Markets of South and Southeast Asia*. Save the Elephants, London, UK.
- Maza, C and Sockchea, M. (2016). *Rhinoceros horns seized at Phnom Penh airport*. The Phnom Penh Post: 2 November. <http://www.phnompenhpost.com/national/rhinoceros-horns-seized-phnom-penh-airport>
- Milledge, S.A. (2007). Illegal killing of African rhinos and horn trade, 2000-2005, the era of resurgent markets and emerging organized crime. *Pachyderm* 43: 96–107.
- Milliken, T. (2014). *Illegal Trade in Ivory and Rhino Horn: An Assessment Report to Improve Law Enforcement Under the Wildlife TRAPS Project*. USAID and TRAFFIC.
- Milliken, T., Burn, R.W., Underwood, F.M. and Sangalakula, L. (2016). *The Elephant Trade Information System (ETIS) and the Illicit Trade in Ivory: a report to the 17th meeting of the Conference of the Parties to CITES*. CoP17 Doc. 57.5 (Annex), CITES Secretariat, Geneva, Switzerland. 29 pp.
- Milliken, T. and Shaw, J. (2012). *The South Africa–Viet Nam Rhino Horn Trade Nexus: A Deadly Combination of Institutional Lapses, Corrupt Wildlife Industry Professionals and Asian Crime Syndicates*. TRAFFIC, Johannesburg, South Africa
- Milliken, T., Burn, R.W., Underwood, F.M. and Sangalakula, L. (2018). *The Elephant Trade Information System (ETIS) and the Illicit Trade in Ivory: A report to the 18th meeting of the Conference of the Parties to CITES*. CoP18 Doc. 69.3 Annex I. CITES Secretariat, Geneva, Switzerland. 29 pp.

- Mills, J. and Servheen, C. (1994). The Asian Trade in Bears and Bear Parts: Impacts and Conservation Recommendations. *Int. Conf. Bear Res. and Manage* 9(1): 161–167. http://www.bearbiology.com/fileadmin/tpl/Downloads/URSUS/Vol_9/Mills_Servheen_Vol_9.pdf
- Milner-Gulland, E., and Clayton, L. (2002). The trade in babirusas and wild pigs in North Sulawesi, Indonesia. *Ecological Economics* 42: 165–183.
- Milner-Gulland, E.J. and Singh, N. (2015). *Two Decades of Saiga Antelope Research: What have we Learnt?* In: Bro-Jorgenson, J. (Eds), *Antelope Conservation in 21st Century*. Wiley, United States.
- Kitade, T. & Naruse, Y. (2018). *Otter Alert: A rapid assessment of illegal trade and booming demand in Japan*. TRAFFIC. Tokyo, Japan.
- Nguyen, M.D.T., Indenbaum, R.A. and Willemsen, M. (2018). *From tusk to trinket: Persistent illegal ivory markets in Viet Nam*. TRAFFIC. Cambridge, United Kingdom.
- Musing, L., Suzuki, K. and Nekaris, K.A.I. (2015). Crossing International Borders: The Trade of Slow Lorises *Nycticebus* spp. as Pets in Japan. *Asian Primates Journal* 5(1): 12-23
- Myers, N., Mittermeier, R.A., Mittermeier, C.G., da Fonseca, Gustavo A.B. and Kent, J. (2000). Biodiversity hotspots for conservation priorities. *Nature* 403:853-858. doi:10.1038/35002501
- Nijman, V. and Shepherd, C. R. (2009). *Wildlife trade from ASEAN to the EU: Issues with the trade in captive-bred reptiles from Indonesia*. TRAFFIC Europe Report for the European Commission, Brussels, Belgium.
- Nijman, V. and Shepherd, C.R. (2010). The role of Asia in the global trade in CITES II-listed poison arrow frogs: hopping from Kazakhstan to Lebanon to Thailand and beyond. *Biodiversity and Conservation* 19(7): 1963–1970.
- Nijman V. (2010). An overview of international wildlife trade from Southeast Asia. *Biodiversity and Conservation* 19: 1101–1114. doi: 10.1007/s10531-009-9758-4
- Nijman, V. and Shepherd, C.R. (2012). China's role in ivory and elephant parts trade from Lao PDR. *Oryx* 46: 172–173. Flora and Fauna International. Cambridge, United Kingdom.
- Nijman, V. (compiler) (2014). *An Assessment of the live elephant trade in Thailand*. TRAFFIC International.
- Nijman, V., Oo, H. and Shwe, N.M. (2017). Assessing the Illegal Bear Trade in Myanmar Through Conversations with Poachers: Topology, Perceptions, and Trade Links to China. *Human Dimensions of Wildlife*. 22(2).
- Nijman, V. and Shepherd, C.R. (2015). *Adding up the numbers: an investigation into commercial breeding of Tokay Geckos in Indonesia*. TRAFFIC. Petaling Jaya, Selangor, Malaysia.
- Ng, J. and Nemora (2007). *Tiger trade revisited in Sumatra, Indonesia*. TRAFFIC Southeast Asia, Petaling Jaya, Malaysia.
- Nguyen, N.V. and Willemsen, M. (2015). Assessment of the Availability of Ivory in the Vietnamese Market. *TRAFFIC Bulletin* 27(2): 59-65. Cambridge, United Kingdom.
- Nguyen, T. and Frechette, J.L. (2017). The Market for Elephant ivory in Cambodia. *TRAFFIC Bulletin* 29(2): 65-72. Cambridge, United Kingdom.
- Nowell, K. (2012). Wildlife Crime Scorecard: Assessing compliance with and enforcement of CITES commitments for tigers, rhinos and elephants. WWF. Gland, Switzerland. http://awsassets.panda.org/downloads/wwf_wildlife_crime_scorecard_report.pdf
- Nowell, K., and Pervushina, N. (2014). *Review of Implementation of Resolution Conf. 12.5 (Rev COP 16) on Conservation of and Trade in Tigers and other Appendix-I Asian Big Cat species*. Report to the CITES Secretariat for the 65th meeting of the Standing Committee. SC65 Doc. 38 Annex 1. CITES. Gland, Switzerland.
- Nowell, K. and Xu, L. (2007). *Taming the tiger trade: China's markets for wild and captive tiger products since the 1993 domestic trade ban*. TRAFFIC East Asia. Hong Kong, China.
- Ohler, A. and Nicolas, V. (2017). Which frog's legs do froggies eat? The use of DNA barcoding for identification of deep frozen frog legs (Dicroglossidae, Amphibia) commercialized in France. *European Journal of Taxonomy* 271: 1–19.
- Om Kicau. (2012). Trend burung ciblek (4): Di Bali mendapat simpati. Omkicau.com. 5 April: <https://omkicau.com/2012/04/05/trend-burung-ciblek-4-di-bali-mendapat-simpati/>

- Outhwaite, W. & Brown, L. (2018). *Eastward Bound: Analysis of CITES-listed ora and fauna exports from Africa to East and Southeast Asia 2006 to 2015*. TRAFFIC International, Cambridge, United Kingdom.
- Oswell, A.H. (2010). *The Big Cat Trade in Myanmar and Thailand*. TRAFFIC Southeast Asia, Petaling Jaya, Selangor, Malaysia.
- Pantel, S. and Chin, S.Y. (Eds). (2008). *Proceedings of the Workshop on Trade and Conservation of Pangolin Native to South and Southeast Asia. 30 June – 2 July 2008*. TRAFFIC Southeast Asia, Petaling Jaya, Selangor, Malaysia. 66-74.
- Phassaraudomsak, M. and Krishnasamy, K. (2018). *Trading Faces: A rapid assessment on the use of Facebook to trade in wildlife in Thailand*. TRAFFIC, Petaling Jaya, Selangor, Malaysia.
- Phassaraudomsak, M., Krishnasamy, K. and Chng, S.C.L. (2019). *Trading Faces: Online trade of Helmeted and other hornbill species on Facebook in Thailand*. TRAFFIC, Southeast Asia Regional Office, Petaling Jaya, Malaysia.
- Poole, C. and Shepherd, C. (2016). Shades of Grey: The legal trade in CITES-listed birds in Singapore, notably the globally threatened African grey parrot *Psittacus erithacus*. *Oryx* 1:1-7. Flora and Fauna International. Cambridge, United Kingdom.
- Rao, M., Duckworth, J.W., Roberts, R. and Shepherd, C.R. (2014). Averting the imminent extinction of Southeast Asian vertebrate species. *TRAFFIC Bulletin* 26 (1): 15-17. Cambridge, United Kingdom.
- Rao, M., Myint, T., Zaw, T. and Htun, S. (2005). Hunting patterns in tropical forests adjoining the Hkakaborazi National Park, north Myanmar. *Oryx* 39:292-300. Flora and Fauna International. Cambridge, United Kingdom.
- Rentschlar, K.A., Miller, A.E., Lauck, K.S., Rodiansyah, M., Bobby, Mutlihati and Kartikawati. (2020). A silent morning: The songbird trade in Kalimantan, Indonesia. *Tropical Conservation Science* 11 (1). <https://doi.org/10.1177/1940082917753909>
- Robin Des Bois. (2015). *On the Trail: Information and analysis bulletin on animal poaching and smuggling*. Robin Des Bois. Paris, France.
- Rowley, J., Shepherd, C.R., Stuart, B.L, Nguyen, T.Q., Hoang, H.D., Cutajar, T.P, Wogan, G.O.U. and Phimmachak, S. (2016). Estimating the global trade in Southeast Asian newts. *Biological Conservation* 199: 96–100.
- Rowley, J., Brown, R., Bain, R., Kusriani, M., Inger, R., Stuart, B., Wogan, G., Thy N., Chanard, T., Trung, C. T., Diesmos, A., Iskandar, D.T., Lau, M., Leong, T.M., Makchai, S., Truong, N.Q., and Phimmachak, S. (2010). Impending conservation crisis for Southeast Asian amphibians. *Biology Letter* 6 (3): 336-338. doi: 10.1098/rsbl.2009.0793.
- Saiga Conservation Alliance (2017). Help Save Mongolia's Saigas. Saiga Conservation Alliance. <http://saigaconservation.org/2017/02/08/help-save-mongolias-saigas/> . Accessed on 24 February 2017.
- Scheffers, B.R., Corlett, R.T., Diesmos, A. and Laurance, W.F. (2012). Local demand drives a bushmeat industry in a Philippine forest preserve. *Tropical Conservation Science* 5(2): 133-141.
- Schoppe, S. (2009). *Status, trade dynamics and management of the Southeast Asian Box Turtle in Indonesia*. TRAFFIC Southeast Asia, Petaling Jaya, Selangor, Malaysia.
- Schoppe, S. and Shepherd, C.R. (2013). The Palawan Forest Turtle; under threat from international trade. *TRAFFIC Bulletin*. 25 (1): 9-11. Cambridge, United Kingdom.
- Skerratt, L.F., Berger, L., Speare, R. et al., (2007) Spread of Chytridiomycosis Has Caused the Rapid Global Decline and Extinction of Frogs. *EcoHealth* 4: 125. doi:10.1007/s10393-007-0093-5.
- Shepherd, C.R. (2007). An assessment of wildlife trade at Mong La market on the Myanmar-China border. *TRAFFIC Bulletin* 21 (2): 85-88. Cambridge, United Kingdom.
- Shepherd, C.R.S., Khan, S. and Krishnasamy, K. (2013). Largest Tiger seizure ever in Malaysia. *CATnews* 59:11.
- Shepherd, C.R. (2000). Export of Live Freshwater Turtles and Tortoises from North Sumatra and Riau, Indonesia: a Case Study. In: van Dijk, P.P, Stuart, B. L., and Rhodin, A. G. J. (eds) Asian Turtle Trade: Proceedings of a Workshop on Conservation and Trade of Freshwater Turtles and Tortoises in Asia. *Chelonian Research Monographs*, No. 2.

- Shepherd, C.R. and Magnus, N. (2004). *Nowhere to hide: The trade in Sumatran Tiger*. TRAFFIC Southeast Asia, Petaling Jaya, Selangor, Malaysia.
- Shepherd, C.R. and Bonggi, I. (2005). *The trade of the roti island snake-necked turtle Chelodina mccordi*. TRAFFIC Southeast Asia. Petaling Jaya, Selangor, Malaysia.
- Shepherd C.R. and Nijman, V. (2007). *An overview of the regulation of the freshwater turtle and tortoise pet trade in Jakarta, Indonesia*. TRAFFIC Southeast Asia, Petaling Jaya, Selangor, Malaysia.
- Shepherd, C.R. and Nijman, V. (2008a). *The wild cat trade in Myanmar*. TRAFFIC Southeast Asia, Petaling Jaya, Selangor, Malaysia.
- Shepherd, C.R. and Nijman, V. (2008b). *Elephant and Ivory Trade in Myanmar*. TRAFFIC Southeast Asia, Petaling Jaya, Selangor, Malaysia.
- Shepherd, C.R. and Nijman, V. (2008c). The trade in bear parts from Myanmar: an illustration of the ineffectiveness of enforcement of international wildlife trade regulations. *Biodiversity Conservation* 17:35–42.
- Shepherd, C.R., Stengel, C.J., and Nijman, V. (2012). *The Export and Re-export of CITES-listed Birds from the Solomon Islands*. TRAFFIC Southeast Asia, Petaling Jaya, Selangor, Malaysia.
- Shepherd, C.R. and Nijman, V. (2015). Trade in tigers and other wild cats in Mong La and Tachilek, Myanmar – A tale of two border towns. *Biological Conservation* 182: 1–7.
- Shepherd, C. R. (2002). *The Trade of Elephants and Elephant Parts in Myanmar*. TRAFFIC Southeast Asia, Petaling Jaya, Selangor, Malaysia.
- Shepherd, C.R., Gray, T.N.E. and Nijman, V. (2017). Rhinoceros horns in trade on the Myanmar–China border. *Oryx*. Flora and Fauna International. Cambridge, United Kingdom.
- Squires, D. (2013). Biodiversity Conservation in Asia. *Asia & the Pacific Policy Studies* 1(1): 144–159. <http://onlinelibrary.wiley.com/doi/10.1002/app5.13/epdf>.
- Stiles, D. (2008). *An assessment of the illegal ivory trade in Viet Nam*. TRAFFIC Southeast Asia, Petaling Jaya, Selangor, Malaysia.
- Stiles, D. (2009a). The status of ivory trade in Thailand and Viet Nam. *TRAFFIC Bulletin* 22 (2). Cambridge, United Kingdom.
- Stiles, D. (2009b). *The elephant and ivory trade in Thailand*. TRAFFIC Southeast Asia, Petaling Jaya, Selangor, Malaysia.
- Stiles, D. (2004). Update on the ivory industry in Thailand, Myanmar and Viet Nam. *TRAFFIC Bulletin* 20(1):39–43. Cambridge, United Kingdom.
- Stoner, S., and V. Nijman. (2015). The case for CITES Appendix I-listing of Earless Monitor Lizards. *TRAFFIC Bulletin* 27 (2): 55-58. Cambridge, United Kingdom.
- Stoner, S., Krishnasamy, K., Wittmann, T., Delean, S. and Cassey, P. (2016). *Reduced to skin and bones re-examined: Full analysis. An analysis of Tiger seizures from 13 range countries from 2000-2015*. TRAFFIC Southeast Asia, Petaling Jaya, Selangor, Malaysia.
- Stoner, S., Verheij, P and Wu, M.J. (2017). *Black Business – Illegal rhino horn trade dynamics in Nhi Khe, Viet Nam from a criminal perspective*. Wildlife Justice Commission. The Hague, Netherlands.
- Stoner, S. (2018). Emerging international trade in vulnerable species of South Asian freshwater turtles. *TRAFFIC Bulletin*. 30 (2): 45-47. Cambridge, United Kingdom
- Stoner, S. (2018). *Operation Dragon: Revealing new evidence of the scale of corruption and trafficking in the turtle and tortoise trade*. The Wildlife Justice Commission. The Hague, The Netherlands.
- Sy, E.Y. (2018). *Trading Faces: Utilisation of Facebook to Trade Live Reptiles in the Philippines*. TRAFFIC, Petaling Jaya, Selangor, Malaysia.
- Theng, M. and Krishnasamy, K. (2017). *An assessment of trade in Saiga horn in Singapore*. TRAFFIC, Southeast Asia Regional Office, Petaling Jaya, Selangor, Malaysia.
- TRAFFIC. (unpublished). *In the Soup: Wild meat trade and associated zoonotic disease risk in Malaysia*. TRAFFIC Southeast Asia, Petaling Jaya, Selangor, Malaysia.

- TRAFFIC. (2010a). *Hundreds of Malagasy tortoises seized in Malaysia*. TRAFFIC Press Release. <http://www.traffic.org/home/2010/7/16/hundreds-of-malagasy-tortoises-seized-in-malaysia.html>. 16 July.
- TRAFFIC. (2010b). *Live tiger found in check-in baggage*. TRAFFIC Press Release. <http://www.traffic.org/home/2010/8/26/live-tiger-found-in-check-in-baggage.html>. 26 August.
- TRAFFIC. (2013). *Rare Malagasy tortoises turn up in luggage seized in Bangkok*. TRAFFIC Press Release. <http://www.traffic.org/home/2013/12/10/rare-malagasy-tortoises-turn-up-in-luggage-seized-in-bangkok.html>. 10 December.
- TRAFFIC. (2014). *Singapore and Thailand Customs each seize 22 kg rhino horn*. TRAFFIC Press Release. <http://www.traffic.org/home/2014/1/20/singapore-and-thailand-customs-each-seize-22-kg-rhino-horn.html>. 20 January.
- TRAFFIC. (2015a). *Thousands of Critically Endangered Palawan Forest Turtles Seized*. TRAFFIC Press Release. <http://www.traffic.org/home/2015/6/24/thousands-of-critically-endangered-palawan-forest-turtles-se.html>. 24 June.
- TRAFFIC. (2015b). *Asian Songbird Trade Crisis Summit calls on regional governments to shut down illegal bird markets*. TRAFFIC Press Release. <http://www.traffic.org/home/2015/10/2/asian-songbird-trade-crisis-summit-calls-on-regional-governm.html>. 2 October
- TRAFFIC. (2016a). *Captive-breeding and ranching: The case for a new CITES mechanism for reviewing trade*. TRAFFIC Briefing Paper presented at CITES CoP17. <http://www.traffic.org/publications/captive-breeding-and-ranching-the-case-for-a-new-cites-mecha.html>
- TRAFFIC. (2016b). *Large seizures of protected Pig-nosed Turtles in Indonesia highlight magnitude of illegal trade*. TRAFFIC Press Release. <http://www.traffic.org/home/2016/2/23/large-seizures-of-protected-pig-nosed-turtles-in-indonesia-h.html>. 23 February.
- TRAFFIC. (2017a). *18 rhino horns seized by Malaysian Customs*. TRAFFIC Press Release. <http://www.traffic.org/home/2017/4/10/18-rhino-horns-seized-by-malaysian-customs.html>. 10 April.
- TRAFFIC. (2017b). *Mapping seizures to aid conservation of imperilled Helmeted Hornbill*. TRAFFIC Press release. <http://www.traffic.org/home/2017/5/16/mapping-seizures-to-aid-conservation-of-imperilled-helmeted.html>. 16 May.
- TRAFFIC. (2017c). *Indian Star Tortoise seizure in Thailand brings year's total to over 6000 individuals seized*. TRAFFIC Press Release. <http://www.traffic.org/home/2017/12/11/indian-star-tortoise-seizure-in-thailand-brings-years-total.html>. 11 December.
- TRAFFIC. (2018). *Malaysia incinerates tonnes of seized Africa-sourced pangolin scales*. TRAFFIC Press release. <https://www.traffic.org/news/malaysia-incinerates-tonnes-of-seized-africa-sourced-pangolin-scales/> 6 December.
- TRAFFIC. (2019a). *Experts meet to turn the tide on Asian songbird extinction crisis*. TRAFFIC Press Release. <https://www.traffic.org/news/experts-meet-to-turn-the-tide-on-asian-songbird-extinction-crisis/>. 27 March.
- TRAFFIC. (2019b). *Experts meet to turn the tide on Asian songbird extinction crisis*. TRAFFIC press release. <https://www.traffic.org/news/experts-meet-to-turn-the-tide-on-asian-songbird-extinction-crisis/>. 27 March.
- TRAFFIC. (2019c). *Big Indian Star Tortoise seizure Malaysia*. TRAFFIC Press Release. <https://www.traffic.org/news/big-indian-star-tortoise-seizure-malaysia/> 8 October.
- TRAFFIC. (2019d). *Asian Otters: CITES parties approve highest trade protection levels*. TRAFFIC Press Release. <https://www.traffic.org/news/asian-otters-cites-parties-approve-highest-trade-protection-levels/>. 26 August.
- TRAFFIC Viet Nam Office. (2019). *Consumer research on the demand for Tiger products in Viet Nam*. TRAFFIC Viet Nam. Hanoi, Viet Nam.
- Treanor, N.B. (2015). *China's Hongmu Consumption Boom: Analysis of the Chinese Rosewood Trade and Links to Illegal Activity in Tropical Forested Countries*. *Forest Trends*, United Kingdom. http://www.forest-trends.org/documents/files/doc_5057.pdf

- Rhodin, A.G.J., Walde, A.D., Horne, B.D., van Dijk, P.P., Blanck, T., and Hudson, R. (Eds.) (2011). *Turtles in Trouble: The World's 25+ Most Endangered Tortoises and Freshwater Turtles*. Lunenburg, MA: IUCN/SSC Tortoise and Freshwater Turtle Specialist Group, Turtle Conservation Fund, Turtle Survival Alliance, Turtle Conservancy, Chelonian Research Foundation, Conservation International, Wildlife Conservation Society, and San Diego Zoo Global.
- UNODC (2015). Criminal justice response to wildlife and forest crime in Cambodia. UNODC. Bangkok, Thailand. https://www.unodc.org/documents/southeastasiaandpacific/Publications/wildlife/CJS_Assessment_Cambodia_17_24Mar2015.pdf
- Utermohlen, M. and Baine P. (2017). *Flying under the Radar – Wildlife trafficking in the air transport sector*. USAID-Routes Partnership. United States. <http://static1.1.sqspcdn.com/static/f/157301/27569977/1495443879600/Flying+Under+the+Radar-FINAL-lo.pdf?token=d500X7exoCGDxaHnlGG8JT0cjCg%3D>
- Utermohlen, M. and Baine P. (2018). *In Plane Sight – Wildlife trafficking in the air transport sector*. USAID-Routes Partnership. United States.
- UNEP-WCMC. (2009). *Malaysia: a review of trade in CITES-listed species*. A Report to the European Commission. UNEP-WCMC, Cambridge, United Kingdom.
- Verheij, P.M., Foley, K.E. and Engel, K. (2010). *Reduced to Skin and Bones. An Analysis of Tiger Seizures from 11 Tiger Range Countries (2000–2010)*. TRAFFIC International, Cambridge, UK.
- Vigne, L and Martin, E. (2016). *Vietnam's illegal ivory trade threatens Africa's elephants*. Save the Elephants. Nairobi, Kenya.
- Vigne, L. and Martin, E. (2017). *The ivory trade of Laos: Now the fastest growing in the World*. Save the Elephants. Nairobi, Kenya.
- von Meibom, S., Vaisman, A., Neo, L. S. H., Ng, J. and Xu, H. (2010). *Saiga Antelope trade: global trends with a focus on South-East Asia*. TRAFFIC Europe and CITES.
- Webber, L. Shepherd, C.R. and Krishnasamy, K. Reduction in Demand for Ivory in Singapore, but Transit Trade Vigilance Needed. *TRAFFIC Bulletin* 25 (2). Cambridge, United Kingdom.
- Weldon, C., du Preez, L.H., Hyatt, A.D., Muller, R., and Speare, R. (2004). Origin of the Amphibian Chytrid Fungus. *Emerging Infectious Diseases* 10(12): 2100-2105. <https://dx.doi.org/10.3201/eid1012.030804>.
- Weru, S. (2016). *Wildlife protection and trafficking assessment in Kenya: Drivers and trends of transnational wildlife crime in Kenya and its role as a transit point for trafficked species in East Africa*. TRAFFIC. Cambridge, United Kingdom.
- Willcox, D., Nguyen, M. D. T. and Gomez, L. (2016). *An assessment of trade in bear bile and gall bladder in Viet Nam*. TRAFFIC, Petaling Jaya, Selangor, Malaysia.
- Wong, R. and Krishnasamy, K. (2019). *Skin and Bones Unresolved: An Analysis of Tiger Seizures from 2000-2018*. TRAFFIC, Southeast Asia Regional Office. Petaling Jaya, Selangor, Malaysia
- WWF. (2016). *Bringing back Cambodia's roar: Reintroducing tigers to the Eastern Plain*. WWF. Phnom Penh, Cambodia.
- Yu, X. and Jia, W. (2015). *Moving targets: tracking online sales of illegal wildlife products in China*. TRAFFIC, Cambridge, UK.
- Zavagli, M. (2015) *Illegal wildlife trade: leadership by the transportation and logistics sector. An introduction and discussion document under the USAID Wildlife TRAPS Project*.
- Zhang, Y. (2008). Conservation and Trade Control of Pangolins in China. In: Pantel, S. & Chin, S.Y. (Eds). *Proceedings of the Workshop on Trade and Conservation of Pangolin Native to South and Southeast Asia*. 30 June – 2 July 2008. TRAFFIC Southeast Asia, Petaling Jaya, Selangor, Malaysia. 66-74.

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TRAFFIC, the wildlife trade monitoring network, is a leading non-governmental organisation working globally on trade in wild animals and plants in the context of both biodiversity conservation and sustainable development.

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