



International Institute  
for Environment  
and Development



# Combating Illegal Wildlife Trade, with a focus on Ivory, Rhino Horn, Tiger and Pangolin in Thailand

## Targeted Scenario Analysis (TSA) on illegal wildlife trade in Thailand



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# Executive Summary

## Background

Wildlife crime is now considered to be at crisis level - driving biodiversity loss and imposing far-reaching impacts on livelihoods, economies and regional security. It is globally the fourth most lucrative type of transnational crime generating illegal revenue estimated at USD 5 billion to USD 23 billion per annum in 2017.

Thailand is a source, transit and destination country for many different types of illegally traded wildlife and wildlife products. Illegal international trades are mostly of exotic species such as rhino horn, elephant ivory and pangolin.

The Government of Thailand is implementing the Global Environment Facility (GEF) project 'Combating Illegal Trade, focusing on Ivory, Rhino Horn, Tiger and Pangolin' (2018 – 2023), referred to in this report as the IWT project. The IWT project's objective is to reduce the trafficking of wildlife through enhanced enforcement capacity and collaboration and targeted behavior change campaigns. As part of the IWT project this **Targeted Scenario Analysis (TSA)** has been undertaken to enhance understanding of the economic gains and losses of different wildlife management approaches.

The Targeted Scenario Analysis of the Illegal Wildlife trade in Thailand follows the 5 step TSA methodology set out in the TSA guidance of UNDP<sup>1</sup>:

- Step 1 – Preparation and definition of the client, client's objectives and scope and objective of the TSA
- Step 2 – Definition of the BAU baseline and EPITES interventions
- Step 3 – Selection of assessment criteria and Indicators
- Step 4 – Construction and analysis of the BAU and EPITES scenarios
- Step 5 – Presentation of policy recommendations

Of note, the TSA methodology has been adapted to align with the focus of this study – namely the benefits of eliminating illegal wildlife trafficking that threatens global biodiversity and the most cost-effective mechanisms (policies, regulations, monitoring approaches) to achieve this. Its starting point is *not* therefore how to better manage ecosystems and their services (although this is important to support wildlife) to improve productivity of a specific sector as in a 'classic' TSA study. Instead this TSA is focused on understanding the revenue flows associated with the current illegal wildlife trade, how the illegal trade can be best curtailed and the economic, social and environmental benefits of doing this. In the classic TSA methodology the Business as Usual (BAU) scenario is compared to an alternative Sustainable Ecosystem Management (SEM) scenario. The alternative scenario in this study is framed as the **Effective Prevention of Illegal Trade in Endangered Species (EPITES)**. The IWT project forms part of the EPITES scenario.

The TSA client is the Department of National Parks, Wildlife and Plant Conservation (DNP) as the agency leading on eliminating the illegal trade in wildlife in Thailand. The TSA addresses the following policy/ management question: **What are the economic gains to Thailand and the global economy of increasing investment to enhance actions to eliminate illegal wildlife trafficking?**

The specific **objectives** of the IWT TSA are to:

- Improve decision makers' awareness of the social, economic and environmental

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<sup>1</sup> Alpizar, F and Bovarnick, A. 2013. Targeted Scenario Analysis: A new approach to capturing and presenting ecosystem services value for decision making. UNDP.

economic losses deriving from the IWT to Thailand and globally, and the benefits associated with a reduction / elimination in wildlife trafficking; and,

- Justify additional financing for wildlife crime enforcement to reduce IWT in Thailand, from Government budget allocations, private sector investments and other sources including international donor transfers.

### The BAU and EPITES scenarios

Both the BAU and EPITES scenarios present interventions along the IWT supply chain, recognising that such an integrated approach is necessary to successfully address the IWT. The BAU and EPITES therefore include current and proposed practices respectively relating to legislation, polices and plans, law enforcement, cooperation and coordination (including information management and exchange) and awareness raising and demand reduction. While there are many positive aspects to the BAU reflecting a transition to EPITES, broader and deeper changes are needed to effectively combat the IWT, as reflected in the EPITES scenario.

Under the **BAU scenario**, Thailand has a comprehensive policy and legal framework to address IWT supported by a network of fifteen agencies with defined roles and responsibilities for tackling the IWT. Nonetheless, several aspects of the current institutional arrangements hinder the effective prevention of the IWT and allow offenders of wildlife crimes to evade investigation, arrest and prosecution. These include the low application of provisions in existing laws on the use of special investigative techniques in wildlife crime cases and provisions targeted at Transnational Organized Crimes, underfunding of IWT enforcement agencies with only the DNP having a dedicated budget line for IWT enforcement activities, complex administrative procedures and the lack of specialized training on IWT as an organized crime among law enforcement agencies. Cooperation and coordination are generally insufficient on IWT enforcement. For example, the Thailand Wildlife Enforcement Network, established to coordinate activities between national IWT agencies - is not currently fulfilling this task, communities are not engaged in IWT enforcement and data are dispersed across agencies making it impossible to understand the big picture. In terms of efforts to raise awareness and reduce demand, campaigns have not focused enough on understanding social norms and the factors driving demand and consumer networks. In terms of capacity, many of the agencies involved in IWT require additional manpower, especially to better enforce activities on the ground. Training is also required on the use of investigative techniques.

Under **EPITES scenario** existing legal provisions, for example under the Customs Act amended in 2005 and the Act of Prevention and Suppression of the Participation in Transnational Organized Crime BE 2556 (2013), which provides the legal basis for the use of special investigative techniques are put into operation. There are investments in law enforcement to improve its effectiveness including increase coverage of SMART patrols, support to the National Resources and Environmental Crime Suppression Division (NED) and Border Patrol Police operations, strengthening of the DNP's Wildlife Forensic Science Unit (WIFOS) and establishment of a special unit within NED focused on suppressing the growing on-line trade in IWT. Cooperation and coordination are improved through the strengthening of Thai-Wen, enhanced collaboration and information sharing with regional and international organizations, the development and application of a harmonized central IWT database to address the current fragmentation of data across various agencies, and the introduction and upscaling of community engagement in transboundary enforcement networks. To enhance awareness and reduce demand EPITES sees more targeted, nuanced and sustained demand reduction campaigns led by the Government and activities to increase awareness among government, judiciary and consumers of the impacts of IWT and penalties.

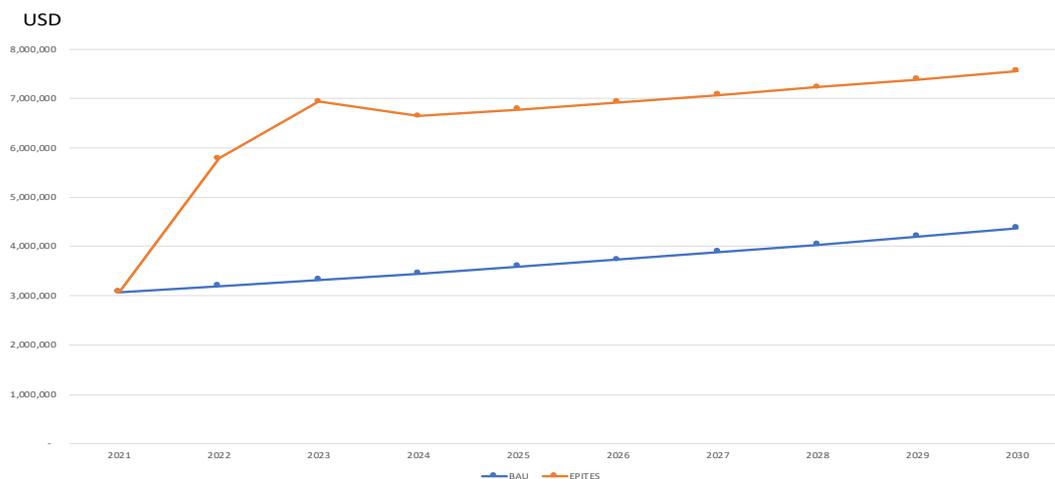
## Key Findings

The TSA study analyses the BAU and EPITES scenarios over a 10-year period against three core criteria: the costs of enforcement; the avoided costs of potential CITES sanctions and domestic tourism benefits.

**Cost of Enforcement.** The DNP and other stakeholders have highlighted the need to better understand current expenditures on controlling the illegal wildlife trade while an understanding of costs of implementing EPITES and the funding gap is critical to understand how EPITES could be sustained once the IWT project ends in 2023.

Figure A shows the projected costs under BAU (blue line) and EPITES (orange line). Under BAU the budget is assumed to increase by not more than 4% a year. Under EPITES the budget increases by roughly USD 3 million per year, nearly doubling current budget allocations from 2023 onwards, and resulting in an 81% increase in total budget allocation by 2030. The largest cost item under EPITES, accounting for around 38% of the *additional* budget required, relates to upgrading the performance of wildlife crime surveillance and enforcement at the border crossing points. This initiative has the potential to reap broader benefits in terms of community level employment and engagement in wildlife conservation and reduced lawlessness in rural areas, as well as reduced incidents of illegal trade in wildlife.

**Figure A: Cost of enforcement under BAU and EPITES**



**CITES sanctions avoided.** The domestic trade in elephant ivory is a risk for Thailand, who face sanctions by CITES if African ivory is found to be circulating in Thai domestic markets. The cost of sanctions avoided is based on the current export of legally traded wildlife and plants which could face sanctions. This potential cost is an argument for the Government to invest in enforcement against IWT, not only to avoid the financial cost of sanctions but also the reputational risk it presents, which would deter impact investors and potentially tourists. A benefit of investing in EPITES is therefore that it ensures that Thailand is able to continue to the export legally permitted wildlife and plants such as orchids and earn revenue of around USD 89.42 million a year (2,900 million Baht).

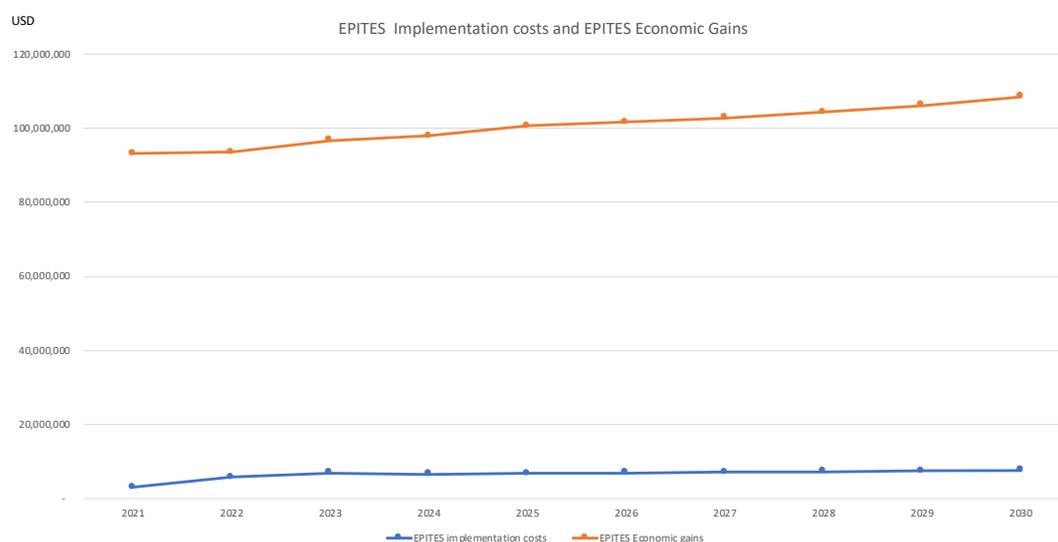
**Domestic wildlife tourism benefits.** While wildlife tourism is currently limited in Thailand it has growth potential and represents an avenue for generating income for wildlife conservation and supporting the development of remote areas and communities. Furthermore, controlling the trafficking of African elephants and Rhino horn through Thailand would benefit wildlife tourism in Africa, the value of which is significant. For Wildlife Sanctuaries, based on projections in tourism number and entrance fees over a period of 10 years, the differences in

revenue between the BAU and EPITES is estimated at USD 33.108 million (1,073.7 million Baht). For National Parks, there is a noticeable difference between BAU and EPITES if entrance fees are increased by twice the existing rate, over a period of 10 years. Under this scenario the *additional* revenue to the 7 National Parks most suitable for the development of wildlife tourism could be as high as USD 67 million (2,176.1 million Baht) over ten years, reaching an annual rate of USD 20,040,707 in 2030.

These estimates can be considered conservative in that they are only based on entrance fees and do not factor in other direct and indirect spending by tourists. However, it should also be noted that the estimated revenue flows are contingent upon investments in tourism infrastructure (e.g. from national and provincial Government and the private sector), the clear definition of specific areas where wildlife viewing is permitted and the specification of the maximum number of tourists that would be allowed at any given period of the year to ensure sustainability.

There are clear economic incentives for investment in EPITES. Figure B shows the cost of EPITES, which totals around USD 65.5 million over 10 years (blue line) relative to the benefits of EPITES (totalling around USD 1 billion over 10 years). This is based on two types of benefits - CITES sanctions and the potential revenue from wildlife ecotourism in Wildlife Sanctuaries and National Parks. To realize the potential revenue from wildlife eco-tourism (which rises to USD 19 million in 2030), there is a need for investment in eco-tourism facilities which have not been factored into the costs of EPITES. However, wildlife tourism has been tipped as having a role to play in Thailand’s strategy to build back better after COVID-19 diversifying its tourism offering and generating investment and jobs in remote areas.

**Figure B: The cost of implementing EPITES relative to the economic benefits**



The economic argument for EPITES is even more compelling given that there are other significant benefits not factored into the calculations above. For the Thai economy these include: EPITES can mitigate of the risks of future zoonotic pandemics; employment benefits related to wildlife tourism and the introduction of integrated enforcement practices; and, the positive impacts on socio-economic development and equity related to reduced crime and the distortions to financial flows associated with wildlife crime. Global benefits include a reduction in the risk of global zoonotic disease and the protection of Africa’s biodiversity and lucrative wildlife tourism sector.

## Conclusions

The economic, social, health and environmental consequences of illegal wildlife trafficking to Thailand are significant. By stemming the IWT Thailand can reap multiple domestic benefits including avoiding potential trade sanctions and the opportunity to develop its wildlife tourism sector and thereby boost development of remote areas and promote inclusive green growth. At the global level, effective prevention of illegal wildlife trade protects key biodiversity and the lucrative wildlife tourism industry in Africa and builds global resilience to future outbreaks of zoonotic disease.

**In order to reduce the trafficking of wildlife in Thailand an increased investment is needed on a sustainable basis, backed by high level political commitment.** The estimated additional investment needed to improve the performance of the agencies involved in combatting IWT is around USD 3 million a year (USD30 million over ten years), this can be compared with the potential economic gains of shifting from current practices under a BAU to those under EPITES of around USD100 million a year. Over a 10-year period the net benefit of EPITES is estimated at around USD940 million. This is based on the sanction costs avoided and the potential wildlife tourism benefits EPITES offers (which would require investment in tourism infrastructure and marketing to be realized). It is important to note that the calculation does not include many other significant benefits that have not been monetized.

**Increasing funding to support combating wildlife related crime is central to the economic reconstruction after COVID-19.** The difference in the cost of the COVID-19 pandemic compared to the costs to prevent it from happening again clearly demonstrates the economic feasibility of investments such as EPITES and associated investments to promote wildlife ecotourism.

**Simultaneous and integrated action is needed at each stage of the IWT value chain to be effective.** IWT needs to be tackled from all angles (from strong laws to public awareness and demand reduction) and levels (transnational, national to local). EPITES incorporates interventions across the IWT supply chain to facilitate this.

**Wildlife trafficking is a transboundary issue and regional and international collaboration is essential.** Effective enforcement of the illegal trade by one country will have a limited effect if traffickers are able to relocate their activities to other countries with legislative gaps and weaker enforcement in place. Strong enforcement practices, data monitoring and analysis, harmonized legislation and cross-border investigations and judicial cooperation globally are therefore needed.

## Recommendations

**Implement EPITES.** Based on the evidence of the economic, environmental, social and health impacts of the BAU and the EPITES scenarios, a shift from BAU to EPITES is justified. Implementation of EPITES includes a range of actions to address illegal wildlife trade activities across the integrated IWT supply chain. It includes: (i) enhanced law enforcement - development of advance investigative techniques, support to DNP's Wildlife Forensic Science (WIFOS) laboratory and upscaling of on-the ground operations; (ii) enhanced cooperation, coordination, information management and exchange - strengthening Thai WEN, informational management and introducing integrated enforcement networks that include local communities; and, (iii) initiatives to increase awareness and reduce consumer demand.

**DNP to request additional budget for eliminating the IWT for the 2023 financial year.** In order to secure additional Government budget the DNP needs to develop a project focused on the IWT for the next budget review cycle for the 2023-2024 financial year. This project request needs to be developed by January 2022, to ensure the

continuity of activities after the IWT project ends. The proposal would need to be approved by the Ministry of Natural Resources and Environment (MONRE) before being submitted to the Budget Bureau of the Ministry of Finance and then the Cabinet and Parliament for final approval. The project request should include output-based performance indicators.

**Develop tourism strategy for Wildlife Sanctuaries and Protected Areas.** There is the potential to generate new and additional revenue from the development of wildlife tourism in a manner compatible with Inclusive Green Growth objectives. However, this is contingent on: (i) an increase in entrance fees and other user charges; (ii) a study to determine the visitor sustainability threshold for the National Parks and the buffer zones of Wildlife Sanctuaries; and, (iii) investments in tourism infrastructure by the National and provincial Government and private sector. The DNP should work with the Ministry of Tourism and Sports and other key Ministries to develop and implement a wildlife tourism strategy, backed up by Protected Area Business Plans.

**Review and reform of the existing budget allocation framework to combat IWT.** It is critical that there is a move away from incremental budgeting to Results Based budgeting. It is also recommended that the budget to implement the Draft Plan of Action 2015-2025 (POA) for ASEAN Cooperation on CITES and Wildlife Law Enforcement, which can be seen as the overall framework for Thailand's activities in combatting IWT, be submitted as a single coordinated package led by Thai WEN.

**Sustainable finance review to identify mechanisms to increase funding for law enforcement agencies from Government budget allocations, private sector investments and other sources including international donor transfers.** The strong link between addressing the IWT and a sustainable post COVID-19 recovery is an opportunity to lobby for the resources needed to implement EPITES. However, given the expected strain on government funding as a result of COVID-19, new funding mechanisms also need to be identified to close the funding gap. A review of potential innovation IWT specific financing mechanisms, building on existing work by the UNDP-BIOFIN for example, is needed to determine concrete funding opportunities.

**Explore the feasibility of developing an international fund to combat the IWT.** At the international level a global fund could be considered to support countries, whose efforts on controlling wildlife trafficking have clear global benefits. Given that Thailand is well positioned to lead on eliminating wildlife crimes in the region, it could lead discussions on the development of such a global or inter-regional fund. As a starting point, a Task Force could be created to explore interest in such a fund and inform the features of the fund including type of Fund (e.g. an endowment, sinking or revolving fund), how it might be capitalized (e.g. Government, private sector and / or donor contributions) and how it would be administered.

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## Acronyms

AMLA	Anti Money Laundering Act
AMLO	Anti-Money Laundering Office
AOT	Airports of Thailand
APTOCA	Anti-Participation in Transnational Organized Crime Act, B.E. 2556
ASEAN	Association of South East Asian Nations
ASEAN WEN	ASEAN Wildlife Enforcement Network
ASEAN WGCWE	ASEAN Working Group on CITES and Wildlife Enforcement
ASEAN SOMTC	ASEAN Senior Officials Meeting on Transnational Crime
BAU	Business as Usual
BNEI	Bureau of Natural Resources and Environmental Corruption Enquiry (BNEI)
CBD	Convention on Biological Diversity
CBO	Community Based Organization
CHIS	Covert human intelligence source (informant)
CITES	Convention on International Trade in Endangered Species
CSO	Civil Society Organization – used interchangeably with local NGO
DNA	Deoxyribonucleic acid
DNP	Department of National Parks, Wildlife and Plant Conservation
DR	Demand reduction
DSI	Department of Special Investigation
EPITES	Effective Prevention of Illegal Trade in Endangered Species
ETIS	Elephant Trade Information System
FPIC	Free Prior and Informed Consent
GEF	Global Environment Facility
GOT	Government of Thailand
GTI	Global Tiger Initiative
GWP	Global Wildlife Program (GEF financed, WB led)
Ha	Hectare
ICCCWC	International Consortium on Combatting Wildlife Crime
INGO	International Non-Governmental Organization
IUCN	International Union for Conservation of Nature
IWT	Illegal Wildlife Trade
LEEO	Law Enforcement Extension Office
ONAC	Office of National Anti-Corruption Commission
MONRE	Ministry of Natural Resources and Environment
NACC	National Anti-Corruption Commission
NBSP	National Biodiversity Strategy and Action Plan
NED	Natural Resources and Environmental Crime Suppression Division
NGO	Non-Governmental Organization (used interchangeably with CSO)
NIAP	National Ivory Action Plan
NP	National Park
NPV	Net Present Value
NTRP	National Tiger Recovery Plan
PA	Protected Area
POA	Plan Of Action
RFD	Royal Forestry Department
RTP	Royal Thai Police
SBCC	Social and Behavior Change Communication
SMART indicators	Specific, measurable, achievable, relevant and time-bound
SOMTC	Senior Officials' Meeting on Transnational Crime
TM	Traditional Chinese Medicine
TOC	Transnational organized crime
Thai-WEN	Thailand WEN (Wildlife Enforcement Network)
UN	United Nations
UNDP	United Nations Development Programme
UNEP	United Nations Environment
UNODC	United Nations Office on Drugs and Crime
USD	United States Dollar
USAID	US Agency for International Development

WARPA	Wild Animal Reservation and Protection Act
WB	World Bank
WCS	Wildlife Conservation Society
WCO	World Customs Organization
WEN	Wildlife Enforcement Network
WIFOS	Wildlife Forensics Laboratory Centre
WT	Wildlife trade
WWF	World Wide Fund for Nature

**Exchange rate:** 1 THB = USD 32.43

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# 1 Background

## 1.1 Context

The illegal wildlife trade (IWT), a driver of biodiversity loss, is now at a crisis level. As part of the response to the crisis the Global Environment Facility (GEF), the World Bank and UNDP have established the Global Wildlife Program, which includes around twenty projects in Asia and Africa. These global projects are designed to serve as a suite of connected actions that together disrupt and reduce illegal wildlife chains and networks spanning countries and regions and promote the conservation and sustainable use of resources.

As part of the Global Wildlife Program (GWP), the Government of Thailand (GoT) is implementing the GEF project ‘Combating Illegal Trade, focusing on Ivory, Rhino Horn, Tiger and Pangolin’ (2018 – 2023) – hereafter referred to as the IWT project<sup>2</sup>. The IWT project’s objective is to reduce the trafficking of wildlife through enhanced enforcement capacity and collaboration and targeted behavior change campaigns. The project has four strategic components: (i) Improved cooperation, coordination and information exchange; (ii) Enhanced enforcement and prosecution capacity; (iii) Reduced demand for illegal wildlife products and targeted awareness actions to support law enforcement; and, (iv) Knowledge management, monitoring and evaluation and gender mainstreaming.

The IWT project is not designed to directly address poaching in Thailand, instead it is focused on significantly reducing the role of Thailand as a key source, transit and destination country for the illegal wildlife trade. The IWT project is primarily concerned with four globally threatened species affected by trafficking – elephants (ivory), rhinoceros (horn), pangolins and tigers<sup>3</sup>. By reducing the demand and deterring the supply and transit of the targeted species, Thailand can contribute towards the maintenance of viable populations of these species, and to the conditions for reintroduction efforts. In addition, successful approaches can help strengthen the delivery of similar initiatives in other countries. The IWT project will enable Thailand to implement its obligations under Convention on International Trade in Endangered Species (CITES) more pro-actively, as well as contributing to global efforts under the Global Wildlife program<sup>4</sup>, which links key countries across illegal wildlife trade supply chains to address the problem through a comprehensive and coherent approach (IWT Project Document, 2017). A simplified Theory of Change for the GEF-IWT project is presented in Figure 1.

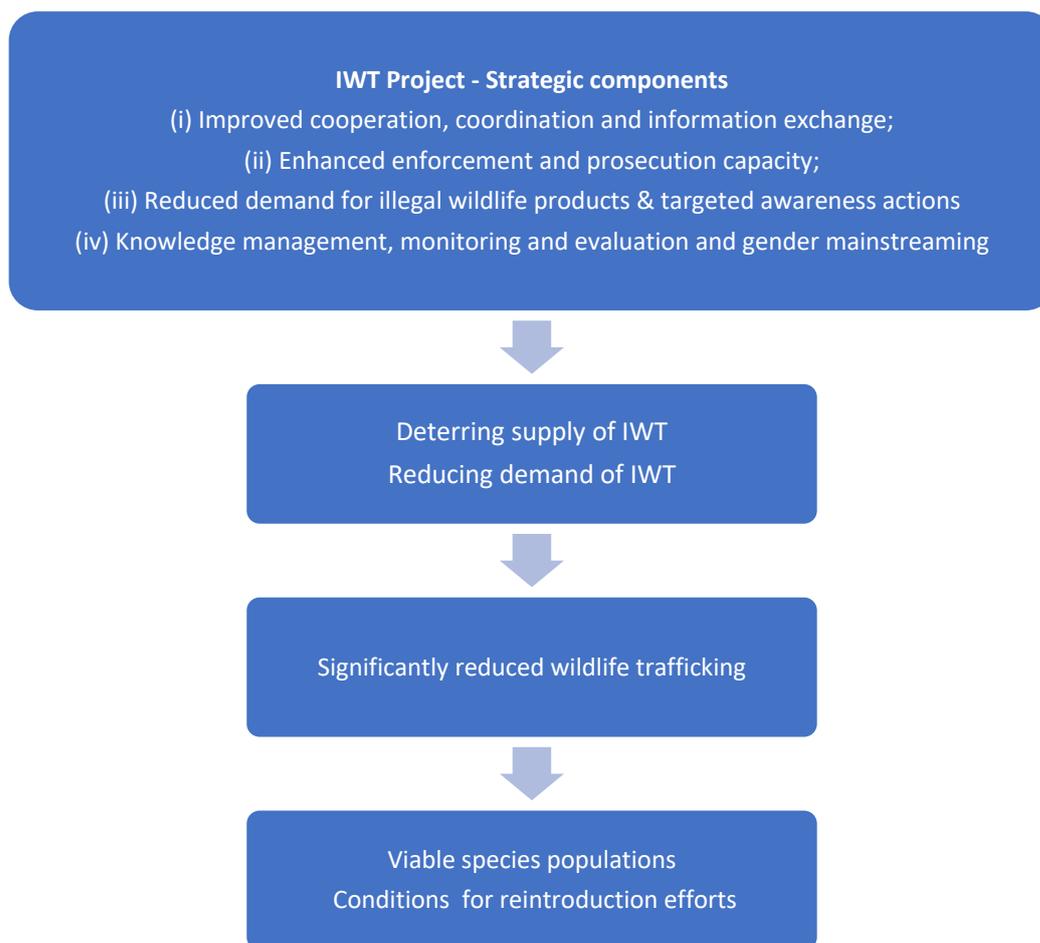
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<sup>2</sup> This USD31.8 million project is being implemented by the Department of National Parks, Wildlife and Plant Conservation (DNP).

<sup>3</sup> Other species of particular conservation concern in which Thailand is recognized to play a significant role in the overall trade of wildlife and their parts include Helmeted Hornbill (Critically Endangered - CR) ivory, a wide range of turtle and tortoise species (many of which are now globally threatened), Chinese Serow (Near Threatened - NT) and Malayan Sun Bear (Vulnerable - VU) gallbladders.

<sup>4</sup> IWT project Components 1 and 2 will contribute towards enhancing national institutional capacity to fight transnational organized wildlife crime through improved enforcement along the entire illegal supply chain of threatened wildlife and products (GWP Outcome 4). Component 3 will contribute towards the reduction of demand from key consumer countries (GWP Outcome 5), and Component 4 towards improved coordination among program stakeholders and other partners, including donors (GWP Outcome 6).

**Figure 1: GOT- UNDP GEF IWT project - simplified Theory of Change**



In order to eliminate IWT, better evidence is needed to inform the design of policies and actions plans and to make the case for increased financing to support these policies and plans.

This study aims to enhance understanding of the economic gains and losses of different wildlife management approaches and policy scenarios through a Targeted Scenario Analysis (TSA). This Targeted Scenario Analysis (TSA) study sits under component (i) of the IWT project and is aligned to one of its outputs: ‘Economic assessment to highlight the global and national economic losses due to illegal wildlife trade and making the case for additional financing for Wildlife Crime Enforcement.’

## 1.2 Targeted Scenario Analysis of Illegal Wildlife Trade

This Targeted Scenario Analysis of the Illegal Wildlife trade in Thailand follows the 5 step TSA methodology set out in the TSA guidance of UNDP, and summarized in Box 1<sup>5</sup>. However, the TSA methodology has been adapted to align with the focus of this study – namely the benefits of eliminating illegal wildlife trafficking that threatens global biodiversity and the most cost-effective mechanisms (policies, regulations, monitoring approaches, community engagement) to achieve this. Its starting point is *not* therefore how to better manage ecosystems and their services (although this is important to support wildlife) to improve productivity of a specific

<sup>5</sup> Alpizar, F and Bovarnick, A. 2013. Targeted Scenario Analysis: A new approach to capturing and presenting ecosystem services value for decision making. UNDP.

sector as in a 'classic' TSA study. Instead this TSA is focused on understanding the revenue flows associated with the current illegal wildlife trade, how the illegal trade can be best curtailed and the economic, social and environmental benefits of doing this. In the classic TSA methodology, the Business as Usual (BAU) scenario is compared to an alternative Sustainable Ecosystem Management (SEM) scenario. The alternative scenario in this study is framed as **Effective Prevention of Illegal Trade in Endangered Species (EPITES)**. The GEF-IWT project forms part of the EPITES scenario.

Notable features of the TSA Methodology are:

- **The analysis is targeted**, i.e. it is focused on a specific objective with a specific decision maker in mind. A TSA is designed to help decision makers and stakeholders target a critical decision to be made at the policy or management level, which requires a change to the status quo if the policy objective is to be reached.
- **It compares two alternative courses of action, the BAU and the transition to EPITES**. The BAU scenario is the status quo. It is presumed that this course is unable to fully control the illegal wildlife trade and redress the risks facing endangered species such as elephants, tigers, rhino and pangolin. Under the BAU scenario, ongoing trade in IWT benefits criminal syndicates at the cost of local communities and national Government and is associated with high risks of zoonotic disease outbreaks. The EPITES intervention involves a change in the status quo, with actions taken to reduce or reverse the negative effects of BAU on endangered species and the Thai economy.
- **The analysis is dynamic reflecting the relative merits of BAU and EPITES over time, based on selected sustainable development indicators**. For example, how wildlife related ecotourism value might grow if IWT enforcement were improved.

**Box 1: Steps to TSA of Illegal wildlife**

**Step 1 – Preparation and definition of the client, client’s objectives and scope and objective of the TSA**

- Identify the key decision makers (the client) and their objectives for a TSA;
- Refine the policy focus and scope of the TSA objective;
- Define the scope of the analysis and assess and verify available data.

**Step 2 – Defining the BAU baseline and EPITES interventions**

- Define the Business-as-Usual (BAU) baseline interventions;
- Define the Effective Prevention of Illegal Trade in Endangered Species (EPITES) interventions;
- Refine the definitions of BAU and EPITES.

**Step 3 – Select Criteria and Indicators**

- Determine the criteria for the analysis, e.g. financial, economic, employment, equity and fairness.
- Select SMART indicators for each criterion, that are important for decision-making
- Identify issues to consider when choosing indicators.

**Step 4 – Constructing and analyzing the BAU and EPITES scenarios**

- Establish a causal link between BAU or EPITES interventions and changes in wildlife and relevant indicators;
- Project changes to the selected indicators resulting from changes to levels of wildlife trafficking;
- Generate data to populate the BAU and EPITES curves;
- Manage uncertainty in constructing the scenarios
- Organize the results of the TSA for decision-making.

**Step 5 – Make Policy Recommend Actions**

- Assist decision-makers in choosing among the policy interventions by reviewing the scenario projections, the magnitude of the outcomes, and the assessment of the criteria.

Stakeholders have been closely engaged in the development of the TSA in order to ensure the analysis is focused on policy needs and priorities. Key steps to achieve this were:

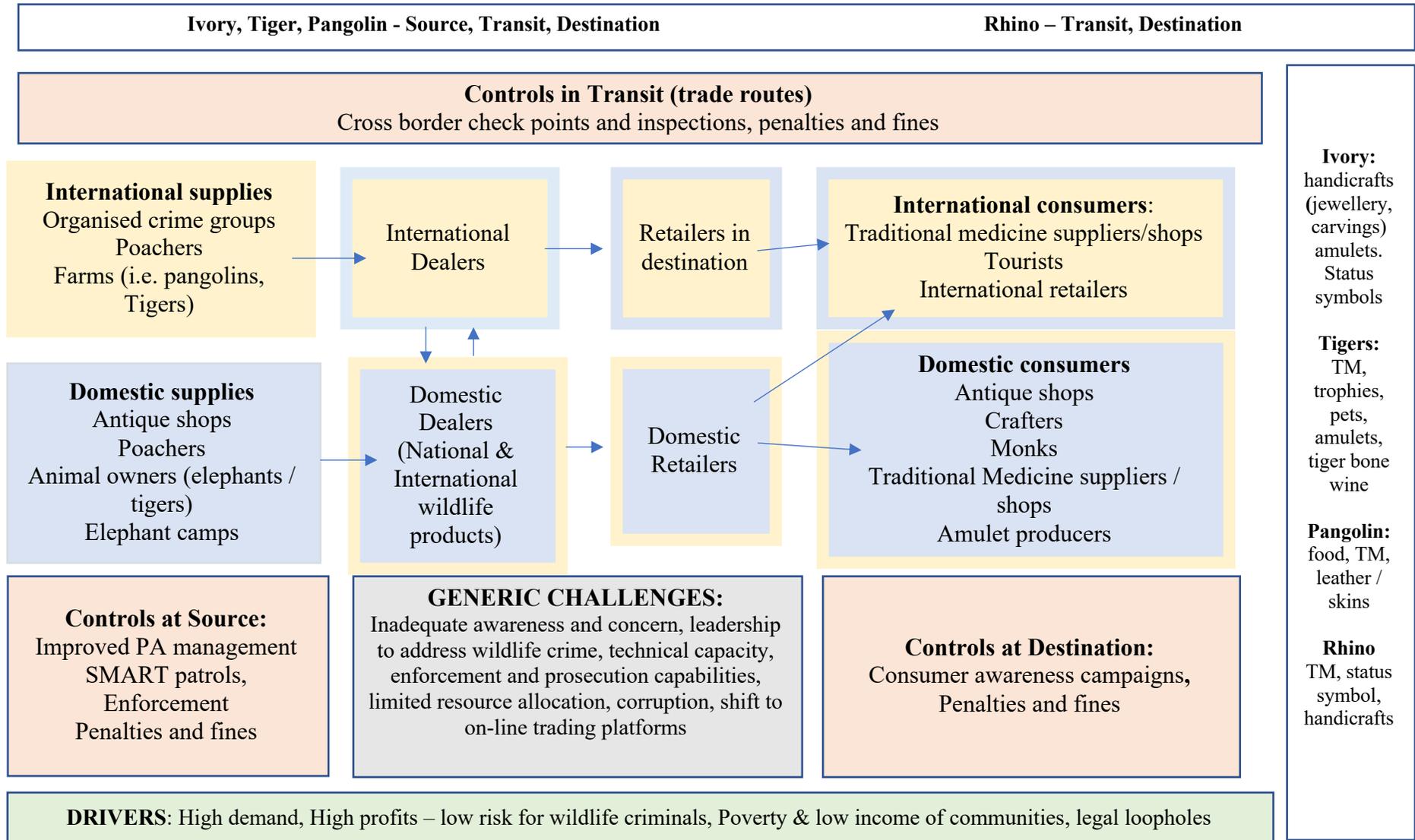
- A half day TSA- IWT **Launch workshop** for decision makers and other stakeholders was held on the 10 November 2020 with some participants joining face-to-face in Bangkok and others joining virtually due to COVID-19 restrictions. The workshop provided an overview of the TSA approach and how it can be applied to help address IWT in Thailand. The workshop was an important opportunity for generating views on the proposed approach (draft policy question and scenarios) such that they could be refined to best reflect available information and knowledge within the timeframe of the TSA study. The workshop was attended by 30 participants.
- Stakeholder meetings. To develop a better understanding of the role of various agencies in the management and control of the illegal wildlife trade, a series of face to face meetings were held with agency representatives, namely the Department of National Parks, Wildlife and Plant Conservation (DNP), the Natural Resources and Environmental Crime Suppression Division (NED), the Border Police, the National Anti-Corruption Commission (NACC), the Department of Special Investigation (DSI), Department of Customs and the Anti-Money Laundering Office (AMLO). In addition, on-line discussions were held with the representatives of the WWF and USAID.
- A virtual **Validation workshop** took place in May 2021 and was attended by 32 stakeholders including representatives across key Government departments involved in addressing the IWT. The validation workshop presented the characteristics of the BAU and EPITES scenarios, the assumptions used in the analysis and the draft findings of the study. It was an opportunity for participants to endorse the preliminary results and provide additional evidence where possible.
- The draft report was reviewed by the GEF-IWT Project manager, Stakeholders, UNDP's senior Global TSA Advisor and external experts.

The study started in September 2020 and faced a number of delays due to COVID-19 restrictions, which severely limited the ability for face to face meetings and travel.

### 1.3 IWT-TSA conceptual Framework

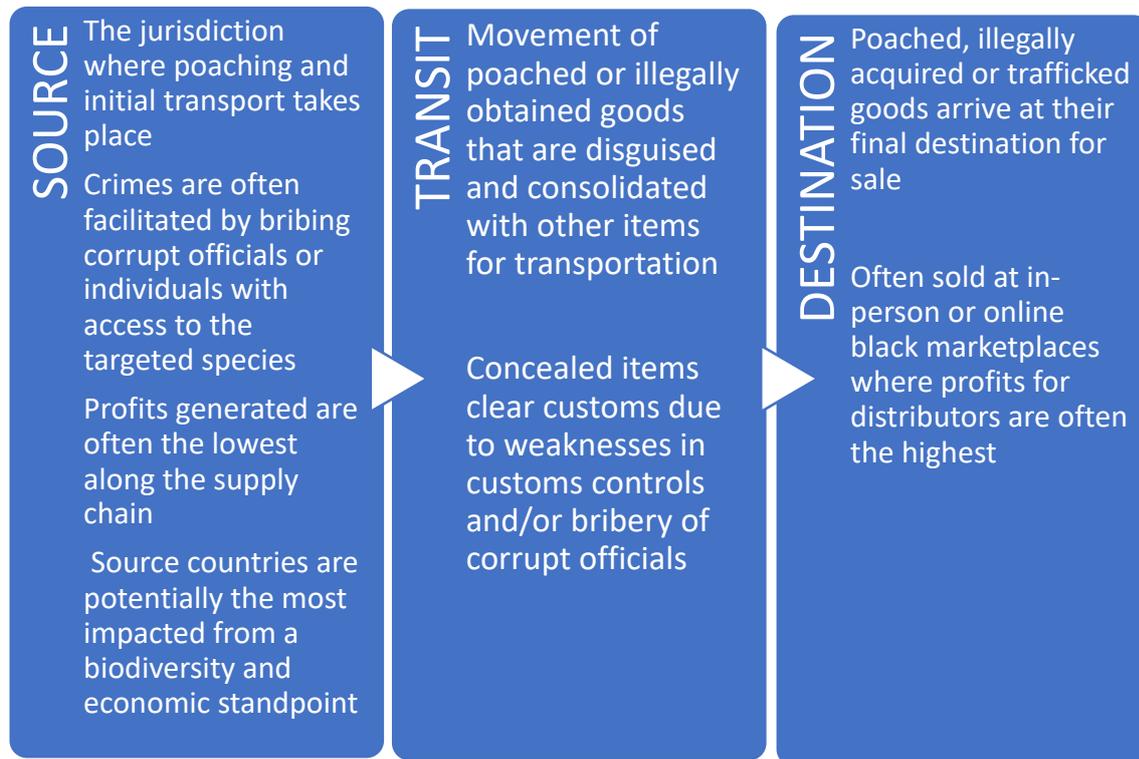
While recognizing that illegal wildlife trafficking chains are diverse, dynamic and species specific, Figure 2 provides a conceptual overview of the interrelations between Thailand's IWT supply and demand (value chain) noting key actors, drivers, main controls along the supply chain and challenges facing enforcement. This conceptual model serves as a framework for the TSA study.

**Figure 2: IWT conceptual model - Thailand**



Thailand is a source, transit and destination country for many different types of illegally traded wildlife and wildlife products - thus playing a significant role in the global wildlife trade (Figure 3). This position has been facilitated by the development in communications and transport facilities, and easy access to international airports. International trades are mostly of exotic species such as rhino horn, elephant ivory and pangolin.

**Figure 3: Source, Transit and Destination Phases of IWT**



**Source:** adapted from ACAMS TODAY EUROPE, Global Financial Crime Review, May 2020-June 2020.

**IWT at Source:** Wildlife poaching in Thailand is not considered to be the main threat to biodiversity as it is typically limited and for food not trade. However, wild elephants are still being camouflaged as domesticated elephants and traded (this is being addressed through the requirement that all domestic elephants are microchipped for identification), and captive tiger facilities can act as a front for the poaching and selling of tigers caught in the wild.

**IWT - Transit:** Thailand has become a hub for wildlife trafficking. For example, large-scale shipments of raw ivory are periodically directed from Africa to Thailand for the production of ivory products sold on the domestic market.

**IWT - Destination:** Much of the demand for wildlife can be broadly grouped into four main categories - collectibles, pets, traditional medicine and food. The illegal wildlife trade continues through Thailand's markets which sell animals as exotic pets or their parts for traditional medicines. The Chatuchak Market in Bangkok has been highlighted as the epicenter of this trade. Criminal networks operating from or connected with the markets are suspected of being behind the trade in primates, birds, testudines and other reptiles. Numerous specimens of species listed in CITES Appendix I and II from Africa, Asia, Australia and South America, and domestically protected specimens from Thailand have been reported through surveys by

TRAFFIC as openly for sale (UNODC, 2017). Furthermore, several seizures of wildlife being smuggled out of Thailand or on arrival in other countries point to Thai markets as the source of the specimens. Pangolin and Rhino horn are reportedly rarely sought by Thai consumers.

A number of generic drivers enable the IWT including: weak legislation; low rates of prosecution and the lack of strong conviction; corruption; the laundering of wild-caught species through captive breeding and harvest quotas; the widespread shift from physical market place to online platforms; improvements in technology and global infrastructure which allows wildlife traders to diversify their trade operations and channels in ways that provide anonymity, making law enforcement more difficult; inadequate action to tackle social and behavior change considerations around wildlife use and consumption; and, poverty and low income of communities which can hinder efforts to curb IWT, especially where local communities benefit financially from engaging with traffickers and there are limited alternative means to support livelihoods. Annex 2 provides more details on these generic drives and their significance in Thailand.

#### 1.4 Understanding the Impacts of the illegal wildlife trade

Wildlife crime is globally the fourth most lucrative type of transnational crime after illegal narcotics, humans and armaments. Due to the nature of illicit trade, it is hard to obtain exact figures, however, in 2017 revenue from wildlife crime was estimated at USD 5 billion to USD 23 billion per annum<sup>6</sup>. In addition, a recent study by the World Bank<sup>7</sup> estimated the annual natural capital loss attributable to the illegal wildlife trade at USD15 million a year, emphasizing that this is likely to be an underestimate as it only accounts for elephant tourism benefits in Africa.

However, it is important to recognize that available data on illegal wildlife trades reflect a small fraction of the overall trade in illegal wildlife given that a high degree of trafficking goes undetected and/or unreported, and loopholes in the regulation of industrial-scale commercial trade, such as captive breeding operations, which leads to a mix of misdeclaration, misreporting and/or laundering of wild-caught animals declared as captive bred (Krisnasamy and Zavagli 2020)<sup>8</sup>.

Wildlife crime has far-reaching impacts on “species, livelihoods, economies, regional security, and in some instances human lives” (CITES, 2013)<sup>9</sup>. The environmental, social and economic impacts of the illegal wildlife trade are interrelated, as depicted in Figure 4. The IWT directly causes declines in species population, which leads to a deterioration in ecosystem functions. It also fosters corruption and criminality. These two direct impacts of IWT lead to a number of impacts with financial and economic implications such as lost wildlife related tourism benefits, lost livelihoods, health costs, reduce revenues for government from the legal trade and

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<sup>6</sup> <http://www.gfintegrity.org/issue/transnational-crime-terrorist-financing/> Accessed 22 September 2020. In comparison – in the early 1990s, TRAFFIC estimated the value of legal wildlife products imported globally was around USD160 billion. In 2009, the estimated value of global imports was over USD323 billion. <http://www.traffic.org>

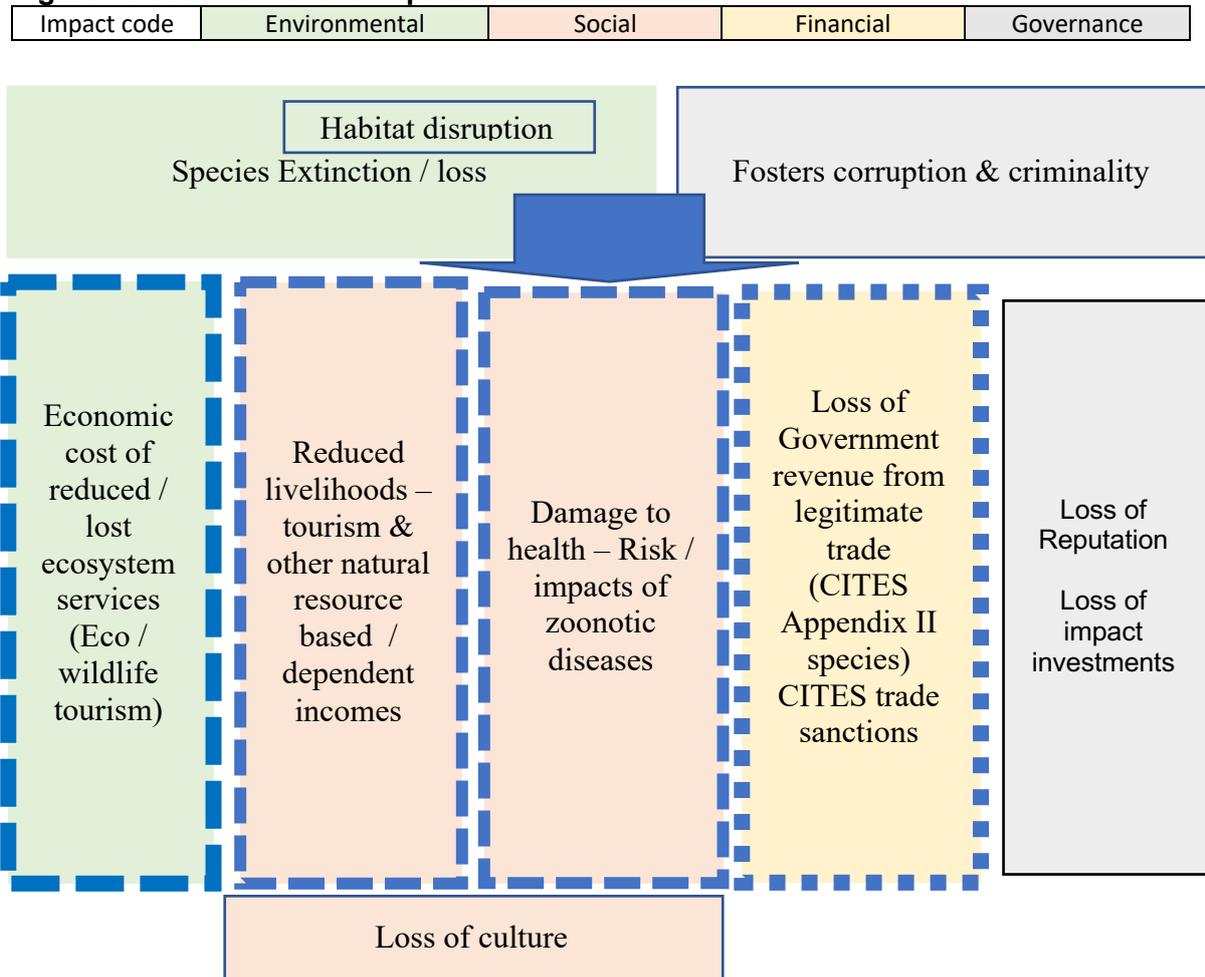
<sup>7</sup> World Bank, 2019. Illegal Logging, Fishing and Wildlife trade: the costs and how to combat it.

<sup>8</sup> Krisnasamy, K. and Zavagli, M. (2020). *Southeast Asia: At the heart of wildlife trade*. TRAFFIC, Southeast Asia Regional Office, Petaling Jaya, Selangor, Malaysia.

<sup>9</sup> CITES. (2013). Ministers come together in Bangkok to discuss the serious nature of transnational organized wildlife and forest crime. Press release. [www.cites.org/eng/news/pr/2013/20130305\\_ministerial.php](http://www.cites.org/eng/news/pr/2013/20130305_ministerial.php)

reduced impact investment<sup>10</sup> due to reputation risks. Many of these impacts have both a global as well as a national dimension. These impacts are set out in detail in Annex 3.

**Figure 4: Overview of the impacts of IWT**



<sup>10</sup> These are funds allocated to organizations, including public sector organizations, for the purpose of investing in environmental projects, wildlife habitat restoration and rehabilitation conditional on measurable and quantifiable.

## 1.5 Outline of report

The rest of this report follows the 5 steps of the TSA methodology. Section 2 defines the client and elaborates on the objective and scope of the TSA (step 1 of the TSA). Section 3 set outs the characteristics of the BAU and EPITES scenarios and aligns to Step 2 of the TSA methodology. Section 4 presents the criteria and indicators selected for the analysis (Step 3 of the TSA methodology). Section 5 presents the core of the analysis - namely projecting the trajectory of the BAU and EPITES scenarios to 2030 for the indicators selected (Step 4 of the TSA methodology). Section 6 concludes and presents policy recommendations (Step 5 of the TSA methodology).

The main report is supported by a number of detailed annexes (Section 7), which should be referred to for additional information on the conceptual framework for this TSA on IWT and supporting evidence on the TSA steps. Annex 1 summarizes the IWT trade and transportation chains in Southeast Asia. Annex 2 sets out generic drivers of the IWT and outlines their significance in Thailand. Annex 3 presents available monetary, quantitative and qualitative evidence of the environmental, social and economic implications of the IWT both nationally and globally. Annex 4 provides illustrative estimates of the value of wildlife tourism in Africa. Annex 5 looks in detail at Thailand's institutional and policy framework, which informs the BAU scenario. It covers existing plans and policies, legislation and key actors. Annex 6 presents principles of a Global IWT action plan as context, based on a recent study by the World Bank. Annex 7 presents a detailed overview of the status, IWT trade in, policies, plans and legislation and consumers and consumption patterns for each of the GEF-IWF focus species – elephant ivory, rhino horn, tigers and pangolin. Annex 8 outlines the demonstration sites for the integrated IWT enforcement approach, being introduced by the GEF-IWT project. Annex 9 provides data tables supporting Step 4 of the TSA – constructing and analyzing the BAU and EPITES scenarios.

## 2 TSA Step 1: Definition of client, client objectives and scope of TSA

The TSA client is the DNP as the lead on controlling IWT in Thailand. The TSA addresses the following policy / management question: **What are the economic gains to Thailand and the global economy of increasing investment to enhance actions to eliminate illegal wildlife trafficking?**

The specific **objectives** of the IWT TSA, as agreed with the DNP, are to:

- Improve decision makers' awareness of the social, economic and environmental losses deriving from the IWT to Thailand and globally, and the benefits associated with a reduction / elimination in wildlife trafficking; and,
- Justify additional financing for wildlife crime enforcement to reduce IWT in Thailand, from Government budget allocations, private sector investments and other sources including international donor transfers.

Addressing the TSA policy question will provide the Thai Government with a broader understanding of the benefits of controlling the IWT, and help convince decision makers of the importance of enhanced enforcement measures and associated funding.

Data on the on-going and potential economic losses linked to IWT can be used to justify an increase in financial support / investment to combat the illegal wildlife trade. This support could be from domestic and potentially international sources, given the international benefits associated with a reduction in illegal wildlife trafficking. The realization of international benefits assumes that the benefits of more effective controls of the IWT in Thailand is not lost through the redirection of the illegal wildlife trafficking to other countries in the region. Increased revenue for IWT could be through government budget allocations, fiscal measures, or other sources (private sector, International Organizations (IOs)).

The TSA study is also intended to support the IWT project's work on governance, which will be refined in its workplan (activities and budget) for the later years of the IWT project following the TSA findings and recommendations.

The TSA was designed to be empirically manageable in the time available. The policy question has global relevance. For example, controlling IWT in Thailand can translate to benefits internationally through a reduction in the trafficking of African ivory, and hence less pressure of elephant populations across the African continent, which can translate into wildlife tourism and other important ecosystem services benefits. While this study has focused on the national level, the implications at the local and the global levels are recognized. Data collation has focused on the costs of enforcement at the national level, but available qualitative, quantitative and monetary evidence has been used to further characterize the economic gains and benefits at the local and global scale.

### 3 TSA Step 2 – Defining the BAU and EPITES Scenario

The BAU baseline and EPITES intervention scenarios form the foundation of the TSA analysis. Table 1 provides a summary overview of BAU and EPITES scenarios. For EPITES Table 1 distinguishes between initiatives under the GEF-IWT project and *additional* initiatives needed now and beyond the timeframe of the GEF-IWT project. Both the BAU and EPITES scenarios present the integrated interventions along the IWT supply chain, recognizing that such an integrated approach is necessary to successfully address the IWT. The BAU and EPITES hence include current and proposed practices respectively relating to legislation, policies and plans, law enforcement, cooperation and coordination (including information management and exchange), awareness raising and demand reduction. While there are many positive aspects to the BAU reflecting a transition to EPITES, broader and deeper changes are needed to effectively combat the IWT, as reflected under EPITES.

Under the **BAU**, Thailand has a comprehensive policy and legal framework to address IWT supported by a network of fifteen agencies with defined roles and responsibilities for tackling the IWT<sup>11</sup>. Nonetheless, several aspects of the current institutional arrangements hinder the effective prevention of the IWT and allow offenders of wildlife crimes to evade investigation, arrest and prosecution. These include the low application of provisions in existing laws on the use of special investigative techniques in wildlife crime cases and provisions targeted at Transnational Organized Crimes, underfunding of IWT enforcement agencies with only the DNP having a dedicated budget line for IWT enforcement activities, complex administrative procedures and the lack of specialized training on IWT as an organized crime among law enforcement agencies. Cooperation and coordination are generally insufficient on IWT enforcement. For example, the Thailand Wildlife Enforcement Network, established to coordinate activities between national IWT agencies - is not currently fulfilling this task, communities are not engaged in IWT enforcement and data are dispersed across agencies making it impossible to understand the big picture. In terms of efforts to raise awareness and reduce demand, campaigns have not focused enough on understanding social norms and the factors driving demand and consumer networks. In terms of capacity, many of the agencies involved in IWT require additional manpower, especially to better enforce activities on the ground. Training is also required on the use of investigative techniques.

Under **EPITES** existing legal provisions, for example under the Customs Act amended in 2005 and the Act of Prevention and Suppression of the Participation in Transnational Organized Crime BE 2556 (2013), which provides the legal basis for the use of special investigative techniques are put into operation. There are investments in law enforcement to improve its effectiveness including increased coverage of SMART patrols, support to the NED and Border Patrol Police operations, strengthening of the DNP's Wildlife Forensic Science Unit (WIFOS) and establishment of a special unit within NED focused on suppressing the growing on-line trade in IWT. Cooperation and coordination are improved through the strengthening of Thai-Wen, enhanced collaboration and information sharing with regional and international organizations, the development and application of a harmonized central IWT database to address the current fragmentation of data across various agencies, and the introduction and upscaling of community engagement in transboundary enforcement networks. To enhance awareness and reduce demand EPITES sees more targeted, nuanced and sustained demand reduction campaigns led by the Government and activities to increase awareness among government, judiciary and consumers of the impacts of IWT and penalties.

The BAU scenario is elaborated on in Section 3.1, and EPITES in Section 3.2. These scenarios have been developed based on discussions with stakeholders and a literature review.

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<sup>11</sup> This institutional context is presented in detail in Annex 5.

**Table 1: Overview of BAU and EPITES**

	BAU characteristics	ENHANCED PREVENTION OF ILLEGAL TRADE IN ENDANGERED SPECIES (EPITES)	
		GEF IWT project initiatives (2019-2023)	Additional initiatives / needs
<b>Legislation</b>	<p>Key legislation includes:</p> <ul style="list-style-type: none"> <li>• Wild Animal Reservation B.E. 2562 (2019).</li> <li>• Ivory Trade Act, B.E. 2558 (2015)</li> <li>• National Park Act B.E. 2504 (1961)</li> <li>• Customs Act B.E 2548 (2005)</li> <li>• Export, Import of Goods Act, B.E. 2558 (2015)</li> <li>• Anti-Money Laundering Act (AMLA) B.E. 2559 (2016)</li> </ul>		<p>Full use of existing legal provision for addressing TOC. Utilize 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 access (Krishnasamy and Zavagli, 2020)</p>
<b>Policies and plans</b>	<p>In principle, Thailand’s policy framework is conducive to controlling illegal wildlife trafficking. Policies and plans include - Draft Plan of Action 2015-2025 (POA) for ASEAN Cooperation on CITES and Wildlife Law Enforcement. Thailand Tiger Action Plan (2010-2022) and CITES National Ivory Action Plan (NIAP) introduced in 2015.</p>		<p>EPITES is not considering new policies and plans but is focused on the actions needed to implement existing plans. The POA can serve as a bases for all public agencies involved in combatting IWT to submit a jointly agreed budget for approval by the Government. Once approved, each agency could then be allocated a budget to execute their tasks within the POA.</p>
<b>Law Enforcement (From seizures to successful convictions)</b>	<p>Key challenges are: Limited financial resources with most agencies financing activities to combat IWT through their normal budget (i.e., there is no specific budget allocation for IWT); Bottlenecks and resources constraints hinder rates of convictions following seizures.</p>	<p><b>Development of advance investigation techniques</b></p> <ul style="list-style-type: none"> <li>• Use of controlled deliveries</li> <li>• Covert human intelligence source (CHIS) recruitment and management</li> <li>• Electronic intelligence databases (and intelligence analysis software)</li> <li>• Equipment for cell phone analysis (NED police)</li> <li>• Additional intelligence analyst and investigative staff (NED police)</li> </ul> <p><b>DNP’s Wildlife Forensic Science (WIFOS) laboratory</b> - Development of WIFOS scientific equipment, DNA tests and other forensic</p>	<p>Sustain initiatives of GEF-IWT project. In addition:</p> <ul style="list-style-type: none"> <li>• Upscale SMART patrols</li> <li>• Increase support to NED: (i) Include conducting investigative techniques as part of NED’s mandate; (ii) Allocate resources to strengthen NED and DNP collaboration on the ground (e.g., ivory patrols); Streamline administrative process to avoid delays in the communicating the findings from NED/DNP to expediate uptake by higher levels of investigation such as DSI, NACC and AMLO; (iii) Develop</li> </ul>

	BAU characteristics	ENHANCED PREVENTION OF ILLEGAL TRADE IN ENDANGERED SPECIES (EPITES)	
		GEF IWT project initiatives (2019-2023)	Additional initiatives / needs
		<p>techniques, and human capacity for analysis and evidence handling.</p> <p>Equipment and training for frontline enforcement officers e.g., identification of wildlife specimens and products and chain of custody evidence handling.</p>	<p>specialized unit within NED, with seconded staff from DNP to track illegal online activity. Develop a work protocol for NED and DNP to collaborate on IWT</p> <ul style="list-style-type: none"> <li>Strengthen illegal online activity of wildlife on commercial trade platforms and trade via social media, working with online business, including the Coalition to End Wildlife Tracking Online, and transport / logistics companies</li> </ul>
<p><b>Cooperation, coordination, information management and exchange</b></p>	<p>Insufficient cooperation between national agencies and with regional and international partners.</p> <p>The Thai-WEN institutional structure is in place, but it is not operational and without influence.</p> <p>Budgets and reporting systems are organization specific and interagency cooperation is difficult to operationalize.</p> <p>Limited community engagement in IWT enforcement.</p> <p>There is no meta database of information on IWT and data sharing is complicated by the different definitions and units used by the various agencies collecting IWT data.</p>	<ul style="list-style-type: none"> <li><b>Strengthen the effectiveness of Thailand WEN</b> to coordinate efforts to reduce IWT through more comprehensive membership (e.g. including anti-money laundering and anti-corruption agencies), a clear strategy and action plan, organizational structure including operational task forces, information sharing mechanism and inter-agency training programme.</li> <li><b>Strengthen information management</b>, analytical capacity and evaluation of joint law enforcement operations to increase wildlife crime detection and enforcement effectiveness. For example, integrate and upgrade online wildlife registration/CITES e-permitting procedures and develop electronic case management system (DNP)</li> <li><b>Demonstrate an integrated approach to wildlife crime surveillance and enforcement</b> at two key border crossing points, including community engagement.</li> <li><b>Information exchanges with regional and international governments and NGOs</b> working on trafficking of selected species enhanced through improved co-operation and co-ordination between wildlife forensics</li> </ul>	<p>Sustain initiatives of GEF-IWT project, conditional on a positive assessment of the impact of the GEF/IWT inputs based on clear performance indicators.</p> <p>Upscale integrated approach to wildlife crime surveillance and enforcement, and ensure equitable sharing of benefits from wildlife conservation / tourism</p>

	BAU characteristics	ENHANCED PREVENTION OF ILLEGAL TRADE IN ENDANGERED SPECIES (EPITES)	
		GEF IWT project initiatives (2019-2023)	Additional initiatives / needs
		laboratories in ASEAN/Asian and African countries. Regular monitoring of physical/online market availability of CITES-listed species in Thailand	
<b>Awareness / Demand reduction</b>	<p>More targeted and nuanced campaigns, led by the Government, are needed to reduce demand.</p> <p>Awareness raising needed across government and law enforcement agencies.</p>	<ul style="list-style-type: none"> <li>• Increase awareness of the existence of law including strong evidence of law enforcement/punishment in order to reduce demand and deter wildlife crime.</li> <li>• Increase awareness among senior government leaders that IWT has been officially recognized as serious crime by ASEAN Senior Officials' Meeting on Transnational Crime (SOMTC) and needs to be treated as such during all aspects of law enforcement.</li> <li>• <i>Economic assessment of the losses attributable to IWT affecting the national economy to strengthen understanding of the issue by national, public and private decision-makers. (this TSA)</i></li> <li>• Establish Coordination Community and community of practice on demand reduction</li> <li>• Social and behavioral change communication with focus on illegal ivory and tiger products</li> </ul>	<p>Sustain initiatives of GEF-IWT project, conditional on a positive assessment of the impact of the GEF/IWT inputs based on clear performance indicators</p> <p>Work with priority industry sectors including e-commerce and social media, travel and tourism, and transport and logistics, medical practitioners and the traditional medical community to influence supply chains, market availability and consumer preferences</p>
<b>Capacity</b>	<p>Limited capacity across wildlife offices, police and judicial systems.</p> <p>Weak capacity in the use of investigative techniques.</p> <p>Weak law enforcement capacity.</p>	<ul style="list-style-type: none"> <li>• Training and capacity building in forensic and investigative techniques</li> </ul>	<p>Training / capacity building in: (i) investigative techniques (both physical and on-line trading); (ii) reporting systems that can speed up the process of information exchange between DNP and NED to the Office of the Attorney General; and, (iii) enhancing capacity of law enforcers through regular training and international collaboration.</p>

### 3.1 BAU baseline

The BAU includes the mix of policies, actions and technologies that make up the current status quo, and their impacts, across the IWT supply chain as discussed below.

#### LEGISLATION

While it is too early to assess its effectiveness, Thailand's recently revised WARPA, 2019 has strengthened legislation on IWT. For example, it has addressed a loophole for traffickers by including non-native CITES species and significantly increased penalties. However, a number of weaknesses are evident in terms of the application of other legislation. For example, there have been observations that while the **Act of Prevention and Suppression of the Participation in Transnational Organized Crime BE 2556 (2013)** provides the legal basis for the use of special investigative techniques in wildlife crime cases, the courts do not accept this evidence as they do in drug-related cases (ICWC, 2019). During the validation workshop however, the representative of the Office of the Attorney General countered that it should not be a problem to use the results of special investigative techniques as evidence in court if the correct protocols are followed. It was also observed that there is a need to amend existing laws on advance investigative techniques, and that while the National Anti-Corruption Commission has proposed amendments a number of times these have not been approved by Parliament.

It was also noted that law enforcement agencies in Thailand investigating or prosecuting Transnational Organized Crimes (TOC) related to wildlife often revert to legislation focused on domestic wildlife crime, which fails to sufficiently address and enforce the transnational or organized nature of wildlife crimes and results in offenders not being treated as severely as they should be. There are several provisions in various laws that could be used to address transnational organized wildlife crime or the crimes that facilitate them including corruption and money laundering, but the laws have not been used to date. Some of these laws are extremely relevant in terms of penalties for the most serious forms of wildlife crimes. For instance, the **Customs Act** amended in 2005 provides for a maximum penalty of 10-year imprisonment for the import or export of restricted goods such as CITES-listed species (UNODC, 2017). The **Act of Prevention and Suppression of the Participation in Transnational Organized Crime BE 2556 (2013)** Section 3 defines TOC as a serious crime with 4 -15 years in prison where there is direct or indirect financial benefit (UNODC, 2017).

#### POLICIES AND PLANS

In relation to specific species, the following plans are of note **Thailand Tiger Action Plan (2010-2022)** and the **CITES National Ivory Action Plan (NIAP)** introduced in 2015<sup>12</sup> to strengthen control of the trade and to apply measures to combat the illegal trade in Asian and African ivory.

#### LAW ENFORCEMENT CHALLENGES (FROM SEIZURES TO CONVICTIONS)

Thai authorities have had a number of successful enforcement outcomes, for example in May 2016, the "Tiger Temple Wat Pa Luang Ta Bua was raided and 137 tigers removed, and in 2018 a 4-year jail sentence was given to a former prosecutor and associate from Saraburi province for attempting to smuggle 21 rhino horns into the country.

In 2016 the Tiger Team was established which operates under the Forest Protection Operation Centre, DNP consisting of a team leader, a legal advisor and an IT person. It operates in all provinces and reports directly to the DNP Director General. Through the Tiger Team, the DNP aims to take a more proactive role to protecting forests and natural resources. It uses

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<sup>12</sup> CITES at <https://cites.org/sites/default/files/eng/com/sc/67/E-SC67-13-A5.pdf>

Facebook to share information and between 2018 and 2021 reported 43 cases of illegal wildlife trade with a total value of 1,417,233 Baht (USD 43,701). To address the growing online trade in illegal species the DNP created the Wild Hawk Group in 2017 as a working group to monitor illegal activities related to wildlife on the internet. Since its establishment, the Wild Hawk Group has intercepted gibbon, hornbills, owls, boas and pythons resulting in 33 arrests, some 1,000 wildlife rescues and the confiscation of 250 carcasses. In December 2020, for example the Wild Hawk Group was able to intercept two illegal wildlife crimes with a trade value of 688,000 Baht.

Box 2 provides an overview of seizures of illegal wildlife in Thailand.

#### **Box 2: Overview of IWT Thailand**

- More than 22,300kg of **ivory** seized between 2009-2019 implicated in Thailand.
- Over 14,500 **ivory products** were observed for sale in Bangkok in 2013, dropping to around 200 products during surveys between 2016-2019. However, surveys outside of Bangkok in 2019 show thousands more for sale elsewhere in the country
- At least 111 **rhino horns** and pieces were selected in Thailand from 2012-2017
- More than 4,500 **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 Turkey
- In January 2019, 1,600 bear claws and **tiger parts** were seized in a smuggling attempt to Lao PDR
- 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 Helmeted Hornbills
- 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 Otters.
- At least 351 **tigers** were seized from 2000-2018, with at least 172 of them being from captive facilities
- In November 215, 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 - 10 times more than what CITES trade records for legal imports show
- Thailand made the largest seizure of CITES Appendix I and Critically Endangered Ploughshare Tortoise – 54 animals were seized in March 2013. From 2008-2013, at least 417 CITES Appendix I and Critically Endangered Radiated Tortoise seized. None of these animals were known to have been repatriated to Madagascar and the status of animals is unknown.

**Source:** Krishnasamy and Zavagi, 2020

However, a number of challenges remain in Thailand's fight against illegal wildlife traffickers as discussed below.

**Limited financial resources.** The budget available to tackle global level organized crime is insufficient. Although there are a large number of agencies involved most of them do not have a dedicated budget line for addressing wildlife crime, and hence do what they can when situations arise. The Natural Resource and Environmental Crime Suppression Division (NED) of the Royal Thai Police for example does not have a specific budget or staff allocated to IWT, unlike for human trafficking, suggesting that it is not afforded much weight by policy makers. The increased in online activities present new and fast changing challenges for enforcement agencies, but unlike for human trafficking there is no government budget allocated to monitor online IWT activities. The performance of the Hawk Group and Tiger Team discussed above, suggest that it would be worthwhile to afford their work more recognition and additional funding that is more targeted to the operational level. For AMLO the budget allocated to wildlife crimes is negligible (discussed further below). However, AMLO does not see this as a critical

constraint as it is possible to request reallocation of budget to investigate money laundering related wildlife crimes provided that the objectives and the expected outcome of the request for budget relocation can be justified.

**Low conviction rates encourage traffickers who perceive the risks as low and the potential gains as high.** When there are a high number of seizure cases, bottlenecks occur and many cases do not even reach court<sup>13</sup>, while the high administrative burden of reporting a IWT crime by NED for example, slows down the process and means that they do not have the resources to investigate the more significant actors behind these crimes. When there are arrests following seizures, law enforcement agencies often do not follow through and when cases do reach the courts, some judges are unfamiliar with wildlife crime and its seriousness. **The Office of the Attorney General (OAG)** is more involved in cases relating to seizures and confiscation as opposed to investigations of organized crimes which fuels the illegal trade. It does not have a specialized branch that deals with wildlife crimes, nor any specialized training on wildlife crime or guidelines on what is required to build evidence against the accused or sentencing guidelines. However, the OAG has started to engage more, and has proposed to set up a separate office to handle environmental crimes, which is in line with the ongoing judicial reform (Wongruang, 2019)<sup>14</sup>. Based on the ICCWC (2019), prosecutors in Bangkok are limited, while technical capacity is a limitation for provincial prosecutors.

## **COORDINATION AND INFORMATION MANAGEMENT AND SHARING**

**Insufficient cooperation between national agencies.** Laws and regulations that directly and indirectly control trade in CITES species are administered by several different authorities as presented in Annex 5. While this can be advantageous given the complexities of illegal wildlife trade, it has often been observed that overlapping responsibilities can also be a hindrance, if not well coordinated. Over the past 10 years Thailand has attempted to promote effective inter-agency cooperation through the Thailand **Wildlife Enforcement Network**<sup>15</sup>. However, Thailand WEN, as a centralized multi-agency task force, needs more support to be effective. It lacks information and intelligence systems and the exchange and flow of law enforcement information happens on a case by case basis. While Thai-Wen has an agreed institutional structure and the potential to bring about collaboration, a commonly held view is that at present, it is not fulfilling this task. The agencies involved are reportedly still operating almost exclusively within their own sphere of work, hence there is limited cooperation. It is also inadequately resourced. Examples of on-going cooperation are provided in Box 2.

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<sup>13</sup> The Department. of Customs seizes, arrests and conducts preliminary investigation. It then hands cases over to the police who are required to undertake a thorough investigation and file a lawsuit with the Courts within 48 hours.

<sup>14</sup> Piyaporn Wonhruang, 2019. Wildlife trafficking: a global scourge. The Nation Weekend. September 2019

<sup>15</sup> Importantly, the OAG is reportedly represented in the new structure of Thai WEN, which should support an increase in the rates of conviction.

### **Box 2: Current IWT enforcement coordination initiatives**

Cooperation between the Royal Thai Police Department, DNP, and **Thai Customs Department** has increased enforcement of ivory smuggling in high risk areas and at borders, seaports, airports and online. **Task force units**, comprised of Royal Thai Police departments and DNP cooperating in rotation, have been established to implement and better monitor and regulate ivory shops in Thailand. They have also been dispatched in several risk spots such as tourism hotspots and country borders, to enable better inspections and monitoring to suppress ivory crime. Registered ivory shops have been inspected and their business monitored monthly by 22 ivory shop patrol teams nationwide. Before the Elephant and Ivory Act B.E 2558 (2015) there were 339 ivory shops (November 2014), as of May 2020 there were 113 (Thailand's report on the implementation of CITES Decision, 2020).

The **Thai Customs** Department has cooperated with source, transit, and destination countries (such as Singapore, Lao PDR, and Cambodia) in order to strengthen efforts to intercept wildlife trafficking by trafficking syndicates, which has resulted in seizures of illegal wildlife. Strict inspections of travelers and cargo at checkpoints in international airports, seaports, and country borders have utilized the latest available technologies such as the Case Management Investigation System (CMIS), the Risk Management System, the Facial Recognition System Detection, the Railway Cargo Inspection System, and the usage of stationary and mobile X-rays in the inspection of cargos and passenger baggage (Thailand's report on the implementation of CITES Decision, 2020).

The Office of the Attorney General (OAG) intends to sign an MOU with the Department of Customs on TOC on controlled deliveries although no concrete progress has so far been made.

**Limited community engagement in IWT enforcement.** The World Bank (2019) recognizes the important role that local communities can play in combatting illegal activities. In Thailand local communities are seen as important potential partners in combatting the illegal trade in wildlife but their involvement has been limited and informal to date. The Mid-term review of the TIGER project noted that more incentives and recognition were needed to encourage DNP staff to engage in community related work. For example, community work could be included as a KPI. As DNP is placing increasing emphasis on community engagement as a tool for sustainable PA management, it was also suggested that a focal point / division be established at DNP to coordinate and provide support to PAs on community outreach and alternative livelihood development. It could initially start as an internal/informal unit within relevant divisions (e.g., Wildlife Protection, National Parks Management) and be equipped with skills in community development/capacity building. This focal unit could also coordinate support for other related agencies at the national and local level in community livelihood development activities (Bann and Worakul, 2018)<sup>16</sup>.

**Limited information management and sharing at all levels.** There is no meta database of information on IWT and data sharing is logistically complicated by the different definitions and units used to record information on IWT by the various agencies. Each agency has their own system of compiling data which is difficult for others to understand. Even within the DNP, data collected by divisions related to specific segments of the IWT are not collated with the result that individual divisions are unaware of the broader picture. IWT related data needs to be collated and centralized across divisions to understand the full pressure points along the IWT supply chain. Decision making is hampered by the current system.

Most prosecutions for wildlife-related offences occurs in the provinces, however, as there is no centralized data management system for prosecutions, it is difficult to obtain

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<sup>16</sup> Bann and Worakul, 2018. UNDP-GEF Midterm Review - Strengthening Capacity and Incentives for Wildlife Conservation in the Western Forest Complex. UNDP PIMS 5436 & GEF project ID4677

comprehensive information about the number of prosecutions throughout the country (UNODC, 2017). At the international level, Information from international organization like INTERPOL Wildlife Crime Working Group is rarely received. This shortcoming is linked to the inadequate collaboration between the concerned agencies.

The issue of data sharing was extensively discussed both during the validation workshop and through bilateral meetings with concerned agencies such as the DNP, DSI, Department of Customs and AMLO. The overall finding is that while data sharing is seen as essential, it is not clear how well this can work in practice under the current system. Data sharing is more common with international agencies in relation of transnational crimes. Data sharing related to the domestic illegal wildlife trade on the other hand, tends to be on an informal basis after the crimes have been committed and is based on the long-term working relationship of focal points in the various Departments. Hence, should the focal point change, there might be some discontinuity while new working rapports are established.

**Limited cooperation with regional partners and international partners (especially in Africa).** International cooperation is essential given the transnational nature of the IWT. Legislation between countries in the region must be harmonized and complementary and the global law enforcement community cohesive and coordinated if powerful criminal syndicate are to be convicted. Thailand has shown leadership through the Special ASEAN Ministerial Meeting on Illegal Wildlife Trade in Chiang Mai (21-22 March 2019). However, its ability to lead is hampered by a lack of capacity and national investment in IWT.

#### **AWARENESS AND DEMAND REDUCTION**

Thailand has an on-going **awareness raising campaigns** (e.g., “No Ivory, No Tiger Amulets”; “no consuming, no buying, no hunting, no selling, no contracting disease, and no animal extinction”) among the main target groups are foreign tourists, ivory traders, ivory owners and the general public.

**Lack of targeted and nuanced campaigns aimed at reducing demand.** Officials and communities along wildlife trade routes often do not consider wildlife trafficking to be as serious or immoral crime compared to drug trafficking. To date most wildlife trade campaigns have lack the messages and evidence needed to create social pressure and reduce consumer demand and increase risk perceptions and hence deter crime. Past consumer surveys have estimated demand and captured information on the public’s opinion and awareness of the IWT but did not measure or identify social norms, factors driving demand and consumer networks which are needed to develop an effective demand reduction campaign. Surveys of trends and public attitude toward IWT have also been conducted on an *ad hoc* basis – mainly led by international NGOs, media support for IWT campaigns has been limited to passive reporting (conferences, press release) and investigative reporting has been conducted sporadically by foreign journalists and researchers.

#### **CAPACITY**

**Limited capacity of wildlife officers, police and justice system.** The discussion on how to improve the capacity of those involved in management and control of illegal wildlife trade seems to have overlooked the need to build and strengthen the base of the operation, that is DNP and NED’s staff working on the ground. DNP’s check points for example are manned by an average of 3 people per check point. The number of NED’s police officers per province is also around 3 staff members. The officers are overloaded with the day to day tasks as well as preparing reports to submit to the Office of the Attorney General, which severely limits the scope for investigative follow up. The same can be said for DSI, NACC, AMLO, the Department of Customs, where there are no special divisions or staff specifically assigned to wildlife crimes. The agencies allocate manpower to wildlife cases as they come in.

**Limited use of advanced investigative techniques by Thai law enforcement agencies such as DNP and NED.** Table 2 provides an overview of current advanced investigative capabilities to investigate organized global wildlife crime. They include controlled deliveries, the interception of communications on devices such as telephones or computers, the use of tracking devices, and covert recording devices to provide real-time monitoring of a suspect's conversations and movements. Investment is needed to increase the manpower to undertake special investigation, development skills and purchase equipment. Equally important is creating a clear career path and financial incentives for staff.

**Table 2: Advanced Investigations Capabilities**

	<b>DNP</b>	<b>FD</b>	<b>NED</b>	<b>DSI</b>	<b>AMLO</b>	<b>Customs</b>	<b>NACC</b>
<b>Use of controlled deliveries</b>	No	No	Limited	Yes	No	Yes***	No
<b>Forensic Capacity Including telephone or computer</b>	Yes*	No	Limited	Yes	Yes*	Yes*	Yes*
<b>Availability of CHIS database</b>	No	No	No	Yes	No	No	No
<b>Availability of linked case database</b>	No	No	No	Yes	Yes	Yes	Yes
<b>Intelligence database</b>	No	No	Limited	Yes	Yes	Yes	No
<b>Surveillance capacity</b>	Yes	Yes	Limited	Yes	Yes	Yes	No
<b>Undercover operation capacity</b>	No	No	Limited	Yes	Yes	No	No
<b>Telephone Intercept capacity</b>	No	No	Yes**	Yes	Yes	No	No
<b>Tracking or Listening Devices</b>	No	No	Yes**	Yes	Yes	Mo	No

**Notes:** \* - with RTP cooperation; \*\* - New TOC law; \*\*\* - usually applied to narcotics matters only

**Source:** UNODC, 2017, updated with project information.

A number of judges are unfamiliar with wildlife crime and its seriousness. The capacity of law enforcers needs to be enhanced through regular training and collaboration among concerned law enforcers across the continents of Africa and Asia. Based on the ICCWC (2019), law enforcement trainings on Illicit Trafficking in Wildlife and Timber have been provided by UNODC, INTERPOL, USAID, and an ASEAN WG, but additional training is needed. Law enforcement officers in the DNP for example, need training on investigation techniques and providing testimonies in court. There is also a lack of knowledge in the police force on wildlife laws. Trainings are limited in number and attendees catered for and hence officers mostly learn through their own experiences (ICCWC, 2019).

Under Activity 3.1.2 of the draft POA for ASEAN Cooperation on CITES and Wildlife Law Enforcement (2016-2020), it was proposed that collaborative training sessions be organized on CITES and wildlife law enforcement at national, bilateral and multilateral levels for customs, police, quarantine and veterinary inspectors, Forestry Department, Wildlife Department, Fisheries Department, prosecutor and judges, port/airport authorities, private sectors and CITES authorities. The trainings would cover specific skills such as species identification, handling of information and sharing of intelligence, developing and sharing advanced forensic, identification and marking systems, exchanging technical expertise such as laboratory analyses, tissue samples and genetic materials to build up a DNA database for forensic analyses of CITES wildlife specimens and controlled delivery. It is not clear how much of this capacity training was undertaken, or the budget allocated to it.

**3.2 Effective Prevention of Illegal Trade in Endangered Species intervention scenario**  
 EPITES as the intervention scenario includes better enforcement of existing laws, increased levels of investments and improved enforcement across the IWT supply chain as discussed below. The GEF IWT project forms a core part of EPITES, addressing many of the limitations of the BAU. However, given that the GEF IWT project will end in 2023 it is important to consider how the investment made by the GEF IWT project will be sustained and what in addition is needed. Realizing EPITES will require increased investment and financial flows.

EPITES is built on an understanding of the shortcomings of the BAU, global best practices (Box 3) and on-going initiatives supporting IWT in Thailand in the short term.

**Box 3: Five generic principles for a global action plan on combatting IWT**

The World Bank documented lessons learned from 20 international donor-funded projects aimed at combating illegal wildlife trade to create five generic principles for a global action plan:

- Recognize the rights and important role of local communities, notably indigenous peoples, in managing natural assets and combating illegal activities;
- Adopt an integrated national strategy for dealing with illegal activities across the supply chain;
- Recognize illegal activities in natural resources trade as a serious transnational organized crime;
- Enable public-private-partnerships; and,
- Scale up funding.

The first four principles apply at the local and national levels, while the last principle applies more to the global level. At the national level, complementary and coordinated actions need to take place at both local and national jurisdictional levels.

**Source:** World Bank, 2019. More details are provided in Annex 6.

## LEGISLATION

**Full use of existing legal provisions.** As discussed above, there are several provisions in various laws that could be used to address transnational organized wildlife crime or the crimes that facilitate them including corruption and money laundering, but the laws have not been used to date. These include the **Customs Act** amended in 2005 and the **Act of Prevention and Suppression of the Participation in Transnational Organized Crime BE 2556 (2013)**, which provides the legal basis for the use of special investigative techniques. Under EPITES these laws are put into operation.

**Monitoring of impact of WARPA.** Given that there has recently been a major revision to the key legislation addressing the IWT, EPITES does not incorporate the development of new legislation as it will take time to understand the effectiveness of WARPA 2019. WARPA 2019 provides for a substantial increase in fines and penalties. However, it will be important to review how well the WARPA 2019 is meeting the evolving challenges of the IWT and whether new legislation is needed based on the Government's routine review due in 2024.

## IMPROVEMENTS IN LAW ENFORCEMENT

**Investing in on the ground-operations.** Investments are needed in DNP SMART Patrols to increase their coverage to all National Parks (NP) and Wildlife Sanctuaries and DNP checkpoints. Investment is also needed in NED and Border Patrol Police Operations in the field (e.g., enhancing investigative techniques) to expand their role beyond intercepting carriers and submitting reports to the Office of the Attorney General to uncovering organized crime groups.

**Enhanced investigation capabilities such as use of controlled devices, Covert Human Intelligent source (CHIS) and development of DNP's WIFOS laboratory.** The DNP's Wildlife Forensic Science Unit (WIFOS) is recognized as one of the leading wildlife forensics laboratory in Southeast Asia, supporting law enforcement and investigations. However, WIFOS is facing operational difficulties particularly in terms of manpower and budgets and cannot effectively fulfil its assigned responsibilities. To operate at full capacity and enhance its functionality, its manpower needs to better match the workload and the status of WIFOS should be elevated so that its work is not disrupted depending on the Division to which it is attached. The strengthening of WIFOS to enhance its functionality is a component of the GEF-IWT project and is supported beyond the GEF project under EPITES.

**Monitoring / crack down of on-line sales.** Trade in wildlife and wildlife products is moving online and criminals can be quick to switch to online platforms to avoid detection. Online trade is particularly difficult to address due to its hidden nature, inconsistent regulatory frameworks, and limited specialized law enforcement capacities (UNODC, 2020) but can be expected to grow in the future.<sup>17</sup> In anticipation a special unit within NED focused on on-line trade, similar to the units already established for human trafficking and drugs trafficking, and with staff seconded from DNP is proposed. This would complement the work of the Wild Hawk Group. In addition to training for the staff in this newly established unit, a system needs to be put in place for the timely sharing of information with concerned agencies so that follow up actions can be swiftly undertaken.

## **IMPROVED COORDINATION AND INFORMATION MANAGEMENT AND SHARING**

**Improved inter-agency coordination and cooperation** through strengthening the effectiveness of Thai-WEN. Based on stakeholder consultations for this study, it would appear there is a critical need to move from the agreed principles of collaboration to concrete actions. This requires jointly working out a plan of action, assessing budget requirements needed for the responsible agencies to execute tasks, setting out outcome indicators and regular sessions to monitor progress and discuss reasons for operational delays or gaps.

Thai-Wen should become an institutional mechanism to eliminate the *ad hoc* approaches in which agencies are executing their mandates to combat illegal wildlife. Currently, Thai-Wen doesn't reach the highest-level decision makers, unlike drugs trafficking where issues are reported directly to the Prime Minister. At the provincial level the capacity of Provincial-Wen needs to be developed to enable it to become a proactive body.

**Enhanced collaboration and information sharing with regional and international organization (especially in Africa).** Poaching levels are relatively low in Thailand, but Thailand is a key transit country for IWT hence its role in the trafficking of wildlife needs to be given due weight and attention, so that it can cease to be a transit hub. Controlling the trafficking of wildlife is impossible without global cooperation. Thailand can contribute to this global cooperation through its enforcement officers strengthening their international alliances, and intelligence sharing. Thailand is well placed to do this under ASEAN Regional Action Plan (Lead shepherd). Under EPITES this role is supported through capacity building (joint trainings) and investment (but has not been costed).

**Establishment of a specialized wildlife crime inter-agency team.** UNODC 2017 highlights the creation of a specialized wildlife crime inter-agency team to target the upper levels of organized crime in Thailand as a priority. Such a team would have several advantages over the current system including; (i) developing closer relationships between agencies and leveraging each agency's investigative strengths and resources; (ii) generating trust and awareness; (iii) reducing corrupt practices; and, (iii) promoting a unified message on wildlife crime. Under Activity 3.1.2 of the Draft POA for ASEAN Cooperation on CITES and Wildlife

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<sup>17</sup> The IWT-GEF project plans to undertake an assessment of market availability (physical and online) for all CITES-listed species in Thailand and system for monitoring of market response before and after the revised WARPA legislation (building on TRAFFIC's information base on ivory, reptiles and birds and monitoring of seizure patterns and case management for pangolin, tiger and rhinoceros horn). This supports implementation of CITES Decision 17.92. All Parties should: a) provide the Secretariat with any changes or updates to domestic legislation that pertain to wildlife cybercrime as well as any other relevant domestic measures; b) provide the Secretariat any best practice models that pertain to regulation of online marketplaces and social media platforms, including enforcement protocols; and c) seek input from purveyors and owners of online marketplaces and social media platforms for the purpose of sharing any relevant information with the Secretariat.

Law Enforcement, it is proposed that collaboration is needed with relevant agencies to investigate money-laundering and other financial crimes linked to wildlife trafficking.

**Holistic and integrated information management.** EPITES includes the development and application of a harmonized central IWT database to address the current fragmentation of data across various agencies, and the use of different metrics and reporting formats. The GEF-IWT project is supporting DNP to develop the former ASEAN WEN Project Coordination Unit database on wildlife crimes, develop and maintain an electronic case management system at DNP for all species covered by the WARPA revisions in order to monitor law enforcement effectiveness, and identify areas of weakness for attention, in collaboration with potential law enforcement agencies. The GEF-IWT Project has also supported DNP to integrate and upgrade the online CITES registration of existing non-native species in Thailand (live and products), organize database elements on species in trade, and develop CITES e-permitting procedures in line with the national single window/ASEAN single window, to strengthen business process and information management efficiency and address new needs arising from the WARPA revisions.

**Increased community engagement in transboundary enforcement network and improved local livelihoods.** Communities that live close to wildlife can play an important role in preventing crime at source and forming a 'first line of defense.' Community-led patrols and community-based crime prevention initiatives can be vital extensions of national law enforcement networks. Under the GEF-IWT project an integrated approach, including communities, to wildlife crime surveillance and enforcement will be piloted at two key border crossing points – in Pengjan village, Nongkai village and Sadao border checkpoint (see Annex 8). This could include increasing the incentives for local communities to act as elephant stewards and strengthening the ability of frontline staff to prevent elephant poaching, and to address the trade in Pangolin. The integrated enforcement approaches developed and supported by GEF-IWT need to be resourced beyond the GEF IWT project and upscaled nation-wide. Such approaches can build on existing models, for example, the National Anti-Corruption Committee has a network of local community watchdogs known as 'strong society,' who work informally for around 500 Baht a month. NED also have unpaid informers at the area level.

## **AWARENESS AND DEMAND REDUCTION**

**Targeted, nuanced and sustained demand reduction campaigns led by the Government.** Under EPITES, demand reduction initiatives are evidence-based, species-specific and community-specific and culturally sensitive. Activities are also undertaken to increase awareness among government, judiciary and consumers of the impacts of IWT and penalties.

## **CAPACITY BUILDING (CROSS-CUTTING)**

Capacity building is required under EPITES (based on interviews with the stakeholders) in: (i) investigative techniques (both physical and on-line trading); (ii) reporting systems that can speed up the process where information is passed on from DNP and NED to the Office of the Attorney General; and, (iii) enhancing capacity of law enforcers through regular training and international collaboration.

Box 4 provides a snapshot of the role Thailand plays in the trafficking of elephants ivory, tiger parts, pangolin and rhino horn. Please refer to Annex 7 for a detailed overview of the status, IWT trade, policies, plans and legislation and consumers and consumption patterns for each of these IWT project focus species.

#### **Box 4: FOCUS SPECIES – ELEPHANTS, TIGER, PANGOLIN AND RHINO HORN**

**Elephants:** The illegal ivory trade remains an on-going problem, with wild elephants still being 'camouflaged' as domesticated elephants. While the strong conservation argument would be to shut down the domestic trade completely (the preferred CITES option), the Thai Government has opted to manage the domestic market and the risks associated with this. Notwithstanding on-going concerns, there have been significant improvements with Thailand being removed from the NIAP watch list in 2018. There is the opportunity for Thailand to show leadership in elephant restoration / human treatment of elephants.

**Tigers:** Thailand plays a source, consumer and transit role for tiger parts and products heading elsewhere in Asia (Krishnasamy and Zavagli (2020)). Leakage of tigers from captive facilities for illegal trade is still seen as a risk. In 2015, 1,151 tigers were privately held in captive breeding facilities, and in 2018 this increased to a reported 1,464 living individuals and 25 carcasses. Overall, 10 facilities in Thailand were identified as being of concern, including the now closed down Tiger Temple (DNP Report, 2020)<sup>18</sup>. Tightening of zoo licenses and standards are required as well as on-going development of DNP's forensics capability.

**Pangolin.** Thailand is a significant transit (and to a much lesser extent source) country for the pangolin trade and pangolins and their parts continue to be smuggled into and out of Thailand via land, river, and air channels.<sup>19</sup> Thailand WEN reported 34 pangolin seizures, including 5 seizures in 2016 totaling 427 heads/3,052 kgs, and 2 seizures in 2017 with 66 heads/1,000 kgs. Most of the pangolins entering Thailand come from Indonesia. They pass through one of three Thai-Malaysia border crossings – Sadao in Songkhla, Betong in Yala and Sungai Kolok in Narathiwat provinces

**Rhino.** Thailand's international airports function as major transport hubs between Africa and Viet Nam and act as key pathways for the illegal trade in rhino horn. Of all the seizures of rhino horn between the period 2009 – **2014 Thailand ranked third** as country of destination after Viet Nam and China. While there is neither demand nor supply of rhino horn in the Thai market, smugglers use Thailand as a transit hub – illustrated by seizure in March 2017 at Bangkok airport.<sup>20</sup> The rhino horns going to Thailand<sup>21</sup> are probably destined for either Viet Nam or China. Based on World WISE data between 2014 and 2019, more than three-quarters of the rhino horn (by weight) was destined for China and Viet Nam (UNODC, 2020).

Enhanced monitoring and investigative practices are needed to stop pangolin and rhino horn being transited through Thailand, both by air and overland.

<sup>18</sup> Facilities may be of concern either: a) on the basis that the number of tigers being kept at such facilities was questionable since it exceeded what was necessary for conservation of the species; or b) on the basis of information that came to the attention of the Secretariat in the course of its regular work that the facility might be involved in illegal trade (CITES CoP18 Doc. 71.2, 2019).

<sup>19</sup> <http://www.channelnewsasia.com/news/asiapacific/thai-police-seize-record-three-tonnes-of-pangolin-scales-7539880> (Thai police seize record three tonnes of pangolin scales 2 Feb 2017) <http://news.sanook.com/1936694/> (Mekong Riverine Unit Nongkhai seized Pangolin on route to Lao 23 Jan 2016)

<sup>20</sup> <http://www.bbc.com/news/world-asia-39268084> (Rhino horns worth USD 5 m seized in Thailand off flight from Ethiopia 14 March 2017)

<sup>21</sup> For example: <http://www.traffic.org/home/2011/2/25/more-than-1-tonne-of-ivory-and-rhino-horns-seized-in-thailand.html> and <http://af.reuters.com/article/topNews/idAFKBN16L188-OZATP>

## 4 TSA Step 3: Selecting Criteria and Indicators

There are a range of criteria that could be analyzed to illustrate the pros and cons of the BAU and EPITES scenarios. Criteria may be financial, economic, relate to key social issues (e.g., employment) and/or address equity concerns. Table 3 presents an overview of possible criteria and their associated indicators.

**Table 3: Potential indicators to support the IWT TSA**

Criterion	Possible Indicators
Financial	<ul style="list-style-type: none"> <li>• <b>Enforcement cost</b></li> <li>• Lost revenue to Government (e.g., royalties from regulated legal trade)</li> <li>• Lost income to communities</li> <li>• Revenue from wildlife crime</li> <li>• [Estimated annual costs of persecuting IWT]</li> <li>• Wildlife rehabilitation cost</li> </ul>
Economic	<ul style="list-style-type: none"> <li>• <b>Costs / benefits (including environment, social, health)</b></li> <li>• <b>Cost of CITES sanctions</b></li> <li>• Foreign exchange earnings</li> <li>• Multiplier effect</li> <li>• Cost of environmental-social conflicts related to IWT</li> </ul>
Employment	<ul style="list-style-type: none"> <li>• Number of new jobs and salary levels</li> <li>• Number of part-time jobs</li> <li>• Ratio of formal and informal jobs</li> <li>• Ratio of high-paying versus low-paying jobs</li> </ul>
Equity and fairness	<ul style="list-style-type: none"> <li>• Ratio of benefits by gender</li> <li>• Ratio of benefits by ethnic group</li> <li>• Number of IWT-related social conflicts (environmental conflicts)</li> </ul>
Intermediate indicators <sup>22</sup>	<p>Institutional performance</p> <ul style="list-style-type: none"> <li>• Number of IWT cases taken to court; number of cases concluded<sup>23</sup>.</li> <li>• Number of Institutional Integrity Committees (at regional or community level) with functional anti-corruption action plans being implemented.</li> </ul> <p><i>Other</i></p> <ul style="list-style-type: none"> <li>• Number of animals (tigers, elephants, pangolins)</li> <li>• Number of tourists</li> </ul>

The selection of criteria and associated SMART (specific, measurable, achievable, relevant and time-bound) indicators to compare the BAU and EPITES interventions over time was based on the priorities of decision makers and the quality of available information / data related to the indicators.

The core criteria and indicators selected are:

- **Financial** - the financial costs of enforcement under BAU and EPITES at the national level.
- **Economic**
  - Avoided costs of potential CITES sanction
  - Domestic tourism benefits (number of wildlife tourists / value)

<sup>22</sup> Indicators linked to **ultimate consequences** are generally more useful for national policy decisions, but the ultimate objective of a given policy may be hard to measure. In these situations **intermediate indicators**, that are directly linked to the ultimate criteria and is easily measured may be used to illustrate progress. They are also often to key to understanding the mechanisms behind outcomes (in this case the elimination of illegal wildlife).

<sup>23</sup> Based on information of the Department of Customs, between 2014-2018, there were 105 cases and worth about 14.26 million Baht.

**Cost of Enforcement.** Financial implications are central to the question of whether a course of action is desirable and the DNP and other stakeholders have highlighted the need to better understand current expenditures on controlling the illegal wildlife trade. Overall expenditure under the BAU is unknown, and includes expenditure by all government agencies, not just the DNP, and NGOs and International organizations through project support. An understanding of the cost of enforcement under the BAU and EPITES can highlight the current funding gap and promote discussions on options for cost saving and potential financial instruments to strengthen wildlife crime enforcement. Sources of finance include government budget allocation, cost-recovery through asset seizures, penalty frameworks and administrative fines, and donor project related support. An understanding of costs under EPITES and the funding gap is also needed to understand how EPITES could be sustained once the GEF-IWT Project ends in 2023. Target 1.3 of the GEF IWT project, as specified in its Project Document, is to increase government funding towards wildlife law enforcement by 20%. The analysis can help determine if this is sufficient to effectively prevent IWT and the benefits associated with this increase in funding, or if additional resources will be required from Government and other sources such as the private sector and donors.

**CITES sanctions avoided.** The domestic trade in ivory is a risk for Thailand, who face sanctions by CITES if African ivory is found to be circulating in Thai domestic markets. The cost of sanctions avoided is based on the current export of legally traded wildlife and plants which could face sanctions. This potential cost is an argument for the Government to invest in enforcement against IWT, not only to avoid the financial cost but also the reputational risk it presents, which would deter impact investors and potentially tourists. Risk of sanctions were used in 2014 to force Thailand to address its domestic trade in illegal elephant ivory, through the introduction of legislation and implementation of a registration system for domestic ivory and ivory traders. Economic sanctions could potentially extend beyond the value of the legal wildlife trade, to the export of other products from Thailand, adding additional pressure and economic costs for non-compliance.

**Domestic (and International) wildlife tourism benefits.** While wildlife tourism is currently limited in Thailand it has growth potential and represents an avenue for generating income for wildlife conservation and supporting the development of remote areas and communities. Furthermore, controlling the trafficking of African elephants and Rhino horn through Thailand would benefit wildlife tourism in Africa, the value of which is significant.

## 5 TSA Step 4: Constructing and Analyzing the BAU and EPITES scenarios

As discussed, the TSA is not a static analysis. It makes projections about how the two alternative scenarios will unfold over time. This enables policy or management decisions to be based on the expected future consequences of implementing the BAU and EPITES options. Changes from implementing the BAU and EPITES interventions over time are measured by changes in the chosen indicators. The BAU projections reflect what will happen to the relevant indicators over time with the continuation of current practices, while EPITES reflects what will happen when additional / improved practices and policies are in place.

Assumptions associated with the BAU and EPITES projections have been built up from data (trend analysis), available information and expert opinion based on discussions with decision makers and stakeholders. The uncertainty around the projections are noted in the discussion below.

### 5.1 Cost of enforcement

This TSA study has used a combination of existing information on the budget for activities in the IWT Project Document, information from stakeholder meetings and available statistics to generate information required on the cost of enforcement.

#### 5.1.1 Cost of Enforcement under BAU

The cost of enforcement under BAU is based on an extrapolation of recent budget allocations by Government agencies. While there are many Government organization involved in managing the IWT, for the majority of agencies this work is funded out of their normal budget (i.e., they do not have a specific budget line for IWT) and it has not been possible to determine the proportion spent on eliminating IWT.

Based on budget allocations presented in Table 4, DNP's work related to the wildlife trade can be divided into 8 areas. Table 5 shows a marked reduction in budget allocation since 2016; the total budget allocated in 2020 (in current prices) is only 75.6% of the 2016 budget. CITES related activities have always received the highest budget allocation – around 30% of total budget in 2020. Control of the ivory trade is the third highest budget item with just under 23% of budget allocated in 2020.

**Table 4: DNP budget allocation related to CITES (THB)**

Activities / Projects	2016	2017	2018	2019	2020
Flora and fauna protection in compliance with CITES	46,185,600	31,017,700	33,932,900	22,307,400	20,918,400
Flora conservation and protection	8,257,600	8,257,600	8,149,600	7,656,100	7,119,300
Activities under ASEAN-WEN	3,401,300	3,401,300	3,401,300	2,356,100	1,913,400
Activities related to control of ivory trade	12,604,900	12,604,900	8,146,800	18,311,000	15,690,000
Increasing the effectiveness of wildlife checkpoints in Special Economic Zones	20,237,900	15,960,500	15,960,500	15,901,700	14,789,300
Activities for improvement of wildlife checkpoints in Special Economic Zones	-	-	4,606,400	-	5,532,400
Improvement of IT and communications	-	1,140,000	1,140,000	1,140,000	1,140,000
Improvement of building structures within Protected Areas	-	1,431,500	4,574,500	2,624,000	1,432,300
<b>Total</b>	90,687,300	73,813,500	79,912,000	70,296,300	68,535,100
<b>USD</b>	2,796,401	2,276,087	2,464,138	2,167,631	2,113,324

**Source:** DNP CITES Division

Of note, the DNP contributions to the GEF-IWT project surpasses its overall budget for 2019 and 2020 suggesting that all DNP resources over the period are focused on implementation of the activities under the GEF-IWT project (Table 5). GEF co-financing commitments are typically provided through in-kind contributions.

**Table 5: DNP Co-finance for IWT-GEF project (USD)**

Co-funder	2019	2020	2021	2022	2023	Total
DNP	2,564,000	2,884,000	2,984,000	3,094,000	3,013,379	14,539,379

NED does not have a specific budget line for eliminating IWT. The average ratio of wildlife crimes to overall environmental crimes over the period 2017-2020 is 20% and therefore 20% of NED's overall budget is used as an indication of NED's budget expenditure on wildlife enforcement.

The Enforcement Division of the Department of Customs had a total budget of 237,130,404 Baht (USD 7,312,069) in 2021 (Table 6). There is no specific allocation for tackling wildlife crime. For the analysis a conservative estimate has been used based on the following assumptions: (i) only salary costs are included in the estimate; (ii) 30% of the total Division's budget relates to administrative costs, so 70% of salaries are used; and, (iii) 25% of the non-administrative salary budget is apportioned to wildlife crime. Based on these assumptions, the budget to tackled wildlife crime is estimated at around 16,324.293 Baht (USD 503,370) in 2021.<sup>24</sup>

<sup>24</sup> These assumptions were accepted at the validation workshop on May 28, 2021.

**Table 6: Thai Customs - Department Budget of Enforcement Division (2017 – 2021) THB**

	2017	2018	2019	2020	2021
Total Budget	273,234,816	265,240,164	245,958,648	244,836,888	237,130,404
Salary only	102,359,424	100,024,632	97,333,692	96,135,132	93,281,676
70% of salary	71,651,597	70,017,242	68,133,584	67,294,592	65,297,173
25% of non-admin expenditure	17,912,899	17,504,310	17,033,396	16,823,648	16,324,293
USD	552,356	539,757	525,235	518,768	503,370

Notes: 1/ Figures have been rounded

ALMO's budget allocated to 26 types of crime (excluding human trafficking, drugs trafficking and illegal migrants which are allocated the majority of ALMO's budget), is around 3 million Baht (USD 92,506) a year. The value of AMLO's work far exceeds the annual budget allocated. For example, while a very small budget 23,000 Baht (USD 709) year is allocated to ALMO to address all natural resource crimes, in March 2021 assets related to the IWT valued at 20 million Baht (USD 0.6 million) were seized by ALMO<sup>25</sup>. Further, money laundering crimes addressed by ALMO between 2015 and 2020 had an estimated value 5,483,918,695 Baht (USD 169,100,175), that is around USD33.8 million a year.

Table 7 provides estimates for the DNP, NED, Customs Department and ALMO under the BAU based on a 4% increase a year. Other agencies involved in preventing the illegal trafficking of wildlife are the Royal Forestry Department, DSI, Office of Attorney General, Office of National Anti-Corruption Commission (ONACC) and Airports of Thailand (AOT). The Government budget is therefore an underestimate. Figure 5 shows that based on available information the DNP provides around 79% of the total IWT budget, followed by the Customs Department (16%) and NED (4.5%). ALMO's budget is very small.

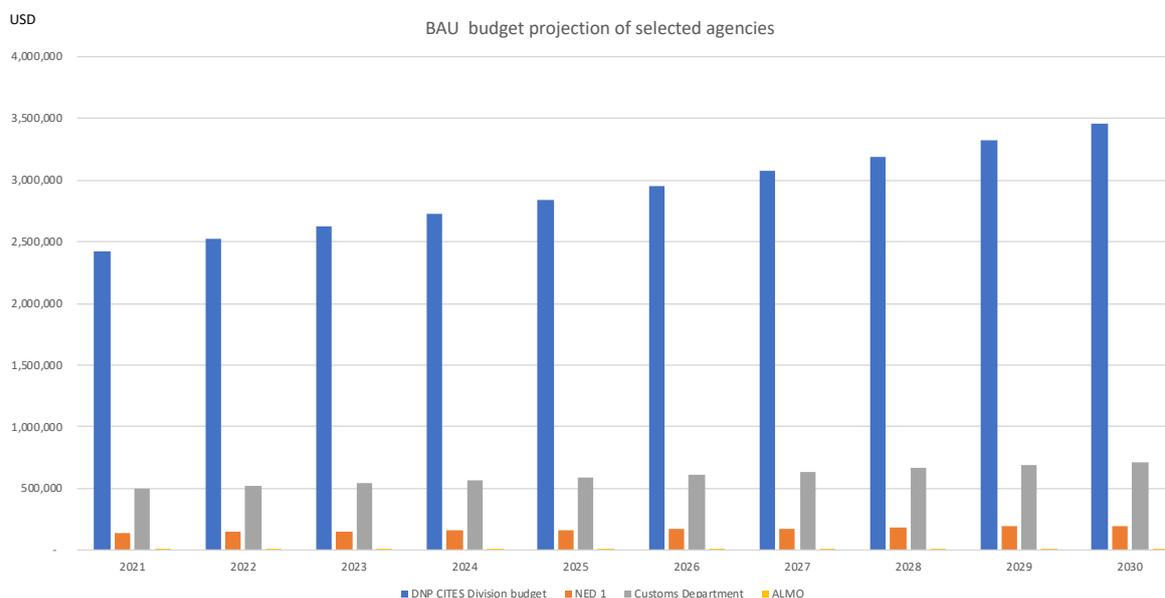
<sup>25</sup> Personal communication with ALMO

**Table 7: Government budget projects – BAU, 2021-2030 (USD)**

Agency / Year <sup>1</sup>	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Total
DNP - CITES Division <sup>2</sup>	2,426,065	2,523,107	2,624,031	2,728,993	2,838,152	2,951,679	3,069,746	3,192,536	3,320,237	3,453,046	29,127,591
NED <sup>3</sup>	139,432	145,010	150,810	156,843	163,116	169,641	176,426	183,484	190,823	198,456	1,674,041
Customs Department <sup>4</sup>	503,370	523,505	544,445	566,223	588,872	612,427	636,924	662,401	688,897	716,452	6,043,514
ALMO <sup>5</sup>	709	738	767	798	830	863	897	933	971	1,009	8,515
Total	3,069,576	3,192,359	3,320,054	3,452,856	3,590,970	3,734,609	3,883,993	4,039,353	4,200,927	4,368,964	36,853,661

**Notes:** 1/ Projections based on annual increase of 4% a year; 2/ Budget for 2021 is based on the average budget for 2016-2020; 3/ The average ratio of wildlife crimes to overall environmental crimes over the period 2017-2020 is 20%. 20% of NED's overall budget is therefore used as an indication of NED budget expenditure on wildlife enforcement; 4/ Based on 70% of salary costs only and assumption that 25% of the non-administrative salary budget is apportioned to wildlife crime; 5/ Budget allocated to ALMO to address all natural resource crimes.

**Figure 5: Budget projects for selected agencies**



**Other support.** There are a number of IOs and NGOs supporting work related to the IWT. It has not been possible to collate a full list of projects and their budgets, however this section provides examples of support from international and national donors.

“Strengthening capacity and incentives for wildlife conservation in the Western Forest Complex” (*PIMS 5436*) (known as the TIGER project) was a five-year project (2015-2020) implemented by the Department of National Parks, Wildlife and Plant Conservation (DNP), supported by UNDP. The project had a total budget of USD 31,573,877 comprised of USD 7,339,450 of GEF support and USD 24,234,427 in co-financing from the Thai Government, Wildlife Conservation Society (WCS), Seub Nakasathien Foundation (SNF), and UNDP. Table 8 presents available information co-financing under the IWT-GEF project 2019 to 2023, the main on-going donor supported project focused on the illegal wildlife trade in Thailand.

**Table 8: Overview of Co-finance for IWT-GEF project**

Co-funder	2019	2020	2021	2022	2023	Total
IUCN	12,239	23,982	23,189	22,152	8,438	90,000
TRAFFIC	13,599	26,646	45,765	13,990	0	100,000
TRACE	4,080	7,994	9,542	8,384	0	30,000
USAID Wildlife Asia	480,000	900,000	870,000	750,000	0	3,000,000
UNDP	6,800.00	13,323	14,687	12,307	2,883	50,000
DNP <sup>1</sup>	2,564,000	2,884,000	2,984,000	3,094,000	3,013,379	14,539,379
GEF	546,479	1,070,763	1,035,359	989,093	376,746	4,018,440
TOTAL	3,518,162	4,928,728	4,984,563	4,891,948	3,403,469	21,827,819
TOTAL excl. DNP	1,065,216	2,044,728	2,000,563	1,797,948	390,090	7,288,440

**Note:** 1/ DNP contributions discussed above

An ongoing study by USAID Asia (2016-2021) has allocated around USD 1,400,000 a year to addressing IWT in Thailand. USAID Wildlife Asia works to end illegal wildlife trafficking in Southeast Asia. In accordance with the U.S. Government's Eliminate, Neutralize, and Disrupt Wildlife Trafficking Act of 2016 (END Act) and the U.S. Presidential Executive Order on Enforcing Federal Laws with Respect to Transnational Criminal Organizations and Preventing International Trafficking 2017, this program addresses wildlife trafficking as a transnational crime. USAID Wildlife Asia coordinates closely with the ASEAN and works with lawmakers, law enforcement, and regional and local partners to reduce demand and the illegal trade of wildlife products. The project period is September 1, 2016 – August 30, 2021, and has a total budget of USD 24 million dollars supporting five countries (Cambodia, China, Lao PDR, Thailand and Vietnam). An estimated 30% of the budget is allocated to partnerships and initiatives in Thailand (i.e., USD 1.2 million a year). For example, USAID Wildlife Asia's 'Beautiful without Ivory' campaign partnered with Thai fashion influencers to amplify messages discouraging the use of wildlife products.

ASEAN-WEN and the Law Enforcement Extension Office (LEEO) is supported by the USAID funded Asia's Regional Response to Endangered Species Trafficking (ARREST) Program, together with in-kind and financial support from the Royal Thai Government.

In 2017-2019 WWF-Thailand's total budget was around USD 100,000 a year, falling to USD 70,000 in 2020. However, in 2020, WWF-Thailand benefited from public funds from the US, UK and the German governments in recognition that the links between COVID-19 and other zoonotic diseases and wildlife habitat disturbance and trafficking, and because Thailand is seen to be a hub for illegal wildlife trade.

Donor support over recent year has been at least around USD 3 million a year. The GEF has been a major contributor, with investments by GEF intended to build sustainability both in terms of national capacity and finance. Going forward, donors may be keen to support efforts to eliminate the illegal wildlife trade due to its links to COVID-19 and future zoonotic disease.

#### 5.1.2 Cost of Enforcement under EPITES

Enforcement costs under the EPITES focus on key interventions across the IWT value chain (to control wildlife crime at source, transit and consumption in Thailand) in recognition of the fact that addressing IWT requires an integrated approach, tackling all elements of the process. It is assumed that the initiatives started by the GEF-IWT will continue beyond 2023, and that in some cases additional funding will be required to upscale activities. The analysis below is focused on the costs of sustaining key ongoing GEF-IWT project initiative and selected additional actions, which together reflect the additional budget outlays required relative to the BAU. Various assumptions have been used in estimating the costs of EPITES, which have been developed and agreed with stakeholders. These assumptions are discussed next.

Table 9 summarizes the additional activities and costs needed under EPITES.

**Table 9: Summary of additional enforcement costs under EPITES post 2023 and key assumptions**

Type of enforcement	Cost	Type of expenditure <sup>1</sup> / Assumptions
<b>ENHANCED LAW ENFORCEMENT</b>		
<b>SMART patrols</b>	USD 1,686,975 (54,708,599 Baht)	One off set up costs. The cost for setting up one SMART patrol unit is 1,182,800 Baht. A conservative estimate is to create 30 units for the Wildlife Sanctuaries and Thong Pa Phum National Park.
	USD 5,229,626 (169,596,771 Baht)	Annual operating cost The operating cost per unit is 30% of set up cost
<b>Integrated monitoring &amp; enforcement at key border check points</b>	USD 1,860,000 (60,319,800 Baht)	Annual cost 2021- USD 80,000 at 22 sites = USD 1,760,000 <i>plus</i> USD 50,000 per 2 existing sites = USD 100,000 Total – USD 1,860,000 From 2022 – USD 50,000 * 24 sites = USD 1,200,000
	USD 73,543 (2,385,00 Baht)	Annual cost The manpower for each of the 53 DNP check points will increase from 3 to 6. Based on 3 additional staff at 15,000 Baht/month 2022 to 2030
<b>WIFOS - DNP</b>	USD 61,037 (1,979,430 Baht)	Annual cost Based on continuation support at similar level to GEF-IWT project
<b>DNP CHIS unit</b>	USD 105,458 (3,420,000 Baht)	Annual costs CHIS unit within DNP with 10 staff members
<b>NED led enforcement activities</b>	USD 131,822 / year (4,275,000 Baht)	Annual cost Manpower increase at the provincial level
	USD 55,5041, (800,000 Baht)	Drones CAPEX, 5-year lifetime
<b>NED/DNP on-line wildlife trade monitoring and investigation</b>	USD 77,706 (2,520,000 Baht)	Annual cost Setting up an on-line wildlife trade investigating unit within NED with 5 NED staff member and 5 seconded by the DNP
<b>COOPERATION AND COORDINATION</b>		
<b>Thai Wen</b>	USD 456,000 (14,788,080 Baht)	Annual cost Based on continuation support at similar level to GEF-IWT project
<b>DEMAND REDUCTION</b>		
<b>Social &amp; behavioral change communication</b>	USD 170,904 (5,542,416 Baht)	Annual cost Based on continuation support at similar level to GEF-IWT project
<b>CAPACITY BUILDING</b>		
<b>Training for NED &amp; DNP on investigative techniques<sup>26</sup></b>	USD 112,228 (3,636,000 Baht)	Annual cost Two 5-day trainings courses for each of the 12 regions a year, with 30 participants per course.

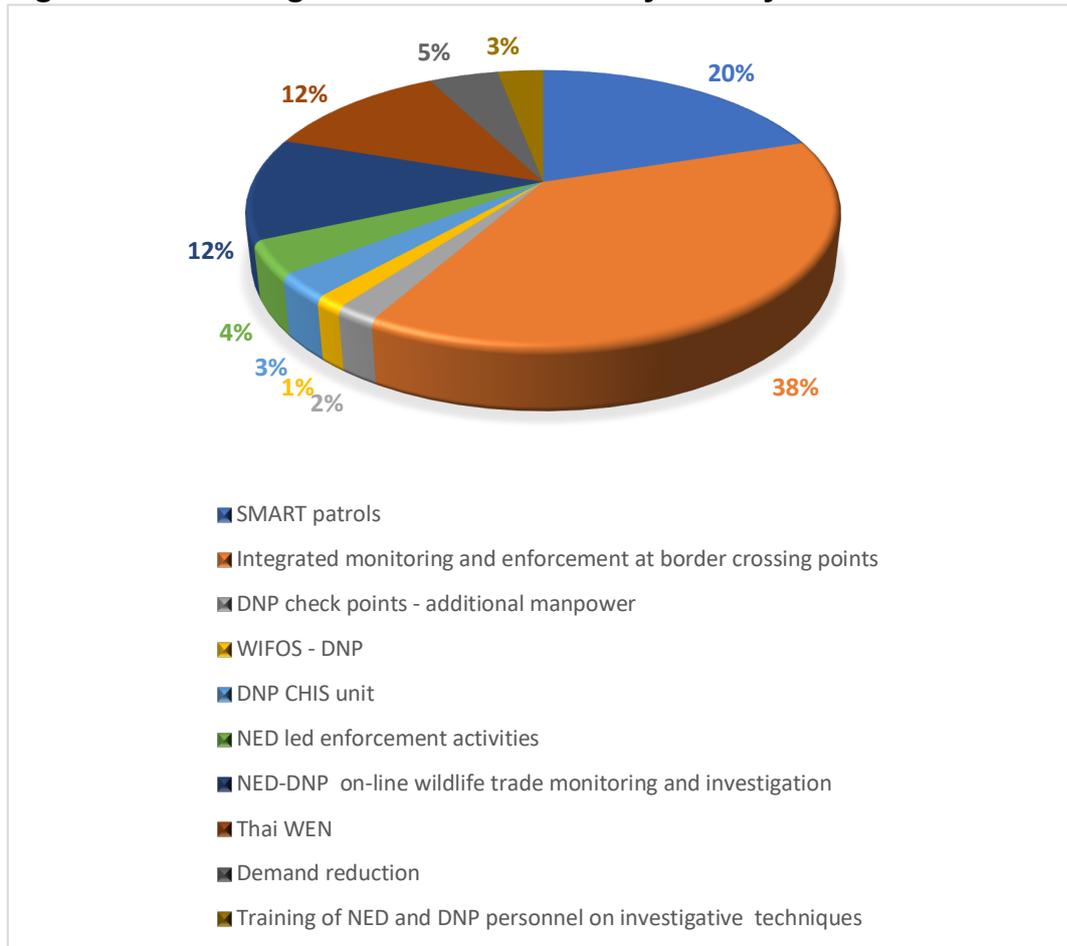
**Notes:** 1/ Costs include annual operating costs and capital expenditure as specified

Figure 6 presents the allocation of projected costs under EPITES by activity. The cost to implement EPITES over the period 2021 to 2030 is USD 29.894 million. The largest cost item, accounting for around 38% of the *additional* budget required, relates to upgrading the

<sup>26</sup> Due to the potential on-going difficulties with face to face meetings due to COVID-19 organizations can be supported through zoom meetings and / or e- training courses.

performance of wildlife crime surveillance and enforcement at the border crossing points. This initiative has the potential to reap broader benefits in terms of community level employment and engagement in wildlife conservation and reduce lawlessness in rural areas. The cost to set up 24 additional SMART patrol units and operating costs which accounts for around 20% of the total estimated budget. Around 20% of the increased expenditure is on advance investigative approaches (including WIFOS support, establishment of a CHIS unit, enhancing NED led enforcement activities and setting up a collaborative NED/DNP on-line investigative unit).

**Figure 6: Percentage of costs allocation by activity under EPITES**



### 5.1.2.1 Law Enforcement

#### **SMART (Spatial Monitoring and Reporting Tool) patrols**

Anti-poaching measures in protected areas is expensive requiring extensive monitoring by rangers and veterinarians, tagging, observation and security of animals, relocation and rehabilitation in cases of injury and death (Smith and Porsch, 2015). A budget of 35.5 million Baht (USD 1,094,665) was approved by the Government for a 5-year period between 2017-2021 to establish 30 SMART Patrol units to operate across 30 National Parks (i.e. 1,182,800 Baht (USD 36,472) per SMART patrol unit<sup>27, 28</sup>). There are 150 Protected Areas in Thailand with different levels of protection and accessibility. These include National Parks (NP), Wildlife Sanctuaries (WS), No Hunting Zones, Botanical Gardens and Arboretum. Huey Kha Kaeng (HKK) -Thung Yai Naresuan Wildlife Sanctuaries were not among the 30 National Parks supported through the Government's budget allocation. However, due to the area's status as a World Heritage Site, there have been technical and financial support for SMART Patrol units from the Wildlife Conservation Society and the TIGER Project. As a result ranger coverage increased from around 60% to 74% of the area which reduced the incidents of illegal wildlife poaching, according to the Khao Nang Ram research station in HKK.

The TIGER project provides an estimate of the cost of SMART patrols in the WEFKOM. The WEFKOM has an area of 11,700,000 rai (1,872,000 hectares) and it was estimated that 50 ranger units would be needed to adequately protect the area; that is 1 ranger unit would patrol an area of 234,000 rai (37,440 hectares).

Among Thailand's National Parks, seven stand out as being popular among tourists for viewing wildlife. With the exception of Thong Pa Phum, all of these seven parks are covered under the Government's 35.48 million Baht allocated to set up SMART Patrol units in National Parks. The budget required to set up SMART patrol units in Thong Pa Phum and the Wildlife Sanctuaries were calculated as follows: (i) The area of Thong Pa Phum and the 45 Wildlife Sanctuaries<sup>29</sup> were divided by the ratio of ranger unit to area coverage from the WEFKOM (i.e. 1 ranger unit per 234,000 rai) to derive the number of SMART patrol units required – estimated at 82 additional units (3 for Thong Pa Phum National Park and 79 for all Wildlife Sanctuaries combined); (ii) within the 10 year period (2021-2030), it is assumed that only 30 units can feasibly be set up. The cost to set these 30 units up will be USD 1,686,975<sup>30</sup>; (iii) it is assumed that operating costs are 30% of the initial set up costs or USD 506,093 per year. The total budget to set up and operate SMART Patrol units from 2021 to 2030 would amount to USD 5,229,626 (See Annex 9 for detailed costings). Based on the performance of these SMART patrol units, decisions can be made on whether or not to increase the number of SMART patrol units to match the level of coverage in WEFKOM.

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<sup>27</sup> Reforming DNP's Forest Patrol System to SMART Patrol. Fiscal year 2018 (DNP internal document in Thai)

<sup>28</sup> The SMART was introduced to DNP over 10 years ago through the WEFKOM Management project (DANCED) and has gradually been adopted into DNP systems. The TIGER project hired an additional 58 rangers in order to increase the coverage of the SMART. Each month rangers report the total distance of the patrol, number of routes, evidence of threats and poachers, and wildlife traces.

<sup>29</sup> This number excludes Huey Kha Kaeng and ThungYai Naresuan which is part of the Western Forest Complex and a World Heritage Site.

<sup>30</sup> 30 units at 1,182,800 Baht

### **Integrated enforcement at key border check points.**

The GEF-IWT project is piloting an integrated approach to wildlife crime surveillance and enforcement at demonstration areas on the Malaysian border (Sadao District) and Lao border (Rattana-wapi District), especially to combat Pangolin trafficking. The GEF-IWT project aims to help establish at least four community agreements on wildlife protection across the two demonstration areas to formalize relations with the authorities and strengthen the basis for collaboration. The GEF-IWT project will facilitate the provision of incentives and training for local community volunteer engagement in surveillance and wildlife protection activities and explore possibilities for local development co-benefits (Annex 8 provides more details). The GEF-IWT budget allocated to support an integrated approach to wildlife crime surveillance and enforcement at border crossing points, including community engagement is USD 156,000, or USD 78,000 per site<sup>31</sup>.

From 2023 it is assumed that a budget of USD 50,000 per year would be needed to support activities at existing sites, while a budget of USD 80,000 would be needed to establish such systems at additional sites. There 15 border check points sites along the Thai-Lao border and 9 sites in the South bordering the Malaysian border. It is proposed to replicate the integrated approach to wildlife crime surveillance and enforcement at all locations (an additional 22 sites on top of the two demonstration sites), at an additional establishment cost of USD 1,760,000<sup>32</sup>. This amounts to only 1% of DNP's current budget and may be considered a good investment with the potential to also improve livelihoods if expanded to provide grants to diversify community income earning opportunities into sustainable natural resource base activities.

Under EPITES, the manpower at each of the 53 DNP check points is also increased from 3 to 6 persons. The cost of this increase is estimated at 15,000 Baht/month starting from 2022 to 2030 or 21,465,000 Baht (USD 661,887) a year.

### **Development of WIFOS Laboratory**

The IWT-GEF project is supporting the WIFOS to conduct and validate DNA tests to support prosecution requirements, collaborate with other range states and share samples. The WIFOS Laboratory seeks accreditation to ISO17025 for components of its wildlife DNA forensic testing to align with International Standards and ensure legally admissible evidence for prosecutions in Thailand. Much of the support being provided by the IWT-GEF project will need to be continued post 2023.

The GEF-IWT project is also supporting the implementation of two surveys of the Thai domestic ivory market, in line with previous surveys by TRAFFIC and DNP in order to determine the origin of ivory samples and monitor reductions in the occurrence of African ivory in the Thai market. The project seeks to develop and obtain official approval for a protocol for systematic long-term sampling that can deliver statistically reliable data on the origins of ivory in the regulated domestic market for Thai elephant ivory, including forensic techniques.

An estimated USD 61,037 a year is needed to sustain the needed support provided under the IWT-GEF project to WIFOS after 2023 (see Annex 9 for detailed costing).

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<sup>31</sup> This includes travel – USD 50,000; supplies – USD 35,000; grants to support community conservation agreements; incentives for local community engagement in wildlife protection activities in demonstration areas – USD 60,000; and, equipment and accessories – USD 11,000 (computers, printers, GPS, digital cameras).

<sup>32</sup> This not include then 18 checkpoints along the Thai-Cambodia border.

### **DNP Covert Human Intelligence Source (CHIS) unit**

It is proposed to establish a CHIS unit within DNP with 10 staff members (2 senior retired officers, 3 IT forensics staff and 5 office staff). This is costed at 3,420,000 Baht (USD 105,458) per year based on staff costs only. A salary of a retired senior government official of 60,000 Baht/month / 720,000 a year is used in the calculations. It is assumed that the unit will be housed within existing facilities. To be effective, a system of formal collaboration will need to be agreed at senior level between the DNP's CHIS unit and agencies with hands-on experience in this area such the DSI, AMLO and the NACC.

### **Strengthening NED**

Currently NED has 387 staff positions at operational level, 57 of which are vacant. Thailand has 76 provinces, the average staff allocation per province is around 5. NED does not have mobile forensics equipment to deal with wildlife crimes (unlike the section that deals with drug crimes), or manpower to specifically detect on-line trafficking. NED needs extra manpower and training and to have the capacity to do more than just intercepting and reporting. Indicators also need to be developed that measure the effectiveness of their operations not only in terms of the number of seizures, but also how many seizures can be traced back to the people who are really responsible. In theory NED and DNP should be working together but in reality cooperation between the organizations is more the exception than the rule.

Under EPITES, NED sees an increase in staff, the purchase of drones to increase surveillance of hotspot areas, especially at night, and additional training (covered below).

- Staff Increase. EPITES assumes 285 additional personnel (3 additional staff per province). This brings the number of operational level staff to 672. The annual increase in personnel is estimated at 42,750,000 Baht (USD 1,318,223). This is based on the entry salary for a graduate with bachelor's degree of 15,000 Baht / month and is considered to be a conservative estimate as some of the posts will be filled with higher level staff.
- Drones to support NED's operations on the eastern part of the country bordering Lao PDR to monitor activities along the Mekong River, especially at night when illegal activity is high are proposed. Drones are probably less useful on the west part of the country bordering Myanmar due to dense forest coverage. At a cost of 100,000 Baht per unit and an allocation of 1 drone for each of the 12 provinces bordering Lao PDR and the 6 provinces bordering Cambodia, the total cost is 1,800,000 Baht (USD 55,504) in 2021 and 2026 (assuming a 5-year lifespan). This is based on the official procurement price of the Office of the Budget Bureau.

### **Enhanced on-line wildlife trade monitoring and investigation**

Part of NED's involvement in controlling illegal wildlife trade involves monitoring on-line trading activities, a growing channel for IWT. Speeding up the investigation of online activities and legal processes requires cooperation and data sharing with national and international organizations. Given the shift of the illegal wildlife trade online, an on-line wildlife trade investigation unit is therefore proposed within NED with ten staff members (5 from NED and 5 seconded from the DNP to ensure collaboration). This unit is costed at 20,160,000 Baht or USD 621,647 a year, based on staff costs alone. Note that this investment is intended to complement, and not replace, the work of the Wild Hawk Group.

**Controlled Delivery.** At present there are no concrete initiatives on the introduction of Controlled Delivery. This would be costly to introduce and would require investment by and cooperation with neighboring countries. It is not included under EPITES

#### 5.1.2.2 Cooperation and Co-ordination

**Strengthening Thai-WEN.** The budget to manage Thailand WEN (Implementation of Action Plan) under the IWT-GEF project is USD 287,079 over 4 years<sup>33</sup>. The IWT project budget for Thailand WEN includes funding from GEF plus contributions from each of focal point government agencies such as DNP, NED and Customs Department to demonstrate best practice of the IWT platform at national and local level.

Beyond 2023, an annual budget from the government will be required for DNP's Combatting Illegal Wildlife Trade office to sustain the activities of Thailand WEN. This is estimated at USD 456,000 a year based on the following considerations<sup>34</sup>:

- Human resources budget: At least 4 permanent government official officers (USD 8,000) and 6 local temporary officers (USD 5,000) to manage Thailand WEN activities. Total cost USD 62,000 per year.
- Meeting / workshops. Quarterly meeting and annual meetings for the Thailand WEN committee consisting of 28 members – USD 80,000 a year.
- Exchange visit / training workshop (quarterly) – USD 100,000 a year.
- Thailand WEN knowledge sharing management annual forum at USD 80,000 per year
- Operation cost for the DNP IWT office at USD 24,000.
- Equipment: Data base IWT case sharing management program at USD 50,000 per year.
- Communication cost at USD 5,000 a month, USD 60,000 a year.

#### 5.1.2.3 Demand Reduction

The IWT Project has allocated a budget of around USD 170,904 a year for 2020 and 2021 to social and behavioral change communication with a focus on illegal ivory and tiger products. It is assumed that a similar level of investment and on-going implementation will be needed beyond 2023.

#### 5.1.2.4 Capacity Building

Based on stakeholder consultations capacity building is required in: (i) investigative techniques (both physical and on-line trading); (ii) reporting systems that can speed up the process of passing on information from DNP and NED to the Office of the Attorney General; and, (iii) enhancing capacity of law enforcers through regular training and international collaboration.

Two 5-day training courses a year on investigative techniques are included under EPITES for each of the 12 regions, with 30 participants per course. The total cost per year is estimated as 3,636,000 Baht (USD 112,228), with each course costing around USD 4,800 (including per diem and accommodation). The judiciary should participate as resources persons at these training courses to build awareness of the legal provisions in order for NED and DNP to be fully informed of the evidence required for the AG to be in a position passed the offence on to the courts and increase rate of conviction.

Figure 7 shows the projected costs under BAU (blue line) and EPITES (orange line). Under EPITES the budget increases by roughly USD 3 million per year, nearly doubling current budget allocations from 2023 onwards, and resulting in an 81% increase in total budget

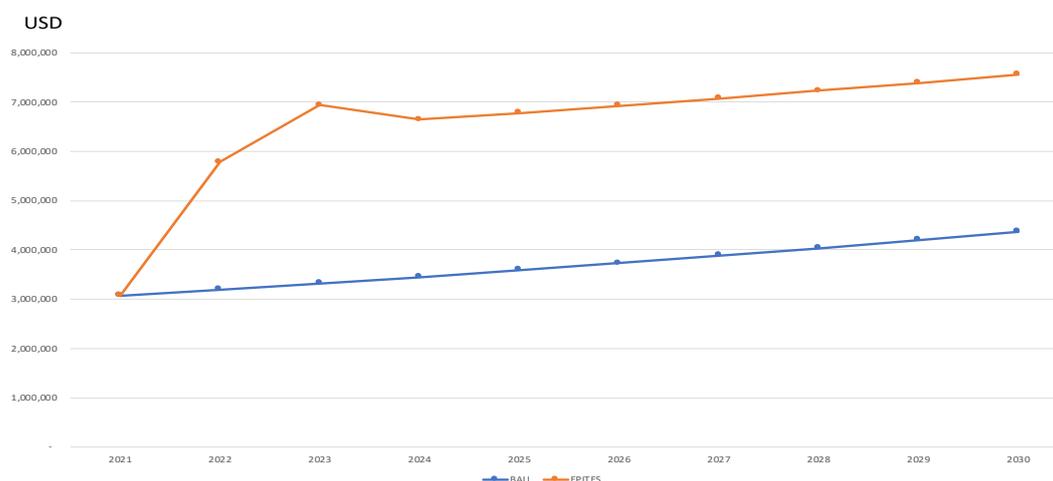
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<sup>33</sup> This is comprised of - Staff support (USD 181,360), Travel - 31,000; Supplies – USD 15,300; Capital expenditure (office furniture and IT Equipment) – USD 6,000; and, focus group discussions to support Thailand WEN – USD 50,000.

<sup>34</sup> This is an underestimate as it does not include contributions from other government agencies to contribute to DNP-IWT office.

allocation by 2030. It is assumed that there is a relationship between budget allocations and the level of crime incidents. The higher the budget allocation, the more work can be done on the ground and the more effective enforcement activities will be. The SMART patrols and integrated monitoring and enforcement at key border check points are seen as strategic priorities and account for over half of the budget under EPITES. The wide ranging benefits associated with the increase spending under EPITES are explored below.

**Figure 7: Cost of enforcement under BAU and EPITES**



## 5.2 Economic gains under EPITES

### 5.2.1 Avoided costs of potential CITES sanction

CITES is focused on international trade, it does not have oversight over domestic activities, or tools to punish crimes against countries. However, CITES can sanction countries through a temporary suspension of trade, which can act as an economic incentive for countries to enact measures to combat and reduce illegal trade. The potential loss of revenue due to CITES trade sanctions is estimated at 2,871 million Baht (USD 88.53 million) per year.

The cost of sanctions avoided is based on data from the Department of Customs on the value of the exports of CITES-listed species such as orchids, reptiles, reptile skins and corals. The data indicates a declining trend in the value of export trade between 2011 and 2014, and then a fluctuation of between 2,666 million Baht (USD 82.21 million) and 3,000 million Baht (USD 92.51 million) from 2015 to 2019. The value of trade in 2020 dropped to the lowest in 10 years at 1,778 million Baht (USD 54.83 million) due to COVID-19 restrictions. The average value over the 9-year period between 2011 and 2019 is used in the analysis – that is 2,871 million Baht (USD 88.53 million) per year (Table 10).

**Table 10: The value of CITES listed exports 2011-2020 (million USD)**

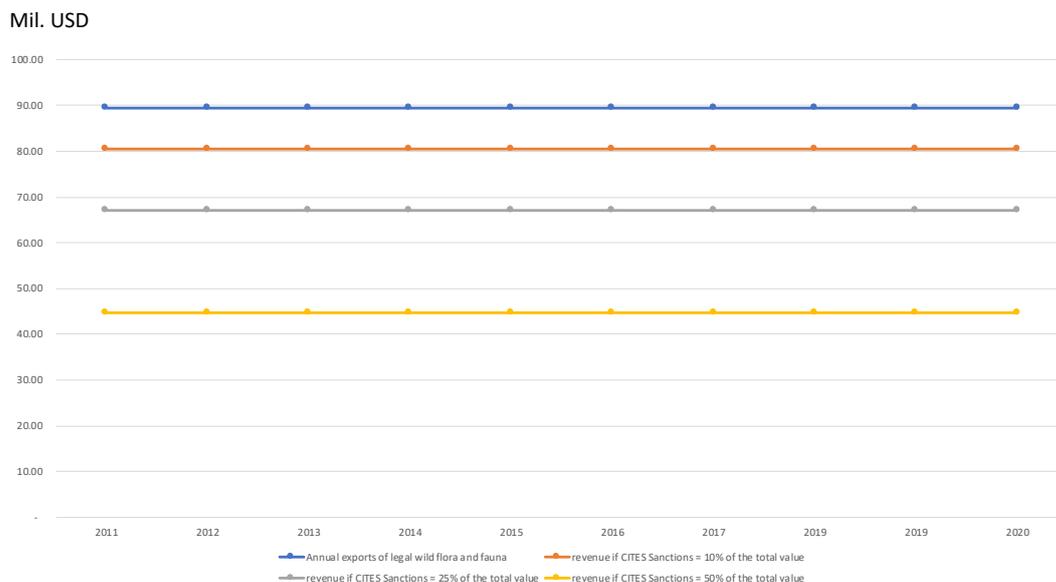
	2011	2012	2013	2014	2015	2016	2017	2019	2019	2020
Orchids	80.96	76.63	76.63	75.41	75.88	76.47	72.64	75.04	70.67	46.33
Animals/ reptile skin	9.31	11.81	16.10	7.94	3.54	2.61	23.77	20.05	9.15	4.36
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Corals	5.72	3.20	3.77	3.58	2.54	2.62	2.57	2.15	1.92	2.28
Crocodiles	16.66	3.82	1.09	2.24	1.74	1.21	0.61	0.53	0.45	0.24
Reptile meat (frozen)	0.34	0.55	1.29	0.85	1.07	1.27	1.15	1.06	1.07	1.30
Reptile meat (dried, smoked)	0.59	1.12	1.53	1.40	1.76	2.44	2.46	2.59	2.20	1.64
Fangs or ivory already processed	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Shells, turtle shells that are already processed	0.33	0.26	0.35	0.54	0.32	0.26	0.00	0.00	0.00	0.00
Agarwood (pieces)	0.00	0.01	0.14	0.32	0.29	0.71	1.51	0.58	0.59	0.71
Birds (parrots, Macaw, parakeet, cockatoo)	0.01	0.00	0.01	0.02	0.03	0.03	0.01	0.05	0.03	0.01
Others	0.05	0.10	0.15	0.05	0.05	0.14	0.06	0.07	0.90	0.26
Total	131.69	111.21	117.56	87.56	84.64	86.10	92.60	91.82	82.18	54.83

**Source:** Department of Customs

In Figure 10 export earnings from CITES listed species is represented by the blue line and is worth around 2,900 million Baht/year (USD 89.42 million). If CITES banned all trade of CITES listed-species due to infringements (for example on discovering African Ivory in Thailand), then all of the revenue from exports would be forgone. A benefit of investing in EPITES is therefore that it ensures that Thailand is able to continue to export and earn revenue of at least around 2,900 million Baht/year (USD 89.42 million). Between 2011 and 2019 the average export earnings from orchids alone averaged at around 2,451 million Baht (USD 75.5 million). The revenue stream from orchid exports was fairly stable over the period 201-2019, declining in 2020 due to COVID-19, but anticipated to quickly recover to pre-COVID levels in the coming years. An annual loss of 2,451 million Baht/year due to orchid sanctions alone is around 25% the annual budget allocated to the DNP. Figure 10 also shows the changes in the projected revenues based on assumptions that 10% (orange line), 25% (gray line) or 50% (yellow line). Thus, even assuming that only 10% of the value of legal exports of flora and fauna are lost due to the CITES or other types of international sanctions imposed, the revenue (benefit) in the terms of the value of the sanctions avoided under EPITES would be USD 94 million <sup>35</sup>.

<sup>35</sup> This is the value of the sanctions avoided.

**Figure 10: Lost revenue avoided due to CITES sanctions under EPITES, Sensitivity analysis**



### 5.2.2 Wildlife tourism revenue

The potential losses from the IWT can be significantly higher when other indirect productive activities, such as ecotourism, are taken into consideration. Wildlife can attract domestic visitors and motivate international tourists. A well developed and managed wildlife tourism sector can support national GDP and employment, particularly for poor and rural populations who are the most vulnerable to marginalization, food insecurity and extreme poverty. Tourism also spurs the development of ancillary services such as restaurants, hotels/guesthouses and transport. Poaching, on the other hand, decreases wildlife populations and negatively affects the touristic experience as it changes animal behavior (animals become shyer and more difficult to locate), can cause safety concerns among visitors (particularly when park shootings take place) and gives countries a bad reputation (Smith and Porsch, 2015). Simply put – more animals attract more visitors. Studies from Africa show lost tourism revenues to exceed the antipoaching costs necessary to halt the decline in elephant numbers (see Annex 4).

In Thailand, unlike in Africa, wildlife tourism is not well developed. Currently, wildlife viewing may not necessarily be the motivation for visitors to National Parks and Wildlife Sanctuaries where there are higher densities of wildlife are not popular tourist destinations due to tighter access restrictions, the difficulties securing entry permission and limited infrastructure for tourists. However, examples of wildlife tourism do exist such as Elephant Hills camp in Khao Sok National Park and there are ambitions to further develop wildlife tourism, for example in Huai Kha Khaeng Wildlife Sanctuary’s buffer zone, a key tiger habitat. Furthermore, ecotourism is seen to have a part to play in Thailand’s strategy to build back better following COVID-19. Phase 3 of the Government of Thailand’s (GoT) Policy response to COVID-19 recovery includes a tourism stimulus packages worth 22.4 billion Baht to be funded from the 400 billion Baht plan earmarked for projects to create jobs and build infrastructure in local communities. This inductive policy environment has prompted discussions on eco-tourism in the GEF 6 Steering Committee Meeting on April 7, 2021. Along the same line, the World Bank (2020) notes that policy interventions should ensure that in the longer-term, products and services in the tourism industry are diversified to avoid dependence on beach tourism in Thailand’s coastal regions and islands where high visitor numbers occur. This involves enabling new tourism products and services such as those focused on eco-travel or local

culture in more remote provinces that support less developed rural regions and provide an opportunity for an inclusive form of tourism. Hence, building back better after COVID-19 offers an opportunity to develop wildlife and ecotourism as part of a more diversified tourism offering which can support resilient and inclusive growth.

Projecting the development of wildlife tourism is particularly complicated given the impact of COVID-19. The tourism sector in Thailand, which accounted for close to 15% of GDP pre COVID-19, has faced a near cessation of international tourist arrivals since March 2020 (World Bank, 2020). The shape of the economic recovery is uncertain with international travel restrictions, trade and supply chain disruptions likely to continue to impact the economy, particularly through reduced tourism (World Bank, 2020). The BAU and EPITES projections of the number of both Thais and international tourists are based on statistics provided by the DNP and allow for a phased recovery of both domestic and international tourists from 2021.

**Wildlife Sanctuaries:** There are 47 Wildlife Sanctuaries in Thailand with a combined area of 37,269.36 km<sup>2</sup>. Wildlife Sanctuaries are afforded a higher level of protection in terms of access and use than other Protected Areas. For Wildlife Sanctuaries, the DNP holds data on the number of visitors for the period 2013 to 2020. In both the BAU and EPITES scenarios, the number of tourists in 2021 is assumed to be equal to the average number of domestic tourists between 2013-2020 which was 2,262,692 visitors/year. The assumptions on the number of Thai and international tourists and the entrance fees used to calculate tourism revenues for BAU and EPITES are described in Table 11. EPITES attracts a higher number of tourist and can justify an increase in entrance fees due to the better protected wildlife and related visitor experience.

For domestic tourists the assumption is that under EPITES the number of tourists will increase by 6% a year from 2022,<sup>36</sup> up until the number reaches twice the current level. This does not occur (taking into account both domestic and international tourism) until after 2030 as a result of the low base / visitor numbers the projection starts from. It is therefore seen as a conservative assumption. Tourists will be allowed in clearly designated zones – i.e. the buffer zone of the Wildlife Sanctuaries (at a distance of 1 km outside), following the model being tested at HKK.

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<sup>36</sup> Given the travel restrictions since the outbreak of COVID-19, domestic tourism is likely to increase. As such, the assumption of an increase of 6% in the number of domestic tourists visiting wildlife sanctuaries in 2022 is not considered over optimistic.

**Table 11: Wildlife Sanctuaries: Assumptions under BAU and EPITES for wildlife ecotourism**

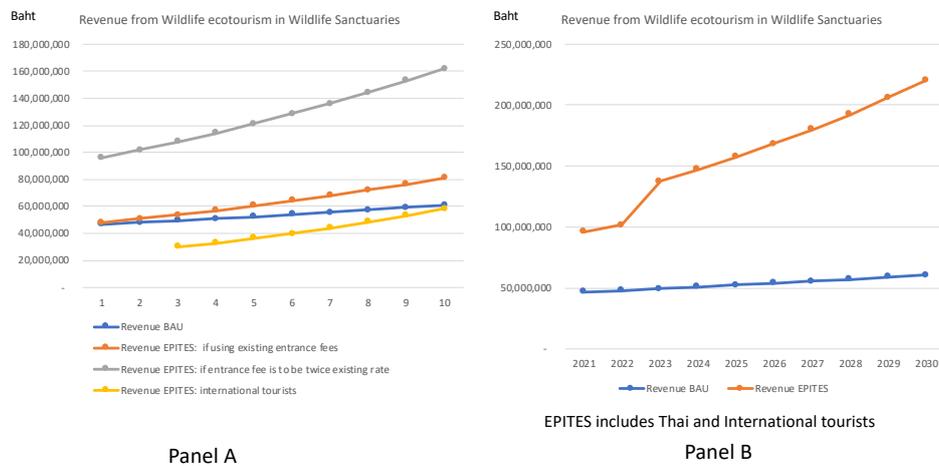
Indicator	BAU	EPITES
Number of Domestic tourists	The number of tourists increases at 3% a year	The number of tourists increases at 6% a year
Entrance fees for domestic tourists	Entrance fees remain stable at 20 Baht/person	Revenue under EPITES is calculated for two options: 1) no increase in entrance fees; 2) the entrance fee increases to twice the existing rate to 40 Baht/person
Number of International tourists	No international tourists	In 2023, there are 150,203 international tourists, equivalent to no more than 10% of the number of Thai tourists in 2020. From 2024 onwards the number of international tourists increases by 10% a year.
Entrance fee for International tourists	Not applicable – no international tourists	The entrance fee is the twice the current entrance fee to National Parks – i.e. 400 Baht/person <sup>1</sup>

Note: 1/ Nabangchnag (2009)<sup>37</sup> estimated the mean willingness to pay for conservation measures to protect Doi Inthanon National Park to be between 715 Baht - 1,210 Baht/household based on a parametric and non-parametric analysis. Using the Travel Cost Method (TCM) consumer surplus was estimated at 1,227 Baht/person/trip. Both these values (even in 2009 prices) are much higher than the entrance fees proposed for international tourists.

Based on the assumptions in Table 11, Figure 11 shows the projected revenue under BAU and EPITES for Wildlife Sanctuaries, for the 10-year period 2021 to 2030. Figure 11 Panel A shows the revenue under BAU and three estimates for EPITES, namely: (i) revenue from Thai tourists using the existing entrance fees; (ii) revenue from Thai tourists assuming that entrance fee is twice the existing rate; and, (iii) revenue from the international tourists starting from 2023 assuming that the entrance fee is equivalent to current fee to enter National Parks. If the entrance fees for Thai tourists is increased over a period of 10 years, the differences in revenue between the BAU and EPITES would be 1,073.7 million Baht (USD 33.108 million) (Figure 11 - Panel B). Importantly, the estimated revenue flows are contingent upon investments in tourism infrastructure (e.g. from National and provincial Government and private sector), the ability to clearly define access to specific areas where wildlife viewing is permitted and the specification of the maximum number of tourists that would be allowed at any given period of the year to ensure that visitors sustainability threshold is applied. Studies are needed to determine the visitor sustainability threshold for the National Parks and the buffer zones of Wildlife Sanctuaries. The difference between BAU revenue stream and the projected revenue stream under EPITES is the income foregone associated with an underinvested in nature reflected through enhanced measures to stem the illegal trade in wildlife.

<sup>37</sup> Nabangchnag (2009) "An Analysis of Economic Values of Inthanon National Park" Report prepared for DNP.

**Figure 11: Wildlife Sanctuaries – revenue from ecotourism under BAU and EPITES**



**National Parks:** Thailand has 154 National Parks,<sup>38</sup> however, only seven are known to be popular among tourists for wildlife viewing. These are Khao Yai, Kuiburi, Kaeng Kracharn, Khao Sok, Mae Wong, Thong Pa Phum and Mae Ping National Parks. Data on the number of visitors are available for the period 2016 to 2019<sup>39</sup>. Khao Sok and Kuiburi are the only National Parks that receive more international than Thai tourists, accounting for 64% and 57% of total visitors in 2019. For the other 5 National Parks, tourists were predominantly Thais with the percentage of international tourists ranging from zero to 15%. For international tourists, in both the BAU and EPITES scenarios, the number of tourists in 2021 is assumed to be equal to the average number of tourists between 2016-2019 – that is 322,051 for the 7 park combined. The assumptions on the number of Thai and international tourists and the entrance fees used to calculate the potential revenues under BAU and EPITES are described in Table 12.

<sup>38</sup> 131 National Parks are officially declared in the Royal Gazette. The remaining 23 are yet to be formally declared.

<sup>39</sup> Although data for 2020 exists, these are excluded from the calculations due to anomalies caused by COVID-19 (near cessation of tourists).

**Table 12: National Parks - Assumptions under BAU and EPITES for wildlife ecotourism**

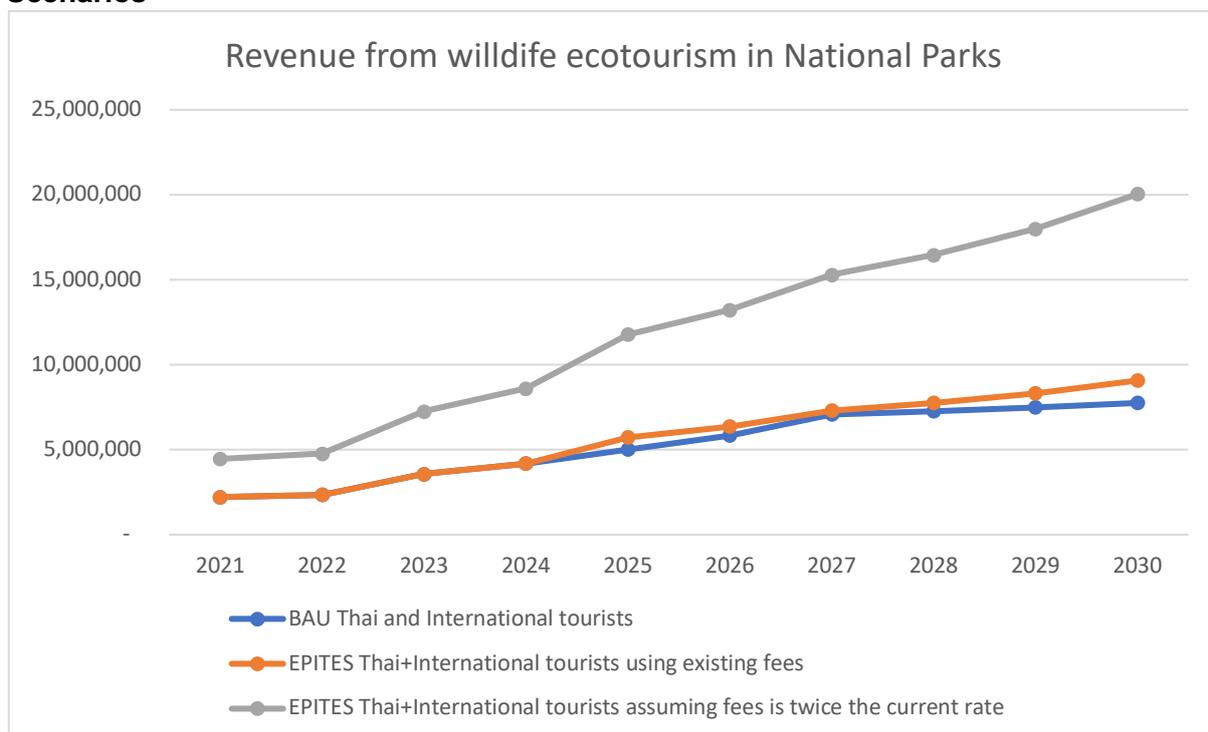
BAU	EPITES
<p><b>Thai tourists</b></p> <ol style="list-style-type: none"> <li>The number of Thai tourists in 2021 is equal to 2020.</li> <li>For Khao Yai, Kuiburi, Mae Wong and Mae Ping, for 2022 and thereafter Thai tourist numbers increase at a rate equivalent to the increase between 2016 and 2019<sup>1</sup>.</li> <li>The number of tourists for Kaeng Krachan and Khao Sok is constant over the period between 2021-2030<sup>2</sup></li> <li>Taking into consideration the carrying capacity of Khao Yai National Park, from 2024 onwards, the number of Thai tourists remains constant at 1.6 million</li> <li>There is no increase in entrance fees<sup>4</sup></li> </ol>	<p><b>Thai tourists</b></p> <ol style="list-style-type: none"> <li>Due to COVID-19, the number of Thai tourists under EPITES is equal to that under BAU up until 2023. From 2024, the rate of increase in the number of Thai tourists is twice the rate under the BAU.<sup>3</sup></li> <li>As with BAU, the number of Thai tourists for Khao Yai National Park remains constant at 1.6 million.</li> <li>As with BAU, the number of tourists for Kaeng Krachan and Khao Sok is constant over the period between 2021-2030</li> <li>Revenue under EPITES is calculated for two options: 1) no increase in entrance fees; and 2) entrance fee increase to twice the existing rate of the National Parks<sup>5</sup></li> </ol>
<p><b>International tourists</b></p> <ol style="list-style-type: none"> <li>Due to travel restrictions, there will be no international tourists for 2021 and 2022.</li> <li>In 2023, the number of international tourists is 50% of the average number per year between 2016-2019.</li> <li>In 2024, the number of international tourists is 75% of the average number per year between 2016-2019.</li> <li>In 2025, the number of international tourists is equal to the average number per year between 2016-2019.</li> <li>From 2026 onwards, the increase in the number of international tourists will be equal to the average rate of increase between 2016-2019<sup>6</sup>.</li> <li>For Kaeng Krachan, international tourist numbers remain constant from 2026.</li> <li>In consideration of the carrying capacity, Khao Sok's international tourists remain constant from 2027.</li> <li>There is no increase in entrance fees<sup>8</sup></li> </ol>	<p><b>International tourists</b></p> <ol style="list-style-type: none"> <li>Due to travel restrictions, there are no international tourists for 2021 and 2022.</li> <li>In 2023 the number of international tourists is 50% of the average number per year between 2016-2019.</li> <li>In 2024 the number of international tourists is 75% of the average number per year between 2016-2019.</li> <li>In 2025 the number of international tourists is equal to the average number per year between 2016-2019.</li> <li>From 2026 onwards, the increase in the number of international tourists is twice the average rate of increase between 2016-2019.<sup>7</sup></li> <li>Kaeng Krachan's international tourist numbers are assumed to remain constant from 2026.</li> <li>In consideration of the visitor sustainability threshold, Khao Sok's international tourist numbers are assumed to remain constant from 2027.</li> <li>Revenue under EPITES is calculated for two options: 1) no increase in entrance fees; and 2) entrance fee increase to twice the existing rate.<sup>9</sup></li> </ol>

**Notes:** **1/** Khao Yai @ 7% p.a., Kuiburi @ 27% p.a., Mae Wong @ 6% p.a. and Mae Ping @ 14%.p.a.; **2/** between 2016-2019 these two National Parks experienced negative growth rates of -13% and -9%; **3/** Kuiburi @ 54% p.a., Mae Wong @ 12% p.a. and Mae Ping @ 28%.p.a.; **4/** Current entrance fees for Thai tourists are 40 Baht for Khao Yai, Kuiburi, Khao Sok, Mae Wong and Thong Pa Phum, 100 Baht for Kaeng Krachan and 20 Baht for Mae Ping; **5/** 80 Baht for Khao Yai, Kuiburi, Khao Sok, Mae Wong and Thong Pa Phum, 200 Baht for Kaeng Krachan and 40 Baht for Mae Ping; **6/** Khao Yai @ 12% p.a., Kuiburi @ 28%, Kaeng Krachan @ -3%, Khao Sok@ 24%, Mae Wong @ 1%, Thong Pa Phum@ 63% and Mae Ping @ 48%; **7/** Khao Yai @ 24% p.a., Kuiburi @ 56%, Kaeng Krachan @ -3%, Khao Sok@ 24%, Mae Wong @ 1%, Thong Pa Phum@ 63% and Mae Ping @ 48%; **8/** entrance fees for international tourists: 400 Baht/person for Khao Yai, 200 Baht/person for Kuiburi, Mae Wong and Thong Pa Phum, 300 Baht/person for Kaeng Krachan and Khao Sok and 100 Baht/person for Mae Ping; **9/** entrance fees for international tourists: 800 Baht/person for Khao Yai, 400 Baht/person for Kuiburi, Mae Wong and Thong Pa Phum, 600 Baht/person for Kaeng Krachan and Khao Sok and 200 Baht/person for Mae Ping.

Based on the assumptions presented in Table 12 the projected revenue under BAU and EPITES is shown in Figure 12. A small difference between revenue under BAU and EPITES is observed *if* entrance fees remain constant. This is due to the assumption that the number of visitors to some National Parks remains constant over the period given the sustainability

threshold of the Protected Areas, and that while the number of international tourists increases at a high rate at some other sites, these are National Parks where the number of international tourists pre-COVID-19 was at a low base so the actual number of tourists and associated revenue is not so significant. However, there is a noticeable difference between BAU and EPITES if entrance fees increased by twice the existing rate, over a period of 10 years. Under this scenario the *additional* revenue to these 7 National Parks could be as high as 2,176.1 million Baht (USD 67million) over ten years, reaching an annual rate of USD 20,040,707 in 2030. While it might be argued that increasing entrance fees might deter potential visitors, there is empirical evidence that demand for visits to National Parks is relatively inelastic<sup>40</sup>. Moreover, in promoting wildlife ecotourism, the aim should not be to attract a high volume of visitors but rather to create a niche market based on tourist who are willing to pay a higher entrance fee to be able to see wildlife in their natural habitat.

**Figure 12: National Parks - Revenue from Wildlife tourism (USD) under BAU and EPITES Scenarios**



The estimates can be considered conservative in that they are only based on entrance fees and do not factor in other direct and indirect spending per tourist. However, it also should be noted that development of the wildlife tourism sector in line with a tourism diversification strategy, would need to be supported by the Government through investment in tourism infrastructure, marketing and increased enforcement of Wildlife Sanctuaries and National Parks.

### 5.2.3 Other key indicators

As anticipated it was not possible to quantify or monetize a number of important indicators within the scope of the study, however, supporting qualitative and quantitative evidence has been collated on these indicators to support the results of the TSA.

<sup>40</sup> Driml, S M, 1996. *Sustainable Tourism in Protected Areas?: an ecological economics case study of the Wet Tropics World Heritage Area*, PhD thesis, Australian National University, Canberra 1996, p257

### 5.2.3.1 Domestic benefits

**Economic - risk of future pandemics / avoided.** The legal and illegal trade in wildlife are hard to justify in the face of the health and economic hardships of the COVID-19 pandemic. A key benefit of reducing wildlife trafficking is the reduction in the risk of future outbreaks of zoonotic diseases and the enormous health, social, and economic costs this entails. It is however difficult to apportion the benefits of an individual country's actions given the global nature of the IWT and of zoonotic diseases once they take hold. There are a number of countries involved in illegal wildlife trade and a suite of measures are needed to protect against zoonotic disease including stopping encroachment into natural habitats, ending the trafficking of wildlife and controls of wet markets.

The illegal wildlife trade in Thailand leaves in place the risk of new viral outbreaks. There is the opportunity for Thailand to lead on the World Health Organization (WHO) "One Health" approach that involves simultaneously protecting people, wild animals and ecosystems. EPITES would complement such an approach.

The economic impact of COVID-19 in Thailand has been severe, particularly due to Thailand's openness to trade and as a tourism hub<sup>41</sup>. The Thai economy was projected to contract by 5% in 2020, which is among the sharpest projected decline in the East Asia and Pacific Region. Given a GDP of 16,898,090 million Baht (Office of the National Economic and Social Development Board) in 2019, this amounts to around 844,904 million Baht (USD 26,053 million). In the first quarter of 2020, Thailand's GDP decreased by 1.8% .<sup>42</sup>

The main underlying reason was believed to be the 38% reduction in the number of international tourists which had repercussions on the tourism related services and business sectors.<sup>43</sup> At the same time Thailand's export sectors contracted due to the disruption in supply chains, the economic situation of trading partners, changes in transportation routes and new border control measures. Production were either stalled or temporarily shut down because of the social distancing measures affecting employment, income and consumers spending power.

The tourism sector, which accounts close to 15% of GDP, has been severely impacted with a near cessation of international tourist arrivals since March 2020. The outbreak will likely lead to severe job losses, particularly in tourism, due to transmission control and social distancing measures. While significant uncertainty remains about the ultimate impact on the labor market, in late May 2020, the National Economic and Social Development Council (NESDC) estimated that 8.4 million jobs were at risk from the COVID-19 outbreak in Q2 and Q3 2020, in addition to the 6 million farmers already at risk from drought (World Bank, 2020). The impact on household welfare is also likely to be severe. The number of economically insecure, i.e., those living below USD5.5 per day, is projected to double from 4.7 million in Q1 2020 to an estimated 9.7 million in Q2 2020, before recovering slightly to 7.8 million in Q3 2020 (World Bank, 2020). Thailand's combined COVID-19 response packages amount to 12.9% of GDP, focused on providing relief to vulnerable households and affected firms (World Bank, 2020). Cabinet Resolutions were passed on March 10 and March 24, 2020 with measures to help alleviate

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<sup>41</sup> Thailand Economic Monitor June 2020: Thailand in the Time of COVID-19, World Bank

<sup>42</sup> COVID-19 Economic and Social Discovery Plan and Projects within 400,000 Million Baht Budget under the 100,000 million Baht Loan Royal Decree (in Thai). A document produced by the Committee responsible for screening usage of loans.

<sup>43</sup> Estimates of the extent to which the Thai economy is affected by COVID-19 varies. The Economic Intelligence Center (EIC) Siam Commercial Bank reporting in May 2020 for example estimated that the April 2020 lock down pushed revenue of tourism down to zero and projected that by December 2020, only 50% of the tourists would return. The same source also reported that consumption reduced by 7.3% in one month

the economic impacts on producers and consumers. These include soft loans, debt restructuring, tax reduction, income compensation and partial compensation of electricity and water charges. In April 2020, the Cabinet passed a Resolution approving the issuance of 3 Royal Decrees. The first was to approve 1 million Baht of loans to compensate households. The second was an economic stimulus package worth 900,000 million Baht to provide assistance to small and medium scale enterprises. The last was to approve a budget of not more than 400,000 million Baht to support financial and economic stability. The economic stimulus packages have benefitted 43.9 million people, i.e., small entrepreneurs (16 million), farmers (10 million), vulnerable people (6.9 million) and the labor force via the social security system (11 million).

**Employment indicators.** EPITES may increase jobs related to wildlife tourism and enforcement (e.g. related to the introduction of integrated enforcement practices at the demonstration sites).

**Equity indicators.** Criminal activities result in significant distortions with money flowing away from communities and countries that host the illegally traded species. Reducing wildlife crime in rural areas strengthens the infrastructure for effective law enforcement in general. It is assumed that effective control of IWT would positively impact socio-economic development of local populations and Thailand's economy as a whole. EPITES should take into consideration how better control of IWT can be used to reduce dependence on IWT through alternative livelihoods and innovative financing mechanisms and to address poverty. At the local level, it is assumed that under EPITES benefits accruing from wildlife related tourism and other initiatives would be equitably distributed to reinforce implementation and buy-in by local communities and other vulnerable groups, who are directly or indirectly involved in the IWT supply chain. Wildlife tourism benefits flowing from tiger and elephant conservation are potential sources of income. Local communities also need to be incentivized to engage in stewardship / enforcement, or at minimum, sufficiently compensated so as to not be drawn into collaboration with poaching syndicates due to economic hardship. Sustainable livelihood initiatives also need to go beyond eco-tourism, which has proven to be vulnerable in the face of travel restrictions associated with the COVID-19 pandemic, and be resilient to climate change.

#### **Economic benefits of wildlife habitats**

Tiger and elephant habitats support ecosystem services such as water provision and regulation, carbon sequestration, plant genetic materials, food security and medicinal plants, and opportunities for community-based tourism. These ecosystem services are of economic value locally, nationally and internationally. Most of these benefits are not monetized so tiger and elephant landscapes are undervalued. The undervaluing of these landscapes contributes to the inaction and under investment that leads to degradation, fragmentation, and loss of natural habitats, depletion of prey animals, and poaching to supply a large illegal global trade in their body parts, and have pushed wild tigers, for example, to the brink of extinction.

**Reputational risk.** Thailand's implication in IWT can also affect its corruption ranking and index by Transparency International and others. If Thailand's corruption ranking worsens then this can affect its credit rating and deter foreign investment. EPITES can protect against this. The Bank of Thailand could also adopt the Equator Principles and impose lending policies that are wildlife friendly<sup>44</sup>.

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<sup>44</sup> The Equator Principles (EPs) is a risk management framework, adopted by financial institutions, for determining, assessing and managing environmental and social risk in projects. It provides a minimum standard for due diligence and monitoring to support responsible risk decision-making.

### 5.2.3.2 International benefits of EPITES

**Supporting biodiversity and tourism in Africa.** Reducing the demand for ivory in Asia is a key element in addressing the biodiversity crisis in Africa and benefits Africa's lucrative wildlife tourism sector. Smith and Porch (2015) estimate the total economic losses (based on annual tourism income and its capital value) due to elephant poaching in Africa at Euro 4-6 billion per year, and Euro 206 million per year for Rhino across 4 countries (South Africa, Namibia, Kenya and Zimbabwe). This raises the question of whether an international fund should be developed to combat the IWT.

While seizures of ivory in Thailand are low, a recent analysis estimates that 3% of rhino horns are seized in Thailand (UNODC, 2020). It is also possible that illegal wildlife transit through Thailand undetected to countries where seizures are high – for example around 40% of rhino horn and 34% of ivory are seizure in Vietnam and 38.5% of rhino horn and 27% of ivory is seized in China (UNODC, 2020)<sup>45</sup>. Tighter enforcement in Thailand would lead to fewer attempts to transit through Thailand, but may well be offset by displacement to other countries where enforcement is weaker.

**Reducing the risk of global zoonotic disease.** COVID-19 has had massive health, economic and social costs globally, with around 4.2 million deaths globally (August, 2021). The economic costs are extremely difficult to calculate, but one estimates suggests it could reach USD 10 trillion in forgone GDP over 2020-21<sup>46</sup>. Governments have responded to the COVID-19 crisis on a massive scale mobilizing USD 14.6 trillion in support to date<sup>47</sup>. It is widely acknowledged that it is critical to protect and restore nature and biodiversity loss to prevent future pandemics, and that such measures should be central to a COVID-19 stimulus measure and green recovery efforts. The shift to EPITES is, therefore, a mechanism to reduce the risk of future pandemics and the massive costs of this globally. A global response is required and it is difficult to attribute the contribution of individual countries, although given Thailand's position as illegal wildlife trafficking hub its contribution is of high importance.

## 5.3 Summary

The additional costs of EPITES over 10 years (2021-2030) is estimated to be close to USD 30 million. This is around an 80% increase of the budget under BAU which is assumed to increase by not more than 4% a year and far more than the 20% targeted by the GEF-IWT budget. The increase in expenditure is justified based on the many benefits flowing from enhanced control of IWT.

A large percentage of the proposed additional budget under EPITES seeks to address the manpower and the resource gaps that DNP and NED on-ground operations face. This is in line with feedback from bilateral meeting with stakeholder agencies that there a shortage of on-the-ground human resources. EPITES also supports capacity building particularly on the legal aspects of illegal wildlife crimes and investigative techniques. Many crimes committed do not end up in courts and there is limited capacity to trace seizures back to the source of the crime, with the upshot that the legal system can currently only punish those involved in the delivery of illegal wildlife goods and not the main criminals driving the illegal trade.

While controlling the illegal wildlife trade is not the main mandate of agencies such as AMLO, DSI, NACC, the Department of Customs and the OAG, these agencies do take an active interest and much can be gained from more collaborative efforts. The EPITES intervention scenario does not include increased budget allocations for these agencies, but there are arguments for this. ALMO has a tiny budget to address all natural resource crimes (although

<sup>45</sup> See Annex 7 for more details

<sup>46</sup> Economist, 7 January 2021. What is the economic cost of covid-19?

<sup>47</sup> Are we building back better? Geneva, Switzerland.

reportedly budgets can be relocated for this means if justified). The Department of Customs' budget is not specifically earmarked for activities related to illegal wildlife trade, and has requested budget for equipment such as x-ray machines to identify smuggled objects, which are yet to be approved.

Table 13 provides an overview of the net benefits of shifting from BAU to EPITES. Quantitative and qualitative information has been provided where it has not been possible to monetize the benefits.

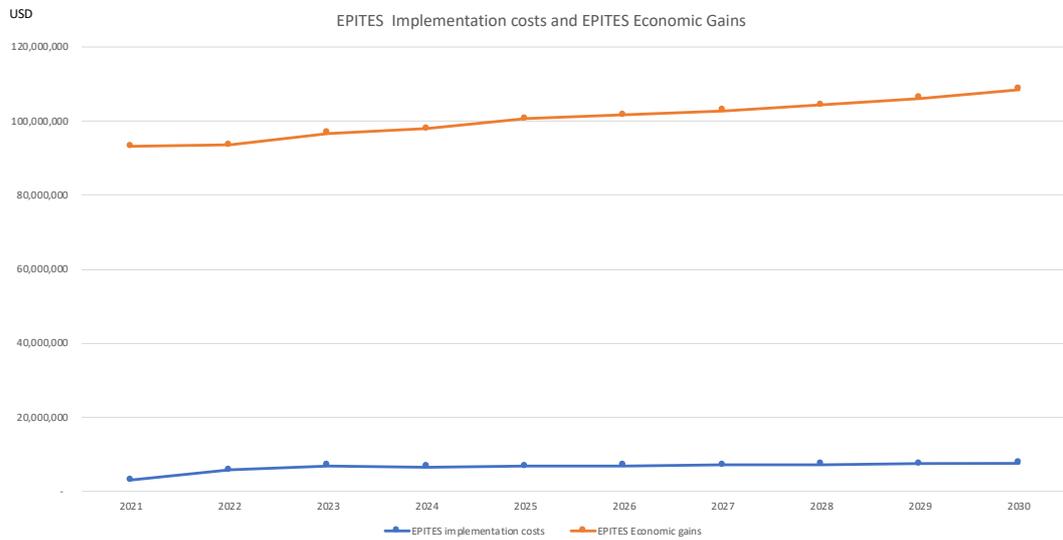
**Table 13: Overview of the net gains resulting from shifting from BAU to EPITES**

<b>Domestic benefits</b>	
<b>Sanction costs avoided (CITES &amp; other potential sanctions)</b>	Up to USD 89.42 million / year Aggregate value over 10 year = USD 894 million
<b>Wildlife tourism – Wildlife Sanctuaries</b>	USD 43.701 million over 10 years
<b>Wildlife tourism – National parks</b>	USD 67.101 million over 10 years,
<b>Cost of zoonotic disease avoided to Thailand</b>	-Estimated loss of GDP 2020 (5%) – USD 26,053 million -8.4 million jobs at risk (2020) -Additional 5 million people economically insecure (2020) -COVID-19 response package equivalent of 12.9% of GDP
<b>Employment</b>	EPITES may increase jobs related to wildlife tourism and enforcement (e.g., related to the introduction of integrated enforcement practices at the demonstration sites).
<b>Equity</b>	EPITES would ensure the equitable distribution of wildlife related benefits to local communities and women and create incentives for wildlife stewardship
<b>Reputation risks avoided</b>	IWT poses reputational risks which could results in reduced flow of (impact) investment to Thailand
<b>International benefits</b>	
<b>Supporting biodiversity and wildlife tourism in Africa</b>	Smith and Porsch (2015) estimates total economic losses (based on annual tourism income and its capital value) due to elephant poaching in Africa at Euro 4-6 billion per year, and Euro 206 million per year for Rhino across 4 countries (South Africa, Namibia, Kenya and Zimbabwe. EPITES can contribute to reducing this loss, although it is not been possible to quantify this contribution.
<b>Reducing risk of global zoonotic disease</b>	Better enforcement of IWT contributes to global efforts to reduce the risk of future zoonotic pandemics

As Table 13 demonstrates, there are clear economic incentives for investment in EPITES. Figure 12 shows the combined costs of EPITES, which totals around USD 65.5 million over 10 years (blue line) relative to the benefits of EPITES (totaling around USD 1 billion over 10 years). This is based on two types of benefits - the benefits of avoided CITES sanctions and the benefits of potential revenue from wildlife ecotourism in Wildlife Sanctuaries and National Parks. The benefits from being risk free from sanctions which CITES could impose on the legal trade of CITES listed flora and wildlife alone is substantial, estimated at around USD 89 million per year. To realize the potential revenue from wildlife eco-tourism (which rises to USD 19 million in 2030), there is a need for investment in eco-tourism facilities which have not been factored into the costs of EPITES. However, wildlife tourism has been tipped as having a role to play in Thailand's strategy to build back better after COVID-19 diversifying its tourism offering and generating investment and jobs in remote areas. There are also other significant benefits not taken into account here such as the cost of future zoonotic pandemics both to the Thai and global economy, the risk of which can be reduced through EPITES and the protection

of biodiversity and Africa's lucrative wildlife tourism sector as set out in Table 13.

**Figure 12: The cost of implementing EPITES relative to the economic benefits**



## 6 TSA Step 5: Policy Recommendations

### 6.1 Conclusions

This TSA study demonstrates the benefits to Thailand that could accrue from the enhanced enforcement of the illegal trade in wildlife, incorporating economic, social and environmental considerations, and the cost of enforcement and protection measures to achieve this. The study is based on information that is publicly available and data made available by the concerned agencies.

Thailand is a source country as well as a significant transit hub for the illegal wildlife trade. This study shows that the economic, social, health and environmental consequences of illegal wildlife trafficking to Thailand are significant. By stemming the IWT Thailand can reap multiple domestic benefits including avoiding potential trade sanctions and the opportunity to develop its wildlife tourism sector and thereby boost development of remote areas and promote inclusive green growth. At the global level, effective prevention of illegal wildlife trade supports key biodiversity and the lucrative wildlife tourism industry in Africa and builds global resilience to future outbreaks of zoonotic disease.

**Thailand's policy framework is conducive to controlling illegal wildlife trafficking. What is now needed is an increase in financial resources and enhanced capacity, cooperation and investigative practices to realize these policies, rather than new policies and action plans.** Thailand has endorsed the Draft Plan of Action 2015-2025 (POA) for ASEAN Cooperation on CITES and Wildlife Law Enforcement. Under the POA, Thailand is to take the role of Voluntary Leadership in the area of Illicit Trafficking of Wildlife and Timber, demand reduction, improved law enforcement, and combatting wildlife cyber-crime (all addressed in the POA 2016-2025). The POA can be seen as the overall framework for Thailand's activities in combatting IWT.

**In order to reduce the trafficking of wildlife in Thailand an increased investment is needed on a sustainable basis.** The estimated additional investment needed to improve the performance of agencies involved in combatting IWT is around USD 3 million a year (USD30 million over ten years), this can be compared with the potential economic gains of shifting from current practices under a BAU to those under EPITES of around USD100 million a year. Over a 10-year period the net benefit of EPITES is estimated at around USD940 million. This is based on the sanction costs avoided and the potential wildlife tourism benefits EPITES offers. While these are potential sanction costs avoided and tourism benefits, (which would require investment in tourism infrastructure and marketing etc. to be realized) it is important to note that the calculation does not include many other significant benefits that have not been monetized such as the cost future pandemics and support to the lucrative wildlife tourism in Africa.

**Increasing funding to support combating wildlife related crime is central to the economic reconstruction after COVID-19.** Ending wildlife crime is recognized as central to building back better from the COVID-19 crisis and preventing future pandemics given that the wildlife trade – both legal and illegal - is a potential vector for zoonotic diseases (UNODC, 2020). The impact of the COVID-19 pandemic on human health, the global economy and national security has been unprecedented. Efforts to prevent further zoonotic disease are based on halting encroachment of natural habitats, addressing the IWT and applying strict sanitary controls at wet markets selling wildlife (or closing them altogether). The difference in the cost of the COVID-19 pandemic compared to the costs to prevent it from happening again clearly demonstrates the economic feasibility of investments such as EPITES and associated investments to promote wildlife ecotourism.

**Thailand is well positioned to play a major role in tackling the global problem of transnational organized wildlife crime.** It is developing its expertise in investigative techniques, and has shown that it is a leader within ASEAN. The Plan of Action (POA) 2015-2025 for ASEAN Cooperation on CITES and Wildlife Law Enforcement developed collaboratively by ASEAN Member Countries can be seen as a roadmap for the Region and individual member countries. The extent to which this POA will result in concrete measures will depend on the political will of each Member Country, who are expected to provide their own budget to implement then Plan of Action.

**Combating illegal wildlife trade is a governance issue and requires high-level political commitment at the national and international levels backed by new and additional finance.** Efforts to combat the IWT are generally underfunded and not prioritized by policy makers. An estimated USD100 billion is spent globally each year to combat the illegal drug trade, equivalent to about 19% of its total market value, compared to around USD 261 million a year to combat the illegal wildlife trade (World Bank 2019). This global situation is mirrored in Thailand, where the Government is prioritizing human and drugs trafficking over the IWT.

There are many agencies engaged in work related to the IWT, but they face budget and time constraints, and most agencies do not have a specific budget for IWT related activities. AMLO for example, have budget ear-marked for human and drugs trafficking but the budget for addressing the IWT is embedded in the budget allocated to address money laundering crimes related to natural resources. For Thailand, the POA presents a framework for action that could help reduce the siloed nature in which agencies are executing their responsibilities. However, the required budget to implement the POA's assigned task will need to be incorporated in annual budgets of individual agencies and approved by the government. For the significant investments to be made available for EPITES, decision makers will need to recognize that investments in EPITES and wildlife ecotourism is an investment in preventing the costs of future pandemics, securing productivity gains (for example from ecotourism) and promoting inclusive green growth.

The TSA's projections of the potential revenue from wildlife tourism for the 47 Wildlife Sanctuaries and National parks where people are known to visit for wildlife is based on the assumption that there will be investments in restoration and rehabilitation of wildlife habitat as well as more local scale investment in eco-tourism facilities. This is consistent with the road ahead advocated by the Dasgupta Review which emphasizes the need to change our investment portfolio and focus investments on areas that can reap productivity gains. Thus, alongside investments in better management and control of the IWT, investments in promoting wildlife-ecotourism are required to accelerate the transition from the extractive use to non-extractive uses of wildlife resources.

**The domestic ivory trade is considered to be a liability for Government, as it remains possible for African ivory to circulate through Thailand undercover of the domestic trade.** While considerable steps have been taken to monitor and seal the domestic market, it is not yet considered to be completely 'watertight'. This has a potential high biodiversity cost for African elephants. NGOs want to close the domestic market altogether and this is supported by CITES, but domestic elephants are considered important to the Thai economy. If CITES banned all trade of CITES listed-species due to infringements (for example on discovering African Ivory in Thailand), then all of the revenue from exports would be forgone. A benefit of investing in EPITES is therefore that it ensures that Thailand is able to continue to export and earn revenue of at least around 2,900 million Baht/year (USD 89.42 million).

**Wildlife trafficking is a transboundary issue and regional and international collaboration is essential to tackle it.** Effective enforcement of the illegal trade by one country will have a limited effect if traffickers are able to relocate their activities to other

countries with legislative gaps and weaker enforcement in place. Strong enforcement practices, data monitoring and analysis, harmonized legislation and cross-border investigations and judicial cooperation globally are therefore needed.

**Simultaneous and integrated action is needed at each stage of the IWT value chain to be effective.** IWT needs to be tackled from all angles (from strong laws to public awareness and demand reduction) as set out in this TSA and levels (transnational, national to local). EPITES incorporates interventions across the IWT supply chain.

**Communities need to be supported through skills development, resources and incentives to engage in wildlife stewardship.** Communities that live close to wildlife are able to detect changes in their local areas and can play an important role in preventing crime at source and forming a 'first line of defense.' Community-led patrols and community-based crime prevention initiatives can be valuable extensions of national law enforcement networks. However, more financial resources are required to support enforcement at the area level. Gains from wildlife tourism operations need to be shared equitably. It is also important if possible to develop Sustainable livelihood initiatives other than eco-tourism, which would be vulnerable to future pandemics. This has been initiated on a small-scale under the TIGER project which is trying to finance small projects supporting buffer zone communities. The initiative is still in its early stage and insufficient time has passed to conclude whether any tangible results were achieved.

## 6.2 Recommendations

**Implement EPITES.** Based on the evidence of the economic, environmental, social and health impacts of the BAU and the EPITES scenarios, a shift from BAU to EPITES is justified. Implementation of EPITES includes a range of actions to address illegal wildlife trade activities across the integrated IWT supply chain. It includes: (i) enhanced law enforcement - development of advance investigative techniques, support to DNP's Wildlife Forensic Science (WIFOS) laboratory and upscaling of on-the ground operations; (ii) enhanced cooperation, coordination, information management and exchange - strengthening Thai WEN, informational management and introducing integrated enforcement networks that include local communities; and, (iii) initiatives to increase awareness and reduce consumer demand.

**DNP to request additional budget for eliminating the IWT for the 2023 financial year.** In order to secure additional Government budget the DNP needs to develop a project focused on IWT for the next budget review cycle in 2023-2024 financial year. This is also the timeframe within which the GEF-IWT project resources will end. This request needs to be developed by January 2022 to ensure the continuity of activities after the GEF-IWT ends, plus the implementation of additional activities included within the EPITES scenario. The proposal would need to be approved by MONRE before being submitted to the Budget Bureau of the Ministry of Finance and then the Cabinet and parliament for final approval. In line with Results based budgeting, the project request should include output-based performance indicators.

**Develop tourism strategy for Wildlife Sanctuaries and Protected Areas.** There is the potential to generate new and additional revenue from the development of wildlife tourism in a manner compatible with Inclusive Green Growth objectives. However this is contingent on, for example: (i) an increase in entrance fees and other user charges; (ii) a study to determine the visitor sustainability thresholds for the National Parks and the buffer zones of Wildlife Sanctuaries; and, (iii) investments in tourism infrastructure by the National and provincial Government and private sector. The DNP should work with the Ministry of Tourism and Sports

and other key Ministries to develop and implement a wildlife tourism strategy supported by Business Plans for the selected Protected Areas and Wildlife Sanctuaries.

While this TSA provides the justification for additional financing for wildlife crime enforcement to reduce IWT in Thailand, a number of follow up actions are urgently required to address the funding gap and support the implementation of EPITES on an ongoing basis.

#### **Review and reform of the existing budget allocation framework to combat IWT.**

- It is critical that there is a move away from incremental budgeting to Results Based budgeting to ensure that annual budget allocations are targeted at priority areas and are cost-effective.
- EPITES is focused on the actions need to implement existing plans and laws. While the POA can be viewed as a road map agencies will have to incorporate the required budget to implement the POA's assigned task in their annual budget. Instead of each agency requesting separate budget for the activities related to IWT, the budget to implement the POA and EPITES should be submitted as a single coordinated package. This needs to be supported at the policy level. Thai-Wen, which is now represented by all of the key agencies, could take a proactive role in advocating this approach. As part of the review, DNP should ensure its existing budget are allocated to address identified priorities.

**Sustainable finance review to identify mechanisms to increase funding for law enforcement agencies from Government budget allocations, private sector investments and other sources including international donor transfers.** This would include:

- The TSA findings can be used by the DNP and other key agencies involved in the IWT to seek additional annual budget allocations. However to overcome the current fragmented nature in which actions to combat the IWT are undertaken, the concerned agencies need to agree upon the macro objectives and targets within a specified timeframe, the role of each agency and the budgetary requirements that each agency will need that is *additional* to their annual budget allocation. COVID-19 relief and economic support packages are currently being prioritized by the Government, it could therefore be difficult to secure even the normal 4% increase per annum in IWT budgets. However, the strong link between addressing the IWT and a sustainable post COVID-19 recovery is an opportunity to lobby for the resources needed. Further, proposing a single package of investments for controlling the IWT (as discussed above) might be a modality to ensure the necessary funding is secured.
- Given the expected strain on government funding as a result of COVID-19, new funding mechanisms need to be identified to close the funding gap. The idea of user charges and pollution charges is not new to Thailand as the principle is stated in the Enhancement and Conservation of National Environmental Quality Act 1992, but there has been little concrete action. In relation to the IWT, fines for perpetrators are still considered to be too low to act as deterrent<sup>48</sup>. Similarly, Thailand seems to be behind other countries, even in Southeast Asia in adopting mechanisms such as Payment for Ecosystems Services<sup>49</sup>. A review of potential innovation IWT specific financing mechanisms, building on existing work by the UNDP-TIGER project for example, is needed to determine concrete funding opportunities.
- As made clear in the Dasgupta Review significant investment in nature is needed, particularly to control the illegal wildlife trade. Building on the investment package

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<sup>48</sup> The statistics made available did provide disaggregated data for IWT fines and it is not clear if fines collected by DNP can be earmarked for conservation

<sup>49</sup> Reducing Emissions from Deforestation and Degradation (REDD+) could have a role to play if associated biodiversity considerations, such as the conservation of elephants, can be incorporated.

specified in the EPITES scenario, including the development of wildlife tourism, Thai WEN should enable agencies to work together to design projects that protect the natural resources base and support sustainable and inclusive development to attract donors and private investors.

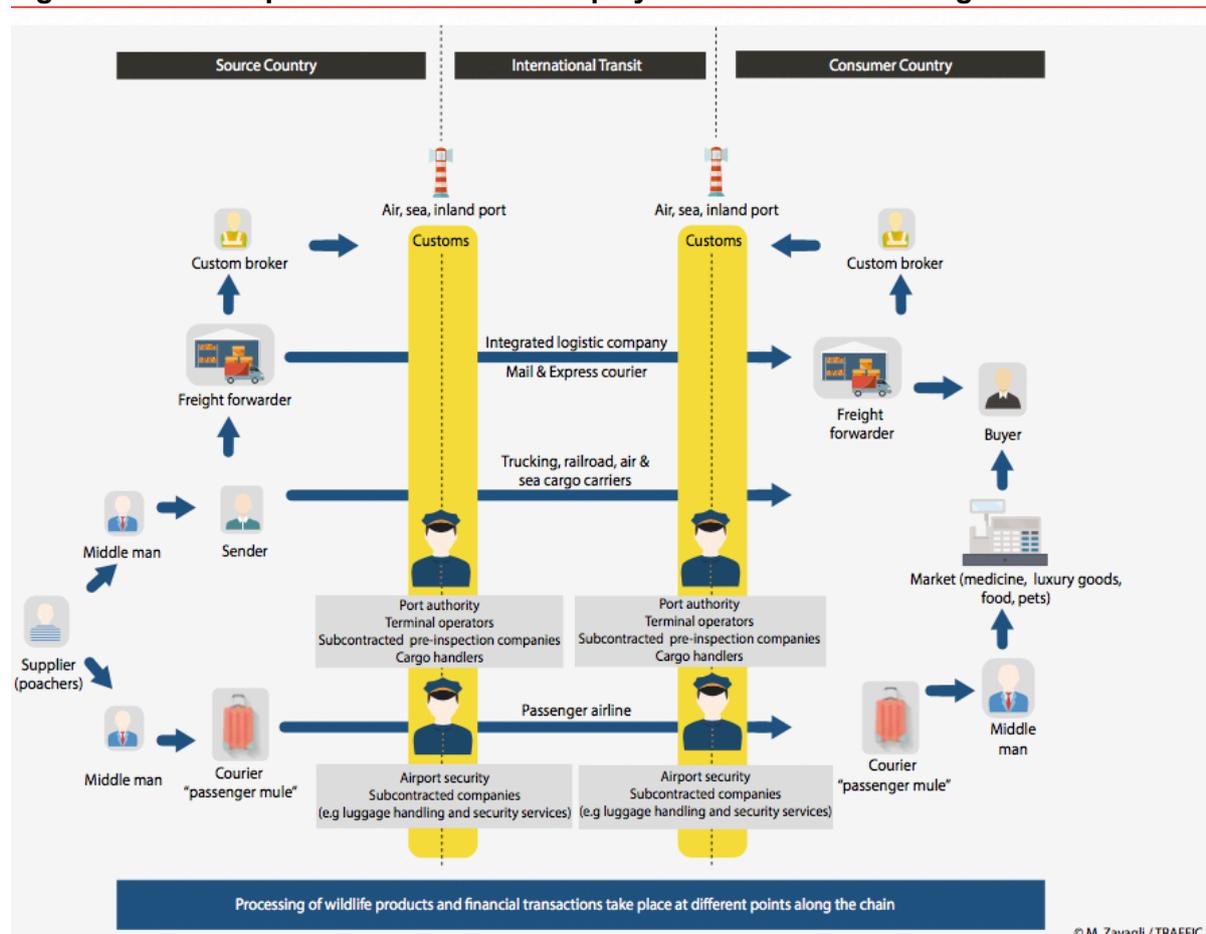
**Explore the feasibility of developing an international fund to combat the IWT.** As highlighted in this TSA, by effectively preventing the trade in illegal wildlife Thailand contributes to a number of benefits outside of its territory, some of which are global in nature. For example, such efforts contribute to reducing the risk of global pandemics, reducing the risk of species extinction and supporting Africa's lucrative wildlife tourism sector. While it is hard to isolate what one country's contribution would be to these global benefits, at the international level a global fund could be considered to support countries, whose efforts to control trafficking have clear global benefits. Given that Thailand is well positioned to lead on eliminating wildlife crimes in the region, it could lead discussions on the development of such a global or inter-regional fund. As a starting point, a Task Force could be created to explore interest in such a fund and inform the features of the fund including type of Fund (e.g. an endowment, sinking or revolving Fund), how it might be capitalized (e.g. Government, private sector and/or donor contributions) and how it would be administered.

## 7 Annexes

### 7.1 Annex 1: IWT Trade chains Southeast Asia

Given the role of Thailand as transit hub for wildlife, the IWT trade chains in the region are discussed in more detail in this section. Trafficked wildlife often passes through multiple countries and actors before it reaches its destination, typically using the same legal transport networks as legal exporters and importers. The range of players involved in Illegal wildlife trade chains is summarized in Figure A1.1 (Zavagli, 2015).

**Figure A1.1: Example of trade chains and players involved in the illegal trade in wildlife**



**By sea.** In Southeast Asia, ship containers are the most efficient method financially and logistically and 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). Countries with the busiest seaports are often also the countries with the most seizures in Southeast Asia: Malaysia, Indonesia, Singapore, Viet Nam, and **Thailand** (Box A1.1). The sheer quantity, estimated at tens of millions of containers each year, and speed of cargo moving through major seaports in the region makes the detection of illicit cargoes low, unless aided by intelligence-led profiling and investigations (Krishnasamy and Zavagli, 2020).

**Box A1.1: Wildlife trafficking through Thailand's seaports**

Based on informant information, containers full of ivory, rhino horns, and pangolin scales would arrive at **Klongtoey seaport** with documents stating that the contents of the containers are used bicycles from Europe, which are not inspected by custom officials. They are forwarded to a nearby location for onward delivery to domestic and international retailers or forwarded by land.

Dealers also get their supply of illegal wildlife products from local suppliers such as poachers, elephant camps, antique galleries (i.e. pre-owned crafted ivory, amulets made from tiger bones) or individual elephant owners.

**Source:** IWT Project Document

**By air.** Illegal wildlife seizures in air transport increased by 40% in 2017. Between January 2009 and August 2016 at least 114 countries had at least one instance of trafficking of ivory, rhino horn, reptiles and birds in the air transport sector, with Indonesia, **Thailand**, and Malaysia placed among the top five countries involved in this trade (Utermohlen and Baine, 2017)<sup>50</sup>. The cost of transporting by air is higher than by sea, and is typically used for high profit margin items including **rhino horn, elephant ivory**, and live wildlife specimens. Pre-COVID-19, wildlife trafficking by air was becoming more feasible on account of the growing frequency of flights, number of airline routes and falling costs. An airport's exposure to trafficking is influenced by its size, routes, inspection procedures and protocols (Utermohlen and Baine, 2017). Large international hubs with high passenger traffic and cargo volumes – such as in Bangkok, are particularly vulnerable as they provide traffickers with a variety of flight options and lower risk of interdiction.

**By road.** 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. 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. 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. (Krishnasamy and Zavagli, 2020).

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<sup>50</sup> Utermohlen, M. and Baine P. (2017). *Flying under the Radar – Wildlife trafficking in the air transport sector*. USAID-Routes Partnership. United States.

## 7.2 Annex 2: Generic IWT drivers

A number of generic drivers enabling the IWT can be identified as presented below, with an indication of their significance in Thailand.

**Weak legislation.** Most countries in Southeast Asia, do not have satisfactory legislation to implement CITES. Weaknesses include – 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. In Thailand, WARPA 2019 has addressed many of the loopholes that were being exploited by criminal gangs to traffic animals from other countries, although legislation such as Money Laundering Control Act. 2008, NACC Act that could be used to convict TOC is not being used.

**Low rates of prosecution and lack of strong convictions.** There is generally a low rate of successful convictions of illegal wildlife traders, with effective prosecutions undermined by – investigative capacity, the low level of fines, political will and the lack of awareness by the judiciary of the seriousness of wildlife crimes (Krishnasamay and Zavagli (2020)).

**Pervasive corruption** and a lack of political will constrain efforts to overcome the identified problems associated with wildlife trade. With the exception of Singapore, Brunei and Malaysia, all ASEAN countries are in the bottom half of Transparency's international's 2019 perception corruption index. Thailand is ranked 101/183 countries. There have been allegations of wrongdoing in cases linked to rhino horn trade in Thailand (Krishnasamy and Zavagli, 2020).

**Laundering of wild-caught species through captive breeding and harvest quotas.** To allow legal trade some countries in South East Asia have set harvest quotas for a number of taxa. However, such quotas are not based on scientific harvest levels, and are poorly monitored and are hence vulnerable to the laundering of wild-caught species as captive species. Captive tiger breeding facilities are in operation in Thailand, including some that have been linked to illegal operations such as the Tiger Temple that was closed in 2016.

**Open markets.** Open markets selling wildlife products illegally exists in many ASEAN countries, including Thailand. Some markets, notably in Lao PDR and Myanmar are also border towns and special economic zones. Bird markets in Thailand tend to cater for the domestic market.

**A shift from physical markets to online platforms, which are now widespread and thriving.** Online platforms can provide anonymity to wildlife traders and are an increasing challenge for enforcement agencies and conservation organizations (Stoner *et al.*)<sup>51</sup>. The GEF-IWT Project Document reports that a high number of wildlife products were observed for sale online (ivory and tiger parts). In 2016, more than 1,500 live animals from over 200 species were recorded for sale in Facebook in Thailand from just 30 minutes of monitoring a day for 25 days. More than half of all animals and species were legally prohibited from trade<sup>52</sup>.

In the case of **ivory**, social media and web sites analysis show that ivory products are still in demand and available for purchase in Thailand. The baseline assessment during the IWT project preparation identified that online ivory sales were growing, with ivory being sold illegally

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<sup>51</sup> 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.

<sup>52</sup> Krishnasamy and Zavagli, 2020 reported that more than 8,500 individual ivory products were offered for sale in Indonesia, Thailand, and Viet Nam on Facebook and Instagram during a 25-day survey in 2016.

using fake documents and illegal African ivory being laundered under cover of domestic ivory. A separate online survey on Facebook and Instagram accounts conducted by TRAFFIC between June and July 2016 shows that at least 2,550 ivory products, mainly jewelry, were recorded for sale on 42 sites/groups on Facebook and Instagram. This figure is comparative to the average number of ivory products that were recorded in Bangkok's marketplace from March – August 2015. At least 232 unique individuals were identified to be offering ivory for sale. The number of items is higher than the number (1,203 products) recorded in Bangkok's physical markets for the period December 2015 through June 2016.

**Transportation routes:** improvements in technology and global infrastructure allow wildlife traders to diversify their trade operations and channels in ways that provide anonymity, making law enforcement more difficult.

**Inadequate action to tackle social and behavior change considerations** around wildlife use and consumption. Existing campaigns lack messages and evidence that create social pressure and fail to increase risk perception that would deter crime and reduce demand from traditional consumers. According to a survey<sup>53</sup>, although 93% of Thais support reducing Thailand's ivory trade, only 42% support banning all ivory trade. This implies that 58% of respondents think that it is acceptable for ivory to be traded.

**Poverty and low income of communities** can hinder efforts to curb IWT, especially where local communities benefit financially from engaging with traffickers and there are limited alternative means to support livelihoods.

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<sup>53</sup> 2015. WildAid Survey Report: Ivory Demand in Thailand  
<http://wildaid.org/sites/default/files/resources/Thailand%20Survey-EN.pdf>

### 7.3 Annex 3: The environmental, social and economic impacts of IWT

Wildlife crime is globally the fourth most lucrative type of transnational crime after illegal narcotics, humans and armaments. Due to the nature of illicit trade, it is hard to obtain exact figures, however, in 2017 revenue from wildlife crime was estimated at USD 5 billion to USD 23 billion per annum<sup>54</sup> (Table A3.1)

**Table A3.1: Estimates of transnational crime value (USD/billion)**

Crime	UNEP - Interpol, 2014	UNEP - Interpol, 2016	GFI, 2017
Illegal logging	30 - 100	51-152	52 - 157
Illegal fishing	11 - 30	11- 24	16 - 36
Illegal Wildlife Trade	7- 23	7- 23	5 - 25
Sub total	48 - 153	69 -199	73 - 216
Drugs		344	426 - 652
Human Trafficking		157	150

**Source:** World Bank, 2019

In addition, a recent study by the World Bank<sup>55</sup> estimated the annual natural capital loss attributable to the illegal wildlife trade at USD15 million a year, emphasizing that this is likely to be an underestimate as it only accounts for elephant tourism benefits in Africa (Table A3.2).

**Table A3.2: Annual natural capital loss estimates by sector (USD/millions)**

	Lower estimate	Upper estimate
Illegal logging (excluding carbon sequestration)	445	3,967
Illegal logging (including carbon sequestration)	42,306	84, 612
Illegal fishing	17	17
Illegal Wildlife Trade	15	15
Sub-total ecosystems services losses	42,782	88,611
Sub-total ecosystems services losses (Long term) <sup>1</sup>	838,546	1,736,795

**Source:** World Bank 2019

**Notes:** 1/ Total long-term economic ecosystem services losses are estimated at USD 839 billion to USD 1,737 billion in net present value (NPV) terms over 30 years at 3% discount rate.

Combining financial (crime value) and economic (natural capital losses) costs, Illegal logging, fishing, and wildlife trade has an estimated full global economic value of about USD 1 trillion to USD 2 trillion per year. More than 90 percent of this value relates to regulating and cultural ecosystem services that are not priced by the market. It is double or more the global risks of counterfeiting and piracy, which are estimated at USD 509 billion, or 3.3 percent of world trade in 2016 (World Bank, 2019, OECD 2019)<sup>56</sup>.

For the IWT the combined financial and economic costs are at least USD 7,015 million per year. However, it is important to recognize that available data on illegal wildlife trades reflect

<sup>54</sup> <http://www.gfintegrity.org/issue/transnational-crime-terrorist-financing/> Accessed 22 September 2020. In comparison – in the early 1990s, TRAFFIC estimated the value of legal wildlife products imported globally was around USD160 billion. In 2009, the estimated value of global imports was over USD323 billion. <http://www.traffic.org>

<sup>55</sup>

World Bank, 2019. Illegal Logging, Fishing and Wildlife trade: the costs and how to combat it.

<sup>56</sup> OECD (Organisation for Economic Co-operation and Development). 2019. Trends in Trade in Counterfeit and Pirated Goods. Paris: OECD. [https://www.oecd-ilibrary.org/trade/trends-in-trade-in-counterfeit-and-pirated-goods\\_g2g9f533-en](https://www.oecd-ilibrary.org/trade/trends-in-trade-in-counterfeit-and-pirated-goods_g2g9f533-en)

a small fraction of the overall trade in illegal wildlife given that a high degree of trafficking goes undetected and/or unreported, and loopholes in the regulation of industrial-scale commercial trade, such as captive breeding operations, which leads to a mix of misdeclaration, misreporting and/or laundering of wild-caught animals declared as captive bred (Krisnasamy and Zavagli 2020)<sup>57</sup>.

The illegal wildlife trade affects all Southeast Asian Nations, facilitated by highly organized cross border networks, and an increasing demand for rare wildlife parts in many Asian markets<sup>58</sup>. The trafficking in wildlife *and* timber in Southeast Asia and the Pacific is estimated to exceed an annual value of USD 20 billion, which corresponds to roughly one fourth of the total financial value of transnational organized crime flows in the region. In East Asia – Pacific, a conservative estimate values the illegal wildlife trade (IWT) at USD 2.5 billion a year, excluding illegal timber and off-shore fishing<sup>59</sup>.

Wildlife crime has far-reaching impacts on “species, livelihoods, economies, regional security, and in some instances human lives” (CITES, 2013)<sup>60</sup>. The environmental, social and economic impacts of the illegal wildlife trade are interrelated, as depicted in Figure A3.1. The IWT directly causes declines in species population, which leads to a deterioration in ecosystem functions. It also fosters corruption and criminality. These two direct impacts of IWT lead to a number of impacts with financial and economic implications such as lost wildlife related tourism benefits, lost livelihoods, health costs, reduce revenues for government from the legal trade and reduced impact investment<sup>61</sup> due to reputation risks. Many of these impacts have both a global and national dimension.

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<sup>57</sup> Krishnasamy, K. and Zavagli, M. (2020). *Southeast Asia: At the heart of wildlife trade*. TRAFFIC, Southeast Asia Regional Office, Petaling Jaya, Selangor, Malaysia.

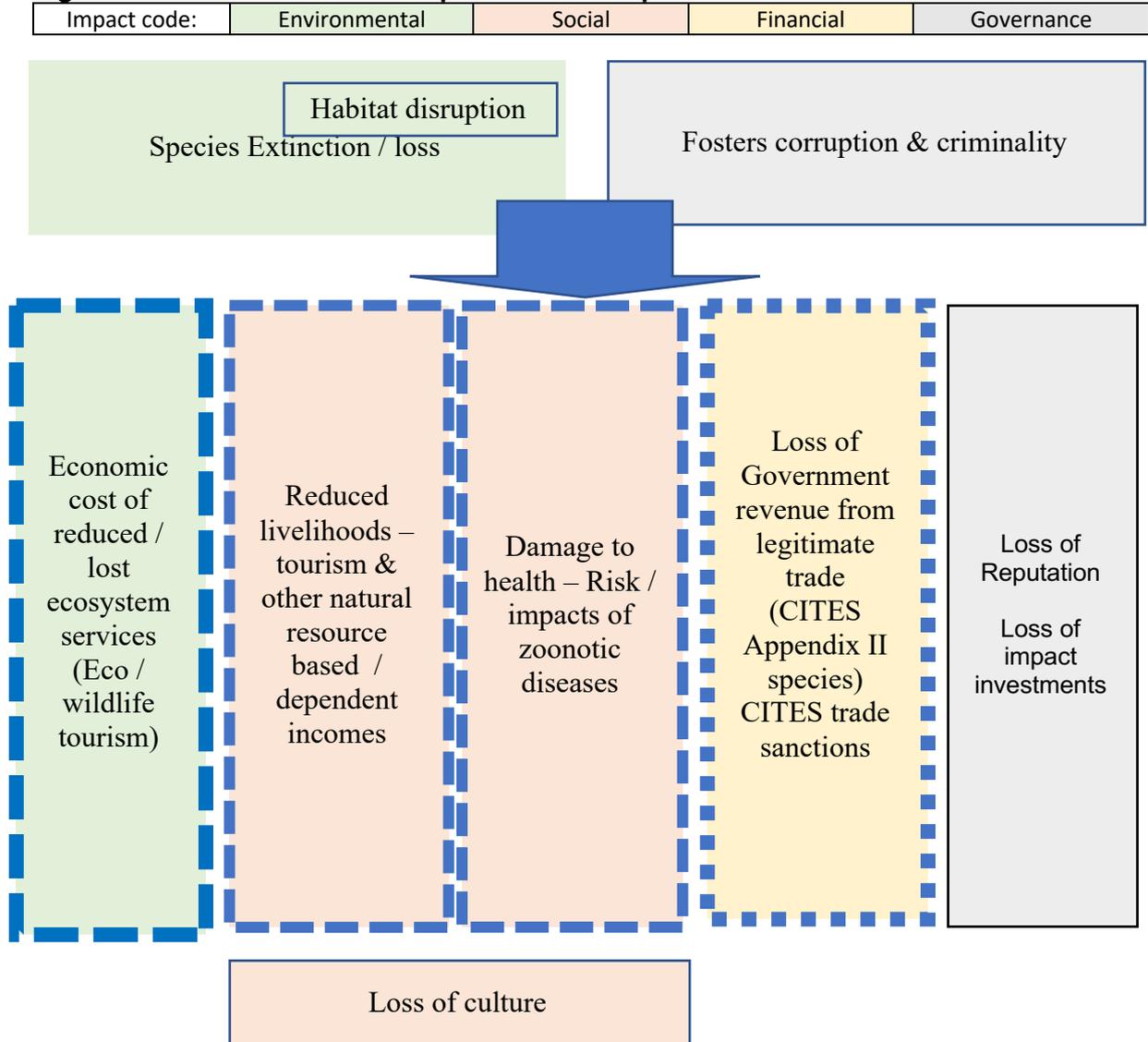
<sup>58</sup> ASEAN-WEN, Handbook on Legal cooperation to combat Wildlife Crime, 2016

<sup>59</sup> UNODC, Transnational Organized Crime Threat Assessments – East Asia and the Pacific, 2013. Chapter 7

<sup>60</sup> CITES. (2013). Ministers come together in Bangkok to discuss the serious nature of transnational organized wildlife and forest crime. Press release. [www.cites.org/eng/news/pr/2013/20130305\\_ministerial.php](http://www.cites.org/eng/news/pr/2013/20130305_ministerial.php)

<sup>61</sup> These are funds allocated to organizations, including public sector organizations, for the purpose of investing in environmental projects, wildlife habitat restoration and rehabilitation conditional on measurable and quantifiable.

**Figure A3.1: Overview of the impacts of IWT Impacts**



### 7.3.1.1 Environmental impacts

Unprecedented biological extinction of many life forms is evident throughout the world and 1 million out of 8 million species are considered to be at risk of extinction<sup>62</sup>. The illegal trade in wildlife species, their parts and derivatives is escalating this biodiversity loss, threatening the extinction of many keystone species such as tigers and elephants. The decline in species populations is a direct result of the IWT and results in ecological disruption contributing to environmental degradation and a reduction of essential ecosystem services. The loss of ecosystem services impacts the poorest populations the hardest, reduces resilience to climate change and undermines future development opportunities.

Illegal trade statistics highlight the significance of Southeast Asia's footprint not only on Asian biodiversity, but also on species originating in other continents (Krishnasmy *et al* 2020):

- Around 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.
- An estimated 895,000 **pangolins** have been tracked 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.
- At least 4,500 **African rhino horns** entered the illegal trade globally between 2016 and 2017. Only 1,093 were seized by enforcement agencies, many of which implicated ASEAN members as a destination or transit country.
- More than 2,200 equivalent **Tigers** were seized in just the 13 Tiger range states between 2000 and 2018.

Wildlife contributes to the health of ecosystems, which makes its conservation crucial. For example, **forest elephants** are ecological engineers that create and maintain forest habitats; thus, their loss has major consequences on the composition and structure of tropical forests (Poulsen *et al.* 2018)<sup>63</sup>. **Tigers** are umbrella species for biodiversity. In their natural habitat, tigers provide a range of services. They help control the prey population which indirectly ensures the balance of the ecosystems in which both the predators and prey live. Tigers' home range or the habitat can also be considered as 'genetic banks' and support micro habitats<sup>64</sup>. Around 75 percent of food crops and nearly 90 percent of wild flowering plants depend at least to some extent on animal pollination (IPBES 2019)<sup>65</sup>.

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<sup>62</sup> <https://www.un.org/sustainabledevelopment/blog/2019/05/nature-decline-unprecedented-report/>

<sup>63</sup> Poulsen, J., C. Rosin, A. Meier, E. Mills, C. L. Nuñez, S. E. Koerner, E. Blanchard, J. Callejas, S. Moore, and M. Sowers. 2018. "Ecological consequences of forest elephant declines for Afrotropical forests." *Conservation Biology* 32 (3): 559–567.

<sup>64</sup> Based on interviews with Dr. Saksit Simcharoen, Chief of Wildlife Research Division, Wildlife Conservation Bureau, Department of National Parks, Wildlife and Plant Conservation and the members of the Tiger Ecology research team. Nabangchang O. Economic Value of the Western Forest Complex's Keystone Species and Ecosystems Services and Financial Solution for Wildlife Habitat Restoration and Human Resettlement

<sup>65</sup> IPBES (Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services). 2019. Global assessment report on biodiversity and ecosystem services of the Intergovernmental Science- *Policy Platform on Biodiversity and Ecosystem Services*. E. S. Brondizio, J. Settele, S. Díaz, and H. T. Ngo, eds. Bonn: IPBES Secretariat. <https://www.ipbes.net/global-assessment-report-biodiversity-ecosystem-services>

### 7.3.1.2 Socio-economic

#### 7.3.1.2.1.1 Reduced livelihood options for rural communities (links to ecological disruption)

The IWT can result in reduced livelihood options for rural communities. When wildlife is lost and their habitats disrupted, Governments and communities forgo the option to legally exploit natural resources in a sustainable manner, for example through wildlife tourism.

#### 7.3.1.2.2 Damage to public health (links to ecological disruption)

Human health is endangered by trade in illegal wild animals, which is unregulated and does not pass through any sanitary / veterinary controls, and thereby contributes to the spread of zoonoses<sup>66</sup> such as SARS-CoV-2 that caused the COVID-19 pandemic<sup>67</sup> (UNODC, 2020). The outbreak of COVID-19, theorized to have jumped from bats into humans, possibly through an intermediate host (pangolin), and spread through a wet market in Wuhan, has brought international attention at how easily zoonotic diseases can emerge from wildlife and the huge human and economic costs of such pandemics. An estimated 60 percent of known human diseases originated in animals, according to the World Organization for Animal Health (Kolby, 2020)<sup>68</sup>. The WHO estimate that 75% of all new and emerging infectious diseases are zoonotic<sup>69</sup>, and are facilitated by environmental destruction and wildlife trafficking (UNODC, 2020).

The threat of more pandemics makes efforts to curb illegal wildlife trade even more critical. In the study by Dobson et al. (2020)<sup>70</sup> cited in the Dasgupta review,<sup>71</sup> the authors estimated that the world may lose at least USD 5 trillion in GDP in 2020, not accounting for the willingness to pay for lives lost and deaths caused by disrupted medical systems. The prevention costs on the other hand would be in the range USD 20-30 billion per year. The economic feasibility is more than justified given that the present value of prevention costs for 10 years would therefore only be around 2% of the costs of the COVID-19 pandemic precautionary actions. Stopping illegal trade in wildlife is among the three precautionary actions proposed, the other two being investments to halve the rate of tropical deforestation and increased investments in monitoring wildlife and embark on programmes to detect and control the spread of potentially deadly viruses and bacteria among domesticated animals. In a post-COVID world, countries need to consider whether to take a “precautionary, public health–based approach, by working to end all commercial trade in wildlife (particularly birds and mammals) for consumption, and to close all such commercial markets” (Lieberman, 2020)<sup>72</sup>, however, there are concerns that this could increase the volume of illegal wildlife trade and undermine local

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<sup>66</sup> Diseases transmitted from animals to humans. Other zoonotic diseases are Swine flu, SARs and Ebola.

<sup>67</sup> The COVID-19 pandemic, which started as an animal virus (SARS-CoV-2) spread to humans, possibly in a wet market in China where many legally and illegally traded species were found. Rosen, T. 2020. The evolving war on illegal wildlife trade. *UNEP Earth Negotiations Bulletin*, October 2020

<sup>68</sup> Importing any live animal brings with it the risk of disease—to native wildlife, to livestock, and to people. Kolby, 2020 notes that “even if coronavirus emerged due to the illegal wildlife trade (for which no evidence has been provided), the legal wildlife trade is just as likely to cause the next pandemic”.

<sup>69</sup> <http://www.emro.who.int/about-who/rc61/zoonotic-diseases.html>

<sup>70</sup> Dobson, A. P., S. L. Pimm, L. Hannah, L. Kaufman, J. A. Ahumada, A. W. Ando, A. Bernstein, J. Busch, P. Daszak, J. Engelmann, M. F. Kinnaird, B. V. Li, T. Loch-Temzelides, T. Lovejoy, K. Nowak, P. R. Roehrdanz, and M. M. Vale (2020), ‘Ecology and Economics for Pandemic Prevention’, *Science*, 369(6502), 379–381.

<sup>71</sup> Dasgupta, P. (2021), *The Economics of Biodiversity: The Dasgupta Review*. Abridged Version. (London: HM Treasury).

<sup>72</sup> Lieberman, S. (2020, May 22). CITES, the Treaty that Regulates Trade in International Wildlife, Is Not the Answer to Preventing Another Zoonotic Pandemic. <https://blogs.scientificamerican.com/observations/cites-the-treaty-that-regulates-trade-in-international-wildlife-is-not-the-answer-to-preventing-another-zoonotic-pandemic/>

livelihoods. Instead more effective regulation and technical upgrading of wet markets may be a better option.

The impacts of the COVID-19 pandemic on wildlife trafficking and wildlife consumption are not yet clear. While global travel restrictions will have caused some short-term disruptions, buyers and sellers will likely reorganize and increase focus on online trade channels. In addition, there is the risk that (subsistence) poaching will increase due to declines in tourism and its associated revenue. Park and protected area closures and a decrease in patrols by rangers have already contributed to increased poaching activities in some countries. Further, wildlife products may be touted as ‘cures’ for COVID-19, notably bear bile<sup>73</sup> and various plant species<sup>74</sup> used in Traditional Chinese Medicine (UNODC, 2020).

The economic impact of COVID-19 in Thailand has been severe, particularly due to Thailand’s openness to trade and as a tourism hub<sup>75</sup>. The Thai economy is projected to contract by 5% in 2020, which is among the sharpest projected declines in the East Asia and Pacific Region. The tourism sector, which accounts close to 15% of GDP, has been severely impacted with a near cessation of international tourist arrivals since March 2020. The outbreak will likely lead to severe job losses, particularly in tourism, due to transmission control and social distancing measures. While significant uncertainty remains about the ultimate impact on the labor market, in late May 2020, the NESDC estimated that 8.4 million jobs were at risk from the COVID-19 outbreak in Q2 and Q3 2020, in addition to the 6 million farmers already at risk from drought (World Bank, 2020). The impact on household welfare is also likely to be severe. The number of economically insecure, i.e. those living below USD 5.5 per day, is projected to double from 4.7 million in Q1 2020 to an estimated 9.7 million in Q2 2020, before recovering slightly to 7.8 million in Q3 2020 (World Bank, 2020). Thailand’s combined COVID-19 response packages amount to 12.9% of GDP, focused on providing relief to vulnerable households and affected firms.

#### 7.3.1.2.3 Loss of cultural heritage

Elephants and tigers are of significant cultural importance in Thailand. Between 1820, in the Reign of King Rama II, and 1917 both the symbolic and the economic-social-cultural importance of elephants was reflected by the fact that the elephant adorned the Thai National flag. History records cultural and economic role of elephants in war and peace time and while this may have waned, elephants still hold an elevated status to Thai people relative to other wild or domesticated animals.

#### 7.3.1.3 Financial and Economic impacts

##### 7.3.1.3.1 Loss of State revenues from legal trade

Government losses from wildlife crimes represent significant financial losses in terms of foregone taxes. The IWT damages the wider benefits to society that such wildlife populations would otherwise offer, for example from tourism, and denies the country revenue that could be obtained through lawful, sustainable wildlife trade, which could fund national development. For species threatened with extinction (CITES Appendix I listed species), commercial trade is not allowed; therefore, there are no tax revenues forgone. Poaching of Appendix I species does however reduce income from wildlife related activities such as tourism, with accompanying impacts on incomes and taxation. For less threatened species (CITES Appendix II species), there are tax revenues forgone from species that otherwise would have

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<sup>73</sup> <https://www.nationalgeographic.com/animals/2020/03/chinese-government-promotes-bear-bile-as-coronavirus-covid19-treatment/>

<sup>74</sup> <https://www.traffic.org/news/covid-19-the-role-of-wild-plants-in-health-treatment/>

<sup>75</sup> Thailand Economic Monitor June 2020: Thailand in the Time of COVID-19, World Bank

been traded legally (World Bank, 2019). According to the World Bank (2019) Governments lose USD 7 billion - USD12 billion per year in foregone fiscal revenues from illegal logging, fishing and wildlife trade (Table A3.3).

**Table A3.3: Tax Revenue Forgone (Financial Losses) USD (billions) per year**

	Range
Illegal logging	6 - 9
Illegal fishing	<1 - 2
IWT (Direct)	<1 - <1
IWT (Indirect)	<1 - <1
Total tax revenue forgone	7 -12

**Source:** World Bank, 2019

These losses have not been calculated in the Thailand context, but their scale is apparent through the high diversity, volume and value of species traded. There is also a potential loss of revenue due to trade sanction imposed by the Convention on International Trade in Endangered Species of Wildlife and Flora (CITES) for infringements.

#### 7.3.1.3.2 Loss of ecosystem service values

Although there are global estimates of the scale of the illegal trade in wildlife, research has mainly focused on charismatic or the most highly endangered species, omitting the extensive trade in less endangered species (e.g. those listed on CITES appendix II) (UNEP 2017)<sup>76</sup>. Hence, the loss in natural capital / ecosystems services associated with IWT in the World Bank study (2019) only considers the loss of elephants, which it uses as a reference point for the wildlife sector<sup>77</sup>. It is expected that tiger-range states and other countries that effectively promote nature-based tourism products and a broader wildlife-based economy experience similar losses.

Naidoo et al. (2016)<sup>78</sup> combined tourist visits with elephant population approximations in 164 African protected areas. They estimated that higher elephant density increases the number of visits to the protected areas. An increase in elephant density of 0.1 per square kilometer results in approximately 700 additional annual visits to a protected area: in other words, each additional elephant increases tourist visits by 371 percent. Considering the direct and indirect spending that each tourist brings, and assuming the average VAT rate for countries with the highest elephant population (15 percent), the forgone tax revenue is estimated between USD 0.64 million to USD 4.26 million per year, with an average estimate of nearly USD 4 million per year (Table A3.4). See also Annex 4.

<sup>76</sup> UNEP (United Nations Environment Programme). 2017. "Analysis of the Environmental Impacts of Illegal Trade in Wildlife." UNEP/EA.2/ INF/28. <https://wedocs.unep.org/handle/20.500.11822/17554>

<sup>77</sup> The World Bank (2019) states that it is not feasible to calculate total economic losses attributable to the wildlife sector as a whole due to lack of data and established methodologies that allow for comparison across species and geographies.

<sup>78</sup> Naidoo, R., B. Fisher, A. Manica, and A. Balmford. 2016. "Estimating economic losses to tourism in Africa from the illegal killing of elephants." *Nature Communications* 7: 13379.

**Table A3.4: Estimates of Government Losses on Tourism Activities due to illegal trade in Wildlife, 2016, USD million / year**

	Predicted annual visits	Direct tourism benefit lost	Indirect tourism benefit lost	Total benefit loss	Min	Max
South Africa	1,605,487	0.71	1.28	1.99	0.87	3.80
East Africa	384,439	0.67	1.20	1.87	0.64	4.26
West Africa	55,405	0.02	0.03	0.05	0.02	0.12
Central Africa	8,412	0	0	0	0	0.03
TOTAL	2,053,743	1.40	1.4	3.91	0.64	4.26

**Source:** Naidoo et al., 2016

For species under CITES Appendix II, the World Bank assumes that 25 percent of the market is illegal, based on Van Uhm (2016). Using the value of the legal global international wildlife trade (nearly USD 8.5 billion per year), including non-CITES species, based on the data for declared import values in 2012 (UN Comtrade and FAOSTAT database) and a tax base of 15 percent, the total forgone losses from the IWT is estimated at nearly USD 320 million (Table A3.5).

**Table A3.5: Global legal wildlife trade estimates, 2012 (USD, million, per year)**

Live Animals	
Primates	132
Birds of prey	5
Cage birds	11
Reptiles	38
Ornamental fish	358
Animal products	
Mammal furs	6,623
Reptile skins	371
Corals and shells	144
Natural pearls	76
Game meat	674
Reptile meat	4
Edible snails	102
Total legal trade	8,538
Estimated illegal trade (25%)	2,135
Foregone tax (15%)	320

**Source:** van Uhm, 2016

### **The value of the wildlife trade in Thailand**

The DNP's official statistics report the value of *legal* wildlife trade in three categories, live animals, carcasses and products. The total value of imports and exports between 2016 and 2020 was 800.33 million Baht (around USD 2.6 million) and 835.52 million Baht (around USD 2.7 million) respectively (Table A3.6). Notably, the value of wildlife related products makes up the larger share of both import and export value.

**Table A3.6: Value of legal wildlife trade imports and exports between 2016-2020**

Year	Item	IMPORTS		EXPORTS	
		Value (Mil. Baht)	Total / Year (Mil. Baht)	Value (Mil. Baht)	Total / Year (Mil. Baht)
2016	Live	24.68	<b>132.6</b>	8.40	<b>68.43</b>
	Carcasses	32.17		26.31	
	Products	75.75		33.72	
2017	Live	28.34	<b>218.32</b>	18.64	<b>256.42</b>
	Carcasses	78.22		33.00	
	Products	111.76		204.78	
2018	Live	30.81	<b>186.75</b>	38.29	<b>147.31</b>
	Carcasses	69		18.03	
	Products	86.94		90.99	
2019	Live	44.01	<b>103.54</b>	60.18	<b>212.15</b>
	Carcasses	1.78		21.87	
	Products	145.18		130.1	
2020	Live	26.52	<b>71.69</b>	20.07	<b>151.21</b>
	Carcasses	0.21		107.06	
	Products	44.96		24.08	
<b>Total</b>			<b>800.33</b>		<b>835.52</b>

Source: DNP (as of October 6, 2020)

An indication of the scale and value of the *illegal* wildlife trade is evident through seizure data. The extent of the illegal wildlife trade no doubt far exceeds these reported values given the lengths organized crime groups go to conceal their activities and the view that much illegal activity remains undiscovered. Nonetheless, seizure data can yield insights on trafficking routes and destinations, concealment methods and techniques used by traffickers. It also reflects the effectiveness and capacity of law enforcement and governance (UNODC, 2020, Smith and Porsch 2015). The picture is further complicated in Thailand by the limited data sharing among the various institutions holding data, and hence the considerable efforts required to compile information to derive an indication of the total value of illegal wildlife trade. Some of the available seizure data in Thailand are discussed below.

Table A3.7 presents data on the number and value of crimes addressed by NED 2017-2020, which shows that between 2017 and 2020 there were 5,288 IWT crimes with a recorded valued of nearly USD 17 million.

**Table A3.7: Number and value of crimes addressed by NED 2017-2020**

	Value THB	USD	Number
Illegal logging	875,442,929	28,889,616	7,276
Forest encroachments	30,429,450,068	1,004,171,852	6,529
IWT	512,945,289	16,927,194	5,288
Activities which causes negative effects on the environment	143,226,899	4,726,487	7,100
Total	31,961,065,185	1,054,715,151	26,193
% IWT crimes	1.6	1.6	20

Source: NED

Table A3.8 provides data on ivory seizures by NED. In addition, between 2014 and 2017 the Thai Customs Department seized approximately 7 tonnes of ivory, which was subsequently transferred to DNP, who is responsible for securing seized ivory. In 2017 it was valued at

approximately USD 7 million. The Customs authorities also seized approximately 10,000 turtles and tortoises, and nearly 6 tonnes of pangolin as shown in Table A3.8 (UNODC, 2017). Many of the larger seizures of ivory, pangolin and rhino horn were shipments destined for Lao PDR (UNODC 2017)<sup>79</sup>. Data for 2020, suggest that there were no seizures of ivory, pangolins and rhino horn. For the period October 2020 to January 2021 (fiscal year 2021), there has been 1 case of illegal ivory, related to 2 tusks / 33 pieces at a value of 4 million Baht. Recent data therefore suggests a general decline in seizures by Thai Customs Department, which could indicate less illegal activity and / or better enforcement deterring traffickers (Table A3.9).

**Table A3.8: NED – Ivory Seizures<sup>80</sup>**

Fiscal year	Number of cases	Total confiscated	Weight	Value (Baht)	USD
		piece/tusk/chunks			
2014	11	1,045 pieces / 3 tusks /83 chunks	1,511	151,100,000	4,659,266
2015	17	1,973 /1,455/ 615	6,429.88	642,988,000	19,826,950
2016	3	169 /115 /9k	1,183	118,300,000	3,647,856
2017	3	10 tusk/ 61 items	73.9	7,390,000	227,875
2018	7	327 pieces/ 9 tusk / 1 chunks /22 boxes 106 items	434.54	43,454,000	1,339,932
2019	3	978 pieces/ 25 tusk/ 13 chunks / 2,080 items	269.5	26,950,000	831,020
Total	44	4,492 pieces/ 1,657 tusk/ 712 chunks /22 boxes / 2,186 items	9,901.82	990,182,000	30,532,901

**Source:** NED

<sup>79</sup> United Nations Office on Drugs and Crime, June 2017. Criminal justice response to wildlife crime in Thailand. A Rapid Assessment

<sup>80</sup> According to NED the market value of ivory in general is more than 100,000 Baht (per pair of tusks) and varies depending on quality and size. With the recent enactment of the Elephant Ivory Tusks Act, 2015, the number of cases of illegal ivory trade is observed to have reduced.

**Table A3.9: Customs Department Seizures 2014-2020**

Species	Unit	2014		2015		2016		2017		2018			2019			2020		
		Cases	Qty	Baht (mil)	Cases	Qty	Baht (mil)	Cases	Qty	Baht (mil)								
Ivory <sup>1</sup>	Tusk / piece	12	441	14	2,086	9	516	-	-	3	80	26.78	3	1,266	2.48			
	Kgs	-	76	-	5,590	-	1,237	-	-									
Testudines	animal	10	2,341	13	4,063	9	3,852	-	-	5	2,531		2	24	0.75	2	1,154	0.46
Pangolin	animal	2	167	11	256	-	-	-	-	3	246		1	47	0.12			
	Kgs	-	-	-	2,820	1	567	3	2,900		1,500	16.45						
Live Birds	Pcs	4	1,028	6	140	5	157	-										
Rhino horn	Pcs	2	14	-	-	-	-	1	21	2	22	33.81						
Carcasses <sup>2</sup>										27	1,308	5.85	14	239	1.34	9	452	1.06

**Source:** Customs Department

**Notes:** 1/ Raw, semi and worked; 2 / For example, tiger, otters, birds, birds' eggs.

#### 7.3.1.4 Governance

The illegal wildlife trade fosters criminality undermining the rule of law, accountability and the capacity of the state. A wildlife crime is usually part of a criminal network that operates beyond the borders of one country. Hence, nearly all transnational wildlife trafficking fulfils the criteria of organized crime, i.e. it is profit motivated criminal activity. In some countries IWT is run by local insurgent groups and may support terrorist organizations that use the trade to finance their operations<sup>81</sup>. Furthermore, wildlife conservation often results in violent conflicts between park rangers and poachers (Brashares *et al.* 2014 cited in World Bank, 2019).

Criminal networks often target low-income and marginalized communities, who are desperate for money. In addition, local people are disadvantaged by wildlife crimes that results in economic losses for legitimate businesses while governments are deprived of tax revenue to support development.

Criminal networks frequently operate more freely with the tacit or active collaboration of officials who are meant to enforce regulations, and/ or investigate and prosecute illegal acts. Facilitated by corruption, traffickers falsify documentation, mis-declare commodities, exploit regulatory loopholes and take advantage of under-resourced law enforcement agencies to bypass controls (Krishnasamy and Zavagli, 2020). The failure to reduce corruption makes addressing illegal wildlife trade a significant challenge (OECD 2018 cited in World Bank 2019)<sup>82</sup>.

Chatham House<sup>83</sup> detail the involvement of organized criminal groups in wildlife trade in Africa. Wildlife trafficking was found to affect the development trajectory of source countries by undermining institutions and the rule of law, creating political and economic instability and perpetuating conflict and violence. The proceeds of IWT benefit powerful individuals and criminal networks, and are typically consumed or invested in non-productive activities outside source countries (World Bank, 2019). Illicit income is the money made from the illegal wildlife trade by all actors in the supply chain. UNODC 2020 provides an indication of the flows arising from the illegal trade in **rhino horn** and **ivory** and highlights the importance of the systematic collection of price and supply data to monitor the situation and to provide insights on potential weaknesses that may allow the disruption of illicit supply chains (Box A3.1).

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<sup>81</sup> A 2014 United Nations Environmental Program report cites that ivory has been an important source of income to militia groups in the DRC and CAR, and is one of the main sources of income to the Lord's Resistance Army (LRA) currently warring in the border region of South Sudan, CAR and DRC and decimating elephant populations in those countries (UNODC, 2020)

<sup>82</sup> OECD, 2018. Strengthening Governance and Reducing Corruption Risks to Tackle Illegal Wildlife Trade: Lessons from East and Southern Africa

<sup>83</sup> Vandome, C and Vines A. 2018.

**Box A3.1: Illicit income & illicit financial flows from rhino horn & elephant ivory (UNDOC, 2020)<sup>84</sup>**

The annual **illicit gross income** generated from ivory and rhino horn trafficking between 2016 and 2018 was estimated to average USD 400 million (USD 310 – 570) and USD 230 million (USD 170 – 280) respectively. The estimates pertain only to the quantities reaching the key markets of South-East and East Asia. Based on field and desk research prices of ivory and rhino horn were collected at all levels of the supply chain. A multi-year average was used to smoothen year-on-year variations, to increase sample sizes and to make the value estimates consistent with the supply estimates. The illicit income generated was broken down by group – retail, international trafficking (including intermediaries, exporters and wholesale traders), runners and brokers and poachers. For both products, the largest increases in prices are found between wholesale and retail selling in Asian countries.

**Table: Annual Illicit income generated by the illicit trade in ivory and rhino horn (USD million), annual average, 2016-2018**

	<b>Ivory</b>	<b>Rhino horn</b>
Overall market size Asia (end consumer), gross income	400 (310-570)	230 (17-280)
Retail	260 - 490	120 - 160
International trafficking	38 - 60	28 - 79
Runners and brokers	7 -11	7 - 15
Poachers	8 -13	6 - 43

- Retail prices differ by a factor of 13 for ivory items and a factor of 36 for rhino horn products, reflecting the wide range of possible qualities. The average price used masks these large differences, and the resulting values therefore represent an order of magnitude rather than a precise statistical estimate.
- Mark-ups for ivory are consistently higher than for rhino horn. Mark-ups cover profits (net income) and costs.
- The differences in prices between ivory and rhino horn are substantial. At the poacher’s level, a kilogram of rhino horn is 55 times more valuable than a kilogram of ivory. A poached elephant yields on average USD 1,000 for its ivory, and a rhino USD 24,000 for its horns. However, there are indications that rhino poachers may face – on average - higher costs than elephant poachers. Further, UNODC, 2020 found the prices of rhino horn to be significantly lower than the widely quoted USD 65,000 per kilogram at the wholesale level in Asian countries.

IFF are cross border flows of illicitly generated, transferred or used income. IFFs emerge from the trade in ivory and rhino horn (income generation) and form the use of the generated net income for consumption or investment outside of the supply chain (income management). Countering illicit financial flows is a crucial component of global efforts to promote peace, justice and strong institutions and is recognized in the Sustainable Development Goals under target 16.4.: “[b]y 2030, significantly reduce illicit financial flows and arms flows, strengthen the recovery and return of stolen assets and combat all forms of organized crime.”

The overall volumes of IFF in the illegal trade in ivory and rhino horn depend on the number and size (volume) of cross-border transactions of the illicit income. In terms of income generation (consumption of goods and services), IFF are estimated at USD10-570 million for ivory and USD 24-390 for rhino horn. No estimates are available for IFF related to income management (investments).

<sup>84</sup> UNODC, World Wildlife Crime Report 2020, United Nations Office on Drugs and Crime, 2020

## 7.4 Annex 4: Valuation studies of wildlife tourism- Africa

### Foregone Government elephant tourism revenue, Naidoo et al, 2016<sup>85</sup>

Naidoo et al, 2016 use Bayesian statistical modelling of tourist visits to protected areas, to quantify the lost economic benefits from poached elephants to African countries. Their tourism model identifies elephant abundance to be an important driver of tourist visits (that is, all else equal, more elephants mean more tourists), therefore the lost economic benefits due to poaching can be estimated as the spending of visitors at and near PAs that will no longer occur due to reduced visitation rates. The model showed that a 1-unit increase in elephant density resulted in 371% increase in PA tourist visits. The result implies that an increase in elephant density of 0.1 km resulted in an additional around 700 annual visits to a PA, all else equal. Population-specific estimates of changes in elephant densities were used to estimate the annual number of elephants being lost to poaching at each PA, and the effect this would have on tourist visits was estimated by re-running the tourism model using the new predicted elephant densities.

The study is based on the average number of annual visits to 164 PAs within 25 elephant range-state countries (these 25 countries collectively contain 90% of Africa's elephants), including 110 PAs that contain elephants. The lost economic benefits estimated at USD25 million annually exceed the anti-poaching costs necessary to stop elephant declines across the continent's savannah areas, although not in the forests of central Africa. Furthermore, elephant conservation in savannah protected areas has net positive economic returns comparable to investments in sectors such as education and infrastructure. Increased elephant conservation is therefore a wise investment by governments in these regions.

The economic losses result from direct and also from indirect and induced spending. Across Africa the annual, direct economic losses from reduced PA visitation due to elephant poaching was a mean of USD 9.1 million (USD 2016), with an additional mean loss of USD 16.4 million in indirect and induced spending. The annual losses to tourism are only a small fraction of the estimated USD 597 million that ivory from Africa's poached elephants was worth annually on Chinese black markets from 2010–2012.

Based on direct and indirect tourist spending, and assuming the average VAT rate for countries with the highest elephant population (15 percent), the *foregone tax revenue due to elephant poaching* was estimated between USD 0.64 million to USD 4.26 million per year, with an average estimate of nearly USD 4 million per year.

**Table A4.1: Estimates of Government Losses on Tourism Activities due to illegal trade in Wildlife, 2016, USD million / year**

	Predicted Annual Visits	Direct Tourism Benefit lost	Indirect tourism benefit lost	Total benefit loss	Min	Max
South Africa	1,605,487	0.71	1.28	1.99	0.87	3.80
East Africa	384,439	0.67	1.20	1.87	0.64	4.26
West Africa	55,405	0.02	0.03	0.05	0.02	0.12
Central Africa	8,412	0	0	0	0	0.03
TOTAL	2,053,743	1.40	1.4	3.91	0.64	4.26

<sup>85</sup> Naidoo, R, Fisher, B, Manica, A & Balmford, A. 2016. Estimating economic losses to tourism in Africa from the illegal killing of elephants. Nature Communications

### **The economic value of elephants and rhino**

Smith and Porsch (2015)<sup>86</sup> estimate the cost of the illegal wildlife trade for two species for which the most accurate information is available on illegal activity – elephants and rhinos. They assessed information on population and poaching to identify the causality between estimated illegal trade numbers and population decline.

The methodology has two distinct steps: (i) the impact of illegal trade on population numbers of the species protected by CITES is assessed based on existing statistics on poaching and population; (ii) the environmental, social, political and economic impacts of such population losses are assessed and monetized where possible. The quantification of impacts is done on the basis of the economic value of the wildlife tourism and game preserve business for the African economies and on an estimate for potential economic gains of rhinos and elephants without poaching.

The authors make a number of assumptions: (i) that an extinction of rhinos and elephants would each diminish the total wildlife watching trade by 20%. As both rhinos and elephants have a very high status for wildlife tourists this may be an underestimate but no data was found to prove or disprove this assumption; (ii) Current estimates of populations and measuring the average population growth rate compared to the poaching rate can help predict the time period in which it would take for the species to become extinct. It is assumed that 1% poaching above the natural growth of 5% would lead to a 1% population loss; (iii) a poaching rate of 5% of the population or less reduces the growth of population while a poaching rate of more than 5% reduces the population towards extinction, and (iv) The overall capital asset value of the wildlife of Africa is 20-30 times the annual income stream it provides. This estimate is in line with the usual assumptions on other long-term capital assets.

MIKE (Monitoring the Illegal Killing of Elephants), collects information on the number of illegally killed elephants in African range states. MIKE aims to establish relative poaching levels by calculating the proportion of illegally killed elephants (PIKE) from the total number of identified carcasses. Using PIKE data it is estimated that 20,000 to 25,000 elephants are illegally killed each year out of total population estimated to be between 420,000 and 650,000. Unsustainable poaching levels that lead to a decrease in population endanger the population as a whole and the income stream of wildlife tourism and game preserves.

The authors conclude that poaching of rhinos and elephants causes significant damage to African economies both by taking away current and legal income opportunities for African economies and also by reducing the natural capital on which future income streams are based. The cost estimates of the IWT can be seen as an underestimate as it does not include other costs imposed by the illegal trade such as annual expenditure for the safeguarding of the hunted animals and the impact of the IWT on the governance of source countries, increasing corruption and organized crime and impeding economic development.

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<sup>86</sup> Smith, L and Porsch, L. 2015. The costs of Illegal Wildlife Trade: Elephants and Rhino. A study in the framework of EFFACE research project. Berlin: Ecologic Institute.

**Table A.4.2: valuation estimates of extinction of Rhinos and Elephants in Four Countries (Euros / billion)**

	Rhinos				Elephants – all range states
	South Africa	Namibia	Kenya	Zimbabwe	
Annual (direct and indirect) tourism income	24.7	1.2	4.8	1.4	74.1
Annual wildlife tourism income	19.7	0.9	3.8	1.1	59.3
Total capital value of wildlife tourism income (20-30 times annual income)	395 - 592	18.7-28	76.8-115.2	22.66 - 33.8	1,185 – 1,778
Loss of extinction of all rhinos (20% of wildlife tourism income)	79-188	3.7-5.6	15.4 - 23	4.5-6.8	237 356
Value of 1% reduction in rhino population	0.79-1.18	0.037-0.056	0.15 - 0.23	0.045 – 0.068	2.4 – 3.6

**Notes:** 1/ The cost of extinction is based on a total capital value for tourism of each elephant to €500,000 to €800,000. 2/ Brandford<sup>87</sup> estimates the value of a live elephant for tourism purposes throughout the course of its life significantly higher at USD 1,607,624. By comparison, dead an elephant is worth USD 21,000 (raw ivory estimate) to fund criminal groups, corrupt officials and even terrorist groups.

**Table A.4.3: The Economic value Lost Due to Elephant Poaching in Africa**

a. Total Population of Elephants in Africa 2010	500,000
b. Number of Elephants Poached 2010-2012	100,000
c. Lost potential legal income per elephant	Euro 22,331 billion – 31, 264 billion
d. Total loss of potential legal income 2010-2012 (10% of c)	Euro 2.3 billion – 3.12 billion
e. Total loss of population 2010-2012 (5% of a)	25,000
f. Value of 1% of population loss	Euro 2.4 billion to 3.6 billion (?)
g. Total loss of natural capital 2010-2012	Euro 12 – 18 billion
h. Total economic loss a year	Euro 4-6 billion

**Table A.4.4: The Economic value Lost Due to Rhino Poaching in Africa**

	South Africa	Namibia	Kenya	Zimbabwe
a. Total Population of Rhino 2012	20,954	2,214 (2010)	914	792
b. Number of Rhino Poached 2006 - 2014	3,827	5 (2006-2011)	101 (2006-2012)	378 (2006-2012)
c. Lost potential legal income per rhino	E312,640	312,640	312,640	312,640
d. Total loss of potential legal income per year	133 million	0.26 million	4.5 million	16.9 million
e. Total loss of population 2010-2012 (5% of a)	0	0	0	67 (8%)
f. Value of 1% of population loss	790-1,180 million	37 – 56 million	150-230 million	45-68 million
g. Total loss of natural capital 2006-2012	0	0	0	360-544
h. Total economic loss a year	0	0	0	51-76
i. Total economic loss per year	133 million	0.26 million	4.5 million	68-93 million

<sup>87</sup> Brandford, undated, Dead or Alive? Valuing an Elephant.

## 7.5 Annex 5: Thailand's Institutional and policy framework

This Annex presents a review of IWT polices, regulations, plans and approaches in Thailand to inform the specification of BAU scenario and highlight potential policy and legal reforms to inform the EPITES scenario. The section is based on a desk-based literature review and stakeholder consultations.

### 7.5.1 Policies and plans

In principle, Thailand's policy framework is conducive to controlling illegal wildlife trafficking. Although controlling wildlife trafficking is not explicitly stated in the DNP's Draft 20 Years Strategy (2017-2036), illegal wildlife trade is recognized as a new threat to national security and included as a priority in the Thai National Security Council international threat prevention strategy (ICCWC, page 8).<sup>88</sup>

In relation to specific species, the following plans are of note (elaborated on in Annex 7):

- **Thailand Tiger Action Plan (2010-2022)** is an implementation framework. The target is to increase the tiger population by 50% from the current baseline population (250 tigers) in 12 years. Key target areas are Thailand's Western Forest Complex (WEFCOM), Tenasserim Range and Dong Phrayayen-Khao Yai Forest Complex. This plan is part of the Global Tiger Recovery Programme.
- **A CITES National Ivory Action Plan (NIAP)** introduced in 2015 to strengthen regulation and enforcement of Thailand's then unregulated domestic ivory market and to close legal loopholes that facilitated the laundering of African Elephant ivory through its domestic market<sup>89</sup>.

At the regional level, Thailand has approved the Statement of ASEAN Ministers Responsible for CITES and Wildlife Enforcement on Illegal Wildlife Trade (January 25, 2019). Key aspects of the Statement, which can be assumed to reflect the policy stance of its signatories, include:

- Adoption of the Global Wildlife Trade Policy. This includes delivery of Sustainable Development Goal (SDG 15)<sup>90</sup>: (i) Target 15.7: Take urgent action to end poaching and trafficking of protected species of flora and fauna and address both demand and supply of illegal wildlife products; and (ii) Target 15.c: Enhance global support for efforts to combat poaching and trafficking of protected species, including by increasing the capacity of local communities to pursue sustainable livelihood opportunities.
- At the Regional Level, Thailand endorsed the Draft Plan of Action 2015-2025 (POA) for ASEAN Cooperation on CITES and Wildlife Law Enforcement. Key activities under this POA which will have implications on legal and institutional reforms as well as financial requirements for Thailand to control and contain the illegal wildlife trade are presented in Table A5.1.<sup>91</sup>
- Thailand is to take the role of Voluntary Leadership in the area of Illicit Trafficking of Wildlife and Timber, demand reduction, improved law enforcement, and combatting wildlife cyber-crime (all addressed in the POA 2016-2025).

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<sup>88</sup> International Consortium on Combating Wildlife Crime (ICCWC), United Nations Office on Drugs and Crime (UNODC), ICCWC Indicator Framework for Combating Wildlife and Forest Crime Assessment in Thailand. Draft Report. September 2019.)

<sup>89</sup> CITES at <https://cites.org/sites/default/files/eng/com/sc/67/E-SC67-13-A5.pdf>

<sup>90</sup> SDG 15 Life on Land. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

<sup>91</sup> Draft POA (2016-2025). July 2020

**Table A5.1: Draft Plan of Action (POA) 2015-2025 for ASEAN Cooperation on CITES and Wildlife Law Enforcement – Key Activities impacting Thailand**

<b>Strategic Thrust 1: Enhancing Sustainable Forest Management</b>	
Activity 1.1.1. Asian Member States (AMS) to develop national strategies, plans and programmes for the conservatism and sustainable use of biological diversity	<ul style="list-style-type: none"> <li>Strengthen national legislations to tighten controls and enhance transparency for importing and transit countries for wildlife.</li> <li>Develop ASEAN Handbook on Legal Cooperation to Combat Illegal Wildlife Trade</li> </ul>
Activity 1.2.1: Develop regional mechanism on preventing wildlife trafficking in the region	<ul style="list-style-type: none"> <li>Develop ASEAN database on wildlife trade to complement CITES database</li> <li>Develop ASEAN reporting protocol on wildlife trafficking with an appropriate coordinating mechanism</li> <li>Explore ways to enhance forensic science capacity for all AMS to enhance enforcement capacity and increase success rate in deterring wildlife crime</li> <li>Explore collaboration with potential partners to support the implementation of POA CITES and Wildlife Enforcement</li> </ul>
Activity 1.2.2: Facilitate the integration of forest ecosystem and biological diversity values in the national and local planning, development processes and poverty reduction strategies and accounts:	<ul style="list-style-type: none"> <li>Conduct socio-economic studies on the use of wildlife products and the impact of wildlife trade on local communities/people who rely on wildlife trade</li> <li>Develop strategies for forestry and wildlife management to take into account the need to prevent transmission of zoonotic diseases from wildlife to humans.</li> </ul>
Activity 1.2.4: Strengthen networking among relevant law enforcement authorities to curb illegal trade in wildlife fauna and flora  <b>(Thailand is the key responsible party for this activity)</b>	<ul style="list-style-type: none"> <li>Establish and sustain links and cooperation with other relevant networks and countries outside ASEAN in order to enhance efforts in combating the illicit trade of CITES wild fauna and flora</li> <li>Conduct campaign in all AMS to reduce demand for illegally obtained wildlife products through media publications, awareness campaign, enhancement of transboundary enforcement activities as well as involve NGOs and private sector.</li> <li>Establish Manuals (Standard Operating Procedures) for dealing with wildlife cases, for law enforcement officers.</li> </ul>
<b>Strategic Thrust 2: Enhancing trade facilitation, economic integration and market access</b>	
Action Program 2.1: Enhancement of Co-operation in Trade of endangered species.  Activity 2.1.1. Develop regional mechanism on trade of endangered species	<ul style="list-style-type: none"> <li>Develop protocol and database to share data and information on legal and illegal wildlife trade in ASEAN; including all permits issued and refused and seizures and confiscations.</li> <li>Conduct a study of legal and illegal wildlife trade in CITES-listed species</li> <li>Review the risks of zoonotic diseases being spread through the legal and illegal international trade in wildlife and establish a policy and mechanisms to minimize this risk.</li> <li>Determine requirements for a traceability system for trade in wild fauna and flora and establish a regional system to the extent practicable.</li> </ul>
Activity 2.1.2: Encourage industry groups, trade associations/traders and local communities to comply with legality and sustainability requirements of CITES and national regulations on trade in wild fauna and flora, and to support research and capacity building on	<ul style="list-style-type: none"> <li>Develop code of conduct for the private sector to comply with the rules and regulations on wildlife trade; in collaboration with private sector</li> <li>Explore ways to provide training related to sustainable management of trade in wild flora and fauna to traders, Small and Medium Enterprises (SMEs) and local communities &amp; initiate training programme.</li> </ul>

sustainable management of trade in wild fauna and flora	<ul style="list-style-type: none"> <li>• Explore ways to facilitate the legal trade in all AMS (task force)</li> <li>• Establish regular stakeholder engagement and awareness programme for industry groups, trade association and local communities on wildlife laws and wildlife trade.</li> <li>• Explore participation of industry and trade groups in regional actions on demand reduction and encourage their involvement in the environmental events. (Explore partnership approach or reward system for those who are cooperating)</li> <li>• Find ways to Involve trade associations in monitoring the legal wildlife trade and in reporting violation of the laws and regulations.</li> </ul>
<b>Strategic Thrust 3: Strengthening Institutional frameworks and capacity building</b>	
<p>Action Program 3.1 Activity 3.1.1: Identify existing training facilities and available training programme on CITES and wildlife enforcement in the region and develop mechanisms for sharing of such training facilities and programmes.</p> <p><b>Thailand is to lead on this activity</b></p>	<p>Identify capacity building needs of AMS. For example: species Identification-including distinguishing wild specimens from captive-bred/artificially propagated; law and regulations related to CITES and wildlife enforcement; Wildlife Forensics; Wildlife investigation; Wildlife prosecution; Intelligence analysis; use of free database software; use of e-permitting toolkit; cybercrime; use of latest technology to optimize intelligence and digital forensics; handling; husband; sampling and evidence handling guidelines for court trial.</p>
<p>Activity 3.1.2: Undertake professional training programmes for judges in forest legislation, particularly those at the level of courts that deal with CITES and wildlife enforcement issues as well as for customs and border guards</p>	
<p>Activity 3.1.3: Promote greater awareness and legal literacy among local communities whose livelihoods are dependent on the goods services provided by forests (wildlife fauna and flora).</p>	<ul style="list-style-type: none"> <li>• Training for captive breeding or artificial propagation of wild animals and plants, especially among local communities instead of harvesting wild specimens. Also support sustainable use of overpopulated wildlife which become pests such as long-tailed macaques, wild pig, monitor lizards.</li> <li>• Explore possible alternatives to wildlife trade as a source of income for the communities including tourism or community – activities.</li> </ul>
<p>Activity 3.2.2: Promote research, monitoring and information exchange on CITES and wildlife enforcement related issues</p>	<ul style="list-style-type: none"> <li>• Conduct feasibility study on potential species for sustainable commercial trade.</li> <li>• Establish mechanism to identify illegal wildlife trade online and to report illegality to enforcement authorities. Potential to involve conservation NGOs.</li> <li>• Conduct research on the potential of resources and the effectiveness of law.</li> </ul>

Thailand is a member of the Working Group on Illicit Trafficking of Wildlife and Timber formed under the framework of the ASEAN Senior Officials Meeting on Transnational Crime (SOMTC) in September 2017. Thailand has been leading the region in these developments as the Voluntary Lead Shepherd, via the Royal Thai Police.

At the international level, Thailand joined CITES in 1983. Box A5.1 summarizes the role of CITES in relation to the IWT. Given the limitations of CITES there is a view that a new treaty

is warranted to address wildlife crime and the human, veterinary, and wildlife health issues and the relationship with wildlife trade.

**Box A5.1: Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) (Rosen, 2020<sup>92</sup>)**

CITES established in 1973 is an international agreement between governments aimed at ensuring international trade in specimens of wild animals and plants does not threaten their survival. It gives varying degrees of protection to more than 37,000 species of animals and plants. Thailand became a signatory to CITES in 1983.

CITES regulates both legal and illegal trade in wild species of flora and fauna, but was not intended to be a crime-related convention and does not require countries to make illegal wildlife trade a criminal offence. Between 2010 and 2018 there were efforts to overcome the limitations of the Convention in countering illegal wildlife trade by embedding it into the work programmes of organizations better positioned to enforce action against wildlife crime, such as the UN Office of Drugs and Crime (UNODC), INTERPOL (International Criminal Police Organization), and the World Customs Organization (WCO). The creation of the [International Consortium on Combating Wildlife Crime \(ICWC\)](#) in 2010 further enhanced the international cooperation needed to support national enforcement efforts (UNODC, 2020)<sup>93</sup>.

In 2013 the United Nations Group of Friends on Poaching and Illicit Wildlife Trafficking, promoted the first UN General Assembly resolution on tackling illicit trafficking in wildlife. [Resolution 69/314](#), adopted in July 2015 recognizes CITES as the primary legal framework for regulating international trade in species of wild animals and plants and combating illicit trafficking in wildlife. [Resolution 73/343](#) in 2019 further underscores the importance of national level action and commitment to effectively address illegal wildlife trade, urging Member States to “take decisive steps at the national level to prevent, combat, and eradicate the illegal trade in wildlife, on the supply, transit, and demand sides, including by strengthening their legislation and regulations necessary for the prevention, investigation, prosecution, and appropriate punishment of such illegal trade, as well as by strengthening enforcement and criminal justice responses.”

The scope of CITES is limited to international trade, it does not have oversight over domestic activities, or tools to punish crimes against countries. However, CITES can **sanction countries through a temporary suspension of trade**, that can serve as an economic incentive for countries to enact measures to combat and reduce illegal trade.

Given the limitations of CITES, there are increasing calls to develop a new convention, within a framework of international criminal law rather than trade law, to address the illegal wildlife trade. Furthermore, zoonotic diseases are outside of CITES’s mandate and therefore the CITES Secretariat does not have the competence to comment regarding the possible links between human consumption of wild animals and COVID-19 (CITES, 2020). There have been calls for CITES and its Parties to address the impact of COVID-19, such as adding a new Appendix IV that would include species considered to pose a threat to public or animal health (End Wildlife Crime, 2020)<sup>94</sup>.

### 7.5.2 Legislation

There are several pieces of legislation in Thailand that cover the investigation and prosecution of wildlife-related and ancillary crimes. These include:

- Wild Animal Reservation and Protection Act, B.E. 2535 (1992) and as amended B.E. 2557 (2014) and B.E. 2562 (2019).
- Ivory Trade Act, B.E. 2558 (2015)

<sup>92</sup> Rosen, T. 2020. The evolving war on illegal wildlife trade. *UNODC Earth Negotiations Bulletin*, October 2020

<sup>93</sup> UNODC. (2020). *World Wildlife Crime Report 2020*. Vienna: United Nations Office on Drugs and Crime.

<sup>94</sup> End Wildlife Crime. (2020). <https://endwildlifecrime.org>

- National Park Act B.E. 2504 (1961)
- Customs Act, B.E. 2469 (1926) and as amended B.E. 2548 (2005)
- Export, Import of Goods Act, B.E. (1979), as amended B.E. 2558 (2015)
- Anti-Money Laundering Act (AMLA) B.E. 2542, (1999) as amended B.E. 2559 (2016)
- Penal Code 1861, as amended (1948)
- Penal Code Amendment Act (No.14) B.E. 2540 (1997)
- The Act on Prevention and Suppression of Corruption B.E. 2542 (1999)
- The Act on Mutual Legal Assistance in Criminal Matters B.E. 2535 (1992)
- The Act on Prevention and Suppression of the Participation of Transnational Organized Crime (APTOCA) B.E. 2556 (2013)
- Enhancement and Conservation of National Environmental Quality Act B.E. 2535 (1992)
- Organic Act on Counter Corruption B.E. 2542 (1999)

Key legislation is discussed below (see also Annex 5 for legislation relevant to focus species).

**The Wild Animal Reservation and Protection Act (WARPA) B.E. 2562 (2019)**, Thailand's primary wildlife protection legislation, was revised in 2019, addressing many of the previous legal loopholes. Of note, the revision includes regulation of a new category for 'Controlled Wild animals', which includes 50 non-native CITES listed species alongside native species. As a result non-native species are regulated in terms possession, breeding and trade (including carcasses and products). This allows NED to act on information that someone is in possession of wildlife (listed under CITES), without having to first prove that the items were imported or will be re-exported in advance.

The law will also be supplemented by a series of by-laws 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 to a maximum of THB 1 million (USD 32,415 and up to 20 years imprisonment, compared to a maximum of THB40,000 (USD 1,290) and up to 4 years imprisonment under WARPA 1992 (Krishnasamy and Zavagli, 2020).

**Ivory Trade Act, B.E. 2558 (2015)**. Thailand has introduced legal reforms 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 minimum fine of THB6 million (USD 200,000) and 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 available in Bangkok, there are indications that trade activity is shifting to on-line trading platforms as well as elsewhere in the country (Krishnasamy and Zavagli, 2020). To control the trade, import, export and possession of ivory and ivory products originating from domesticated elephant ivory under the **Ivory Trade Act B.E. 2558 (2015)** there are three registration systems for: (1) ivory traders and ivory products; (2) legal ivory possession from domesticated and African elephants; and, (3) confiscated ivory. The registration system for domesticated elephant ownerships, the license for legal owners to legally trade, and the strict control to prevent the trafficking of ivory are aimed at preventing any illegal ivory from entering the market.

Domesticated Asian elephants are classified as draught animals and must be registered under the **Beast of Burden Act B.E.2482 (1939)** which is enforced by the Ministry of Interior. This law allows domesticated animals to be treated as private property. The ivory from domesticated elephants can be worked and traded commercially in the domestic market. Such ivory requires the certificate of origin and /or movements permits. Exportation or the importation of all species of beast of burden must be notified to appointed officials. The Ministry of Interior has improved the registration of domesticated elephant to protect against

the laundering of wild-caught elephants into the domesticated elephant population. The new Elephant Identification Certificate includes a microchip number and DNA data.

Asian elephant (*Elephas maximus*) including parts and derivatives thereof exported as good from Thailand needs permission under the **Export and Import Act B.E.2522** (1979). The import or the export of domesticated Asian elephants must also get a health certificate granted by Department of Livestock Development and endorsement on relevant documents and permits for import or export of the animal must be done by CITES and Customs officials at the port of import or export. There are also Tourism business and tour guide committee's regulation to cover any violations involving elephant ivory and protected wild fauna and flora.

To control the trade, import, export and possession of ivory and ivory products originating from domesticated elephant ivory under the **Ivory Trade Act B.E. 2558** (2015) there are three registration systems for: (1) ivory traders and ivory products; (2) legal ivory possession from domesticated and African elephants; and, (3) confiscated ivory. The registration system for domesticated elephant ownerships, the license for legal owners to legally trade, and the strict control to prevent the trafficking of ivory are aimed at preventing any illegal ivory from entering the market.

**Anti-Money Laundering Act (AMLA) B.E. 2542, (1999) as amended B.E. 2559 (2016).** Wildlife and timber trafficking are 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 (Krishnasamy and Zavagli, 2020).

Table A5.2 presents key recommendations on strengthening the legal framework on trade in IWT in 2017, changes made and remaining gaps.

**Table A5.2: Key recommendations on Strengthening the legal framework on trade in IWT (Moore et al 2016)<sup>95</sup> and remaining loopholes**

Observations and recommendations	Changes made under WARPA 2019
WARPA's definition of "trade" is inconsistent with the CITES definition, which includes import, export, re-export and introduction from the sea. WARPA 2557 only included import, export	Re-export has been included in WARPA 2562, 2019
No regulations cover the possession of specimens of species that are not protected under WARPA.	Amended (Section 4)
With the exception of 11 vertebrate species, WARPA omits non-native CITES-listed species from domestic protection, and Thailand is unable to control any trade, international and domestic, in such specimens.	WARPA, 2019 includes 50 non-native CITES species.  While WARPA prohibits possessing, importing, exporting, transiting, and trading, without a license, all species listed under international agreements. these prohibitions will not be effective until the Minister of MONRE issues a notification.
The draft amendment to WARPA would allow hunting of preserved and protected wildlife as well as CITES-listed species, as long as the hunter has a license from DNP. It recommended that hunting of species listed in CITES	While the principle has been put in place, enforcement depends on the by-laws to be drafted and approved by the Cabinet before being passed on to the

<sup>95</sup> Moore, P., Prompinchompoo, C., and Beastall, C.A. (2016). CITES Implementation in Thailand: A review of the legal regime governing the trade in great apes and gibbons and other CITES-listed species. TRAFFIC. Petaling Jaya, Selangor, Malaysia.

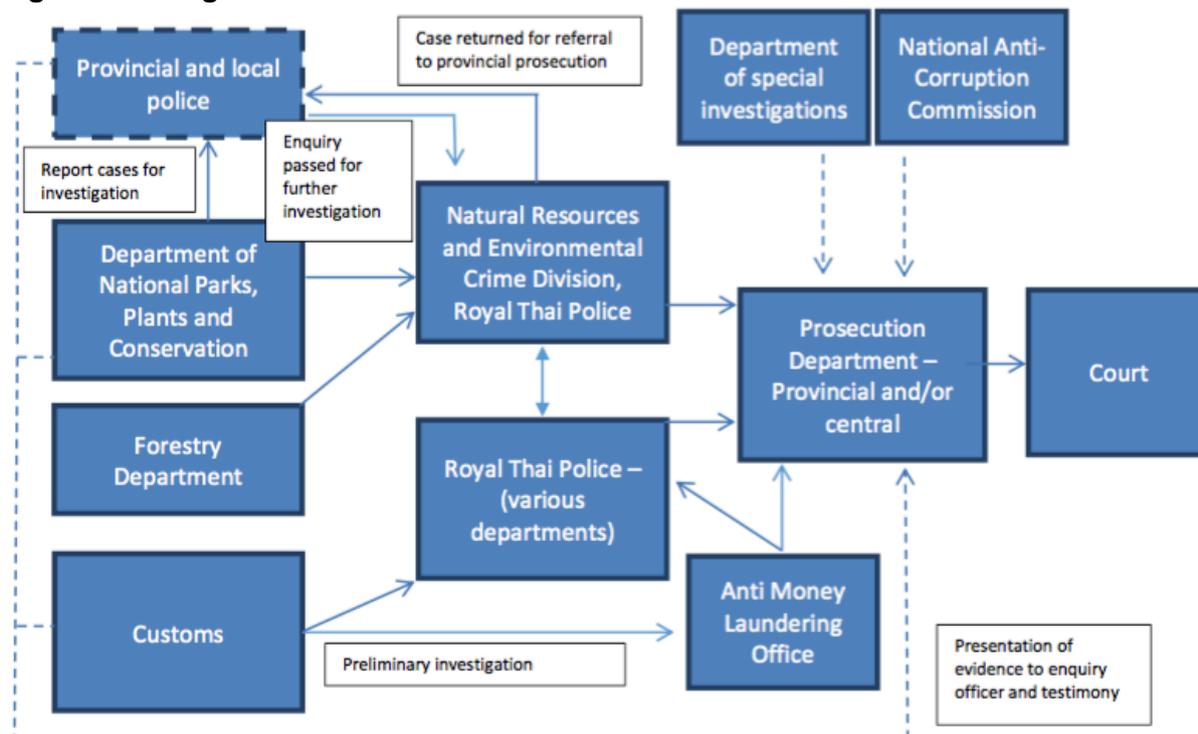
<p>Appendix I should be prohibited and licenses for hunting species listed in CITES Appendices II and III only issued on confirmation that the animal or animals hunted will only be used for the purpose of captive breeding or scientific exchange with a licensed research institution.</p>	<p>Office of the Judicial Council. Once the Cabinet receives the revised version from the Office of the Judicial Council, the Ministry can then issue the Ministerial Order. The process could take from 1 month to one year.</p>
<p>Unless there is evidence of legal import or export, there should be a presumption that un-licensed possession of non-native, CITES- listed wildlife is a product of, or for the purpose of, illegal trade.</p>	<p>Adopting this proposal as opposed to the current situation where the State must prove that anyone who possesses non-native, CITES-listed wildlife has acquired that wildlife illegally will be discussed with the legal expert of DNP CITES Division.</p>
<p>Following from above, the procedure should be that the DNP immediately request a court to order that un-licensed non-native wildlife be vested in the State and begin the process of determining the country of origin. Where this involves living animals, contact should be made with the appropriate officials in the country of origin to determine whether repatriation is possible.</p>	<p>As above, if this is within the broader principles of WARPA 2019, putting this into practice will require the drafting by-laws and subsequently issuing the Ministerial Orders.</p>

### 7.5.3 Key actors

#### 7.5.3.1 Government agencies

This section provides a brief summary on the roles and responsibilities of key Government agencies in relation to the wildlife trade and the laws that they operate by. There are some 15 public agencies involved in illegal wildlife management and enforcement. Figure A5.1 provides an overview of the interactions between key public agencies engaged in the detection, investigation and suppression of wildlife.

**Figure A5.1: Agencies involved in IWT Thailand**



Source: UNODC, 2017<sup>96</sup>

The role of key government agencies in IWT is summarized below.

**Department of National Parks, Wildlife and Plant Conservation (DNP).** DNP is responsible for CITES Management and is the Scientific Authority for Thailand. The DNP’s Division of Wild Fauna and Flora Protection is the national focal point for CITES. It is responsible for coordinating the activities of ASEAN-WEN, who are responsible for implementing WARPA 2562 in areas relevant to the wildlife trade. The Division comprises 5 units: (i) CITES Implementation and Monitoring; (ii) International Wildlife Trade Permission; (iii) Wildlife Check Point Administration; (iv) Ivory Control; and, (v) Exotic Animal Management.

**Wildlife Forensics Laboratory Centre (WIFOS).** Thailand has a modern and advanced wildlife forensic laboratory centre, which (technically) should be able to work on DNA analysis for investigation and prosecution purposes. There have been multiple trainings on forensic testing although extraction of digital evidence in wildlife crime is still developing and facilities are under-utilized. Funds from the GEF-IWT project are to be allocated for forensic equipment. The work of WIFOS will be undertaken with the support of Tools and Resources for Applied Conservation and Enforcement (TRACE) Wildlife Forensics in the UK. Based on recent information provided by the DNP and feedback from the validation workshop however, WIFOS is currently hindered by a number of factors. The WIFOS unit has moved from being attached to one division to another which has disrupted its work and resulted in a dramatic drop in WIFOS’s budget allocation for 2020.<sup>97</sup> WIFOS’s should be an independent unit either within the DNP, or even within the Ministry of Justice similar to the Central Institute of Forensic Science. As it stands, there is a large discrepancy between the role WIFOS is expected to

<sup>96</sup> United Nations Office on Drugs and Crime, June 2017. Criminal justice response to wildlife crime in Thailand. A Rapid Assessment

<sup>97</sup> WIFOS’s budget dropped from 2,127,500 Baht for 2019 fiscal year, to only 408,000 Baht in 2020.

play and the reality. WIFOS is only manned by 9 members of staff comprising 2 government officials, 2 government employees, and 5 other non-government staff members.

**Thailand Wildlife Enforcement Network or Thai-WEN** coordinates all concerned agencies both within and outside of the country. There are multiple agencies and pieces of legislation relevant to controlling legal and illegal wildlife trade, however coordination is noticeably lacking. Information is currently only being exchanged on a case by case basis and each agency have their own database and their own approaches to criminal intelligence. The Thai-WEN has been established to address this shortcoming. In 2020 revisions were made to the composition of the Thailand WEN Committee as well as its role and responsibilities. This revised organizational structure is an important first step but political will is needed to push Thai-Wen into taking a more active role.

**Royal Forestry Department (RFD).** On the ground, the RFD works closely with the DNP, NED and the Regional Police, with a focus on cases pertaining to deforestation and encroachment. Crimes related to wildlife are automatically transferred to the DNP.

**Thai Customs Department** is involved in all types of transboundary crimes, e.g. drugs, intellectual property rights, CITES, money laundering and illegal wildlife trade (which is also part of CITES related responsibilities). In relation to CITES implementation, the Department of Customs is an enforcement authority. It is authorized by the Customs Law to confiscate wildlife and coordinate with the DNP on further steps. The Department of Customs is also involved in financial investigations on wildlife crimes in collaboration with the Anti Money Laundering Office and the Royal Thai Police. The Department of Customs engages intelligence work to intercept traffickers.

The Customs Department has around 6,000-8,000 staff but only around 500 work in the Enforcement Division, which is divided into 3 sub-sections – Land, Sea and Air. According to the Custom Department the highest risk of illegal wildlife trafficking is through Suvarnabhumi airport, which is equipped with the best technology in Thailand for scanning incoming passengers (CT scanner). It uses passenger processing services for risk assessment (e.g. travel routes, who they travelled with, facial recognition) and can access information from various networks to develop passenger profiles if suspicions are aroused. There are around 28 staff positioned in the Suvarnabhumi Airport Cargo Clearance Customs Office. All live wildlife is smuggled through the passenger section, only carcasses and products pass through the cargo section.

The Department of Customs seizes, arrests and conducts preliminary investigation. It then hands cases over to the police who are required to undertake a thorough investigation and file a lawsuit with the Courts within 48 hours. Bottlenecks occur when there are a high number of seizure cases, in such situations cases generally do not reach the court.

In 2015 about 511 pieces of ivory from Kenya weighing around 2,000 kgs were intercepted worth an estimated USD 3.5 million.<sup>98</sup> This was possible due to intelligence sharing between Thai and African customs officials under the Mutual Legal Assistance Treaty (MULAT).

**The Office of the Attorney General** is more involved in cases relating to seizures and confiscation as opposed to investigations of organized crimes. Based on the ICCWC (2019), prosecutors in Bangkok are limited in number, while technical capacity limits provincial prosecutors. The Office of the Attorney General does not have a specialized branch that deals with wildlife crimes, nor any specialized training on wildlife crime or guidelines on what is required to build evidence against the accused or sentencing guidelines. [However, the OAG

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<sup>98</sup>The tusks were hidden in a shipment of frozen fish from Kenya, imported by a Thai company.

has started to engage more, and has proposed to set up a separate office to handle environmental crimes, which is in line with the ongoing judicial reform (Wongruang, 2019)<sup>99</sup>].

**The Royal Thai Police** manages a central database on IWT. Development of the database is reportedly slow and improvements in information flow are needed (e.g. the consistency across statistics provided by different departments).

Within the Royal Thai Police is the **Natural Resources and Environmental Crime Suppression Division (NED)**. As with the Department of Customs, NED is responsible for financial investigations related to wildlife crimes, in collaboration with the **Anti Money Laundering Office**. However, police resources to undertake financial investigations are limited and NED reportedly only work on domestic cases. Local Police stations have many cases which NED have the legal authority to pursue, but no financial investigations have been carried out to date (ICCWC, 2019, p.18). The Technical Crime Suppression Division of the Royal Thai Police has software (but no laboratory) to support digital forensic. However, for wildlife cases forensic evidence is often sent to the DNP which has higher credibility due to its expertise in wildlife forensics. [At the local level, DNP, RFD, Regional Police and NED work together. If crimes are detected by the DNP or the RFD, they are either reported to the Regional Police or NED. The latter gather up all evidences and submit to the courts].

NED deals with 4 areas - deforestation, encroachment, wildlife crimes and crimes related to the environment. In principle, the budget allocated to NED should be equally divided among their 4 areas of responsibilities, but in practice, most of the resources are used to execute works related to deforestation. In relation to wildlife crimes NED operates under WARPA 2019. If someone buys wildlife for the purpose of trading, then the matter is transferred from NED to AMLO.

NED has a staff of 553 working in 9 separate units. Considering the area coverage and the complexity of the IWT supply chain, NED needs more manpower and operational budget. There are 3-4 staff members in each province. Ideally there should be twice this number but the increase is capped. If extra manpower is needed, back up is requested from the Provincial Police Region, who are not specifically trained in wildlife crimes (e.g. relevant laws and investigative techniques). In 2020, NED reported 1,648 cases, but the majority of these cases do not find its way to the Courts, although the courts are paying more attention to wildlife crimes (especially in cases where there is public pressure).

NED is involved in crimes involving more than one province - local or small cases are handled by the Regional Police, whereas largescale and international crimes are transferred to the DSI. Collaboration with the DSI, apart from the conditions specified by WARPA 2019 described below, is done upon the request of NED. For cases which NED assess to be better handled by the DSI and request that the case be transferred to the DSI, the DSI generally appoint a member of the Police Force as advisor or as co-investigator. NED also has a Foreign Affairs Division.

**The Law Enforcement Extension Office (LEEO) was** created in 2008 through an agreement with the Royal Thai Government, the ASEAN-WEN Support Program (2005-2010), the ASEAN Secretariat, and the US State Department. The role of LEEO is to support and coordinate law enforcement matters and transnational wildlife investigations. The LEEO is staffed by seconded officers from the Royal Thai Police, Department of National Parks, Wildlife and Plant Conservation (DNP) and the Customs Department, and is housed at the Natural Resources and Environmental Crimes Suppression Division of the Royal Thai Police.

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<sup>99</sup> Piyaporn Wonhruang, 2019. Wildlife trafficking: a global scourge. The Nation Weekend. September 2019

**Department of Special Investigation (DSI): Bureau of Natural Resources and Environment Crime.**<sup>100</sup> In 2016/17, a Ministerial Order was enforced specifying that DSI should be involved in cases of IWT exceeding 50 million Baht. The DNP should automatically consult DSI in IWT cases of CITES listed species. The DSI is also involved in cases as specified by Section 54 of the WARPA 2019 which now cover cases of encroachment of Wildlife Sanctuaries or Non-hunting areas which exceeds 100 rai (16 hectares) as well as cases exceeding 100 million Baht. For IWT cases not exceeding 50 million Baht or cases under Section 54 which do not exceed 100 million Baht, the DNP should report to the National Police Office. However, if during the investigation process, it transpires that the case involves high profile people, politicians or high ranking government official, it is within the power of the Commander of the National Police Office, as member of the DSI Board, to propose that the DSI become involve in the investigation.

As with the Department of Customs and the NACC, the DSI does not have a budget earmarked for activities related to illegal wildlife, which are thus covered through normal annual budget allocation. For DSI to work effectively, international networking is important as they are dealing with imports-exports

**The National Anti-Corruption Commission (NACC)** can inquire and investigate offences by government officials. Charges of corruption are based on the penal code and the anti-corruption law in Thailand which includes laws on bribery, using authority for misconduct, and neglecting duty. Most of the NACC's work is related to forest encroachment. When cases involving illegal or corrupt activities of government officials occurs, the NACC provides information to the Office of the Public Prosecutor who undertake further investigations and decide whether or not to file a lawsuit. In some cases where the Public Prosecutor decides not to file a lawsuit, the NACC has the power to file its own lawsuit.

In addition to the 30 personnel in the NACC central office who are involved in investigating special crimes, the NACC has 9 regional offices. Each Regional Office is responsible for 9 provinces but is only manned by 2 members of staff . At the area level, there is cooperation with NED if required by the Deputy Secretary General of the NACC Regional Office. They also have networks of local people referred to as 'Strong Society' who act as watchdogs at the area, who among other things tracking illegal wildlife. These volunteers are not paid, all they get is travelling expenses. The Provincial Natural Resources Office also have 'village environmental volunteers.'

The **Bureau of Natural Resources and Environmental Corruption Enquiry (BNEI)** under the Office of the National Anti-Corruption Committee (NACC) has the power to investigate illegal wildlife trafficking if government officers are involved due to negligence or receiving bribes and only if the crime involves high ranking officials. Over the period between 2015-2019, the BNEI has reportedly only worked on 4 such cases.<sup>101</sup>

**Anti-Money Laundering Office (AMLO)** has worked on the financial assets of wildlife-related offenders in civil cases, in parallel with criminal investigations (ICCWC p.18). Under the Anti-

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<sup>100</sup> The Bureau of Natural Resources and Environment Crime has the following duties and power: (i) perform work to prevent, suppress and investigate special crime, and to prosecute offenders in natural resources and environment crime; (ii) Analyze and prove guilt in cases under responsibility; (iii) Collect, and analyze intelligence, and plan, manage and coordinate prevention, suppression and investigation of special cases under responsibility; (iv) Perform work for prevention, suppression and investigation of other crimes, and for inquiring offenders in other cases as assigned; (v) Retain case evidence and exhibits; and; (vi) Jointly perform or support the operation of other related agencies or as assigned.

<sup>101</sup> ICCWC, UNODC. ICCWC Indicator Framework for Combating Wildlife and Forest Crime Assessment in Thailand. Draft Report. September 2019.

Money Laundering Law all ill-gotten wealth related to the illegal wildlife trade can be seized from traffickers. AMLO Act (1999 amended in 2013/ Section 3 (15) specifies that AMLO is responsible for 29 types of crime. Illegal wildlife crime is specified in Section 3 (15) of the AMLO Act. AMLO has around 250 staff covering all provinces and types of crime, i.e. staff are not specialized in specific types of crime. Because AMLO's work is on civil law, they have the power to investigate even though the criminal is not yet caught and evidence confiscated, and therefore have greater flexibility in terms of their operations than the DSI)

**Airports of Thailand (AOT).** The AOT is primarily responsible for the safety of passengers and its role in the IWT is really a by-product of this. AOT scans passengers and luggage departing Thailand and in transit. Although meeting ICAO security standard, the fact that there are cases when tigers and leopards can be smuggled out indicates loopholes. The security system is designed to check for bombs, explosives but not wildlife or drugs. There is a K-9 unit as well. AOT has contributed to detection of smuggling cases. For example, in February 2019 a one-month tiger cub weighing 1kg and hidden in a plastic grocery basket was smuggled out of the country from Suvannaphum but detected in Chennai, and in March 2019 the baggage x-ray scanner caught 3 leopard cubs, 2 pygmy marmosets, 3 weasels and 3 unidentified bird eggs being smuggled illegally out of Thailand to Chennai, India. There are cases where smugglers tie live snakes, live birds around their waist. If cases are intercepted, AOT staff notify the DNP, RFD and the Department of Fisheries. The system is the same for all international airports, Chiang Mai, Chiang Rai, Phuket, Hat Yai, Don Muang. In-bound travelers and luggage are scanned by Computed Tomography (CT), which provides a cross section view of objects and is operated by the Department of Customs.

Other agencies involved to a lesser extent in the IWT include - Ministry of Information and Communication Technology (MICT), Port Authority of Thailand, Zoological Park Organization of Thailand, The Royal Thai Navy, the Mekong River Unit and the Judiciary.

Table A5.2 presents an assessment of Thai law enforcement and prosecution agencies undertaken by UNDOC in 2017.

**Table A5.2: Strength and Weaknesses of Thai law enforcement and prosecution agencies, based on UNODC, 2017**

Agency	Strengths <sup>1</sup>	Weaknesses	Recommendations
Department of National Parks, Wildlife and Plant Conservation	<ol style="list-style-type: none"> <li>1. Strong mandate as lead agency for wildlife investigations</li> <li>2. Good presence at border checkpoints</li> <li>3. Can refer matters directly to the OAG</li> <li>4. Online investigative capacity</li> <li>5. Expertise in wildlife identification</li> </ol>	<ol style="list-style-type: none"> <li>1. More compliance than law enforcement</li> <li>2. No operational intelligence system</li> <li>3. No CHIS system</li> <li>4. Lack of experience with advanced investigative methods</li> </ol>	<ol style="list-style-type: none"> <li>1. Create of a case management system</li> <li>2. Create of an intelligence database with the necessary software for improved data collection and analysis capability</li> <li>3. Increase training including joint training with other agencies on a wide range of basic and advanced investigative techniques</li> <li>4. Contribute to the formation of a joint task force to address serious wildlife and forestry crimes</li> <li>5. Develop CHIS Management System</li> <li>6. Provide training in CHIS management</li> <li>7. Provide training in online undercover investigations</li> </ol>
Forestry Department	<ol style="list-style-type: none"> <li>1. Good presence in the territory and at border checkpoints</li> <li>2. Expertise in timber identification, including CITES species</li> </ol>	<ol style="list-style-type: none"> <li>1. Lack of experience with advanced investigative methods</li> <li>2. High reliance on temporary staff and rangers</li> <li>3. No CHIS system</li> </ol>	<ol style="list-style-type: none"> <li>1. Increase training including Joint training with other agencies on a wide range of basic and advanced investigative techniques</li> <li>2. Develop CHIS management system</li> <li>3. Receive training in CHIS management</li> </ol>
Natural Resources and Environmental Crime Suppressing Division of the Royal Thai Police	<ol style="list-style-type: none"> <li>1. Dedicated law enforcement agency</li> <li>2. Access to international law enforcement agencies i.e. INTERPOL</li> <li>3. Sound organizational framework</li> </ol>	<ol style="list-style-type: none"> <li>1. Short staffed</li> <li>2. Lack of resources</li> <li>3. Poor analytical capability</li> <li>4. No CHIS management system</li> </ol>	<ol style="list-style-type: none"> <li>1. Create dedicated intelligence analyst positions</li> <li>2. Provision of equipment including cell phone analytical tools to increase investigative capacity and capabilities</li> <li>3. Contribute to the formation of a joint task force to address serious wildlife and forestry crimes</li> <li>4. Develop CHIS management system</li> <li>5. Receive training in CHIS management</li> <li>6. Provide training on undercover operations</li> </ol>
Department of Special Investigation	<ol style="list-style-type: none"> <li>1. Dedicated law enforcement agency</li> <li>2. Dedicated intelligence capability</li> <li>3. CHIS management system</li> <li>4. Access to advanced investigative tools and methodologies</li> <li>5. Dedicated case management system</li> <li>6. Good connections with international law enforcement agencies</li> </ol>	Mandate not limited to environmental crimes so it will constantly need to balance priorities	<ol style="list-style-type: none"> <li>1. Contribute to the formation of a joint task force to investigate serious wildlife and forestry crimes</li> <li>2. Undertake operational intelligence assessment to identify top 25 timber and wildlife traffickers in Thailand</li> </ol>
Office of the Attorney General	<ol style="list-style-type: none"> <li>1. Well trained staff on legal matters</li> <li>2. An environmental crime unit that acts as a clearing house for environmental crime cases</li> </ol>	<ol style="list-style-type: none"> <li>1. Limited experience with prosecuting cases based on advanced investigative methodologies</li> </ol>	<ol style="list-style-type: none"> <li>1. Create a dedicated wildlife crime prosecutions unit</li> <li>2. Provide training on anti-corruption and anti-money laundering</li> <li>3. Develop a centralized database at the OAG to monitor relevant</li> </ol>

		2. No specialist environmental unit in the provinces	statistics in the prosecution of wildlife and forest crimes 4. Contribute to the formation of a joint task force to investigate serious wildlife and forestry crimes
Customs	1. Dedicated regulatory agency with managers who possess a law enforcement mindset 2. Access to international law enforcement agencies i.e. World Customs Organization (WCO)	1. Mandate not limited to environmental crimes so it will constantly need to balance priorities 2. Lack of experience with advanced investigative methodologies 3. No central CHIS system 4. Limited capacity for species identification	1. Provide advanced investigative training to customs officers at major airports and seaports 2. Create a central CHIS registry 3. Provide CHIS management training 4. Contribute to the formation of a joint task force to investigate serious wildlife and forestry crimes 5. Include customs in the MoU on controlled delivery 6. Provide species identification training (ongoing)
NACC	1. Strong mandate to investigate corruption	1. Lack of access to advanced investigative techniques 2. Reactive in nature 3. No central CHIS system	1. Amend legislation to allow access to advanced investigation techniques 2. Provide training in advanced investigative techniques 3. Create a central CHIS registry 4. Provide CHIS management training 5. Organize study tours to other anti-corruption units in the Asia/Pacific 6. Contribute to the formation of a joint task force to investigate serious wildlife and forestry crimes
AMLO	1. Strong mandate to address money laundering 2. Strong legislation 3. Superior financial data collection capability 4. Proactive mindset 5. Strong anti-corruption stance	1. Lack of manpower 2. Mandate not limited to environmental crimes so it will constantly need to balance priorities	1. Provide additional staff 2. Contribute to the formation of a joint task force to investigate serious wildlife and forestry crimes

Source: UNODC, 2017

Other actors include domestic NGOs and international NGOs (see Box A5.1), International Organizations – TRAFFIC, USAID, UNDP-GEF and local communities.

**Box A5.1: NGOs working on Wildlife Conservation in Thailand**

There are a large number of NGOs working with wildlife in Thailand. A number of NGOs work on elephants including Friends of the Asian Elephant, Five Provinces Bordering Forest Preservation Foundation, the Asian Elephant Foundation of Thailand, Save Elephant Foundation, Treasure Our Elephants Fund Foundation, Thai Elephant Alliance, Elephant Sanctuary Asia Foundation and the Elephant Guardian Foundation. The Five Provinces Bordering Forest Preservation Foundation in particular works on wildlife related issues in the five provinces in the eastern region of Thailand, one of the region with the highest concentration of wild elephant population in Thailand.

Other NGOs work on other specific species such as the Hornbill Research Foundation, the William E. Deters Foundation for Gibbon and Wildlife Conservation Projects which focuses on providing refuge for injured and abandoned gibbons and monkeys. The Bird Conservation Society of Thailand (BCST), a national organization comprised of individuals and groups who work for the conservation of birds and nature. BCST carries out this task through surveys, education and advocacy on birds and biodiversity conservation issues. There is also the Foundation of Western Forest Complex Conservation which is an area-based organization focusing on finding solutions to resolve the human-elephant conflict in WEFCOM.

Other NGOs working with wildlife in general include - Animal-Sanctuary Chiangmai, Love Wildlife Foundation, the Thai society for The Prevention of Cruelty to Animals (TSPCA), The Wild Animal Rescue Foundation of Thailand, Wildlife Friends Foundation Thailand (WFFT), Wildlife Fund Thailand under the Royal Patronage of H.M. The Queen, EGCO Group and Wildlife Friends Foundation.

The two NGOs which are known to have done substantive area-based work as well as having provided policy inputs are Seub Nakhasathien Foundation and the **Wildlife Conservation Society (WCS) Thailand Program**.

## 7.6 Annex 6: Principles for a global IWT Action Plan<sup>102</sup>

The World Bank documented lessons learned from 20 international donor-funded projects aimed at combating illegal wildlife trade to create five generic principles for a global action plan (World Bank 2019).

- Recognize the rights and important role of local communities, notably indigenous peoples, in managing natural assets and combating illegal activities;
- Adopt an integrated national strategy for dealing with illegal activities across the supply chain;
- Recognize illegal activities in natural resources trade as a serious transnational organized crime;
- Enable public-private-partnerships; and,
- Scale up funding.

The first four principles apply at the local and national levels, while the last principle applies more to the global level. At the national level, complementary and coordinated actions need to take place at both local and national jurisdictional levels

World Bank, 2019 recommends a multi-tiered approach, “whole-of-government” coordinated response to illegal activities (Table A6.1)

**Table A6.1: Priority local, national and global Illegal activities Policy actions**

LOCAL	NATIONAL	GLOBAL
[Establish / enhance property rights / tenure] Establish mechanism for communities to contribute to IWT enforcement / land use management Stimulate alternative economic opportunities Establish transparent mechanism to ensure that the resources and benefits derived from ecosystems services e.g. Wildlife tourism flow to local communities and stakeholders	Define wildlife crimes as a serious organized crime Enact national strategy to mobilize resources and build institutional capacity Establish legal and fiscal environment to catalyze investment Undertake anti-corruption reforms and empower anti-corruption agencies Establish national mechanisms to capture the value of ecosystems, including GHG mitigation and their contribution to the economy	Establish / leverage mutual legal assistance treaties and bilateral mechanism to combat natural resource crimes Utilize Egmont Group and International financial networks to conduct joint investigations across countries and jurisdictions as part of criminal investigations Contribute to and leverage data systems to generate transparent and reliable natural resource crime data Create global markets and mechanisms to capture the value of ecosystem services

**Source:** Adapted from World Bank, 2019

### **Local measure:**

Measures are needed to incentivize stakeholders to take actions that deter illegal behavior and increase incentives for conservation, such as the development of Nature (Wildlife) Based Tourism. One toolkit that can be used to boost conservation earnings while protecting wildlife and landscapes is the Building a Wildlife Economy toolkit (Space for Giants 2019).

**Sustainable use and alternative livelihoods:** The long-term survival of wildlife populations, and the success of interventions to combat IWT, depends to a large extent on the engagement of those who live with wildlife populations. At present, the lack of ownership and shared benefits of wildlife (such as nature-based tourism) hinders support of local communities as

<sup>102</sup> Drawn from World Bank, 2019

front-line defenders for wildlife. Indigenous peoples and local communities are affected by insecurity attached to the IWT and the depletion of important livelihood and economic assets. In some instances, communities are exploited by criminals and crime facilitators and driven to serve as low-level poachers. Typically, communities are excluded from the benefits of conservation and suffering from human-wildlife conflicts.

Community-based conservation investments can improve livelihoods and have a direct impact on reducing the illegal killing of wildlife.

- a. Engage communities on governance boards to provide oversight, local ownership, and strengthen conservancy institutions.
- b. Enlist community conservancy rangers and eco-guards into wildlife monitoring and anti-poaching programs to address threats from poachers and broader security monitoring.
- c. Develop enterprises to generate alternative economic opportunities and jobs for conservancies, especially women and youth; community-based natural resource management can help alleviate pressures on wildlife habitats and increase tolerance and coexistence with wildlife.
- d. Increase awareness of value and benefits of wildlife through educational programs.

#### **National measures:**

**Define natural resource crimes as serious organized crime and ensure the illegal activity falls within the national definition of “predicate offense” to money laundering.**

According to UNODC, any pattern of profit-motivated, serious criminal activity is considered organized crime, and nearly all transnational wildlife trafficking fits the criteria (World Bank, 2019). Serious crime definitions vary across countries and typically relate to specific penalty levels (UNODC 2018). It is critical that natural resource crimes committed by organized crime networks are prosecuted with penalty levels commensurate with the serious nature of this crime. It is also essential that natural resources crimes fall within the definition of “predicate offense” to money laundering, so financial investigations are conducted, and tougher charges can be brought against criminals that reap proceeds from natural resource crimes. A critical first step in combating illegal activities is to enact principal legislation aimed at punishing such crimes, including trafficking, importing counterfeits, and importing and selling prohibited products, as well as ancillary legislation that punishes associated crimes such as money laundering, handling or possession of proceeds of crime, corruption and embezzlement, and organized crime or racketeering. The national legal framework should be tied to international frameworks that define natural resources trade crimes as “serious crimes” (penalties of more than four years in prison), according to UNODC definitions under the United Nations Convention against Transnational Organized Crime (UNTOC) (UN 2004).

The Financial Action Task Force (on Money Laundering) recommends (FATF 2016) that predicate offenses should include offenses that are punishable by a maximum penalty of more than a year in prison (or minimum penalty of more than six months in prison for countries with minimum thresholds for offenses in their legal system).

**Implement “whole-of-government” and multiagency illegal activities strategy<sup>103</sup>.** This should include financial intelligence units, anti-corruption agencies, customs and tax units, and strengthened institutional capacity. In addition to strategic collaboration, operational cooperation among these agencies — in the form of creation and implementation of joint task forces, information exchange platforms, resource sharing, and enforcement efforts — is essential to yield results on the ground and break down silos. Work across agencies can also help reduce corruption risks by requiring staff across ministries that may not work together to

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<sup>103</sup> This recommendation (and others included below) is aligned with the OECD report on Illegal Wildlife Trade and Corruption in Southern and Eastern Africa (OECD 2018c) and the report on Illegal Wildlife Trade in Southeast Asia (OECD 2019).

share information, resources, and regulatory and enforcement power. A government-wide initiative that has political support from the top helps secure the financial and technical resources required to combat serious crimes. This support is critical to improve government agency staff capacity to design and deploy risk-based approaches to enhance enforcement actions, investigations, prosecutions, and convictions of natural resources trade crimes and related offences, as well as the ability to partner with communities and the private sector.

#### **Increase institutional capacity.**

- Priority training areas may include criminal intelligence analysis, controlled deliveries  
Increase institutional capacity
- **Customs and border officials require skills, training and technology to assist in screening/profiling, risk management, and understanding of environmental laws and penalties.**
- Most countries can benefit from **financial intelligence unit analysts training** to increase awareness, capacity and use of natural resources criminal data. 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 (Krishnasamy and Zavagli, 2020)<sup>104</sup>.
- Non-institutional actors from corporate financial institutions also need training and development of standardized procedures on development of typology information and risk indicators to identify suspicious transactions tied to natural resource crimes. Governments can enhance their analytical and enforcement capabilities if the private sector actively partners with relevant agencies on capacity building and information-sharing through secure communications channels and established mechanisms. Government agencies must work effectively with the private sector (including financial and transportation sectors) and establish a regulatory environment for banks and transportation companies to work collaboratively and apply due diligence standards that reduce risks in the supply chain and financial system.
- Engaging online retailers and other private sector entities to reduce the use by criminals of online and social media channels to sell their illegal products is increasingly important. For example, WWF, IFAW, and other partners are collaborating with companies across continents, such as Alibaba, eBay, Facebook, Google, Microsoft and Tencent, to unite the industry and maximize impact for reducing wildlife trafficking online. CITES and INTERPOL are also engaging with partners to capture good practices and collaborate with governments and private sector partners to push illegal trade of wildlife to the dark net.

**Enhanced customs screening of physical movements of cargo** at selected exit or entry points (e.g., ports, airports, border check points, free trade zones). 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 (Krishnasamy and Zavagli, 2020)]

#### **International**

**Utilize international networks of finance intelligence units (Egmont Group) for information sharing (exchange of financial information ahead of a formal request for mutual legal assistance).** Financial Intelligence Units (FIUs) play an important role in

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<sup>104</sup> Money laundering occurs in source/transit countries when the proceeds from sales of illegally traded wildlife are used to fund offshore accounts or buy real estate or luxury goods. Offshore accounts can then be used to purchase items that can be resold, or as a source for trade-based money laundering. Money laundering may take place far from source countries, highlighting the important role of international cooperation and coordination in tracing illicit financial flows

enforcement across multiple jurisdictions and should be brought into law enforcement efforts related to natural resource crimes at an early stage in support of the financial crime investigations. For countries that are not part of Egmont, support can be obtained through bilateral agreements. At the request of host countries, INTERPOL, UNODC and other specialized organizations (i.e. Europol) can also help with operational support that may include investigations across jurisdictions. Examples of global/country efforts that strengthen the legal and enforcement environment to combat natural resources crimes include:

- The United for Wildlife Transport and Finance Task Forces (United for Wildlife 2019) provide a network of over 150 private sector entities to share intelligence and coordinate action across borders. Since their formation, the TFs have supported 52 law investigations, contributed to 10 trafficker arrests, assisted in over USD 500,000 worth of seizures, and trained more than 55,000 industry employees. UfW TFs regularly provide alerts to industry and targeted direct support to investigations. TFs also have a link with formal information-sharing mechanisms -- UK's Joint Money Laundering Intelligence Taskforce (JMLIT), the US 314 Consortium, and the UNODC container control program -- and with law enforcement.
- Similarly, global efforts to educate and incentivize potential whistleblowers can help increase the number of high-quality confidential reports to detect natural resources crimes and enforce laws prohibiting illegal trafficking worldwide.
- Interventions to follow-the-money should also consider money laundering methods related to trade-based money laundering (TBML) (ACAMS 2019). TBML enables illicit actors to disguise and legitimize illicit finances by purchasing trade goods, moving these across borders, falsifying their value, quality or quantity, and mis-invoicing or mis-representing trade-related financial transactions (Luna 2019).

**Table A6.1: Country Examples**

**Namibia established national policies to benefit conservation and communities.** For example, its tourism and wildlife concessions policy enabled greater community engagement as custodians and beneficiaries of protected landscape. This policy and other reforms granted rights to communities of ownership to revenue from game, tourism, and huntable game. This facilitated investments (many supported by international donors) that contributed an estimated USD 488 million (at 2018 exchange rates) to net national income and created 5,147 jobs from the beginning of 1990 to the end of 2016. Namibia's national elephant population increased from 7,500 animals in 1995 to around 22,711 by 2015. Source: Namibian Association of Community-Based Natural Resources Management Support Organizations

**Tanzania defined natural resource crimes as a serious organized crime.** Tanzania's tourism industry is worth USD 5 billion and relies on wildlife as a tourist draw and a critical source of foreign exchange. From 2009–14, more than 60 percent of the Tanzanian elephant population was lost to poaching. This was 30 percent of all illegally killed elephants on the African continent during that period. Tanzania responded by recognizing IWT as a serious transnational organized crime, which enabled its National and Transnational Serious Crimes Investigative Unit (NTSCIU) to tackle this poaching crisis. Since 2014, the NTSCIU helped reverse the poaching trend and is effectively combating IWT. NTSCIU became one of Africa's most effective and recognized countertrafficking teams taking on wildlife crime syndicates in Tanzania. It also actively fights corruption.

**Kenya increased the institutional capacity of custom and border officials to assist in screening / profiling, risk management and understanding of environmental laws and penalties.** In 2017, ICCWC training was provided to Kenyan authorities on anti-money laundering. Key authorities that participated in training included wildlife law enforcement officials, prosecutors, judges, financial intelligence units, anti-corruption agencies, customs, tax authorities, private sector actors, and civil society. This training (and follow-up action) strengthened the authorities' ability to bring court actions against wildlife crimes and money laundering actions. The anti-money laundering training helped develop financial investigations in wildlife crime cases and work parallel money laundering or proceeds-of-crime investigations as part of major wildlife crimes.

**The People's Republic of China's State Council banned the processing and sale of ivory and ivory products in 2017.** A February 2017 Save The Elephants report showed the price of ivory in markets across China dropped by two-thirds, from USD 2,100 per kilogram in early 2014 to USD730 per kilogram in February 2017. Further, TRAFFIC found that compared to the first six months of 2017, the price of ivory bracelets in 2018 decreased nine percent in China and the price of raw ivory declined 17–38 percent at the end of 2017 (Traffic 2018). This is an example of how a national legislative effort can have an impact beyond national borders.

**Source:** World Bank, 2019

## 7.7 Annex 7: IWT in elephant ivory, rhino horn, pangolin & tiger in Thailand

### 7.7.1 Elephant ivory

#### 7.7.1.1 Status

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 two one-off sales permitted by CITES in 1999 and 2008).

In **Thailand**, elephants are a national symbol, nonetheless their population has been decimated by habitat destruction, poaching, domestication and human-wildlife conflict. At the beginning of the 20th century there were approximately 300,000 wild and 100,000 domesticated elephants in Thailand<sup>105</sup>. There are now an estimated 3,168 -3,440 wild (DNP, 2021) and 3,700 domesticated elephants (UNODC, 2017).

Thailand has worked hard to protect its wild elephants, and in March 2017 it announced a 10% increase in elephant numbers within protected areas<sup>106</sup>. Nonetheless, the future of Thailand's elephants is still uncertain as reduced genetic diversity and habitat fragmentation threaten the long-term viability of the population. There were eight recorded cases of elephant poaching, which resulted in the deaths of 10 animals between 2013-2017 (UNODC, 2017).

#### 7.7.1.2 IWT in Ivory

The latest UNDOC Crime report (2020) strikes a cautiously upbeat note on the trafficking of African elephants to supply the demand for ivory in Asia. It highlights that significant policy changes in the past four years restricting ivory trafficking in several of the largest *legal* domestic markets coincides with indicators suggesting a sharp decline in the illicit market<sup>107</sup>. It is possible that the loss of the legal market has impacted the illegal market by undermining investor confidence and hence flooding the market with ivory in excess of demand resulting in a fall in price and by and changing the way people view ivory as a product.

**Loss of elephants to poaching in Africa.** Based on population-based modelling of data 2006-2015 and poaching (PIKE) data-based estimates, it appears that between 10,000 (population loss average) and 17,000 (poaching estimate average) elephants were poached per year between 2006 and 2018, producing potentially between 100 MT and 170 MT of illicit ivory on average per year<sup>108</sup>. For both estimates, it appears that the illegal ivory supply has been declining since 2011<sup>109</sup>.

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<sup>105</sup> In the past, wild elephants were captured and tamed for use as work animals in forest logging. However, this has declined since the government's logging ban in 1989. Domesticated elephants are now mostly used in tourist activities.

<sup>106</sup> P. Rujavanarom, 13 March 2017. Number of wild elephants in Thailand on the rise. The Nation, <http://www.nationmultimedia.com/news/breakingnews/30308906>

<sup>107</sup> On 6 June 2016, the United States Endangered Species Act was revised, prohibiting import, export, and interstate trade of African elephant ivory, with very limited exceptions. On 30 December 2016, the Chinese government announced its decision to end the commercial processing and sale of ivory by the end of 2017. In 2018, the Hong Kong Special Administrative Region of China also announced that it would implement a three-step plan to phase out the trade in elephant ivory by the end of 2021, and to impose heavier penalties to deter the illicit trade in endangered species.

<sup>108</sup> Milliken *et al.*, 2018 estimated 20,000–30,000 African elephants poached per year since 2012 to supply the demand for ivory in Asia and from 2008-2017, 393,100 kg of ivory was seized globally.

<sup>109</sup> However, there are significant sub-regional differences: in eastern and southern African MIKE sites, which provided the bulk of the data and host the largest numbers of African elephants, trends were similar in magnitude

### **Box A7.1: Monitoring the Illegal Killing of Elephants (MIKE)**

The CITES programme for **Monitoring the Illegal Killing of Elephants (MIKE)** analyzes the continental and sub-regional trends in the proportion of illegally killed elephants, based on data collected by MIKE sites in Africa. As of 2020, there are 69 MIKE sites in 32 countries in Africa (representing **more than 50% of the African elephant population on the continent**), and 30 sites across 13 States in Asia.

In 2020, 58 MIKE sites in 30 African elephant range States submitted data relating to elephant carcasses detected in these sites during 2019. Participating rangers report the number of dead elephants they detect and the share of these dead elephants that appear to have been illegally killed - known as the **Proportion of Illegally Killed Elephants (PIKE)**. PIKE is therefore an index of poaching pressure and is calculated at the sub-regional and continental levels and adjusted for sample variation. PIKE can be affected by potential biases related to data quality, the fact that MIKE sites are not randomly selected, the reporting rate, carcass detection probabilities, and the variation in natural mortality rates across MIKE sites - including increases in natural mortality caused by drought and other factors. The data set used for the most recent PIKE trend analysis for Africa consists of 20,712 records of elephant carcasses found between 2003 and the end of 2019.

The price of ivory in Africa also appears to have declined since 2014. UNODC fieldwork conducted in 2018 in Kenya and the United Republic of Tanzania found that poachers were being paid between half and one-third of the price they were paid in 2014, and that some poachers may be holding onto their tusks in hopes that the price would eventually rise (UNDOC, 2020). The illicit market wholesale price as reported by market observers in 2018 was about the same as that observed before the boom in 2010, at around USD 750 per kilogram. This is significantly lower than in 2014/5. For example, a study in 2014 found that the illegal ivory trade had more than doubled since 2007 with a value of up to USD 2,205 per kilogram in Beijing<sup>110</sup>. In 2015 uncarved ivory was worth USD 2,100 per kilo and assuming that an elephant on average has 10 kilos per tusk, the black market revenue of one poached elephant was estimated at USD 21,000 (Smith and Porsch, 2015).

### **Estimating illicit flows of ivory (UNDOC, 2020)**

Illegally traded ivory can come from illegally killed elephants, private stockpiles or from leakages from national ivory repositories holding ivory seized during law enforcement operations or harvested from legal killings (for example, killings in the context of problem animal control) or natural mortalities.

Based on data on detected elephants' carcasses (illegally killed or died from natural causes) recorded by the CITES MIKE program UNDOC 2020 estimate the number of elephants poached, and thus the size of illicit ivory supply between 2016 and 2018, at an average of 10,000 (range 8,300 – 13,000) elephants per year in Central, Southern and Eastern Africa.

Combining estimates of illegally killed elephants with estimates of the average ivory yielded per elephant results in an annual average of 105 (88-136) tons of ivory available for the illegal market between 2016 and 2018. The average ivory yield figure is 1.9 tusks per elephant and

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and range, and it is highly probable that these two subregions are essentially driving the observed continental downward trend. For central Africa there is strong evidence that the PIKE trend increased from 2003 to 2011 and remained at high levels up to 2019. For west Africa, the high contribution to the total number of carcasses from one single site (Pendjari Biosphere Reserve, Benin) out of 16 MIKE sites, makes inferring a sub-regional trend difficult (UNDOC, 2020).

<sup>110</sup> Lawson K and Vines A. 2014. Global Impacts of the Illegal Wildlife Trade. The Costs of Crime, Insecurity and Institutional Erosion. Chatham House (The Royal Institute of International Affairs), London. <https://www.chathamhouse.org/sites/files/chathamhouse/public/Research/Africa/0214Wildlife.pdf>

about 5.5 kg per tusk, resulting in an average of some 10 kilograms per elephant. Leakages for national stockpiles are not considered in the analysis.

Net income is the more informative metric for comparing the profitability of crime across the actors of the supply chain, and insights into business models. However, this is not possible with the available data. Cost components to consider are: (i) Operational costs such as transportation, labor, material and other inputs; (ii) Concealment costs, such as hiding products in legal shipments, financing safe houses for hiding products, or purchasing custom-made vehicles to transport illegal commodities; (iii) Evasion costs. Organizers of large-scale operations employ intermediaries to distance themselves from the poaching offence and from the goods and services trafficked. They use complex structures to launder the proceeds of crime into legal businesses, use non-traceable ways for monetary transactions (including nominee accounts, shell companies) and pay other criminal organizations to protect their contraband (security payments); (iv) Corruption costs, i.e. payments (bribes) to government officials and other corruptive acts or that facilitate the illegal trade at all levels.

### Trafficking patterns

For African elephants, the trade in ivory is closely linked to organized 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, quoted in Krishnasamy and Zavagli, 2020).

UNDOC, 2020 notes that seizure data shows a dramatic reorientation in the routing of ivory. While East Africa (particularly Mombasa, Kenya) was the primary source of illicit shipments in the past, Nigeria has become a dominant collection and transit point over the last four years. Similarly, while China dominated in the past, Viet Nam has emerged as the primary destination of these shipments. Up to 2015, Viet Nam was the destination of about 3 per cent of total weight of ivory interdicted, but 2015-2019 data show that this share has increased to 34 per cent. Recently, almost all the major seizures recorded in World WISE were destined for Vietnam and Cambodia, although data in World WISE for 2018 and 2019 do not have the same coverage as previous years.

In addition, large mixed shipments of ivory and pangolin scales have become more common, suggesting experienced ivory traffickers are using their expertise to traffic pangolins (UNDOC, 2020)

While **seizure records** do not give an accurate representation of the volume of trafficking because it is not clear what share of the contraband flow is being seized, and this share can vary from year to year, long term trends can be triangulated with other trend data to give an indication of market dynamics and trafficking patterns. The official CITES data on elephant ivory seizures are maintained by TRAFFIC in the Elephant Trade Information System (ETIS). These data show the total annual weight of seizures reported to ETIS began to decline in 2013 and the number of seizures declined after 2011. The trend parallels the decline seen in the poaching data: both indicate that ivory trafficking grew between about 2007 and around 2011-2013 and has experienced an overall decline since that time.

If an average about 100 MT to 170 MT of illicit ivory per year were generated between 2010 and 2018, the ETIS seizure figures suggest a high rate of interdiction: 17% to 35% on average across the decade. World WISE contains a comparable number of ivory seizures to ETIS in recent years. Looking just at tusks, the trend between 2007 and 2017 is similar to the ETIS raw data, with sharp growth between 2009 and 2013 and an uneven decline since then. Based on World WISE records of 1,262 African elephant tusk seizures between 2005-2017, China

and South-East Asia were the destination of 90 per cent of these shipments by weight. Some of the countries in South-East Asia are highly likely to be transit countries (UNDOC, 2020).

Just five large scale seizures made in 2019, totaling over 30 MT, would make it a record year in terms of seizures, contradicting the downward seizure trend seen since 2014. Since poaching levels appear to be down, this suggests either improved interdiction (a higher share of the ivory now being captured) or sourcing from stockpiles (not from recent illegal killings).

**Forensic research** suggests that as few as three or four major criminal groups may be responsible for a large share of the ivory seized (and, possibly, trafficked).

UNDOC, 2020 estimate the destination of ivory using the country of destination of the shipments, as reported by Member States. Assuming an annual average of 105 (88 – 136) tons of ivory was supplied from African range states between 2016 and 2018. Based on World WISE seizures, out of these, 5 tons were seized by law enforcement in Africa, and 9 tons were destined for Africa, leaving 92 tons available for export to destination markets. Some 88 tons reached Asian countries via various routes (including routes passing through European countries). In Asia, 24 tons were seized by law enforcement and 63 tons remained available for consumption. Some 3.6 tons were destined for Europe, of which 2 were seized and 1.6 were thought to be consumed.

All ivory entering the illegal market in a year is either purchased by end consumers, seized by law enforcement, stockpiled for later sale or otherwise lost in the process (e.g. rendered unusable during transportation, products lost during manufacture of items and products). Some actors may keep stocks as an investment to speculate on higher prices, others may hold on to products to wait for less risky trafficking opportunities or to collect more products to collate a larger shipment. Losses include products

**Asian Elephants *Elephas maximus*** (Endangered) have been impacted less dramatically by poaching for ivory – with an average of 37.6 poaching cases per annum recorded in India from 2010 - 2015. In addition to ivory, Asian elephants are poached for a variety of other products (including meat and leather), and poaching is acknowledged as a threat to the long-term survival of some Asian elephant populations.

ASEAN countries play a critical role in the global ivory trade. Cambodia, Lao PDR, Indonesia, Myanmar, the Philippines, Singapore, **Thailand**, and Viet Nam have open domestic ivory markets which allow trade in some form, either ivory from pre-CITES convention or from domesticated Asian Elephants within their respective countries. (Krishnasamy and Zavagli, 2020)

A study in 2013 estimated that the 1,230 adult male captive Asian elephants in Thailand and could only yield approximately 650 kg of ivory annually, possibly less and typically in small sized pieces owing to the periodic trimming of tusks. This quantity was considerably less than the quantities observed in Bangkok markets in a 2013 survey. In addition, the size of specific products indicates that larger sized elephant tusks are reaching the market in Thailand and seizure data confirms attempts to move large quantities of African Elephant ivory to Thailand from Africa<sup>111</sup>.

Despite increasing international pressures to ban the ivory trade completely, the Thai government has opted to maintain a legal domestic ivory market for ivory from Thai domesticated elephants. Prior to 2015 this market was largely unregulated, and along with

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<sup>111</sup> Thailand WEN statistics on ivory seizures

weak legislation, this allowed for the laundering of African Elephant ivory through what was thought to be one of the largest unregulated ivory markets in the world. Following the introduction of the Elephant Ivory Act (*see below*), coupled with the ivory registration process, research by TRAFFIC in 2016 showed a dramatic turnaround, with a 96% reduction in ivory on sale in the domestic market compared with 2012 (from a monthly high of 7,421 ivory items in 2014 to just 283 products by June 2016) (Box A7.2)<sup>112</sup>. As a result the 2016 Elephant Trade Information System (ETIS) report recognized Thailand as a country of “secondary concern”. In 2019 Thailand was excluded from the NIAP process and ETIS report for CoP18 no longer cites Thailand as a risk country. 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. reported in Krishnasamy and Zavagli, 2020). It is clear that the longevity of the NIAP will depend heavily upon continued law enforcement monitoring<sup>113</sup>, especially in view of an apparent shift to online sales.

Illegal ivory trade into Thailand remains an ongoing problem and the enforcement of the existing regulations has proven to be challenging. Once imported, illegal ivory from Africa is either re-exported or processed (crafted into carvings, ornaments and jewelry to avoid detection) and passed off as local and legal products in Thai outlets (markets and shops)<sup>114</sup>. Therefore, the challenge is to eliminate the connection with poaching for ivory in both Africa and Asia (e.g. in Myanmar and Indonesia) and the laundering of such illegal ivory through the domestic market through a combination of enforcement supported by forensic analysis, and targeted Social and Behavioral Change Communications (SBCC) (Project Document)

An online survey conducted by TRAFFIC between June and July 2016 illustrated that at least 2,550 ivory products, mainly jewelry, were recorded for sale on 42 sites/groups on Facebook and Instagram. This was a higher number of products than what was recorded in Bangkok’s physical markets in the period from December 2015 through June 2016 (average of 1,203 products), confirm concerns of a market shift from the physical marketplace to online platforms, as has been the case in China.<sup>115</sup>

**Box A7.2: Overview of Ivory Market in Bangkok 2014-2016**

TRAFFIC’s 18-month survey of open market availability of ivory in Bangkok from December 2014 through June 2016 also found:

- A steep decline in the number of retail outlets offering ivory and the number of ivory products found for sale was observed since Thailand’s legislative reform.
- The highest number of shops selling ivory was recorded in December 2014 and the lowest number of retail outlets selling ivory was in June 2016.
- An average of 2,662 ivory products per month were recorded in trade over this 18-month period. However, when averaging the number of products in trade since April 2015, when the law came into place, this figure reduces slightly to a total of 2,049 products.
- The biggest jump in availability of worked ivory items occurred in November 2015, when an increase of 1,096 ivory products was noted at the Chatuchak Market, compared to the previous month; one shop alone had 2,285 products for sale at that time.
- The top two locations with the highest number of retail outlets were Chatuchak Market and the Amulet Market. Throughout the survey period, several shops, which previously sold ivory

<sup>112</sup> Thailand’s drive against illegal ivory trade bolstered by forensic tools. TRAFFIC, at <http://www.traffic.org/home/2015/2/23/thailands-drive-against-illegal-ivory-trade-bolstered-by-for.html>

<sup>113</sup> Massive downturn in Bangkok ivory market as Thailand introduces National Ivory Action Plan, at <http://www.traffic.org/home/2016/9/29/massive-downturn-in-bangkok-ivory-market-as-thailand-implement.html>

<sup>114</sup> Krishnasamy, K., Milliken, T. and Savini, C. 2016. *Ibid.* and, Stiles D. 2009. The elephant and ivory trade in Thailand, TRAFFIC Southeast Asia, Malaysia.

<sup>115</sup> Xiao, Y. and Wang, J. (2015). *Moving Targets: Tracking Online Sales of Illegal Wildlife Products in China*. A briefing paper, TRAFFIC East Asia- China, Beijing, China – cited in 2015. TRAFFIC Report: *In Transition: Bangkok’s Ivory Market – An 18-month survey of Bangkok’s Ivory*

were closed (either temporarily or permanently), with a clear reduction in the number of observable ivory products on display.

- A clear reduction has been observed in the open availability of ivory products in Thailand's capital city after trade has been regulated. The number of ivory products in trade averaged 10,469 per month over the 13 months before the Elephant Ivory Act came into place, compared to an average of 2,048 products per month for the 15 months where trade was subjected to regulation.

### 7.7.1.3 Policies, plans and legislation

#### **CITES National Ivory Action Plan (NIAP)**

The National Ivory Action Plan (NIAP) process was introduced at CITES CoP16 in 2013. It is a practical tool that is being used by the Convention in a number of its member States, categorized as Parties of 'primary concern', Parties of 'secondary concern' and Parties of 'importance to watch', to strengthen their controls of the trade in ivory and ivory markets, and help combat the illegal trade in ivory. The NIAP outlines the measures that a CITES Party commits to deliver based on its priorities, circumstances and resources, including legislative, enforcement and public awareness actions, along with specified timeframes and milestones for implementation.

In 2012 Thailand was considered to have the largest unregulated ivory market in the world that allowed the laundering of African Elephant ivory and as summarized by UNODC (2017), came under significant international pressure, as one of the eight initial countries of 'primary concern' in the poaching of elephants and trafficking of ivory. Thailand was directed to prepare and implement a **CITES National Ivory Action Plan (NIAP)**<sup>116</sup> to strengthen regulation and enforcement of its then unregulated domestic ivory market and to close legal loopholes that facilitated the laundering of African Elephant ivory through its domestic market<sup>117</sup>.

Thailand reacted positively to international concerns - preparing a NIAP and overhauling its legal and enforcement regime for combatting ivory trafficking to address Thailand's role in the illegal ivory trade. Key to the NIAP reform was **the Elephant Ivory Act B.E 2558 (2015)**, introduced to strengthen the regulation of Thailand's domestic ivory trade, limiting it exclusively to Asian Elephant (*Elephas maximus*) ivory from registered captive animals. The Act stipulates; (i) documentation has to be sought for possession of ivory; (ii) to trade domesticated elephant ivory permission has to be granted by the Director General of the DNP and accounts have to be kept; (iii) ivory traders have to notify authorities in advance if they change the location of their shop or shape of the elephant ivory in their possession and are obligated to issue certificate for every item of ivory sold. Penalties for violations are imprisonment for a term not exceeding three years or a fine not exceeding six million baht (around USD190,000) or both.

Other aspects of reform included:

- In order to control trade, import, export and possession of domesticated elephant ivory and ivory products a more stringent **registration processes** for possessors and traders of ivory was introduced (i.e. every piece of possessed/traded/kept ivory in Thailand is registered in a government database). A nationwide registration process registered 40,000 people and 670,984 ivory products, weighing a combined 200,358 kg (totals as at August 2015). The average weight of the worked ivory registered as commercial stock was only 9.31 grams per piece, indicating that most finished products for sale were extremely small items<sup>118</sup>.

<sup>116</sup> 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 the illegal ivory trade, based on evidence in the TRAFFIC's tracking of the elephant and ivory trade since 1989 through **the Elephant Trade Information System (ETIS)**.

<sup>117</sup> CITES at <https://cites.org/sites/default/files/eng/com/sc/67/E-SC67-13-A5.pdf> 7

<sup>118</sup> 2015. TRAFFIC Report: *In Transition: Bangkok's Ivory Market – An 18-month survey of Bangkok's Ivory market* <http://www.traffic.org/storage/TRAFFIC-Report-Bangkok-Ivory.pdf>

- Revisions to the **Wild Animal Reservation and Protection Act (WARPA)** to make possession and/or trade in African elephant ivory an offence (a legal loophole that had allowed for African elephant ivory to be laundered through the Thai domestic market). It includes the amendment of certain provisions under WARPA (1992) to prevent the illegal possession of wildlife specimens, carcasses and wildlife products, by granting African elephants the status of a protected species;
- Legal and penalty frameworks to combat illegal trade in African Elephant ivory and control domestic trade and possession of ivory
- Comprehensive enforcement and awareness-raising actions in support of the legal reforms.
- Collecting DNA samples – to ensure calves are not taken from wild animals and laundered into the captive system.
- Supervision and law enforcement by establishing patrol teams throughout the country and joint task force teams to increase enforcement at borders, seaports, airports and post offices.
- Public relations-continuously raising awareness among the main target groups, i.e. foreign tourists and general public. Thai authorities and NGOs including WildAid and WWF also undertook a major education and awareness campaign aimed at foreigners purchasing ivory from local markets.
- Establishment of sub-committees to carry out, monitor, evaluate and report to the CITES Committee of Thailand and the Prime Minister.

### **CITES Decision 18.226 and 18.227**

At its 18<sup>th</sup> meeting (CoP 18, Geneva, 2019), the Conference of the Parties adopted Decision 18.226 and 18.227 on Trade in Asian elephants (*Elephantus maximus*).

Decision 18.226 directed all Parties involved in the trade in Asian elephants and derivatives to:

- a) undertake, as necessary, investigations into the illegal trade in Asian elephants and their parts and derivatives, and endeavor to enforce, and where necessary improve, national laws concerning international trade in specimens of Asian elephants with the explicit intention of preventing illegal trade.
- b) develop strategies to manage captive Asian elephant populations.
- c) ensure that trade in, and cross-border movements of live Asian elephants are conducted in compliance with CITES, including the provisions in Article III, paragraph 3, for Asian elephants of wild origin.
- d) collaborate in the development and application of a regional system for registering, marking and tracing live Asian elephants, requesting as necessary assistance from experts, specialized agencies or the Secretariat.
- e) at the request of the Secretariat, provide information on the implementation of this Decision for reporting by the Secretariat to the Standing Committee.

Decision 18.114 Directed parties that had not closed their domestic markets for commercial trade in raw and worked ivory to report to the Secretariat for consideration on what measures that are taking to ensure that their domestic ivory markets are not contributing to poaching or illegal trade (Thailand's report on the implementation of Decision 18.226, date).

Thailand have enacted laws and carry out various measures to protect the elephants and preventing them from illegal trade. Asian elephants in Thailand are divided into two categories, wild elephant and domesticated elephant, with different legal status.

*Asian Wild elephants* are protected under The Wild Animal Reservation and Protection Act, B.E.2562 (2019) which protects them from poaching and possession of illegal wildlife specimens, carcasses and products with penalties (prison terms, fines, or both) for any violations.

Domesticated Asian elephants are classified as draught animals and must be registered under the **Beast of Burden Act B.E.2482** (1939) which is enforced by the Ministry of Interior. This law allows domesticated animals to be treated as private property. The ivory from domesticated elephants can be worked and traded commercially in the domestic market. Exportation or the importation of all species of beast of burden including domesticated Asian elephants must be notified to appointed officials to endorse the identification card of the animal to acknowledge its import or export. The Ministry of Interior has improved the registration of domesticated elephant to protect against the laundering of wild-caught elephants into the domesticated elephant population. The new form of Elephant Identification Certificate includes a microchip number and DNA data. According to the DNP, reports from the Department of Provincial Administration regarding the number of elephant tusk's certificates of origin January 2015 – May 2020 was consistent with the number of raw ivory entering the ivory market in Thailand.

To control the trade, import, export and possession of ivory and ivory products originating from domesticated elephant ivory under the **Ivory Trade Act B.E. 2558** (2015) there are three registration systems for: (1) ivory traders and ivory products; (2) legal ivory possession from domesticated and African elephants; and, (3) confiscated ivory. The registration system for domesticated elephant ownerships, the license for legal owners to legally trade, and the strict control to prevent the trafficking of ivory are aimed at preventing any illegal ivory from entering the market.

Asian elephant (*Elephas maximus*) including parts and derivatives thereof exported as good from Thailand needs permission under the **Export and Import Act B.E.2522** (1979). The import or the export of domesticated Asian elephants must also get a health certificate granted by Department of Livestock Development and endorsement on relevant documents and permits for import or export of the animal must be done by CITES and Customs officials at the port of import or export. There are also Tourism business and tour guide committee's regulation to cover any violations involving elephant ivory and protected wild fauna and flora.

*Supervision and Law Enforcement.* Cooperation between the Royal Thai Police Department, Department of National Parks, Wildlife and Plant Conservation, and **Thai Customs Department** has increased enforcement of ivory smuggling in high risk areas and at borders, seaports, airports post offices and online ivory trade. Task force units, comprised of Royal Thai Police departments and Department of National Parks, Wildlife and Plant Conservation cooperating in rotation, have been established to implement and better monitor and regulate ivory shops in Thailand. Monthly inspections conducted have found that ivory shops have complied with ivory regulations. These Task force units have also been dispatched in several risk spots for illegal ivory trade, such as tourism hotspots and country borders, to enable better inspections and monitoring to suppress ivory crime. [Registered ivory shop have been inspected and their business monitored monthly by 22 ivory shop patrol teams nationwide. Before the Elephant and Ivory Act B.E 2558 (2015) there were 339 ivory shops (November 2014), as of May 2020 there were 113

The **Thai Customs** has cooperated with source, transit, and destination countries in order to strengthen efforts at intercepting wildlife trafficking being committed by trafficking syndicates. It has utilized technical experience and technologies to better assess risks in activities. It has coordinated with Customs from other countries, such as Singapore, Lao PDR, and Cambodia, in relaying its risk analyses of suspected wildlife trafficking activities and behavior. This effort

has resulted in seizures of illegal trade in wildlife and their parts and derivatives by Customs of these countries. Strict inspections of travelers and cargo at checkpoints in international airports, seaports, and country borders have utilized the latest available technologies such as the Case Management Investigation System (CMIS), the Risk Management System, the Facial Recognition System Detection, the Railway Cargo Inspection System, and the usage of stationary and mobile X-rays in the inspection of cargos and passenger baggage.

In December 2017, the DNP established 'Yiaw Dong' or the Wild Hawk Team, which is a specialized task force to combat and suppress illegal wildlife over the internet. This resulted in the seizure of 171.6 kgs of African ivory in northern and north-eastern Thailand

Thailand continues our **awareness raising campaigns** (e.g. "No Ivory, No Tiger Amulets", "no consuming, no buying, no hunting, no selling, no contracting disease, and no animal extinction") among the main target groups which are foreign tourists, ivory traders, ivory owners and the general public.

**Management of captive Asian elephant population.** The Ministry of Agriculture and Cooperatives (Department of Livestock Development (DLD)) is responsible for elephant movements and health care through livestock veterinary networks, and coordinates a microchipping program. There also are elephant camp standards, one issued by the Department of Tourism under the Ministry of Tourism and Sports, and the other by the DLD that include regulations on elephant shelters, health care, food and water, mahout management, environmental and waste management, tourist service and safety, and recording systems. Additionally, Department of Livestock Development in cooperation with National Elephant Institute held the education and awareness programme of staffs, mahouts, veterinarians, and other people who are involving in taking care of and controlling of Asian elephants about how to take a proper care of Asian elephants to elephant camps.

International trade in live Asian elephants of Thailand is only allowed for domesticated Asian elephants for limited purposes (for international relations, researches, conservation, and as ancient items and artworks). Since 2009, Thailand has prohibited the export of elephants until the completion of its nationwide elephant registration to prevent the claim of wild elephants as house elephants for export.

Thailand has revised a drafted 20 year-management plan of wild Asian elephants which aims to: manage wild Asian elephant population at a desired population size; solve human-elephant conflict; prevent illegal activities involving Asian elephants; conserve and manage wild Asian elephants with participatory and sustainability approaches; and be a role model regarding Asian elephant management in Asia.

#### 7.7.1.4 Consumers and Consumption Patterns <sup>119</sup>

The Asian elephant (*Elephas maximus*) is Thailand's national symbol - elephants are considered sacred and are greatly revered in traditional Thai culture. The elephant's mythical role as protector and bringer of good fortune has led to the belief that wearing ivory amulets or jewelry will imbue the wearer with these traits. Monks and fortune tellers often give amulets in return for donations. Hence, ethnic Thais tend to purchase ivory amulets and good luck charms, including Buddha figurines, while the Chinese Thais buy Chinese style figurines (e.g. Guan Yin, Long Life, Happy Buddha, Fu Lu Zo), chopsticks, and mounted polished tusks. Amulets made from *elephant tails* are sold by fortune tellers and monks to their customers as well as online. Suppliers of elephant tails are hunters, elephant owners, elephant camp workers.

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<sup>119</sup> Based on GEF-IWT Project Document

Three broad categories for ivory consumers in Thailand have been identified:

- Typically, older, wealthy elite and government officials, who often buy expensive and elaborate pieces sometimes consisting of entire tusks; ivory products are customarily given and accepted as gifts rather than a direct purchase.
- Religious or superstitious consumers who mostly seek amulets for their 'magical' properties. The consumers of Ganesh amulets made from ivory are mainly urban women (from low to high income). There is a huge informal economy in Thailand surrounding ivory amulets, the most valuable of which can fetch upwards of USD 100,000. Interviews with Thai ivory sellers show that fabrication of counterfeit ivory certificates is commonplace<sup>120</sup>.
- Generally wealthier tourists. The country's legal domestic trade is considered to have stimulated demand from tourists, especially those from Mainland China and Hong Kong.

In recent years the main buyers of Thai worked ivory have been European, American, ethnic Chinese (from Malaysia, Singapore, Taiwan, Hong Kong and mainland China) and Japanese visitors.

Surveys conducted in the largest known ivory markets globally seem to reflect a move toward a smaller number of smaller objects, consistent with an overall reduction in the volume of ivory available. In China, evidence suggests that interest in buying raw ivory or large artworks for their investment value has declined, with retail market for trinkets now accounting for 90% of the market. It is also possible that sales have moved on-line, but surveys in China suggest only a small share of ivory buyers (17 per cent in 2018) bought ivory online, with most buying it in person either in China or while overseas (UNDOC, 2020). The situation in South-East Asia appears to be similar, with ivory markets in Viet Nam and **Thailand** seem largely limited to bangles, amulets, and other jewelry. In Thailand, TRAFFIC found that 35-52% of ivory pieces were bangles and large-scale pieces have become increasingly rare. This could imply a large customer base and a growing middle class distanced from the religious reverence for the elephant is adopting a taste for ivory trinkets<sup>121</sup>.

A 2018 survey of 60 online sellers and 852 physical outlets in 13 locations in Viet Nam found that 90 per cent of over 10,000 items reviewed were jewelry, and only the top 1% were priced over USD 200. A 2016 survey of ivory markets in Bangkok found the number of objects observed for sale dropped sharply over an 18-month period between the end of 2014 and mid-2016. Some 86 per cent of the objects observed were jewelry, and only 4 per cent were carved ivory, with the number of carved ivory objects dropping from 614 in December 2014 to just 10 in May 2016. In Japan, which retains a legal domestic ivory market, most (80 per cent) ivory is used to produce *hanko* name seals, though ivory is also worked into jewelry and other finished products often targeted at an international tourist clientele. A survey of Japan's physical ivory market and auctions in 2018 found a strong reduction in the number of whole tusks ordered for sale (UNDOC, 2020).

In July 2015, WildAid, African Wildlife Foundation and Save the Elephants conducted a poll on Thailand's ivory consumers and attitudes towards the ivory trade in Thailand. According to the survey most respondents (96%) say they are not likely to buy ivory products in the future and 93% pledge never to buy. However, according to the survey, although 93% of Thais support reducing Thailand's ivory trade, only 42% support banning all ivory trading. Suggesting that 58% of respondents think that ivory can be traded even though almost everyone says they would not buy ivory (only 4% of the respondents say they would). This is an indicator of a lack of social pressure or sanction against consumers of ivory – and many of

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<sup>120</sup> 2015. Carter, Leo: *The Nature of Ivory Demand: Thailand* <https://sites.utexas.edu/wildlife/2015/05/12/the-nature-of-ivory-demand-thailand/>

<sup>121</sup> 2014. Doak, N.: *Polishing off the Ivory Trade: Surveys of Thailand's Ivory Market*. TRAFFIC International, Cambridge, UK.

whom were probably not participants of the survey. Notably, often, ivory products are customarily given and accepted as gifts instead of a direct purchase for personal use.

## 7.7.2 Rhino horn

### 7.7.2.1 Status

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.

The two Critically Endangered Asian rhinos—the **Sumatran Rhinoceros** *Dicerorhinus sumatrensis* and the **Javan Rhinoceros** *Rhinoceros sondaicus*—exist in Indonesia. Habitat loss, poaching and low reproduction rates have caused drastic declines, and they are close to extinction in the wild. The Sumatran Rhino possibly exists in Myanmar while 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 park (Krishnasamy and Zavagli, 2020). The Indian rhinoceros (*Rhinoceros unicornis*) is Vulnerable (Project Document).

In 2017, there were an estimated 23,562 African rhino (IUCN)<sup>122</sup>. Of the African rhino (about 25,000 of them) - 75 per cent are be found in South Africa. The rhinoceros species in South Africa, the black (*Diceros bicornis*) and white rhinoceros (*Ceratotherium simum*), are Critically Endangered and Near threatened respectively.

South Africa has been so successful in breeding rhinos that it has managed to export 538 live rhinos since 2014, feeding growing wild and captive populations in other countries. Drought and poaching have caused South Africa's rhino population to decline since 2012, however, driving down the overall continental population. Around 7,500, or over 40 per cent, of South African rhinos are privately owned by ranchers and private game reserves. These operations have weathered a decline in the price of a live rhino by two-thirds between 2007 and 2018. While legal prices have declined, the threat of poaching has imposed substantial security costs for rhino ranchers. In this way, the illegal trade poses an additional threat to rhino populations: it threatens to make these private holdings unsustainable (UNDOC, 2020).

### 7.7.2.2 Illegal trade in Rhino horn

When CITES came into force in 1976, the trade in African rhino horn decreased, but reemerged in 2008, with Vietnam being identified as a major consumer of rhino horn (Milliken, 2013). In recent years, the plight of rhinoceros species in Africa has dominated the media. In South Africa, around 1,000 rhinos were poached annually between 2013 and 2016. Recent estimates are that 2-3 rhinos are lost a day in Africa (Attenborough, 2020)

Similar to ivory, there have recently been indications of a decline in the market for rhino horn, as both supply (poaching) and price indicators are declining. Rhino horn poaching appears to have risen from 2007, peaked in 2015, and declined every year since that time, with prices also declining during this period. South Africa, which experienced 86 per cent of the recorded poaching incidents between 2006 and 2017, has seen a declining trend in its poaching numbers every year since 2014. In 2019, the number of poaching incidents decreased to 594, the lowest level since 2011 (UNDOC, 2020).

While poaching for rhino horn is driven by their high value on the black market, prices currently paid **for rhino** horn in Asian markets are a fraction of those cited in the popular press (UNDOC, 2020). It had been suggested that raw horn was worth USD 65,000 – USD 100,000

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<sup>122</sup> South Africa- 17,671, Namibia – 2,832, Kenya – 1,258, Zimbabwe – 877, Botswana – 502, other – 412.

per kilogram around 2014-2016, when it peaked<sup>123</sup>. Smith and Porsch (2015) note a street price of Rhino horn of USD 100,000/kg in 2015 compared to the price in 1990 of USD 250-500/kg, with a single horn weighing between 1-3kg, depending on the age and species. Thus, the poached value of a rhino individual was estimated between USD 100,000 – USD 300,000. However, field monitoring suggests the 2019 price was closer to USD 16,000 (UNDOC, 2020).

### Trafficking routes

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 same 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 (Krishnasamy and Zavagli, 2020). 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 have revealed organized 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).

Based on World WISE data between 2014 and 2019 where the final destination was known, accounting for about two metric tons of horn, more than three-quarters of the weight of horn was destined for China and Viet Nam (UNDOC, 2020). **Thailand's** international airports function as major transport hubs between Africa and Viet Nam and act as key pathways for the illegal trade. Of all the seizures of rhino horn between the period 2009 – 2014 **Thailand** ranked third as country of destination after Viet Nam and China. While there is neither demand nor supply of rhino horn in the Thai market, smugglers use Thailand as a transit hub – illustrated by seizure in March 2017 at the Bangkok airport<sup>124</sup> The rhino horns noted as going to Thailand<sup>125</sup> are probably destined for either Viet Nam or China.

World WISE shows a strongly increasing trend in the number and weight of rhino horns seized, from 16 seizures in 2008 to 105 in 2017. This trend stands in contrast to the declining number of poaching incidents and suggests increased enforcement has resulted in a higher share of the illicit flow being captured or that some of the horn being seized are from public or private stockpiles (UNDOC, 2020). Unlike ivory, seizures show a clear and consistent upward trend, which could be due to improvements in the rate of interdiction or a genuine increase in the flow. If the flow has increased as poaching has decreased, this could suggest the new supply is coming from existing stockpiles, many of which are in private hands and can be sold in

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<sup>123</sup> Lawson K and Vines A. 2014. Global Impacts of the Illegal Wildlife Trade. The Costs of Crime, Insecurity and Institutional Erosion. Chatham House (The Royal Institute of International Affairs), London. <https://www.chathamhouse.org/sites/files/chathamhouse/public/Research/Africa/0214Wildlife.pdf>

<sup>124</sup> <http://www.bbc.com/news/world-asia-39268084> (Rhino horns worth USD5m seized in Thailand off flight from Ethiopia 14 March 2017)

<sup>125</sup> For example: <http://www.traffic.org/home/2011/2/25/more-than-1-tonne-of-ivory-and-rhino-horns-seized-in-thailand.html> and <http://af.reuters.com/article/topNews/idAFKBN16L188-OZATP>

some range states. Sellers may be motivated by declining prices and possibly declining interest.

Because rhino horn is relatively portable and value intensive, the vast majority is trafficked by air in luggage and personal baggage (sometimes wrapped in tinfoil) and is seized at airports with a relatively large number of seizures involving arrests. According to World WISE data for the period 2010 to 2017, Chinese (including 24 suspects in 2017 alone), Vietnamese, Indian, and South African nationals are most commonly implicated in rhinoceros horn smuggling (UNDOC, 2020).

Combining data (2016-2018) on supply estimates with seized amounts and destinations of flows, UNDOC (2020) estimate that out of the 5.6 tons of rhino horns entering the illegal market each year, 5.2 tons leave Africa and out of these, 4.6 tons reach end-consumers in Asia. Less than 100 kg might be destined for other regions in the world. Thailand was the reported destination of 3.1% of rhino horn seizure over the period 2012-2019 (this excludes seizure for which the destination is unknown accounting for 53.7% of all seizures). Most seizures are destined for Vietnam (40.7%) and China (38.5%).

#### 7.7.2.3 Policies, Plans and Legislation

WARPA 2019 includes provisions for protection of non-native species, such as rhinoceros.

#### 7.7.2.4 Consumers and consumption patterns

Rhino horns are highly prized for medicinal use and represents a status symbol. The trade has evolved to include handicraft products such as pendants and other carvings (Krishnasamy and Zavagli, 2020). Rhino horn is composed of carotene and is the same chemical composition as a human fingernail, thus making the trade not only unsustainable but scientifically misguided. Surveys since 2016 highlight that rhino horn products continue to be openly offered for sale in Lao PDR, Myanmar and **Thailand** (TRAFFIC, in prep, reported in Krishnasamy and Zavagli, 2020).

Viet Nam is noted as the world's largest consumer of rhino horns<sup>126</sup>, although the market in China is believed to be growing. Recent market surveys have shown that, similar to ivory, demand for rhino horn in Viet Nam often involves Chinese nationals seeking to move the product to China. These surveys indicate a growing demand for rhino horn jewelry and décor items, including traditional libation bowls, rather than medicine (UNDOC, 2020)

### 7.7.3 Tigers

#### 1.1. Status

Tigers (*Panthera tigris*) are listed in CITES Appendix I, all international commercial trade has been banned since 1987. Population estimates suggest fewer than 3,900 tigers are left in the wild (WWF, 2016). The known tiger range declined by 42% between 2006 and 2014, attributed to the actual decline in tigers as well as a reflection of better data collection methods and increase in tiger survey efforts. Tigers are threatened by the persistent illegal trade and trafficking in tiger parts, products and derivatives, and the poaching which supplies this trade.

At the beginning of the 20<sup>th</sup> Century there were an estimated 100,000 wild tigers in Asia. This number is now estimated at fewer than 4,000, of which approximately 150-200 are in Thailand (DNP Report, 2020).

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<sup>126</sup> For example, see: <http://www.traffic.org/home/2017/3/23/thorough-investigations-needed-following-major-rhino-horn-se.html> and MacMillan, D., Bozzola, M., Hanley, N., Kasterine, A. & Sheremet, O. (2017). Demand in Viet Nam for rhino horn used in traditional medicine, International Trade Centre, Geneva, Switzerland.

Of the seven tiger range countries in Southeast Asia (Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Thailand, and Viet Nam), their stronghold today is Indonesia<sup>127</sup>, Malaysia, and **Thailand**. These three countries hold an estimated 19% of the global tiger populations (Wong and Krishnasamy, 2019); they also 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 (discussed further below). Tigers in Cambodia, Lao PDR, and Viet Nam are thought to be functionally extinct (Goodrich *et al.*, 2015; Stoner *et al.*, 2016; WWF, 2016).

There are an estimated 150-200 tigers in nature in Thailand in 31 protected forest areas (DNP, Report to CITES, 2020). The tiger population has declined by around 50 animals since 2010, when the population was estimated to be between 190 and 250, but the number of protected areas occupied by tigers has increased from 25. These protected areas support subpopulations of varying densities, with the Western Forest Complex, containing Huai Kha Khaeng Wildlife Sanctuary, supporting the highest density of tigers. The Western Forest Complex, together with the Khaeng Krachan Forest Complex, has the potential to support one of the largest tiger populations in the world due to extensive intact forest connecting the two subpopulations.

Thailand has put considerable conservation efforts in protected area subsystems such as the Western Forest Complex and Eastern Forest Complex. Within this complex, the Huai Kha Khaeng Wildlife Sanctuary has seen the tiger population increase from 41 to 60-65 (a 66% increase in population) since 2010 (DNP Report, 2020). Described as the one safe tiger habitat in South-East Asia, Huai Kha Khaeng is an example of a successful collaboration between the Wildlife Conservation Society (WCS) and the Department of National Parks, Wildlife and Plant Conservation (DNP). The sanctuary uses intensive patrolling to curb the poaching of tigers and of their prey.<sup>128</sup> While this success is encouraging, continued vigilance and support will be required for it to remain sustainable (UNODC, 2017).

Despite the enhanced protection, tiger poaching still occurs within Huai Kha Khaeng Wildlife Sanctuary. In 2013 a ranger was shot in the neck by poachers<sup>129</sup> and in 2015 a female tiger was poached on the fringes of the sanctuary. In the latter instance two suspects were arrested at a highway checkpoint in Mae Sot District, around 400 km north-west of Bangkok, after officers search their vehicle and found the dead tiger. The ensuing police investigation identified an additional three suspects, who said that the tiger's body was to be sold to a buyer in Bangkok for 80,000 baht (around USD 2,300)<sup>130</sup>. In 2015-16 in Thailand there were two reported cases of wild tiger poaching, which resulted in the death of eight tigers. (UNODC, 2017).

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<sup>127</sup> Indonesia 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). Of the three strongholds in Southeast Asia, Indonesia had 78% of the seizures between 2017-2018 (Wong and Krishnasamy, 2019)].

<sup>128</sup> J.R. Platt, 2016. Tigers Have Just One Safe Habitat in SE Asia, Scientific America <https://blogs.scientificamerican.com/extinction-countdown/tigers-thailand/>

<sup>129</sup> T. Maresca, 2016. Rangers Risk Life Trying to Save Endangered Tigers. USA Today, <http://www.usatoday.com/story/news/world/2016/09/28/rangers-risk-lives-save-endangered-tigers/90688536/> at accessed on 27 March 2017

<sup>130</sup> Tiger Poachers Caught in One Week. Wildlife Conservation Society webpage found at <http://www.wcsthailand.org/english/news/tiger-poachers-caught-within-one-week> accessed on 27 March 2017

**Box A7.3: The GEF Tiger Project in Western Forest Complex Thun Yai and Huay Kha Kaeng World Heritage Site**

The UNDP/GEF project on ‘*Strengthening Capacity and Incentive for Wildlife Conservation in the Western Forest Complex*’, implemented by DNP (2016 – 2020) has worked to improve the management effectiveness and sustainable financing for the Western Forest Complex Thun Yai and Huay Kha Kaeng World Heritage Site, which is an important habitat for the tiger in Thailand. The project is designed to support Thailand to implement the National Tiger Action Plan. The project has also established conditions for the transport of captive tigers, as well as the storage and management of tiger specimens/parts.

Initiatives under the GEF TIGER project in HKK include: (i) **Wildlife forensic analysis** to improve the DNA registry of captive and wild tigers, which complements the forensic component of the IWT project. Key equipment for the DNA laboratory was purchased by the project and a DNA database of captive tigers developed; (ii) Installation of **400 camera traps** and establishment of a Wildlife Research Substation to collect and analyze monitoring data; (iii) Development of **Network Centric Operation System** - a short-wave system to transmit real time information from rangers working in the deep forest to HKK HQ and DNP central office in Bangkok. There are many potential benefits of such a system including: quicker responses from the regional offices to support rangers and address infringements; improved poacher morale and protection; better planning allowing counter-measures to be focused on hot-spot areas; and, better engagement of decision makers and more timely decisions based on real time information (rather than having to wait for monthly written reports); (iv) **Training** on SMART Patrolling. The project also supported community livelihoods through: joint surveillance by officers and communities of the protected areas; development of nature-friendly production (e.g. coffee and weaving) supported by small grants (with a total budget of USD120.000); training of Community Liaison officers hired by the project; identification of possible livelihood opportunities such as community forestry, engagement of people in wildlife management and promotion of wildlife friendly agriculture and ecotourism (total of USD 240,000 allocated in grants).

## 1.2. *Illegal trade in tigers*

Tiger parts and products have long been used throughout Asia and the illegal hunting of tigers to supply the Asian markets is their single biggest and most immediate threat (Nowell and Xu, 2007; CITES, 2015; Stoner and Krishnasamy, 2016). All parts of the tiger are traded and used, for traditional medicine and for other purposes, but the bones are generally the most sought after.

Between 2000 and 2018 a minimum of 2,359 tiger equivalents were seized (Wong and Krishnasamy, 2019). These seizures related to 1,142 incidents and occurred in 32 countries globally, although more than 2,200 tigers (93%) were seized in just the 13 Tiger range states (Wong and Krishnasamy, 2019). Krishnasamy and Zavagli (2020) 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.

According to UNODC, 2020, based on World WISE data covering 2007-2018 Thailand and India are the main source countries of shipments seized in international trade, together representing 82 per cent of the total whole tiger equivalents seized where the origin was known<sup>131</sup>. Thailand has one of the largest captive tiger populations, but fewer than 200 wild tigers, so most of these seizures since 2007 likely involved captive-sourced animals. Conversely India, has the world’s largest wild population and a small captive population with no indicators to suspect captive specimens in trade (UNDOC, 2020).

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<sup>131</sup> Sourcing from Nepal, Bangladesh, and Bhutan is also ongoing.

**Thailand** seized 166 Tigers from 2012-2015, compared to 64 seized from 2008-2011, with the seizure of 102 Tigers from the Tiger temple in 2015 being the main reason behind this increase (Project Document).

### **Captive tiger establishment**

It is estimated that there are up to three times as many tigers in captivity (estimated at 12,574), 91 per cent of which are held in 716 facilities in seven countries for which data are available: China, the United States of America, Thailand, Lao People's Democratic Republic, India, Viet Nam and South Africa. Some of these facilities appear to supply domestic tiger product markets, and some appear to be the source of illegal international trade (UNODC, 2020).

Captive breeding of Appendix I species, such as tigers for the international commercial trade of these captive-bred species and their parts is permitted but strictly regulated under CITES and can only be carried out by facilities registered with the CITES Secretariat. In 2007, however, the Conference of the Parties agreed in **Decision 14.69** that tigers should not be bred for the purpose of commercial international trade in their parts and voted for "trade", in the context of this Decision to refer to domestic as well as international trade. Breeding of tigers for commercial purposes may however be legal in some and some countries allow trade under a permit system. Some non-range states do not have regulations regarding non-native species. Trading these products across borders, however, is contrary to CITES under national CITES implementation laws

Cambodia, Lao PDR, Viet Nam and **Thailand**, operate 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 where about 60% of whole carcasses and live Tigers seized from 2012–2018, equivalent to 282 animals, came from suspected captive sources , reaching close to 70% in Thailand (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<sup>132</sup>.

A trade in captive tigers occurs within Thailand through legally established non-commercial zoos. In 2015, 1,151 tigers were privately held in captive breeding facilities, and in 2018 this increased to a reported 1,464 living individuals and 25 carcasses. This is compared to just 228 held by the government. In June 2020, Thailand reported a total of 23 public zoos with less than 49 tigers in their possession, and 9 public zoos with more than 49 tigers in their possession. Overall, 10 facilities in Thailand were identified as being of concern, including the now closed down Tiger Temple (DNP Report, 2020). Facilities may be of concern either: a) on the basis that the number of tigers being kept at such facilities was questionable since it exceeded what was necessary for conservation of the species; or b) on the basis of information that came to the attention of the Secretariat in the course of its regular work that the facility might be involved in illegal trade (CITES CoP18 Doc. 71.2, 2019). Although these facilities have been identified as being of concern, the number of captive tigers in many continues to increase.

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<sup>132</sup> 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). (Krishnasamy and Zavagli 2020).

**Table A 7.1: Thailand Captive Tiger facilities of concern**

No	Name of Facility	Reason	Number of tigers in possession			Remark
			2010	2019	2020	
1	Safari World, Bangkok	a)	124	221	224	
2	Star Tiger Zoo, Chaiyaphum	b)		7	5	
3	Sriracha Tiger Zoo, Chonburi	a) and b)	424	272	288	
4	The Million Years Stone Park and Pattaya Crocodile Farm, Chonburi	b)	47	55	69	
5	Tiger Temple, Kanchanaburi	a) and b)		-	-	Closed down
6	Safari Park open Zoo Cap, Kanchanaburi	b)	11	28	23	
7	Mukdahan Tiger Zoo and Farm,	b)		50	49	
8	Mali-Salika Zoo, Nakhon Nayok	a)	109	-	-	Closed down
9	Phuket Tiger Kingdom, Phuket	a)		44	13	Due to close
10	Huahin Zoo and Animal Park, Prachuap Khiri Khan	b)		35	47	
TOTAL				712	718	

**Source:** DNP Report to CITES, 2020

In June 2016 the DNP and Royal Thai Police (RTP) raided the world-famous Tiger Temple, around 180 km west of Bangkok, and allegedly gathered evidence of that facility's involvement in the illegal breeding and trafficking of tigers. (UNODC, 2017). 137 live tigers were confiscated by DNP as well as 40 frozen cubs and 20 cubs preserved in formaldehyde<sup>133</sup>. Following the Tiger Temple investigation, DNP said it would inspect other tiger facilities in Thailand to ensure compliance, supported by scientific evidence including recording tiger stripe patterns and DNA testing (UNODC, 2017).

### Trafficking routes

Cambodia, Lao PDR, Viet Nam, **Thailand** and Myanmar play a source, consumer and transit role for tiger parts and products heading elsewhere in Asia. ( Markets openly selling tiger parts intensify the problem by encouraging demand and consumption, much of which also caters to Chinese clientele (.Krishnasamy and Zavagli (2020)).

Thailand-Lao PDR-Viet Nam is suspected to remain the predominant trade route. Some of the seizures reported in Thailand and Viet Nam cite Lao PDR as the source or transit of Tigers. Reports from Viet Nam claimed the Tigers seized had originated from Lao PDR, while some within Thailand state that the Tigers were on route to Lao PDR. A prevalence of seizures on key arterial routes in Thailand has been apparent, especially for the highway connecting the south (from the border with Malaysia) to central Thailand and the road leading towards Vientiane, Lao PDR<sup>134</sup>.

Trafficking networks for tiger products involve Chinese, Vietnamese, Indian, and Indonesian traders who primarily sell the products to medicinal industries in China and manufacturers or

<sup>133</sup> <http://www.aljazeera.com/indepth/features/2016/06/happened-thailand-tiger-temple-160605074332073.html>

<sup>134</sup> Stoner et al. 2016. Ibid. Further to this: The 65th meeting of the CITES Standing Committee adopted a recommendation requesting these Thailand, Laos, Viet Nam and Myanmar to review their implementation of Resolution Conf. 12.5 (Rev. CoP16), and in particular to "introduce innovative enforcement methods and, as a matter of priority, strengthen enforcement efforts in key border regions, and develop or improve implementation of regional enforcement networks"

consumers in Viet Nam and Thailand, which together were believed to be the destinations for more than half of the whole tiger equivalents seized (UNODC, 2020).

[China implemented a ban on all domestic trade of tiger bone in 1993 and China's national medicine standard for using tiger bone in prepared Chinese medicine was annulled ( but leopard bone was permitted as a substitute) Illegal trade continues, but more evidence is needed to understand the magnitude of this trade given the limited number of seizure cases where the destination is known (16% of seizures) (UNODC, 2020).

Vietnamese law allows internal trade in wild or captive-bred big cats with a permit from designated authorities (the Provincial People's Committee, which reports to the Ministry of Agriculture and Rural Development). Based on interviews in 2019 in Viet Nam, it appears no permits have yet been granted. A new law is said to be under review that would require all tigers to be registered, with the government surveying all tiger facilities. The result of these controls is that few pharmacies, traditional medicine shops, or wildlife markets now openly carry tiger products in Viet Nam (UNODC, 2020).

### 1.3. *Consumers and consumption patterns*

Consumer demand has shifted in recent years with tiger product buyers purchasing these goods (e.g. tiger meat and tiger wine) as a sign of wealth rather than for their health. The most popular bone-based products appear to be tiger wine and tiger glue/paste (UNDOC, 2020). Tigers are also prized for trophies and sometimes as pets (Nowell and Xu, 2007; Verheij *et al.*, 2010). A large part of the trade has shifted to online sales through social media and messaging apps.

A fair number of Thai consumers, especially military persons and polices, believe that crafted tiger bones, specifically from the skull and forehead, have magic properties and would seek to possess the products as amulets. There is demand for tiger bone wine, particularly among Chinese tourists, which is considered to have health properties.

Reported wholesale prices for tiger bone in Southeast Asia ranged from USD 1,200 per kg in 1994, to USD 1,250-3,750 per kg in 2007, to USD 2,260 per kg as of 2014, but prices vary significantly based on the source of information used. For example, Chinese court records indicate prices of about USD 1,400 per kg in 2015 closer to the retail end of the trafficking chain. There are thought to be cultural preferences for certain tiger bone products: use of tiger bone wine is more commonly associated with Chinese culture, while use of tiger glue is associated with Vietnamese culture (UNODC, 2020)

**Tiger wine** is produced in several ways. The Hunan Sanhong Pharmaceutical Company describes one procedure where tiger bone is crushed into powder and mixed with sorghum liquor. Other methods include soaking tiger bones in alcohol to produce tiger stock rather than mixing crushed bone (bones are used for a maximum of three batches in this case). Tiger wine is sold in East and Southeast Asia for an average of about USD 80 for a bottle aged three years, USD155 for six years, and upward of USD 290 for an eight-year wine. In venues where tiger wine is consumed for prestige, bottles can range in price from USD 500 to over USD 1,000 per bottle (UNODC, 2020).

**Tiger glue** is a concentrated product manufactured by boiling the bones for three to seven days, producing a red-brown substance that is poured into a frame to make a gelatinous cake and cut into bars of approximately 100 grams for sale. It is often ground into powder or scrapings and consumed with alcohol. Tiger glue bars, weighing about 100 grams, are sold in Viet Nam for about USD1,000 each (UNODC, 2020). In Thailand, Tiger glue is sold behind closed doors and a large part of the trade, including tiger wine and live trade, has shifted to on-line sales (UNODC, 2020).

Thai consumers, on the other hand, tended to buy tiger products for spiritual reasons and because they believed these products would provide protection (86 per cent), with less than half of consumers buying for status reasons. These purchases were mainly in the form of spiritual items and amulets, often blessed by a Buddhist monk, despite a strict 2014 prohibition against the use of tiger parts in amulets from the Sangha Supreme Council, the governing body of the Buddhist order of Thailand (UNODC, 2020).

#### 1.4. *Policies, plans and legislation*

After the Tiger Summit in St. Petersburg, Russia, the first and the second Asia Ministerial Conferences on Tiger Conservation in Thailand in 2010 and in Bhutan in 2012, Thailand agreed to increase the tiger population in collaboration with other Asia's Tiger Range Countries (Bangladesh, Bhutan, Cambodia, China, India, Indonesia, Lao PDR, Malaysia, Myanmar, Nepal, Russia, Thailand and Viet Nam).

Thailand adopted the Wild Animal Reservation and Protection Act 1992 (WARPA), under which the hunting, breeding, possession and trading of Asian big cats is prohibited, except for the purpose of surveillance, study, research, wildlife protection, breeding or public zoos which must be approved (DNP Report to CITES, 2015). Thailand established a **Thailand Tiger Action Plan (2010-2022)** as an implementation framework. The target is to increase the tiger population by 50% from the current baseline population (250 tigers) in 12 years. Key target areas are Thailand's Western Forest Complex (WEFCOM), Tenasserim Range and Dong Phrayayen-Khao Yai Forest Complex. This plan is part of the Global Tiger Recovery Programme. Additionally, tiger conservation is supported by activities including SMART patrol practice, long-term tiger population monitoring (using camera traps and capture based method), occupancy surveys, research programme and captive breeding programme (DNP Report, 2013).

Thailand has introduced several management practices and controls to prevent illegal tiger trade (DNP Report, 2020). For captive tigers, a registry has been established which contains microchip identification number, DNA samples, gender and photographs of stripe pattern of every individual. The DNP is notified of births/deaths within 24 hours; newborns are identity marked (microchip) and parent information recorded if available, and recently deceased tigers are kept for necropsy examination to determine cause of death. Breeding and reproduction of tigers is forbidden. Approval from the DNP is required for safekeeping of tiger parts, as well as for transporting specimens between zoos, with the parties involved required to update their records appropriately. Disposal of tiger parts is by incineration, and an official must be present. Monitoring of these laws are carried out by a collaborative operation team from DNP and police officers, which inspect facilities at least once a month. Violation of these regulation results in legal action, including prison sentence and/or fines.

In the wild, Thailand has increased supervision of tiger habitats, through a SMART patrol system in hunting areas. This has allowed the spread of populations to conservation sites such as the Salakapra Wildlife Sanctuary and the Erawan National Park in Kanchanaburi Province, which have not seen tigers in a long time. The DNP has also developed a database on individual strip-marking of wild specimens (DNP Report to CITES, 2015). In order to reduce demand for tiger products and improve education and awareness, there are public campaigns in local schools and communities, as well as through mainstream media channels and quality publications. For example, a focused campaign on tigers and manual "Teacher for Tigers" to work with local schools around the Western Forest Complex. National Wildlife Day (December 26th) is celebrated by DNP to raise public awareness of wildlife conservation. Tiger parts, such as 'tiger bone', have been removed from all medical ingredients.

The UNDP/GEF project on '*Strengthening Capacity and Incentive for Wildlife Conservation in the Western Forest Complex*', implemented by DNP (2016 – 2020) has worked to improve the management effectiveness and sustainable financing for the Western Forest Complex Thun

Yai and Huay Kha Kaeng World Heritage Site, which is an important habitat for the tiger in Thailand. The project is designed to support Thailand to implement the National Tiger Action Plan. One of the components of the project focused on improving the DNA registry of captive and wild tigers, which complements the forensic component of the IWT project. The project has also established conditions for the transport of captive tigers, as well as the storage and management of tiger specimens/parts.

#### 7.7.4 Pangolin

##### 7.7.4.1 Status

Pangolins are reclusive nocturnal creatures and there is limited knowledge of their ecology (UNDOC, 2020). They are the only mammal wholly covered in scales. In October 2016, all eight African and Asian pangolin species were listed in CITES Appendix I and the international trade in live pangolins or any of their parts is banned (Krishnasamy and Zavagli, 2020). All pangolin species are globally threatened and three are Critically Endangered - the Sunda Pangolin (*Manis javanica*) and Chinese Pangolin (*M. pentadactyla*) since 2014 and the Philippine Pangolin (*Manis culionensis*) since 2019.

At present, sourcing from captive-bred populations does not seem to be possible to meet demand and/or replace the wild population of pangolins harvested by poachers, as pangolins do not fare well in captivity due to a highly specialized diets and extreme sensitivity to capture-induced stress (UNODC, 2020).

Population estimates are unavailable globally and it is therefore difficult to determine the conservation impact of the illegal trade. However, the sheer volume of seizures, suggests unsustainable harvesting (UNODC, 2020). This situation is mirrored in Thailand, where there is little recent data on the specie's status, but populations are under pressure from collection for both local use and international trade, which seems to have intensified in recent years based on available evidence, and which could well be having a detrimental impact on population levels<sup>135</sup>.

Thailand holds stockpiles of pangolin specimens (Table A7.2). Identification and capacity building materials for pangolins, in terms of compliance with applicable national legislations and stockpile management systems are considered to be inadequate. Guidelines on stockpile management and a wildlife stockpile management system need to be established (DNP, 2017). A number of confiscated Asian pangolins are also kept in captivity in Thailand at the following wildlife breeding stations - Phu Khiao, Tone Nga Chang, Patthalung and Mae Tuen.

**Table A7.2: Stockpiles of pangolin specimens**

Species	Part / derivative	Volume	Source	Data	Held by
Sunda pangolin	stuffed	1	Police station	2017	Government
n/a	scales	1,281.75kg	Suvarnabhumi airport	2-14-2017	Government

##### 7.7.4.2 Illegal trade in Pangolin

Pangolins are considered to be the world's most trafficked wild mammals. Between July 2019 and August 2000, an estimated equivalent of 895,000 pangolins were trafficked globally (Challendar *et al.*, 2019).

<sup>135</sup> DNP, 2017. Notification to the parties No 2017/035 Annex. Questionnaire on the status, trade and conservation of pangolins

Trafficked pangolins are predominantly destined for Asian markets, especially China and Viet Nam, but there is also demand in other Southeast Asia countries including Cambodia, Lao PDR, Myanmar, Malaysia, Indonesia and the Philippines (Krishnasamy and Zavagli, 2020)<sup>136</sup>. There has been a shift in the nature of pangolin seizures over time, away from live and meat seizures (mainly of Asian species) and towards African pangolin scale seizures, exported from Africa (especially Nigeria and the Democratic Republic of the Congo) to Asia (especially Viet Nam as a conduit for the market in China (UNODC, 2020). The trafficking of African pangolin species to meet Asian demand has been on the rise since 2001 (CITES, 2016b; Heinrich *et al.*, 2016). This is attributed to the zero-quota set in 2000 for Asian pangolins, the drastic population decline in the four Asian species, growing demand and increasing economic ties between East Asia and African countries and corruption<sup>137</sup>. Large individual seizures in 2019 show that Nigeria is the primary point of export of pangolin shipments, while Viet Nam has emerged as the primary destination (UNODC, 2020).

Analysis of global pangolin **trafficking routes** from 2010–2015 show Indonesia, Lao PDR, Malaysia, **Thailand**, and Viet Nam among the top 10 countries most implicated in international pangolin trafficking (Heinrich *et al.*, 2017)<sup>138</sup>. 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 (Krishnasamy and Zavagli, 2020).

Thailand is a significant transit (and to a much lesser extent source) country for the pangolin trade and pangolins and their parts continue to be smuggled into and out of Thailand via land, river, and air channels.<sup>139</sup> Thailand WEN reported 34 pangolin seizures, including 5 seizures in 2016 totaling 427 heads/3,052 kgs, and 2 in 2017 with 66 heads/1,000 kgs.

Most of the pangolins entering Thailand come from Indonesia. They pass through one of three Thai-Malaysia border crossings – Sadao in Songkhla, Betong in Yala and Sungai Kolok in Narathiwat provinces. The preferred smuggling route is through Songkhla, where the animals arrive either by boat or by road from Malaysia. Then they are driven 1,600km north to Nong Khai, and cross the border into Lao PDR. Some trade continues onwards to Viet Nam and China. Approximately 1 million Baht is charged to deliver each shipment from Thailand's South to the banks of the Mekong River, where Lao and Chinese traffickers take over to complete the delivery. The price of a live pangolin is 500 Baht per kilogram, which jumps six-fold by the time they reach Laos and goes up to 4,000 Baht per kilo upon arrival in China. Dead pangolins are worth only 1,000 Baht per kilogram in China. While arrests drive up their costs, which is about 400,000 Baht per shipment, this illegal business remains attractive," (Butkote, 2019<sup>140</sup>). Dried pangolin scales are far easier to transport and much harder to detect than live pangolins. They fetch an even higher price, upwards of 40,000 Baht per kg.

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<sup>136</sup> Analysis of CITES trade data from 1977 to 2014 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 USA. 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 cited in Krishnasamy and Zavagli, 2020).

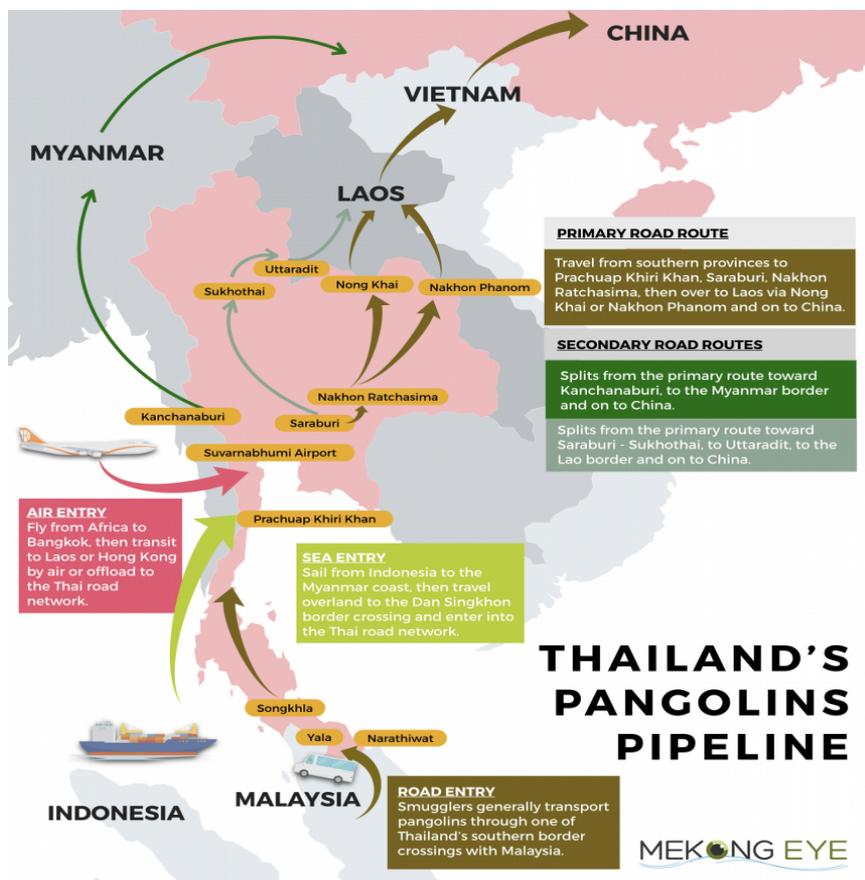
<sup>137</sup> Pantel *et al.*, 2008; Challender *et al.*, 2016; Heinrich *et al.*, 2016; Challender and Waterman, 2017; Heinrich *et al.*, 2017)

<sup>138</sup> 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)

<sup>139</sup> <http://www.channelnewsasia.com/news/asiapacific/thai-police-seize-record-three-tonnes-of-pangolin-scales-7539880> (Thai police seize record three tonnes of pangolin scales 2 Feb 2017) <http://news.sanook.com/1936694/> (Mekong Riverine Unit Nongkhai seized Pangolin En Route to Lao 23 Jan 2016)

<sup>140</sup> Butkote, C. 2019. *Thailand's Pangolin pipeline*. July 30 2019. The Nation Thailand and Mekong Eye under the Earth Journalism Network, Internews

African traders are the major source, especially since China banned domestic sales of ivory in 2017, causing wildlife smugglers to turn to pangolins, since they can be legally sold in both China and Vietnam. Commercial airlines are the preferred mode of transport for African pangolin scales. They generally originate from Nigeria and the Congo, and often transit through Suvarnabhumi airport. Hong Kong and Vietnam are also key destination ports. From 2013 through mid-2016, Thai custom officials intercepted five pangolin shipments at Suvarnabhumi Airport worth a combined value of 6 million Baht. In December 2016, they seized two shipments totaling 2.9 tonnes of pangolin scales valued at 116 million Baht, which was shipped from the Congo, smuggled through Turkey and eventually bound for Laos. At least 6,000 pangolins would have to be killed to gather 2.9 tonnes of scales. There has reportedly been a decline in the number of illegal pangolin imports via Suvarnabhumi, which is partly attributed to the installation of 1,647 CCTV cameras by the Department of Customs in Suvarnabhumi, along with more X-ray machines to scan cargo and increased deployment of cargo e-tracking systems have collectively worked to deter smugglers from using Suvarnabhumi as a transit point (Butkote, 2019).



According to UNODC (2020) between 2014 and 2018, seizures of pangolin scales globally increased tenfold. This may be partly due to greater awareness by customs inspectors resulting in a higher rate of interdiction, however the sharp and consistent increase in the number and size of seizures of scales strongly suggest an increase in the illicit flow. Individual seizures made in recent years have been comprised of the scales of tens of thousands of pangolins, indicative of highly organized criminal operations.

There is some debate as to how much of the large increase in the of scale trafficking could be coming from stockpiles that existed prior to pangolin's CITES Appendix I listing. Nineteen

countries have declared pangolin scale stockpiles to CITES. China reports regularly releasing these stockpiled scales for domestic use by designated hospitals and manufacturers of patented Chinese medicines. However, the volume of declared stockpiles in source and destination countries is far smaller than the tens of thousands of whole pangolin equivalents seized over the past decade and therefore unlikely that leakage from declared government stockpiles contributes significantly to the illegal trade.

Ivory traffickers appear to be involved in the pangolin trade, with recent large seizures of pangolin scales often mixed shipments of both pangolin scales and ivory. Poachers also perceive authorities to consider crimes associated with pangolins as less serious than other forms of poaching such as elephant poaching, and it is therefore seen as low risk. Currently, the market for ivory appears to be in decline, while pangolin prices are on the increase (UNODC, 2020).

Based on the seizure data made available for this study, between 2015 and 2017, 25 seizures by the DNP (with support from the police in 4 incidents) were recorded. Information of the alleged country and origin, transit and destination are rarely known or recorded, although the means of transport is typically recorded as by land and the perpetrators are Thai. While there are data on the number of people prosecuted, data is not provided on the number of actual court cases or convictions or penalties imposed. A separate data set shows that between December 2012 and February 2017 11 seizures (likely additional to the 25 cited above) were recorded (i). A number of cases (7) involved collaboration between the police and or the Customs Department. The pangolins were trafficked by land and air. Countries of origin included Nigeria, Malaysia and D.R.Congo, transit countries were Turkey, Kenya and Thailand, and the final destination were thought to be Thailand and Lao PDR. Charges were brought under WARPA and the Customs Act, resulting in convictions and penalties based on data recorded in only 2 cases (18% of cases).

#### *7.7.4.3 Policies, plans and legislation*

Under WARPA 2019 any harm to a protected species is subject to a fine of between 300,000 and 1,500,000 Baht, or imprisonment between 3-15 years, or both fines and imprisonment. Domestic use of pangolins is only permitted for conducting study/research with a permit issued by the Director General, under the Ministry of Natural Resources and Environment<sup>141</sup>.

#### *7.7.4.4 Consumers and consumption patterns*

Pangolins are killed for their meat and their scales<sup>142</sup>. About 20 per cent of a pangolin's weight is contained in its thick, protective scale made of keratin, the same material as human fingernails. Pangolin products have been used in traditional Chinese medicine for thousands of years, with practitioners believing these scales can treat a variety of human ailments (e.g. promote blood circulation and increase lactation in pregnant women) while the meat is used as a tonic. Some 200 Chinese pharmaceutical companies produce around 60 types of traditional medicines that contain pangolin scales, contributing greatly to the rise in pangolin trafficking (Butkote, 2019). In Nigeria, for example, pangolin parts are used to treat a wide range of physical and psychological conditions.

Although a large number of live pangolins and pangolin scales are being transported through Thailand there is very little demand for pangolin consumption in Thailand. Thais would eat pangolin meat as food (not medicine) but now the price is too high for such purpose (IWT Project Document).

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<sup>141</sup> DNP, 2017. Notification to the parties No 2017/035 Annex. Questionnaire on the status, trade and conservation of pangolins

<sup>142</sup> 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)

## 7.8 Annex 8: Demonstration sites for integrated IWT enforcement approach - Thailand

The IWT project under Output 1.3 will pilot an integrated inter-agency approach towards transboundary IWT enforcement engaging communities and linking with local volunteer networks (Box A8.1). The demonstrations are two CITES checkpoints<sup>143</sup> located on priority wildlife cross border trafficking routes for key target species on the Thai-Malaysian and Thai-Lao borders (e.g. especially for pangolin trade from Malaysia through to Laos, Vietnam and China). The demonstration pilots are aimed at strengthening and incentivizing engagement with local communities, motivating local agency staff and improving vertical coordination between local and central offices. The concept of integrated response to IWT at the local level is seen as a logical extension of the more structured approach towards inter-agency collaboration proposed through Thailand WEN.

### **Box A8.1: GEF-IWT project support to local inter-agency enforcement**

**Output 1.3:** *Pilot an integrated approach to wildlife crime surveillance and enforcement at demonstration areas on the Malaysian border (Sadao District) and Lao border (Rattanaowapi District), especially to combat Pangolin trafficking*

Indicative **activities** proposed:

- 1.3.1 Establish local inter-agency task forces for Sadao District and Rattanaowapi District border regions led by the Royal Thai Police; confirm objectives, TOR, membership and SOP for each task force. At a minimum, the task forces would include Royal Thai Police (NED and other local police), DNP, Customs, Immigration, Quarantine agencies, Mekong Navy (NE Thailand) and local government. Support local joint enforcement operations informed by intelligence gathering and analysis. Conduct participatory annual review workshops and assess potential for upscaling.
- 1.3.2 Strengthen cross-border collaboration on wildlife crime enforcement with counterpart agencies in Laos and Malaysia with support from Thailand WEN and international law enforcement organizations (such as ICCWC, INTERPOL, UNODC)
- 1.3.3 Conduct awareness raising programmes for local communities on the prevalence and negative impacts of wildlife crime
- 1.3.4 Facilitate the establishment of at least 4 community agreements on wildlife protection across the two demonstration areas to formalize relations with the authorities and strengthen the basis for collaboration. Facilitate the provision of incentives and training for local community volunteer engagement in surveillance and wildlife protection activities and possibilities for local development co-benefits.

This output is linked to a *Project Objective indicator – 1 (b) Joint Operational Partnerships (DNP, NED Police, Mekong Navy, Customs, Immigration, Quarantine, other agencies as needed) for demonstration areas in Nongkhai Province and Sadao District*

**Intermediate Outcome** >> *Local level mechanisms for joint agency operations and community engagement to combat wildlife crime are demonstrated*

**Source:** GEF-IWT Project Document

Community support is seen as key to reducing demand reduction and increasing the effectiveness of crime deterrence efforts. Officials at both Pengjan and Sadao agree that it is very difficult to monitor wildlife smuggling outside of the checkpoint activity without intelligence

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<sup>143</sup> DNP operates a network of 53 CITES wildlife checkpoints (40 operational), co-located with customs, immigration and quarantine posts.

from the communities. It is therefore vital to improve community support and enhance cooperation between officials and local communities.

*“We are equipped and have resources. All we need is intelligence and community support on information.”* – Mekong Riverine Unit Official

However, according to the community members and officials at the sites, this will be a very challenging for two critical reasons (Project Document):

1. Some community members and officials are benefiting from the trade, and
2. Individually and collectively, the community members see that wildlife trade has less severe punishment, less (perceived) risk from enforcement, and is morally ‘less wrong’ (personal and communal views) but has a higher financial return compared to drugs or timber trade. To them drug or human trafficking directly damages the community, but wildlife trade does not.

Additionally, according to a study at Sadao Checkpoint, illegal wildlife trade prevention is not a top priority. In the last decade, there has been a huge government investment to accomplish several competing aims: the facilitation of legitimate travel and trade, the prevention of terrorism and transnational criminality, and reductions in illegal migration flows. A well planned and collaborative advocacy campaign is needed in order to create a strong political will, commitment, and the establishment of an appropriate incentives/disincentives framework to systematically and sustainably improve the quality of the country’s effort to combat illegal wildlife trade.

At both demonstration sites, the project will support awareness raising on wildlife crime issues, to build local support for wildlife conservation and cooperation with the authorities, and mechanisms for local communities to cooperate with law enforcement authorities in responding to IWT.

While there is a degree of existing coordination between agencies at these sites, it is recognized that this could be strengthened to address apparent weaknesses in IWT law enforcement, especially the dispersed trafficking of wildlife outside the main checkpoints, and lack of seizure cases entering the prosecution process (thus denying the opportunity for more detailed investigation of IWT networks and operations). Local stakeholder involvement will mainly focus on developing a more coordinated approach towards IWT law enforcement, including local law enforcement task forces and more proactive engagement of local communities in efforts to control IWT through the MNRE’s NEV-Net volunteer network, with facilitation of incentives for volunteer involvement and appropriate training.

**Table A8.1: Key features of the project demonstration sites**

Features	Demonstration Sites	
Name	<b>Pengjan Village, Nongkhai Province (North East Thailand)</b>	<b>Sadao Border Checkpoint, Songkhla Province (South Thailand)</b>
Administrative Units	Rattana-wapi District, Nongkhai Province	Sadao District, Songkhla Province
Lead DNP Offices	Nongkhai Wildlife Checkpoint	Sadao Wildlife Checkpoint
Land area	Rattana-wapi District: 204 km <sup>2</sup> 62 villages	Sadao District: 1,029 km <sup>2</sup> 67 villages
Population	36,920 (2005)	120,306 (2009)
Key species in wildlife trade at this location	Sunda Pangolin, tiger (oil, parts), serow (gall bladder), bear (gall bladder), tortoises and freshwater turtles, crocodiles (skins), rosewood	Sunda Pangolin, turtles and tortoises at Sadao. Padang Besar railway checkpoint has made ivory, tiger and rosewood seizures.
Key border crossing points and markets involved in wildlife trade	Pengjan Village market, long porous border along Mekong River (wildlife farm in Laos nearby)	Sadao border crossing point, Padang Besar border crossing point, Long porous land border in forested / plantation areas
Key local stakeholders	DNP, Customs Dept, RTP, Quarantine (Depts of Agriculture, Fisheries, and Livestock Development) Royal Thai Navy – Mekong Riverine Unit, provincial and district governments, subdistrict council, NEV-Net, Tourism Authority offices, local radio stations, schools and colleges	DNP, Customs Dept, RTP, Quarantine (Depts of Agriculture, Fisheries, and Livestock Development), provincial and district governments, subdistrict council, NEV-Net, Tourism Authority offices, local radio stations, schools and colleges

**Pengjan Village**, Ponpang Sub-district (Tambon), Rattana-wapi District of Nongkhai Province (NE Thailand).

Rattana-wapi District has an area of 20,400 ha and population of 37,970 (19,136 male and 18,834 female). **Ponpang Sub-district population:** 5,866 (2,883 women, 1,787 households)

#### **Community members' major professions:**

- Rice farming
- Fisheries
- Cash crop farming i.e. pineapple, rubber, eucalyptus, corn, chili
- Animal husbandry i.e. cattle, pigs, ducks, chickens
- Household food processing i.e. pineapple candy, fermented fish, dried fish, wicker wares

Pengjan Village, situated on the right bank of the Mekong River border with Laos, is significant for its market at which bushmeat and traditional Chinese medicine products are openly sold, and illegal trade in wildlife products continues covertly. The village has a checkpoint for border trade between Thailand and Laos.

In particular the town's Sunday market is known among consumers and suppliers as a place to trade wildlife products. Thai and foreign consumers come to Pengjan village's Sunday Market to browse, buy, and solicit wildlife products as well as other consumer goods. Sellers display legal products such as wild boar meat or honeycomb but covertly approach and offer illegal products to customers. Monks, fortune-tellers, and traditional healers are frequent customers seeking ingredients for traditional medicine, wildlife parts for amulet crafting, and some leave orders for vendor and suppliers.

Across the Mekong river from Pengjan village in Lao PDR there is a wildlife farm, which has received legal permission from the Lao government. Live animals, specifically pangolins, are regularly transported over the river (from Thailand to Laos) to be 'laundered' at this site and then forwarded to Viet Nam and China 'legally' as farmed animals. Navy officials say that it is very difficult to arrest the smugglers as the border is very long and many community members support the trade and obstruct the enforcement as they benefit from the activities. Teenagers, for example, are paid 3-500 Baht for an hour of work helping unload pangolins from cars to the boats while villagers tip off the smugglers when they see navy officers approaching near the site of activity.

The **Royal Thai Navy's Mekong Riverine Unit (MRU)** at RattanaVapi is, at present, the de facto main actor in the law enforcement effort against IWT in the area. Under the current military regime, military officials hold the highest level of authority, especially in the area of law enforcement efforts. However, although the military-led effort could be perceived as 'operational' this arbitrary institutional arrangement is a very much a top-down authoritative approach imposed upon the community and local officials by the current military government. A civilian-led arrangement is needed in ensuring that a more participatory, transparent, and effective effort is put in place. While working with and providing support to the MRU is indispensable at the time being, there are several local agencies that should also be engaged, empowered, and supported in order to plan and implement the intervention more effectively.

**Sadao Border Checkpoint**, Samnakkham Sub-district (Tambon), Sadao District, Songkhla Province (South Thailand) on the Malaysian border

**Sadao District** (Songkhla Province): 102,900 ha. Population: 63,011 male and 64,666 female (incorporating projected population increase over the project period).

The Sadao Border Checkpoint is the highest ranking site for cross-border trade in Thailand<sup>144</sup>, and has been identified by the Royal Thai Police's Natural Resources and Environmental Crime Division (NRECD) representatives as a major wildlife trade entry point by land from Malaysia. As the border areas surrounding the checkpoint are mostly located in the national parks, national forests or wildlife sanctuaries enforcement is particularly challenging and will require active support from the communities in order to acquire intelligence, enforce law, and deter wildlife smuggling based on support from the communities and local authorities.

Local officials and the community leaders confirm that, via Sadao, pangolins and ivory smugglers have been using the Thai-Malaysian roads as the main lifeline of the wildlife trafficking circles. The DNP officials from Hat Yai airport checkpoint have been active in seeking cooperation with Sadao checkpoint authorities and various government units in the areas of inspecting and reporting of news related to trafficking with an aim to create an effective network in sharing information for future operations<sup>145</sup>.

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<sup>144</sup> 2013. Boriboonrat, Pimupsorn: Collaborative Border Management in Thailand and Neighboring Countries: Needs, Challenges and Issues

<sup>145</sup> <http://asean-wen.org/index.php/networks/network-news/747-2-60> (Cooperative efforts by Thai Officials against Illegal Trafficking Routes in Southern Thailand 2 Feb 2016)

## 7.9 Annex 9: TSA Step 4: Supporting Data tables

**Table A9.1: SMART patrol requirements for National parks and Wildlife Sanctuaries**

National Park	Province	(Area)		SMART patrol units required <sup>1</sup>
		(km <sup>2</sup> )	(Rai)	
Mae Wong	Kamphaeng Phet, Nakhon Sawan	894.00	558,750.00	2
Mae Ping	Chiang Mai, Lamphun, Tak	1,003.75	627,346.00	2
Khao Yai	Nakhon Ratchasima, Saraburi, Nakhon Nayok	2,165.55	1,353,471.53	2
Thong Pha Phum	Kanchanaburi	1,235.54	772,214.27	3
Kuiburi	Prachuab Khiri Khan	969.00	605,625.00	2
Kaeng Krachan	Phetchaburi, Prachuab Khiri Khan	2,914.70	1,821,687.84	2
Khao Sok	Surat Thani	738.74	461,712.50	2
All Wildlife Sanctuaries	[Various]	37,269.36	19,276,265 <sup>3/</sup>	79
Additional SMART Patrol Units to be set up between 2021-2030				30
Budget to set up SMART Patrol units and operational costs between 2021-2030				5,229,626

**Notes:** 1/ Based on the ratio of ranger : area patrolled of the Western Forest Complex; 2/ Based on unit cost of 1,182,800 Baht; 3/ Budget already earmarked; 3/ area excludes Wildlife Sanctuaries in the Western Forest Complex.

**Table A9.2: Cost to support WIFOS under GEF-IWT project and beyond 2023**

Description	GEF- IWT budget	Requirement from 2023
DNA sequence database for key CITES-listed species implicated in IWT in Thailand for use in determining origin of seized wildlife, its parts and derivatives <sup>146</sup>	Laboratory reagents – USD 15,000 Printers – USD 2,000 Software & accessories – USD 4,000 Software and bioinformatic support – USD 1,000	Database will be established, but a maintenance budget will be needed (not costed) Laboratory reagents – USD 5,000 per year
Develop protocol for systematic long-term sampling on the origins of ivory in the regulated domestic market for Thai elephant ivory, including forensic techniques		A budget will be required to undertake systematic survey but since the protocol has not yet been developed this is difficult to cost with any accuracy.
Additional staff to deliver timely results to enforcement agencies	2 temporary lab staff at USD 2,500 for 4 years Additional ISO17025-QA staff position at USD 20,000/year Full time WIFOS scientist at USD 20,000 / year over 3 years. IUCN technical coordination support to WIFOS capacity development activity – USD 24,000 Total annual cost: USD 48,500	USD 48,500 a year
Equipment, reagents and consumables to undertake testing of wildlife seizures	Laboratory equipment- USD 20,000	Not costed but additional equipment may be needed and /or existing equipment replaced
Training	6 WIFOS workshop (4 ASEAN, 2 ASEAN-African) at USD 10,000 per workshop 1 coordination group meeting at USD 2,052  Travel in support of capacity development - USD 250 / month * 48 = USD 12,000	1 workshop per year at USD 10,000 1 coordination group meeting per year USD 2,052
Consultancy support	USD 212,500	-
<b>TOTAL</b>		<b>USD 61,037 a year</b>

<sup>146</sup> This will follow the ForCyt system's protocols and will support field sample collection, equipment and reagents, outsourced NGS sequencing, software and bioinformatic support.