



# Going, Going, Gone...

## The Illegal Trade in Wildlife in East and Southeast Asia



# **Going, Going, Gone: The *Illegal* Trade in Wildlife in East and Southeast Asia**

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July 2005

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Discussion Paper

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Environmental and social development issues are integral part of the development challenge in the East Asia and Pacific (EAP) region. The recently completed Environment and Social Development Strategies for the World Bank in the region have provided the conceptual framework for setting priorities, strengthening the policy and institutional framework for sustainable development, and addressing key environmental and social development challenges through projects, programs, policy dialogue, and partnerships. The EASES Discussion Paper Series provides a forum for discussion on good practices and policy issues within the development community and with client countries.

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# FOREWORD

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In the last five years, the World Bank has approved nearly 50 projects directly or indirectly related to biodiversity conservation in East and Southeast Asia, accounting for some \$310 million of Bank financing. However, there is a growing realization that these investments are being seriously compromised by the illegal wildlife trade, and that as a result the region's forests are increasingly silent, empty of the wildlife that makes them so unique.

The region is a center for the consumption of wildlife derivatives, ranging from tiger bone medicines to shark fin cuisine. The region is also a key supplier to the international wildlife market, both legal and illegal. Wildlife is traded as food, traditional medicine, pets, for zoos and other live animal collections, and as trophies and decorations. If a species has a marketable value, and a market exists for it, it is traded.

This paper provides a glimpse into the world of illegal wildlife trade, as well as a snapshot of how the World Bank, through its lending and non-lending activities, can leverage its many investments to safeguard biodiversity and the livelihoods that depend on it. It seeks to identify key

entry points for actions by the World Bank, governments and other stakeholders to reduce the threats to wildlife and human welfare posed by the illegal trade in wildlife. The paper's recommendations focus on scaling up the effectiveness of current interventions, and suggest others that have not yet been tried or tested.

This report aims to stimulate discussion, share knowledge, and contribute to learning from experience. It is a means to guide future thinking about the engagement of the World Bank on issues of wildlife trade, and is part of a larger effort in the World Bank to implement a coherent strategy in support of placing the fight against the illegal trade in wildlife squarely on the development agenda.

As governments and civil society alike become more aware of the importance of biodiversity for economic growth and poverty alleviation, and of the threats posed to this biodiversity by the illegal trade in wildlife, there is hope that the rich forests, fauna and flora of East and Southeast Asia will remain a major asset for improving the quality of people's lives and providing opportunities for future generations.

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# ACRONYMS

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ADB	Asian Development Bank
ASEAN	Association of Southeast Asian Nations
CBD	Conference on Biological Diversity
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CoP13	The Thirteenth Conference of the Parties (CITES)
GDP	Gross Domestic Product
GMS	Greater Mekong Sub-Region
GTZ	German Technical Cooperation Agency
IUCN	The World Conservation Union
NGO	Non-Governmental Organization
NNT NPA	Nakai Nam Theun National Protected Area (in Lao PDR)
PMNP	Pu Mat National Park (in Vietnam)
PRSC	Poverty-Reduction Support Credit
SFNC	Social Forestry and Nature Conservation Project (in Vietnam)
TDNP	Tam Dao National Park (in Vietnam)
TCM	Traditional Chinese Medicine
UNDP	United Nations Development Program
WCS	Wildlife Conservation Society

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# EXECUTIVE SUMMARY

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East and Southeast Asia account for a remarkable proportion of the world's biodiversity. The region, which spans the Palearctic, Oriental, and Australasian biogeographical regions, has a richness and diversity of species that is found in few other regions of the world. It encompasses the centers of origin for many important and widespread crops including rice, sugar cane, citrus, and soybeans. People rely on biodiversity for food, shelter, and other inputs to their livelihoods. Biodiversity also boosts economic growth by contributing to trade and foreign exchange earnings. The region's charismatic fauna, stunning forests, coral reefs, and rich coastal areas offer recreation and inspiration for millions of people.

People have occupied much of the land surface of East and Southeast Asia for thousands of years. The region's biodiversity is the product of a long history of interaction between mankind and nature. However, as the region's population exploded in the twentieth century, agricultural expansion converted forests and grasslands into cultivated land; deforestation and forest fires reduced the forest area and left remaining forests more fragmented and degraded; pollution, over-fishing, and draining of wetlands irrevocably altered freshwater and marine landscapes; and unsustainable resource use, generated by a strong demand for wildlife products, emptied the forests and seas of their riches. As a result, the rich biodiversity of the region is under serious threat.

Perhaps one of the most pernicious of threats is from the illegal trade in wildlife - animals and plants - which is occurring throughout the region. The region's recent economic performance has been strong, with regional growth in GDP exceeding six percent in 2004; growth prospects continue to look good for the future. The region's dynamism is creating more personal wealth and higher standards of living than ever before. However, economic growth has, as elsewhere, brought changing patterns of consumption, and some of these have led to heightened environmental degradation. Consequently, the region is failing to strike a balance between

economic growth, consumer demands, and biodiversity conservation.

As a result of rapid economic growth, the demand for natural resources such as land, timber and non-timber forest resources has exploded across Asia. Moreover, the East and Southeast Asia region is a center for the consumption of wildlife derivatives, ranging from tiger bone medicines to shark fin cuisine. The region is also a key supplier to the international wildlife market, both legal and illegal. Much of the demand arises from the practice of Traditional Chinese Medicine (TCM), which uses natural plant, mineral, and animal-based ingredients. TCM dates back at least 3,000 years and is an indispensable part of China's cultural heritage. For many centuries, tiger bone was a preferred treatment for joint ailments like arthritis, while rhino horn has been used to treat fever, convulsions, and delirium. Bile from bear gall bladders is used to treat a variety of ailments, from inflammation to bacterial infections. Although alternatives are available, and many species used in TCM are now protected by national and international laws, illegal trade and poaching have increased to crisis levels as TCM's popularity has expanded, in part supported by the rise in personal wealth and the status gained by consuming rare and exotic species.

In addition to their purported curative properties, wildlife and plant derivatives are in demand for exotic cuisine, clothing, trophies, and accessories. This has led to unsustainable levels of exploitation for many of the region's most charismatic and endangered<sup>1</sup> species. The region's forests are increasingly silent, empty of the wildlife that makes them so unique.

## **Combating the Illegal Trade**

Various efforts have been made by different stakeholders to sustainably manage the wildlife trade. One initiative is the Convention on

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<sup>1</sup> Throughout this report, 'endangered' is used in the colloquial sense, and not in the narrower sense of one particular IUCN threat category.

International Trade in Endangered Species of Wild Fauna and Flora (CITES), which came into force in July 1975.

CITES is an international agreement that relies on voluntary adherence by states. Because the trade in wild animals and plants does not stop at state borders, the effort to manage it and curb illegal activities requires international cooperation to safeguard certain species from over-exploitation. CITES was born out of the need for such cooperation. Currently, 167 nations have ratified CITES. For these states, CITES provides a framework in which to manage the trade in wildlife and plants, which is supplemented and made operational by domestic legislation. Today, CITES accords varying degrees of protection to more than 30,000 species of wild animals and plants, whether they are traded as live specimens for the pet trade, as bit-parts for trophies and ornamental use, medicine, or as food. Many wildlife species in trade are not endangered, but the existence of CITES safeguards these resources for the future.

### **Differentiating Between the Legal and Illegal Trade**

All trade in species categorized as endangered is illegal, both under international environment treaties such as CITES and under implementing legislation enacted by national legislatures. Many other species, though not endangered, are traded through permits, many of which are provided using quotas to limit harvests. Trading wildlife without permits, and exploiting wildlife beyond stated quotas, is adding additional stress on wildlife numbers. Consequently, because of limited baseline data, weak capacity and poor enforcement, much of the nominally legal trade contributes to the demise of wildlife throughout the region.

### **Solving the Problem**

Illegal wildlife trade has many complex causes, which are rooted in social, economic, cultural, and political structures. Any solution needs to address these different factors and must include (a) a better understanding of the dynamics of the trade; (b) regulatory controls at the national and regional levels coupled with incentives to change bad behaviors; (c) incentives for better management of the species most under threat; (d) improved awareness of the threats from the trade; and (e) engagement of stakeholders at many levels and in different places.

It is not enough to tell people what to do; they must be convinced that it is in their own best interests. The wildlife trade in East and Southeast Asia involves many different groups: hunters, the rural poor, government officials, consumers, and decision-makers. All of these stakeholders need to know **why** they should change their behavior, and **how** they may do so without having to incur major losses.

### **Engaging the World Bank and Others**

The World Bank and other international agencies have the experience and the capacity to be catalysts in the fight against the illegal wildlife trade. To protect its considerable investments in biodiversity conservation, to leverage its environmental policy dialogue, and to scale-up its work against the illegal trade in wildlife and plants, the World Bank is well positioned to engage in several additional activities in which it has a comparative advantage. These include awareness-raising, brokering cooperation and information sharing, working with governments to better implement their safeguards policies, and supporting monitoring systems and personnel.

In time—with coordinated efforts, information-sharing, collaboration, and support—it is entirely possible that we may witness a renaissance in wildlife populations rather than their inexorable decline.

# CHAPTER 1

## THE WILDLIFE TRADE – STILL GOING

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Trade in wildlife in East and Southeast Asia has a long history. In Cambodia, wild plants and animals have been a major source of foreign exchange between the first and 20<sup>th</sup> Centuries (Martin and Phipps, 1996); until the 10<sup>th</sup> Century, Vietnamese kings presented live animals and wildlife products to their Chinese leaders (Nash, 1997). In the 1860s, in Lao PDR the French explorer Garnier observed a thriving trade in wildlife conducted by Chinese and Thai nationals. It included elephant ivory, rhinoceros horn, peafowl feathers, and animal bone (Garnier, 1869-85). By the 1960s, foreign businesses were trafficking Lao wildlife into Thailand (Mills and Servheen, 1990), and by the late 1970s, Cambodia's Khmer Rouge had traded \$25 million-worth of wild animal parts to the Chinese for weapons and supplies (Nooren and Claridge, 2001).

All trade in species categorized as endangered is illegal, both under international environmental treaties — most noticeably CITES — and under implementing legislation enacted by national legislatures. CITES, the Convention on International Trade in Endangered Species of Wild Fauna and Flora, came into force in 1975 and provides a broad framework in which to manage trade in wildlife and plants. It is supplemented and made operational by domestic legislation. Today, CITES accords varying degrees of protection to more than 30,000 species of wild animals and plants (both dead and alive) that are traded. Many of these species, though not endangered, are traded under strict permits to limit harvests and reduce the stresses on wildlife numbers.

### **A Multi-Million Dollar Business**

Notwithstanding this bleak history, over the past two decades the wildlife trade in East and Southeast Asia has been at its most intensive. In the Mekong riparian states of Cambodia, Lao PDR, Myanmar, Thailand, Vietnam, and southern China, which make up the greater Mekong sub-region (GMS), over-exploitation of wild plants and

animals for trade (both legal and illegal) is considered to be the single greatest threat to many species, even more than habitat loss and degradation (e.g. Davis et al, 1995; Nooren and Claridge, 2001; Oldfield, 2003) Today, wildlife eradication happens even more quickly than deforestation (Bennett et al., 2002).

In East and Southeast Asia, the illegal trade in wild animals and plants (including timber, which is undermining attempts at sustainable forest management) is estimated to be worth many millions of dollars (Compton et al., 1999; Nooren and Claridge, 2001; Vietnam Ministry of Agriculture and Rural Development, in press). In the early 1990s, the illegal wildlife trade in Vietnam was conservatively estimated at \$24 million annually (Donovan, 1998). In 2002, it was estimated at \$66.5 million (Van Song, 2003). In 1999 and 2000, approximately 25 tons of wild freshwater turtles and tortoises were caught and exported each week from northern Sumatra to China (Shepherd, 2000). Despite continued demand, as turtles become harder to find, this trade has dropped to seven to ten tons per week (C. Shepherd, TRAFFIC Southeast Asia, *in litt.* to WCS/TRAFFIC, August 2004). This is the maximum amount of turtles available, and is a likely indicator of their demise in a matter of two years. In Thailand in 2003, a one-day raid on Bangkok's Chatuchak market seized 1,000 protected species worth \$1.25 million. In early 2004, Chinese law enforcement seized the skins of 31 tigers—today there are only 50 tigers estimated to be left in the wild in China—worth more than \$1.2 million (Gray, 2004).

If a species has a marketable value that is greater than the marginal cost of harvesting that species, it is traded. This value can be for "wild meat" or food; traditional medicines; building materials; pets (including aquaria); zoos and other live animal collections; or trophies and decorations (e.g., jewelry, reptile skins, ivory, and ornaments). Today, as the number of large animals has dwindled almost to nothing, the most visible trade

flows are in smaller mammals, reptiles, fish, and plants. While information on the exact numbers of these species is difficult to obtain, available evidence suggests that even these relatively abundant species are beginning to be seriously affected by the trade.

**Tigers.** In Sumatra, approximately 51 tigers were killed each year between 1998 and 2002 (Shepherd and Magnus, 2004)—out of a total population of around 800 individuals before 1998. The majority were to satisfy demand elsewhere in Asia. Between June 2003 and April 2004, seven tigers were killed in northeastern Lao PDR; their bones reportedly were traded for over \$50,000 (A. Johnson, WCS Lao Program in litt. to WCS/TRAFFIC, August 2004).

**Antelope.** The translucent, waxy horns of the droop-nosed and severely-threatened saiga antelope, which used to be found across Kazakhstan and Mongolia, constitute an ingredient in more than 30 types of traditional Chinese medicine (TCM), including a medicine prescribed to counteract the SARS virus. Between 2000 and 2003 in China, 15 cases were reported of smuggling male saiga horns. Together the horns weighed 5 tons and represented more than 15,000 animals, or about one-third of the total world population. Mongolia has a disjunct population which now numbers only some 800 animals. These unique antelopes are under increasing pressure of extirpation throughout their range.

**Pangolins.** According to CITES trade data, between 1993 and 2003 over 80,000 pangolin skins were illegally exported from Lao PDR to international markets, primarily in the United States and Mexico. Over 15,000 pangolins were confiscated in Thailand in 2002, brought from Indonesia to Lao PDR and eventually China. Pangolin skins continue to be seized regularly in Malaysia, Thailand, Lao PDR, and Vietnam. Arriving by air from Malaysia, more than four tons of wildlife, including water monitor lizards and over 600 pangolins, were seized in Hanoi, Vietnam, from March to April 2003 alone (C. Shepherd, TRAFFIC Southeast Asia, in litt. to J. Thomson, September 2004). All available evidence suggests that they are disappearing throughout their natural range in Asia—largely as a result of the trade.

**Freshwater turtles.** Over 50 percent of Asia's freshwater turtles (45 species) are now considered in danger of extinction in the immediate or near future as a direct result of over-exploitation for trade (van Dijk et al., 2000; Stuart and Thorbjarnarson, in press). In 2000, it was estimated that 10 million freshwater turtles (or 10,000 tons) were traded annually in East Asia for use in food and traditional medicine (TRAFFIC Southeast Asia, unpublished data). Six tons of wild-caught freshwater turtles were seized in Hanoi, Vietnam in March 2003. They had been exported by air using false permits from Malaysia (C. Shepherd, TRAFFIC Southeast Asia, in litt. to J. Thomson, September 2004).

**Marine turtles.** Almost 30,000 items made from the critically endangered Hawksbill Turtle were found on sale in Vietnam in 2002 (TRAFFIC Southeast Asia Indochina, 2004), signaling the death of thousands of these marine creatures.

**Water snakes.** From 1999 to 2000, over 8,500 water snakes (comprising five species) were estimated harvested per day from Cambodia's Tonle Sap, primarily for local subsistence and trade, possibly representing the greatest exploitation of any single snake assemblage in the world (Stuart et al., 2000).

**Seahorses.** An estimated 20 million seahorses are taken annually from the South China Sea and Gulf of Thailand, of which 95 percent are destined for China for use in the traditional medicine industry, according to Project Seahorse (Gray, 2004).

**Timber.** Vietnam's Forest Protection Department reportedly seized 63,000 m<sup>3</sup> of illegal timber in 2003. While thought to represent only a fraction of Vietnam's total illegal trade in timber, this is nonetheless equivalent to logging ten soccer pitches of forest a day over the course of one year (T. Dawson, WWF Indochina, in litt. to TRAFFIC Southeast Asia, September 2004).

### **Characteristics of the Trade**

Illegal domestic and international wildlife trade is a commodity business driven by a wide variety of socioeconomic and cultural forces. Patterns and trends in illegal wildlife trade are affected by the usual commercial factors: improved transport infrastructure and development, especially in

frontier areas; increased market access; and accelerated national and regional economic development. The structure of the trade—and the relationships between collectors, middlemen, traders and wholesalers—can be extremely complex, and the character of these relationships shifts over time and place (Broad et al., 2003). For example, traders rapidly adapt to changing circumstances to maintain their substantial income. When supplies become depleted or access restrictions are imposed, they respond by:

- *Targeting new source areas or countries for a particular species or group of species.* Depletion of Chinese Pangolin across its range in southern China, Vietnam, Lao PDR, Thailand, and Myanmar has shifted harvesting and trade southward (TRAFFIC Southeast Asia, 2004).
- *Developing new smuggling methods and routes to avoid detection.* During the boom in prices of bear bile and bear parts in Vietnam in the early 2000s, smuggling of bears was accomplished by fake army vehicles, fake funerals, and even fake ambulances complete with the bear dressed as a patient and surrounded by concerned relatives (SFNC, 2003).
- *Exploiting weak wildlife law enforcement.* Often traders will re-label wildlife to convince customs officials that rare species are actually common species that are legal to trade, and then only when they are actually caught in possession of wildlife. Even when caught, fines and other penalties are generally much less than the risk premiums gained from the trade, negating their effectiveness as disincentives.

- *Targeting new species within a commodity group.* The scarcity of langur (leaf monkey) bones for the medicinal trade has led to a rise in the collection and sale of macaque bones; although
- the latter are considered less effective in traditional remedies (SFNC, 2003), the similarities between the bones are enough to either at best deceive or at least satisfy customers and in so doing, maintain the market.

As wildlife law enforcement efforts increase, the illegal trade moves underground. It becomes more difficult to monitor activity, or determine the quantities, value, or number of species involved.

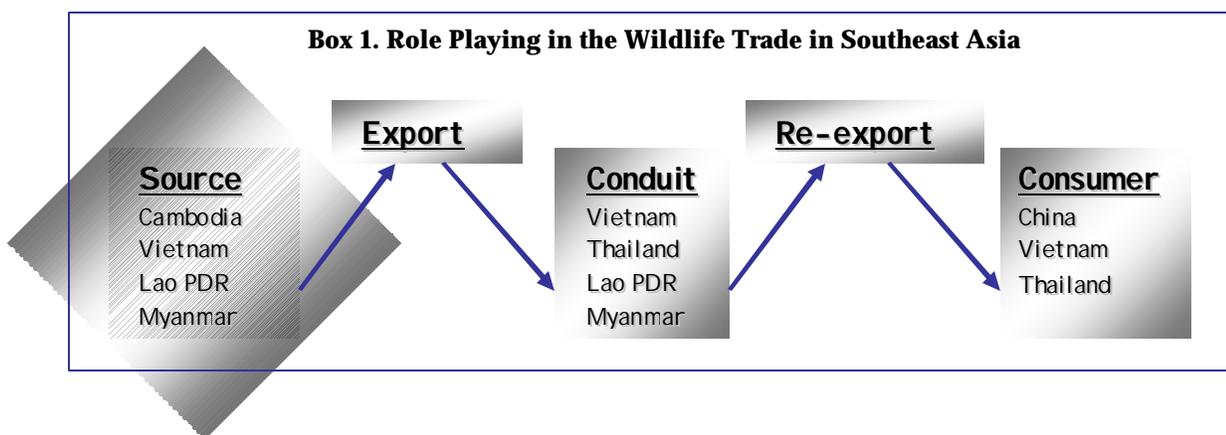
**Role playing.** Countries of East and Southeast Asia play one or more of three roles in the international wildlife trade:

- As source / exporter
- As conduit / re-exporter
- As consumer / importer.

Box 1 illustrates the connections between source and destination countries.

*China* is the GMS region’s largest consumer, particularly of animal and plant products used as food and ingredients in traditional Chinese medicine.

*Cambodia* is primarily a source country, particularly for reptiles, primates, and plants, and formerly for timber. *Vietnam* is unique in that it remains a source country, as well as a growing consumer and an important trade conduit to China.



*Thailand*, formerly a major source of wild species, is now chiefly a consumer, particularly of high-value pets, trophies, and food products, while also playing an important role as a regional and global trade conduit (box 2).

*Lao PDR and Myanmar* are probably the most important source countries for a wide range of wild animal and plant species (box 3). Both countries are also conduits; Myanmar for wildlife products coming into GMS countries from the Indian subcontinent, and Lao PDR to international markets in neighboring nations (China, Vietnam, and Thailand).

*Other important source countries* for the trade into and through Southeast Asia's GMS include Indonesia and Malaysia.

### **What Is Driving the Trade?**

The predominant driver of the Asian trade in many plants and animals is demand for wild animal products as food and medicine in China. But China is not alone. The trade in wild plants and animals all over East and Southeast Asia appears to have been exacerbated by the regions' rising living standards and rapidly growing population. Experience throughout Asia has shown that as income increases, so does the demand for wildlife—as suggested by the expanding wildlife markets in towns and cities from Bangkok to Jakarta and Shanghai (Robinson and Bennett, 2002).

#### **Box 2. Thailand's Changing Role**

Thailand has a growing urban middle class who can afford to be among significant consumers and re-exporters of Southeast Asia's wild resources. The reduction of its own wild species causes its traders to look elsewhere. Wildlife trade surveys conducted along the border areas between Thailand and Myanmar, Lao PDR, and Cambodia since 1990, for example, identified Thai nationals as among the principal consumers of those countries' wildlife products (Martin, 1992; Srikosamatara et al., 1992; Nash, 1997; Nooren and Claridge, 2001). In 1991, Thailand was considered by international conservation organizations as the center of Southeast Asia's illegal wildlife trade (Srikosamatara et al., 1992); its consumption of trophies is one of the main forces driving the trade in wild cattle in the sub-region (Broad, 1994).

Political changes and economic development have also had an impact on wild species. For example:

- The opening up of country economies to international market-based policies through trade facilitating measures, particularly in Vietnam and China, has enhanced international trade connections.
- Infrastructure development has linked previously isolated regions to outside markets and has opened up new wilderness areas to exploitation.
- Commercial logging has opened up remote forest areas to people from other regions, altering local economies and patterns of resource consumption (Robinson et al., 1999). Increased road access and infrastructure to support logging in Lao PDR, for example, has greatly improved access to hunting grounds and wildlife trade with Vietnam (Compton et al. 1999).

#### **Box 3. Lao PDR and Empty Forests**

The "land of a million elephants" shares its borders with China, Myanmar, Thailand, Cambodia, and Vietnam. It is essentially providing its resources to neighboring countries with much greater population and purchasing power (Donovan, 1998).

International trade in wildlife is illegal in Lao PDR. Nevertheless, many species are traded on the international market, including reptiles, wild orchids and wildlife products to be ingredients in TCM, trophies from wild cattle, reptiles, pets, and food animals to Thailand, and macaques, freshwater turtles, monitor lizards, and pangolins to Vietnam.

The greatest threat to Lao's wild species is the country's over-harvesting for international and domestic trade and consumption (WCS Lao Program, 2003). At the current rate, Lao PDR is in danger of the "empty forest syndrome"—all trees and no animals (Nooren and Claridge, 2001). The international trade in Lao's wildlife was documented in the mid-1800s (Garnier, 1869-85) and probably occurred as early as the 6<sup>th</sup> Century (Nooren and Claridge, 2001). The economy of Lao PDR is resource-based. In the early 1990s, a significant portion of rural peoples' incomes was derived from hunting and selling threatened wildlife at local markets. The volume of illegally traded wildlife is also high; the value of wildlife smuggled into Vietnam from Lao PDR along one route alone was estimated at \$11.8 million in 1999 (Nooren and Claridge, 2001).

- Porous and lengthy land borders have made things easier for illicit traders in Southeast Asia. For example, the river border between Thailand and Lao PDR has been described as Lao PDR's greatest law enforcement problem (Nash, 1997).

Wildlife is not traded in isolation. It is often part of a larger network of organized crime that involves drugs, guns, and people-smuggling. Organized crime networks often supplement income from trading in other contraband by trading in wildlife, using existing networks of supply chains that are often beyond the law.

## CHAPTER 2

### CASE STUDIES

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The following four case studies are examples of stages of sophistication and diversification of the wildlife trade, from subsistence through commercialization and professionalism to direct marketing and export.

#### **Case Study 1. Trading as a Subsistence Activity in the Nakai-Nam Theun National Protected Area, Lao PDR.**

The Nakai-Nam Theun National Protected Area (NNT NPA) lies almost entirely within the watershed of the middle and upper reaches of the Nam Theun River, extending from high in the Annamite Mountains down to the Nakai Plateau. The NNT NPA is not only the largest protected area in the Lao PDR, but is also one of the most important for biodiversity conservation in East or Southeast Asia. It is also of global significance for biodiversity. Studies of resource use in 54 villages were conducted in 2004. The results highlight the changes in species and trends, as well as in cross-border trade.

**Species and trends.** Much hunting and trapping was directed toward acquisition of food, particularly rodents (rats, squirrels, or porcupines), pigs, or small-bodied animals with relatively high natural densities or rates of reproduction (common songbirds, jungle-fowl, common civets, etc). Monitor lizards, muntjac, and sambar deer were also periodically reported as important food items, but in many villages were too rare to harvest frequently.

Some 59 percent of villages indicated that terrestrial wildlife had been an important source of cash income in their village over the last decade. Pangolins were most frequently reported as important for cash income (45 percent of villages), followed by turtles (35 percent), primates (22 percent), and monitor lizards (12 percent). To a lesser degree, pythons and bears were also reported important for sale. Many villages reported that the sale of wildlife was secondary to the use of

wildlife for food, or that sales were opportunistic if a buyer came to the village (some villages said traders came one or two times per month) or if the household needed cash.

The majority of villages reported that overall abundance of most terrestrial wildlife had declined considerably over the last decade following over-exploitation for subsistence and trade. Several large-bodied and frequently sold species were the most frequently reported as exhibiting the most severe declines—up to 75 percent in some areas. Most villages also reported that commercially valuable plant species (especially agarwood, many species of rattan, and damar resin) had also declined widely and were increasingly scarce or extirpated from most areas, and some reported a shift to marketing orchids.

**Cross-border trade.** The majority of village residents thought that the depletion of wildlife and plant products was due to an enormous influx of Vietnamese nationals, which reached a peak around 2000 (some villages reported annual totals of more than 4,000 people working in their area). This influx was associated with massive harvest and trade of *Aquilaria*, pangolins, rattans and other valuable forest products. Most—but not all – villages report that this number has declined recently due to the disappearance of many species.

#### **Case Study 2. From Subsistence to Professionalism at Pu Mat National Park, Vietnam.**

Wildlife trade is responsive to market forces, and markets for wildlife appear to be ever expanding. In the GMS region, the wildlife trade at the Pu Mat National Park (PMNP) is perhaps the best studied, and provides the best example of developmental and legislative approaches to address the issue. The PMNP is in the north Annamite Mountains in central Vietnam. It has a core area of 90,000 ha and a nominal buffer zone of around 87,500 ha. It is an extremely important site for the conservation of

plant and animal taxa endemic to the Annamites. Over 2,600 vascular plant species have been identified within the PMNP and its buffer zone; it is critical for the conservation of many large mammals and birds (SFNC, 2000a). Between 1997 and 2004, the Government of Vietnam and the European Union co-funded a \$22 million project to reduce the loss of forest and biodiversity from this area. The PMNP has thus had the financial resources to both study the trade and to devise and implement a series of measures to address it.

**Background to the trade in plants and wildlife from the PMNP.** The Pu Mat forests have been a source of wildlife for decades, but the market for wildlife began to expand rapidly from about 1985, at which time many large animals could be freely traded. Many wildlife traders established themselves in district towns around the PMNP. The quantities of wildlife removed from the PMNP were so vast that many of these traders subsequently went out of business in the mid-1990s: wild stocks were so reduced and efforts to extract them so increased that profit margins became much narrower. In the early 2000s, the volume of wildlife traded was reduced by around 70 to 80 percent of its early 1990s level following noted scarcity, and only about eight large traders remained in business in the district towns.

Pu Mat was established as a protected area in 1995. As a result, the agricultural land available to the growing population in the buffer zone of Pu Mat was fixed, and so the income necessary to supplant their food-generating potential grew following the park's gazettement. However, income opportunities shrunk. Thus it was estimated in 1997 that the population faced an income gap of more than \$1 million per year (the gap between the food they produced and the amount they needed to survive). Difficult terrain made illegal logging hard work: nonetheless, it was estimated that the value of the illegal timber trade was around \$260,000 per year (SFNC, 2000b). Moreover, as wildlife became scarce throughout Indochina, the value of wildlife in Pu Mat increased considerably. Consequently, the wildlife trade was valued at around \$1.25 million per year. This effectively closed the income gap; despite the increasing scarcity of wildlife, 75 percent of the buffer zone households were involved in the trade.

**Species and sources.** In the 1980s and early 1990s, the focus was on turtles and some valuable mammals such as gaur and tiger. A State Forest Enterprise employee reported that in the mid-1980s he was buying around 2 tons of turtles per year from hunters (SFNC, 2000c).

In the early 1990s, the number of species collected broadened to include a variety of primates and smaller mammals, including a variety of snakes and monitor lizards. Hunters report that they did not collect geckos and snakes because they did not know of a market for these species until 1996, when traders began ordering these species as well.

By the late 1990s, wild populations of traditionally targeted species had crashed. Many wildlife traders were looking for new commodities to trade, and thus reptiles had become the mainstay of the wildlife trade, particularly turtles and snakes, which still survived in relatively large numbers in remote areas. By 1999, hunters were already beginning to report that hunting these species was becoming much more difficult too (SFNC/TRAFFIC, 1999).

As a result, cross-border trade greatly increased in the mid- to late-1990s. Traders in district towns forged relationships with suppliers in Lao PDR as a means of maintaining supply chains and keeping profit margins high. In 1999, up to 100 bears (40 percent of the annual total traded) and around 1 ton of pangolins (90 percent of total traded) originated from Lao PDR. Only 20 percent of bears, but almost all pangolins and large but undefined quantities of turtles, were transported through the official border crossing at Muong Xen, indicating a degree of selectivity on the part of customs officials (and the relative difficulty of concealing bears from view).

By 2003, the main species traded had shifted again. The cross-border trade from Lao PDR now focused almost entirely on pangolins, and numbers traded had gone up by at least 100 percent and perhaps considerably more (SFNC, 2003c). Most still came through the border crossing at Muong Xen. Numbers of reptiles in the wild had been drastically reduced by this time. Hunters operating in the PMNP had changed their focus from China to concentrate on smaller mammals (especially

civets and porcupines) for the booming market for wildlife meat in the provincial capital of Vinh and in Hanoi. By 2003, this was the main outlet for the wildlife trade from the PMNP itself.

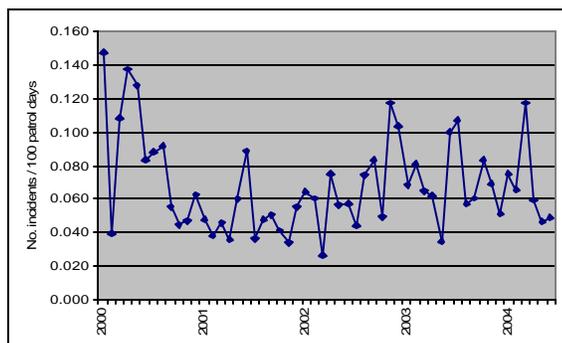
**Developmental interventions and effects.** Legal logging of the Pu Mat forests ceased in 1995 when the protected area was gazetted. Illegal logging has continued, but is restricted to the more accessible areas of the NP. According to satellite image analysis, logging had affected about 30 percent of the Pu Mat forests by 1992, but the affected area grew only slightly between 1992 and 1998, and not at all after that time. Most of the remaining primary forest area cannot be logged due to the inaccessible terrain. The illegal logging trade is now focusing on secondary growth in areas already logged, and is believed to be becoming less profitable.

The wildlife trade involved 75 percent of buffer zone households during the 1990s, and the capture and sale of wildlife was a major subsistence activity. The illegal extraction of forest products was the only activity available to generate the income necessary to buy rice.

The effects of project interventions were as follows:

- Accelerated socioeconomic development has led to wildlife becoming less important to the overall rural economy. Due to the new livelihoods and the increased effort necessary to make the trade profitable, the number of people involved in the trade has contracted to relatively few households who specialize in this area and have become highly professional

**Figure 1. Monthly trends in hunting incidents in the core zone of the PMNP**

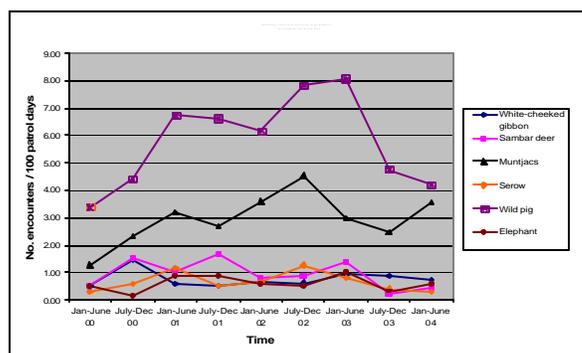


in their approach. To these people, wildlife remains a vital income source.

- The increasing scarcity of wildlife, which made casual hunting and trapping more time-consuming and less rewarding, and the provision of economic alternatives has caused most non-professional hunters to stop hunting activities. Hunting and trading in wildlife has effectively ceased to be a subsistence activity.
- Involvement in the wildlife trade is now a career decision. By 2003, even professional hunters had realized that the only way to stay in business was to become more focused, acquire new skills or equipment (such as tranquilizing drugs), and spend longer periods searching and trapping in remote areas, including traveling over the border into Lao PDR. In 1999, there were around 1,000 professional hunters in the buffer zone; by 2003, there were only some 250 professional hunters remaining. During a campaign to confiscate hunting guns implemented in 2004, more than 700 hunters voluntarily gave up their guns.

As the number of non-professional hunters in the buffer zone has dropped, local traders have begun to sponsor professional hunters from elsewhere to supply high-value species, as well as to strengthen links with traders operating from Lao PDR. As the hunting profession has become increasingly specialized and professional, there is a trend for the

**Figure 2. Forest patrol encounter rates with selected large mammals (corrected by patrolling days)**



professionals to travel long distances to preferred areas. By about 2002, the presence in the PMNP of professional hunters from as far away as Thua Tien Hue began to be reported

Quantification of the hunters' perceptions of trends in abundance is based on a comparative ranking of the availability of animals in the forest over the years—meaning the numbers that were obtainable for trade purposes. (It should be noted that the prevalent attitude in the buffer zone – that wildlife is a resource to be harvested – has not changed significantly over the project lifetime, despite a large and well-funded environmental education program.)

The main conclusions of this study were that extremely valuable animals sought after by the China trade were now almost extirpated (tigers, for example), or had decreased drastically (langurs and turtles both dropped a total of eleven ranks between 1999 and 2003, gibbons dropped ten ranks). Popular meat animals such as serow also dropped in abundance (six ranks). By 2003, the most popular animals for hunters were wild pigs, muntjac, civets, and porcupines, the availability of which had increased in relation to the other species. Most significant in conservation terms is that hunters reported a decrease in all species listed in the IUCN and Vietnam Red Data Books, with the exception of elephants.

A large number of targeted research projects carried out by the project report the same trend. For example, between 1999 and 2004, primate populations decreased by 52 percent (SFNC, 2004b). The population of saola, one of the world's rarest and least-known mammals, crashed from around 26 to 12 individuals (SFNC/WWF, 2004).

### **Case Study 3. Diversification at Tam Dao National Park, Vietnam.**

If there is a demand for wildlife, traders will find a way to supply it. The more difficult a sought-after species is to find (as local populations are exhausted), the higher the price that can be fetched for it on the market, and the more profitable it becomes for traders. As large wildlife supplies are exhausted, traders supply the other markets that are identified—in this case, an export market for insects.

Tam Dao National Park (TDNP) illustrates a rather grim future. It covers 36,000 ha and is located on a 40-km long mountain range about 60 km north of Hanoi. The massif forms an ecological island surrounded by intensifying rice and plantation agriculture and rapid urbanization, as light industry spreads north from Hanoi to take advantage of cheap local labor. The nominal buffer zone contains 140,000 people.

Proximity to high population density areas with high demands for wood fuels and water, commercial extraction of a range of plant and animal species to supply urban and export markets, and easy access for mass tourism have all had considerable impacts on wildlife numbers.

As part of a GTZ-financed project to support institutional capacity and buffer zone development, a detailed study has been undertaken of the importance of the trade in plant and animal products to the rural economy (TDMP, 2004).

The TDNP is an example of the “empty forest syndrome.” Although the large animal fauna that formerly supplied the market for medicines and wildlife meat is mostly gone, the trade has not. Traders have looked outwards (for supplies from other areas) and downwards (to the smaller plants and animals).

**Supply diversification.** As the TDNP is a major tourism area for the urban population of Hanoi, the

most important commercial activity involving wildlife is the sale of meat in restaurants. Valuable animals had largely gone from the area by the mid-1990s, so there are no longer any professional hunters in the buffer zone of the TDNP; most wildlife (particularly civets, muntjac, wild pig, civets, turtles, and snakes) comes from other provinces. Small wildlife such as turtles (and formerly the endemic Tam Dao salamander) is collected opportunistically, mostly by women collecting firewood.

Wildlife is no longer hunted in TDNP but it is still traded, by means of a sophisticated network, centered on the provincial centre of Vinh Yen. Dealers now collect and process animals

throughout the northern provinces of Tuyen Quang, Ha Giang, Cao Bang, and Bac Kan. Meat animals are sold to restaurants in the tourist sites around TDNP, or transported through Vinh Yen and Dai Tu to Thai Nguyen and Hanoi. Particularly valuable species of turtles and snakes are sorted and exported to China for medicine through Mong Cai border station.

Another important commercial activity is the sale of orchids. Among 84 orchid species recorded in Tam Dao NP, 28 species were found in trade in 2004, including six listed in Government Decree No 48, two listed in the Red Data Book of Vietnam. One traded species was the endemic Tam Dao orchid *Paphiopedilum grantrixianum*, listed on Appendix I of CITES<sup>2</sup>; only one small population is now known, at high altitude in Dai Tu District (Thai Nguyen Province).

**Trade diversification.** The insect trade (particularly of large and showy butterflies and beetles) began in the mid-1990s, as economic returns from other wildlife were declining, and it peaked in the late 1990s. Many local people and people from Vinh Yen were involved in insect-collecting activities. By 2004, the populations of key species had declined drastically at the main, easily accessible collecting sites. Surveys in 2004 indicated that the density of all traded butterflies was reduced by 55-58 percent in collected sites compared to remote forest sites. The most valuable butterflies, *Teinopalpus* sp., a female that can be sold to a dealer in Tam Dao town for more than \$100, had been extirpated from easily accessible areas. Species diversity of beetles also showed a statistically significant decrease in collected areas: only one specimen of a commercially valuable species was collected in 25 nights of light trapping in the Tam Dao town and Tay Thien areas.

Despite the drop in wild populations, many people in the buffer zone, particularly in Vinh Phuc province, still collect insects, some professionally. Collectors report that they can still earn \$10 per man per day supplying local dealers, which compares favorably with jobs in agriculture and forestry, or even in the expanding light industry around Hanoi. By 2004, collectors at TDNP were

focusing particularly on live specimens of giant beetles, which are sold to dealers at \$20 per pair. These beetles are available through international dealers on the internet at \$200 or more per pair, representing a considerable profit to the urban traders.

After 2000, in response to the decline in the commercial insect populations in TDNP, traders in Tam Dao town established links with suppliers in Lao Cai (particularly Sa Pa), Cao Bang, Ha Giang, Tuyen Quang, Lang Son, and Lam Dong (Da Lat) provinces to keep up with the demand. There is increasing evidence that some insects may now be sourced from neighboring GMS countries. In effect, Tam Dao town has become a center for the insect trade in northern Vietnam. Almost all insects are exported through contacts in Hanoi and Ho Chi Minh City; very few insects are bought directly by tourists.

**Socioeconomic value of the trade.** As elsewhere in Vietnam, the wildlife trade at TDNP has become increasingly commercialized in recent years. A medium-sized trader operating in Vinh Yen and processing wildlife from a wide area can make more than \$15,000 a year. Restaurant owners in Tam Dao town with good inter-provincial connections can make \$1,000 to \$1,500 annually from selling wildlife meat to tourists. There are no longer professional hunters or orchid collectors; instead, insects are collected by most of the population of the TDNP and buffer zone. Many poor households in Tam Dao town, who have little land or forest resources, can earn more than 80 percent of their household income in this way. The insect collectors are becoming more professional and are being sponsored by urban traders. About 60 percent of households use high wattage lamps to attract night-flying species, and many have professional collecting equipment and chemicals.

Controls on the wildlife trade at TDNP, especially Tam Dao town, are very weak due to conflicting jurisdictions of the TDNP Authority and Vinh Phuc province. From January 2000 to June 2004 there were 24 administrative cases brought by TDNP Authority related to the illegal wildlife and plant trade. There were no cases involving orchids and only one relating to a seizure of insect specimens. The latter occurred in 2001, when a collection of

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<sup>2</sup> All orchids are on Appendix II unless they are specifically included in Appendix I.

854 specimens was confiscated by the TDNP Authority from a foreigner (after it had been sold to him by local dealers). This had the effect of moving main transactions to Vinh Yen town.

#### **Case Study 4. No different in the North: The Mammal Trade in Mongolia.<sup>3</sup>**

Mongolia's changeover from a relatively strong Soviet-dominated economy with strict controls over hunting and trade to a struggling free-market economy in the early 1990s has resulted in a dramatic increase in illegal hunting and trade. A faltering economy, increased reliance on trade with China, porous borders, and little budget capacity or will for enforcement has led to rapid declines in a range of wildlife. Much of this hunting is for local trade or consumption, but there are a number of species in Mongolia threatened by illegal international trade, and evidence suggests that this threat is growing and beginning to spread to new species.

***Unsustainable trade pressures.*** The trade in Mongolia is directed at mammals. Red deer, musk deer, Mongolian gazelle, saiga antelope, brown bear, and a host of furbearers are the main components of the illegal trade market. As these species decrease in number, hunters and traders are already switching to other species such as moose, roe deer and even red squirrel. Five examples illustrate the currently unsustainable illegal hunting and trade pressure in Mongolia:

- A catastrophic decline in the Mongolian subspecies of the Saiga antelope has resulted in a population collapse from over 5,000 to less than 800 within the last five years. The driver in this decline is the lucrative Chinese medicinal market for saiga horn, and it follows shortly after a similar collapse in the major populations of saiga in Kazakhstan and Russia, where populations have crashed from over 1 million in the early 1990s to perhaps as low as 175,000 in recent years. The decline is exacerbated by skewed sex ratios due to focused hunting on the horned males, which has negatively affected the populations' breeding system and its ability to recover.

- Mongolian gazelles still number around one million animals in Mongolia. However, a recent hunting survey found that as many as 200,000 gazelles are taken annually by local herders in the eastern steppe region alone. Meanwhile, urban dwellers in just one city in eastern Mongolia were estimated to consume approximately 16,000 gazelles a year, while in 2001 the Chinese customs office approved permits for 100 tons of gazelle meat, equal to almost 3,000 gazelles. Given that harvest models suggest a total sustainable off-take of 6 percent, or 60,000 gazelles a year, Mongolian gazelles may be in the process of experiencing a decline similar to that of the Kazakhstan saiga antelope. This could be exacerbated if there is a commercial switch from saiga to gazelle horns, and evidence for this ominous trend has been found in the recent increase in price for gazelle horns.
- Red deer have also declined catastrophically across Mongolia. According to a 1986 government assessment, the population size was approximately 130,000 (inhabiting 115,000 square km). The most recent population assessment in 2004 showed that only about 8,000–10,000 red deer now inhabit 15 aimags (provinces) of Mongolia. Threats are numerous, but are mainly directed toward international medicinal markets, and include harvesting for antlers (1 kg \$60 to \$100), male genital organs (\$70 to \$80), fetuses (\$20 to \$50), and female's tails (\$50 to \$80).
- For Siberian marmots, a recent hunting study found that in eastern Mongolia the observed trade volume alone was almost three times the actual hunting quota. Although the government only issues about 100,000 marmot licenses a year, 88,000 marmot skins were found in the markets of just three towns in Mongolia in 2001, while in that same year 200,000 skins were officially imported to China from Mongolia. This is likely only a fraction of the number of marmot skins that cross the border—for example, in 2003 just two seizures of illegal shipments into China totaled 37,332 marmot skins.

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<sup>3</sup> Contributed by P. Zahler and B. Lhagvasuren, the Box by R. P. Reading, J. R. Wingard, and S. Amgalanbaatar.

- Musk deer males are hunted for their valuable scent glands, or pods, for which there is a heavy demand in China and Southeast Asia. Although no recent surveys have been performed for musk deer in Mongolia, there is evidence of an unsustainable increase in hunting of this species. Over a five-year period from 1995–2001, the number of musk deer traders increased by a factor of four; moreover, the price of a musk deer pod increased six-fold,

as did the number of musk pods traded. As a result it is reasonable to assume that the number of deer poached increased also. Mongolian scientists believe that musk deer populations peaked at 44,000 in the 1980s due to strict state control of hunting and trade; over the last 11 years, market-based estimates of off-take are as high as 33,000, with a minimum estimate of 2,000 males taken every year.

**Box 4. Trophy Hunting of Argali: An Example of Unsustainable Legal and Illegal Hunting and Trade**

Mongolia is home to the world’s largest mountain sheep, the argali. These animals are greatly sought by foreign hunters because of their impressive size and long, spiraling horns. Argali are declining in Mongolia primarily due to an increase in poaching for meat and horns (to trade with China), predation by domestic guard dogs, and competition with domestic livestock. Government figures estimated 50,000 argali in Mongolia in 1975 and 60,000 animals in 1985, but only 13,000–15,000 in 2001. Despite being listed as a threatened species both in Mongolia and internationally, argali trophy hunting remains legal in Mongolia and the number of licenses has been increasing, with 80 licenses offered in 2004. This is a lucrative business, and trophy hunting companies offer hunts for \$25,000 to \$50,000. Controversy surrounds this program, as manifested by growing local opposition, accusations of corruption by the media, and a U.S. lawsuit

To be sustainable, hunting programs must be well-managed and have the support of local communities. Neither currently occurs in Mongolia. Although legally required, no management plan for argali presently exists. Population surveys are too infrequent and localized to inform managers about specific areas in a timely manner. Critically undermining management capacity are legal mandates that rely heavily upon local governments without providing the necessary funding, tools, or training. Finally, despite laws for investment of trophy hunting fees in conservation of the resource, current practices deny local communities and conservation efforts the benefit of revenues. As a result, some local officials are working to eliminate trophy hunting from their territories. Still, trophy hunting licenses are increasing even as poaching also continues to increase. Redressing these problems requires reforming argali trophy hunting and population management to ensure (a) openness and transparency, including external review and oversight; (b) a mix of top-down and bottom-up authority that enjoys local support; and (c) active and adaptive argali conservation and management, including anti-poaching enforcement, using funds generated by trophy hunters.

## CHAPTER 3

# CURBING THE TRADE

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Curbing the wildlife trade requires information and action in four areas: (1) policy; (2) enforcement; (3) economics of supply; and (4) consumer demand. Action to tackle the trade began in the early- to mid-1990s, when it was sporadic, chiefly driven by nongovernmental organizations (NGOs), and aimed at monitoring the trade and advocating accession to CITES by the region's non-party nations.

Although there have been attempts to stem the trade over the last decade or so, only in the past two years has there been a concerted effort to tackle the problems on a broad front. There have been some limited successes, and crucially, wildlife trade is now on the political agenda; however, actions remain fragmented, short-term, lacking a strategic clarity or framework, and usually under-resourced. Communication between the relevant government departments responsible for enforcing wildlife trade controls has been poor, as has communication between the NGOs working on the trade. As a result, interventions have often been undertaken in isolation, frequently resulting in missed opportunities and lack of information-sharing. The limited funds available have been used primarily to strengthen wildlife law enforcement. This is a priority for curtailing the trade, but this focus has resulted in a lack of investment into other key areas, such as tackling the demand that drives it.

### **Action to Date**

By the end of the 1990s, a group of NGOs had begun to set up awareness campaigns and investigate the trade. Government buy-in was minimal; few governments had even begun to acknowledge that the trade was a threat to resource security or long-term economic well-being. Activities to strengthen enforcement capacity did not commence until post-2000.

Since 2002, NGOs have begun forming partnerships; governments have begun engaging

with neighboring countries; country delegations to the Conference of the Parties to CITES have become increasingly better-informed; strategic plans and appropriate legislation are now being drawn up; and much of the information on which to base the development of appropriate actions has been made available. However, CITES relies on internal partnerships in countries between agencies responsible for its implementation, and in their absence the trade continues to flourish, irrespective of existing laws and legislation.

***Political support through the Association of Southeast Asian Nations (ASEAN).*** Prior to 2000, the governments of the region's countries had done very little to address the illegal wildlife trade. Since 2000, national governments and regional associations have shown increasing recognition of the trade and willingness to act, in order to comply with various international treaties to which they are party (for example, CITES, CBD, CMS, and Ramsar).

The Association of Southeast Asian Nations (ASEAN) has become increasingly active in addressing environmental issues in the region. ASEAN's Yangon Resolution on Sustainable Development (2003) states: "*effective environmental and natural resources management, and sustainable utilization of these resources are critical to alleviate poverty, promote healthy living, reduce the incidence of diseases, and enhance economic growth in the ASEAN region.*"

The 2005 to 2010 ASEAN Action Plan on Forestry confirmed that enhanced CITES compliance and wildlife trade controls are key objectives. At the thirteenth meeting of the Conference of the Parties to CITES (CoP13) in October 2004, the ASEAN Secretariat released a "Statement on CITES"—signed by all of the ASEAN member countries—calling for regional collaboration in critical areas, such as wildlife law enforcement along key border regions and information sharing among relevant agencies, to alleviate the illegal exploitation and

trade in wild fauna and flora. The statement is to be followed by an ASEAN Regional Action Plan on Trade in Wild Fauna and Flora expected before the end of 2005.

**National compliance with CITES.** With the accession of Lao PDR to CITES in 2004, all of the countries in ASEAN are now Parties to the Convention. As stipulated in the text of the Convention (Article VIII), each Party is required to implement the provisions through its domestic legislation. Not surprisingly, there is a range in the effectiveness of the laws by which CITES is implemented across the GMS. For example, both Thailand and Vietnam have developed specific CITES-enabling legislation. In Cambodia, CITES as well as domestic wildlife trade controls is implemented through its Forestry Law and minor legislative instruments. As such, all countries in Southeast Asia have either adequate domestic legislation on the books to implement CITES or are in the process of doing so (see Annex 1).

However, promulgating legislation alone is not sufficient to guarantee the implementation of CITES, nor the conservation of threatened species. Notwithstanding, the motivation to ensure that adequate domestic legislation has been enacted is high, as those countries ignoring this obligation face the threat of trade sanctions in CITES-listed species. This actually occurred in Vietnam (briefly) and Thailand. In Thailand, it resulted in the loss of millions of dollars to the Thai economy.

**Additional measures to implement and enforce CITES and national wildlife trade controls.** Since coming under pronounced international scrutiny in 2002, primarily for the size of its domestic ivory market, **China** has put some effort into addressing its role as the region's largest consumer of wildlife through wildlife law enforcement and collaboration with neighbors in Southeast Asia and South Asia.

Political will in **Lao PDR** to address the trade has improved. For example, regulations on wildlife trade were amended in December 2003, and efforts to confiscate illicit wildlife cargoes by the Vientiane Forestry Department have increased. The Governor of Vientiane has ordered a cessation of the trade in city markets, driving it underground. However,

much more needs to be done if the trade is to be curbed effectively.

In 2003, **Thailand** established a special Wildlife Task Force to combat the illegal trade. Thailand is also considering the use of the death penalty for illegal wildlife trafficking, and in coordination with the Royal Thai Army and the Anti-Money Laundering Office (AMLO), invoking anti-money laundering laws to seize the profits of illegal wildlife traffickers (Anon, 2003).

In **Vietnam**, newspaper coverage of the wildlife trade increased four-fold from 2002 to 2003 (Education for Nature Vietnam – ENV, *in litt.* to TRAFFIC Southeast Asia, 2004). The government issued Directive 12 in May 2003 calling for an urgent need to strengthen controls on forest resources. In September 2004, the Vice Prime Minister approved a national action plan to strengthen control on trade in wild fauna and flora, the first of its kind in East or Southeast Asia. Again however, implementation of plans and directives is the missing link.

**Regional cooperation.** In October 2004, Thailand hosted CITES CoP13, the first country in Southeast Asia to hold a CITES Conference of the Parties. The meeting opened with the Prime Minister of Thailand and Thailand's Minister of Natural Resources and Environment calling for regional cooperation to implement and enforce CITES, including the establishment of a Southeast Asian law enforcement network to combat the illegal wildlife trade. CoP13 considered 50 proposals to amend the CITES Appendices. Of particular relevance to Southeast Asia were the approvals given to include in Appendix II the highly valued scented agarwood-producing species, ramin, the commercially important tropical wood found throughout East Asia, four species of freshwater turtle harvested for international and/or domestic food markets, and humphead wrasse, an endangered coral reef fish of the Indo-Pacific caught for restaurants in East Asia.

Specific regional measures taken include:

- In December 2003 the CITES Management Authorities of Vietnam and China signed an agreement to cooperate on strengthening CITES controls along the shared border.

- In June 2004, at a meeting convened by the CITES Secretariat, the countries of the GMS identified priority actions to strengthen CITES trade controls in the sub-region, which included agreement to collaborate on a range of issues.

### **Engaging Effective Partners**

Several international and national NGOs, as well as private individuals, have focused their attention on various aspects of the illegal wildlife trade in East and Southeast Asia. The better-known among these include:

- Conservation International (CI), an international organization supporting on-the-ground wildlife law enforcement in Cambodia and China.
- Education for Nature in Vietnam (ENV), a national conservation organization in Vietnam working to change attitudes toward the consumption of threatened wildlife.
- Flora and Fauna International (FFI), an international organization addressing the illegal trade in crocodiles, primates, and elephants in Indochina.
- TRAFFIC, the wildlife trade program of WWF (known in the United States as the World Wildlife Fund) and IUCN-The World Conservation Union, identifying trade routes and destinations, and working on the ground and at national and regional levels to strengthen policy and government capacity in

the implementation and enforcement of wildlife trade controls, such as CITES.

- Wildlife Conservation Society (WCS), an international organization conducting site-based efforts and national training focused on hunting and wildlife trade in Cambodia, China, Lao PDR, Indonesia, Malaysia, and Myanmar.
- WWF, an international organization working in East and Southeast Asia on raising awareness of the illegality of the trade in endangered species and strengthening wildlife law enforcement on the ground.
- WildAid, an international organization working in Cambodia, China, and Thailand to change attitudes on the consumption of threatened wildlife, and strengthening site-based wildlife law enforcement, including national training.

In addition to working with NGOs, effective efforts to curb the trade in illegal wildlife must include government partners. As wildlife is traded in concert with other contraband by existing organized crime, combating the growing trade in illegal wildlife requires efforts to improve governance more broadly by working with the security and police forces, customs, and border police to integrate attempts to curb the trade in illegal wildlife with the trade in other contraband.

# CHAPTER 4

## RECOMMENDATIONS

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Trade in wildlife - animals and plants – has many complex causes rooted in social, economic, cultural, and political structures. Any solution needs to address these different factors. Any real, practical and workable solution must include (a) a better understanding of the dynamics of the trade; (b) regulatory controls at the national and regional levels; (c) incentives for better management of the species most under threat; (d) improved awareness of the threats from the trade; and (e) engagement of stakeholders at many levels and in different places.

It is not enough to tell people what to do; they must be convinced that it is in their own best interests. The wildlife trade involves many different groups: hunters, rural communities, government officials, urban consumers, medical professionals, and decision-makers. All of these groups need to know **why** they should change their behavior, and **how** they can do this without incurring huge losses in cash income.

### Key Areas of Focus

**Learning how the illegal trade works.** Improving our understanding of the complex dynamics of the trade requires action at two levels. First, a database—integrated at the regional level among governments, implementing agencies for CITES, and engaged NGOs—must be established to collate, manage, and monitor trade data. The database can be used to investigate and monitor trends in individual species and groups of species in trade; understand their sources, routes, and destinations; and survey market demand and investigate what factors drive each product's consumption. Second, analysis is needed to tease apart the data and better understand the underlying dynamics that both drive and supply the trade. Doing this requires faster and more regular reporting from the field to test hypotheses and potential responses on the supply side, as well as behavioral and social analyses to better understand and curb the demand side.

**Implementing regulatory controls for the legal and illegal trade.** Developing much greater enforcement capacity and more strategic targeting of key wholesalers, importers, and exporters is very important. At the regional and national levels, enforcement officials (police, customs, border guards) require training in a number of key areas, including in CITES, national legislation and their application, trade investigation and species identification techniques, collection and storage of evidence, reporting, handling, and disposal and release of wildlife and products. In addition, collaboration between enforcement personnel in neighboring countries should be encouraged through more regional training.

**Incentives for better managing the legal trade.** The establishment of robust management frameworks for legal, and more importantly sustainable, trade regimes for non-endangered species may alleviate pressure on wild populations of these and other species. Increasingly efficient operations of the CITES management and scientific authorities are needed in all East and Southeast Asian countries to ensure that penalties are sufficient to deter illegal trade and put in place appropriate incentives for legal, well-managed trade and production systems which do not lead to declining populations of wildlife.

**Improving awareness.** Awareness needs to be raised both among suppliers and consumers. Changes in consumer attitudes are especially essential to reduce demand for wild products. This will require prolonged, persistent advocacy targeting the key consumer markets. Campaigns that can target key audiences need to focus on several aspects of the trade, such as explaining the **long-term impacts** of trading in threatened species, including their disappearance and with them the end of alternative livelihoods based on their sustainable use and non-consumption. Myths about the consumption of wildlife parts for medicinal purposes should be debunked and alternatives designed, and sustainable consumer

behavior should be encouraged (e.g. through product certification).

***Strengthening collaboration and partnerships with key stakeholders.*** The establishment of a permanent regional wildlife trade working group can ensure a regionally strategic approach and improve dialogue between countries and agencies. The CITES Experts Group at the ASEAN level is the only example of an existing regional group dedicated to the discussion of CITES and associated wildlife trade issues at a regional level. However, it has met only three times since 1999 (always in the months immediately prior to the Conference of the Parties to CITES). The potential for this group to be far more active in dealing with wildlife trade issues and the implementation of priority activities is clear, and could focus on providing scientific and technical advice, law enforcement cooperation, and coordinating bilateral and multilateral partnerships with key stakeholders within the region, including consumer countries and donors (e.g. ADB, World Bank, UNDP, and others).

The primary need at the provincial and district levels is for provincial authorities to address the transportation and outlet ends of the wildlife trade. The increased professionalism and sophistication of the hunters and local trade network, especially those related to organized crime, has made it extremely difficult and dangerous to address the source end. The support of the provincial media, to reach as many people as possible, is also required as part of a nationally coordinated campaign. Implementation at the provincial level needs to be effectively monitored at the national level, preferably with an independent assessor, to ensure that funds are appropriately directed and action taken. It is comparatively easy to identify actions to address weak links (main traders in district towns, main outlets for wildlife products in provincial towns).

### **Why Should the World Bank Care?**

Biodiversity conservation is an important element of the Bank's corporate and regional Environment Strategy (World Bank, 2001; 2005). The World Bank Group is the largest single international funding source for biodiversity projects globally. Since 1988, the total World Bank Group financing for

biodiversity-related initiatives globally has reached \$2.5 billion, leveraging a similar amount of co-financing. World Bank Group financing include loans, credits, and grants through the International Bank for Reconstruction and Development (IBRD); the International Development Association (IDA); the Global Environment Facility (GEF); and the International Finance Corporation (IFC).

In the period 1999–2004, the World Bank's active biodiversity portfolio in East Asia and the Pacific amounted to \$300 million, with another \$120 million leveraged through co-financing (World Bank, 2004). In East and Southeast Asia, the World Bank has supported biodiversity through the establishment and strengthening of protected areas and the provision of support to activities such as taxonomy that establish a scientific basis for doing conservation. The World Bank's investments have also targeted mainstreaming biodiversity conservation in local production landscapes and in other World Bank investments, and reducing illegal activities that are undermining conservation success. Finally, investments have been used strategically to build constituencies for conservation both at the local and regional level, by raising awareness among the general public, working with partners, and finding non-traditional allies whose message and ours coincide.

In addition to project support, the World Bank has been able to mobilize millions of dollars in trust funds from donor governments to support research and other non-lending services for biodiversity conservation. As a result, the Bank has produced several pioneering reports, including, for example, on limestone and freshwater biodiversity, the use of biological indicators in the monitoring of water quality, and the assessment of competition between wild and ungulate grazers.

Building on the stated objectives of its corporate Environment Strategy and Environment Strategy for East Asia and the Pacific, as well as its commitment to the Millennium Development Goals, the World Bank continues to seek new ways to help protect global biodiversity. Notwithstanding its focus on protected areas, the World Bank recognizes the interdependencies that connect conservation with development that go beyond the boundaries of gazetted protected areas.

As a result, the World Bank is increasingly focusing on mainstreaming biodiversity conservation in its development projects and priorities, to leverage biodiversity results in the broader landscape. However, attempts by the World Bank to protect biodiversity are often undermined by a general lack of political and public commitment to conservation, reflected in the large-scale occurrence of illegal wildlife trade. As a result, the World Bank is seeking to engage governments, civil society, and local communities to combat this trade, in order to:

- Assist countries with their obligations under global environment treaties, especially CITES and CBD
- Assist countries with the success of GEF and other investments in protected areas and biodiversity conservation
- Protect Bank investments in NRM, sustainable forest management, and biodiversity
- Enable the safeguards process to better protect vulnerable resources that are endangered by Bank investments in infrastructure, hydropower development, etc.
- Facilitate improved governance of natural resources and forestry.

In addition, as the trade in wildlife depletes resources that are used as sources of local livelihoods, their disappearance is threatening the lives and livelihoods of the millions of people at the rural frontier who supplement protein sources, maintain livelihoods, and sustain cultural cosmologies based on consumptive and non-consumptive use of these resources. As such, the Bank is working to ensure that local communities can sustainably access wildlife resources over the long term as it fights to alleviate poverty globally.

### **Next Steps**

To protect its existing investments in biodiversity conservation, and to scale up its fight against the illegal trade in wildlife and plants, the World Bank is well positioned to engage in several additional activities in which it has a comparative advantage:

- *Policy dialogue.* The Bank can engage in a dialogue at the international and regional levels to raise awareness at the highest level

among policy- and decision-makers within national governments and regional associations (e.g. ASEAN). In this way, the Bank can become a regional broker for establishing cooperation and information-sharing among countries and for the existing ASEAN Experts Group on CITES.

- *Technical assistance.* The Bank can support the development of a monitoring system and train personnel to monitor national and provincial-level implementation of government legislation relating to the wildlife trade. To do this, the Bank can continue to support standard national wildlife trade enforcement manuals. The Bank can also provide a qualified expert representative to be present at regional meetings and provide assistance at the national level where appropriate.
- *Project investments.* The Bank can work with client countries and partners to improve standard applications of safeguard conditions pertaining to wildlife trade and natural habitats among multilateral and bilateral aid donors (particularly in infrastructure development and forest conservation projects). For example, the Bank could work with governments to more effectively implement its safeguards and manage the potential negative consequences of the increased opening up of previously remote areas through roads, leading to the premature decline of wildlife resources. In this regard, poverty-reduction support credits (PRSCs) and other lending instruments could be designed to promote an enabling framework to underscore investments in biodiversity conservation, and limit the negative impacts of investments in infrastructure and other projects.

The World Bank and other international agencies have the experience and the capacity to be catalysts in this process of change. Coordinated efforts, information-sharing, collaboration, and support makes it entirely possible that in time we may not witness the inexorable decline of wildlife populations, but their renaissance.

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# ANNEX 1

Main legislative instruments in the protection of wild species and implementation of CITES and wildlife trade controls in the countries of East and Southeast Asia.

Country	Name of Legal Instrument	Category under CITES National Legislation Project <sup>4</sup> (as of 30 April 2004)	Current Legal Development
Brunei Darussalam	Wildlife Protection Act 1981	Category 3	A draft CITES law has been developed and is under review by the CITES Secretariat
Cambodia	Forestry Law 2002; Sub-decree No 17 on the Rules and Functions of the Ministry of Agriculture Forestry and Fisheries 2000; Sub-decree on Sanitary Inspection of Animal and Animal Products 2003	Category 3	A draft CITES law has been developed and is under review by the CITES Secretariat
China	Wild Animal Protection Law 1989	Category 2	A CITES legislative plan has been submitted to the CITES Secretariat
i) Hong Kong	i) Animals and Plants (Protection of Endangered Species) Ordinance 1976	i) Category 1	
ii) Macao	ii) Decree-Law No. 45/86/M 1986	ii) Category pending review by the CITES Secretariat	
iii) Taiwan	iii) Wildlife Conservation Law 1989; Foreign Trade Act	iii) Not applicable	
Indonesia	Act of the Republic of Indonesia on Conservation of Living Resources and Ecosystem 1990, commonly referred to as Act No. 5, 1990	Category 1	
Japan	Basic Environment Law 1993; Foreign Exchange and Foreign Trade Law; Customs Law	Category 1	
Lao PDR	Forestry Law 1996; Decree No. 169/PM on the Management and Use of Forests and Forest Lands 1994; Penal Code of Lao 1989	Category pending submission of its legislative instruments to the CITES Secretariat	
Malaysia	Peninsular Malaysia: Wildlife Protection Act 1972 (amend. 1991), Malaysian Timber Industry Board Act (1973) Sarawak: Sarawak Wildlife Protection Ordinance 1998 Sabah Wildlife Conservation Enactment 1997	Category 2	Revised CITES implementing legislation has been developed and is under review by the CITES Secretariat
Mongolia	Law of Fauna 2000	Category 3	CITES implementing legislation has been enacted and under review by the CITES Secretariat
Myanmar	Protection of Wild Life and Wild Plants and Conservation of Natural Areas Law, 1994	Category 3	CITES implementing legislation has been enacted and is under review by the CITES Secretariat
North Korea	Unknown	Not Applicable (not a CITES Party)	

<sup>4</sup> The National Legislation Project reviews and evaluates CITES Parties' legislation, determining the degree to which it meets the four minimum requirements set out in Resolution Conf. 8.4, and as adopted at the ninth, 10<sup>th</sup>, and 11<sup>th</sup> meetings of the Conference of the Parties.

**Category 1** means legislation that is believed to generally meet the requirements for implementation of CITES.

**Category 2** means legislation that is believed to generally not meet all requirements for the implementation of CITES.

**Category 3** means legislation that is believed generally not to meet the requirements for implementation of CITES.

<b>Country</b>	<b>Name of Legal Instrument</b>	<b>Category under CITES National Legislation Project<sup>5</sup> (as of 30 April 2004)</b>	<b>Current Legal Development</b>
Philippines	The Wildlife Resources Conservation and Protection Act 2001; The Philippine Fisheries Code of 1998	Category 2	Revised CITES implementing legislation has been developed and is under review by the CITES Secretariat
Republic of Korea	Nature Environment Protection Law 1991	Category 1	
Singapore	Endangered Species (Import & Export) Act (Chapter 92A)	Category 1	
Thailand	Wild Animal Reservation and Protection Act B.E. 2535 (1992)	Category 1	
Vietnam	Decree 11/2002/ND-CP, Management of Export, Import and Transit of Wild Animals and Plants; Decree 48/2002/ND-CP – amending and supplementing the list of precious and rare wild plants and animals; Decree 18/HDBT Stipulating the categories of rare and precious forest fauna and flora, and their management and protection (1992)	Category 1	

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<sup>5</sup> The National Legislation Project reviews and evaluates CITES Parties' legislation, determining the degree to which it meets the four minimum requirements set out in Resolution Conf. 8.4, and as adopted at the ninth, 10<sup>th</sup>, and 11<sup>th</sup> meetings of the Conference of the Parties.

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