

The trade in African and Asian ivory in South and South East Asia

*Daniel Stiles*¹ and *Esmond Martin*²

¹ PO Box 5159, Diani Beach, Kenya; email: kenyan@wananchi.com

² PO Box 15510, Mbagathi, Nairobi, Kenya; email: rhino@wananchi.com

Abstract

Elephant poaching continues in Africa and Asia, largely as a result of the ivory markets. If the ivory markets were reduced through law enforcement and education, the price of raw ivory would fall and the incentive to poach elephants would also drop. The authors completed a study of the ivory markets in Africa in 1999, but baseline data to pinpoint the problem areas in Asia were urgently required because the two regions are linked. The authors therefore undertook a study in South and South East Asia in late 2000 and early 2001. It is more cost efficient to investigate, understand and thus be able to control the ivory markets than to stop elephant poaching by conventional means. The eight key countries visited and covered in this article were Cambodia, Laos, Myanmar, Nepal, Singapore, Sri Lanka, Thailand, and Vietnam. Data were collected on the numbers of craftsmen, workshops, retail outlets, ivory items, and prices for raw and worked ivory. Thailand, by far the largest market, is fuelled mainly by illegal imports of African raw ivory plus some tusks from Myanmar. The ivory trade has declined since 1990 in all the countries surveyed because the demand for ivory has been reduced, except for Thailand, where trade has probably remained the same, and Myanmar, where it has increased. Although all the countries studied except Laos are members of CITES and also have domestic laws on ivory, law enforcement is weak. It is important to stop illegal ivory sales to tourists and businessmen in the two regions reported in order to reduce elephant poaching in Africa and Asia, especially in Cambodia, Laos and Vietnam where wild elephant numbers have declined by over 75% since 1988.

Résumé

Le braconnage des éléphants se poursuit en Afrique et en Asie, en grande partie à cause de l'existence d'un marché pour ce produit. Si on pouvait diminuer le marché de l'ivoire par un renforcement des lois et par l'éducation, le prix de l'ivoire brut chuterait et les incitants du braconnage diminueraient aussi. Les auteurs ont terminé une étude sur le marché de l'ivoire en Afrique en 1999, mais on avait besoin des données de base pour localiser avec précision les zones qui posent problème en Asie parce que les deux régions sont liées. Les auteurs ont donc entrepris une étude en Asie du Sud et du Sud-Est fin 2000 – début 2001. Il est en effet plus rentable de faire des enquêtes, de comprendre et puis de pouvoir contrôler le marché de l'ivoire que de stopper le braconnage des éléphants par des moyens traditionnels. Les huit pays clés visités et couverts par cet article sont le Cambodge, le Laos, le Myanmar, le Népal, Singapour, le Sri Lanka, la Thaïlande et le Vietnam. Nous avons récolté des données sur le nombre d'artisans, d'ateliers, de points de vente, sur les objets en ivoire et sur les prix de l'ivoire brut ou travaillé. La Thaïlande, qui est de loin le marché le plus important, est principalement approvisionnée par des importations illégales d'ivoire africain brut auquel s'ajoutent quelques défenses venues du Myanmar. Le commerce de l'ivoire a diminué depuis 1990 dans tous les pays étudiés parce que la demande a baissé, sauf en Thaïlande où le commerce est probablement resté stable, et au Myanmar où il a augmenté. Bien que tous les pays étudiés, sauf le Laos, soient membres de la CITES et qu'ils aient une législation locale sur l'ivoire, le respect des lois laisse à désirer. Il est important de stopper les ventes illégales d'ivoire aux touristes et aux hommes d'affaires dans les deux régions citées pour pouvoir réduire le braconnage des éléphants en Afrique et en Asie, et spécialement au Cambodge, au Laos et au Vietnam où le nombre d'éléphants sauvages a chuté de plus de 75 % depuis 1988.

Introduction

In 1999 we investigated the ivory markets of Africa, finding out that raw African ivory was still being smuggled from certain countries into Asia in significant quantities (Martin and Stiles 2000; Stiles and Martin 2001). The subsequent work in South and South East Asia was partly to find out where African ivory was going in the two regions and who was buying it (Martin and Stiles 2002). There are fewer than 50,000 wild Asian elephants remaining, about 10% of the African elephant population (WWF 2002; Kemf and Santiapillai 2000). The Asian elephant population cannot supply the ivory demand in some parts of South and South East Asia, a situation that has encouraged smuggling ivory from Africa.

This recent study focused on internal trade in raw and worked ivory in the key towns and cities with ivory markets in two regions of Asia. We also gathered information related to cross-border trade. We visited eight countries in the region—Cambodia, Laos, Myanmar, Nepal, Singapore, Sri Lanka, Thailand, and Vietnam. Even though all except Laos have ratified CITES, international trade in ivory still occurs, particularly with Thailand.

A main question to answer is whether the ivory trade is increasing or decreasing or is stable. The level of poaching should be correlated with the magnitude of retail ivory being sold, both of which are in most cases illegal and thus hidden. We believe that monitoring and evaluating ivory markets can be a cost-effective method of assessing threats to elephant populations. Here we provide baseline data to help understand the scale of the ivory trade, and in some instances where past data are available, trends.

Methods

Fieldwork was carried out from early November 2000 to late March 2001 by two investigators working in close coordination to keep data-collecting techniques as similar as possible for consistency and comparisons. Martin worked in Cambodia, Nepal and Thailand, while Stiles worked in Laos, Myanmar, Singapore, Sri Lanka, and Vietnam. Ivory traders, craftsmen, vendors, customers, government officers and conservationists were interviewed. Almost every retail ivory item on display was counted individually. Indicators used were the

prices of raw and worked ivory, the number of outlets selling ivory items, the number of ivory workshops and craftsmen, and the number of ivory items seen for sale. Prices for raw tusks were confirmed by using several informants.

Results

Legal position of the ivory trade

CAMBODIA

Cambodia joined CITES in 1997. All hunting of wildlife and the internal trade in new ivory were banned in 1994. The domestic trade in pre-1994 elephant products is not prohibited. In 1996 the sale, trade, harvest and transport of live wildlife was prohibited, but not the sale of dead animal products. Thus trade in elephant products in Cambodia was legal for 'old' items, but not for new ones at the time of this survey.

LAOS

Although Laos has not joined CITES, ample national legislation since 1986 prohibits elephant killing and trade in products of elephants and other protected wildlife species. Ivory and other wildlife products can be imported and exported, but since 1989 government authorization plus a certificate of origin are needed.

MYANMAR (BURMA)

Myanmar joined CITES in 1997. Wild elephants have been protected since 1935. In 1994 a new law was enacted protecting wild animals and plants outside forest and wildlife protected areas, and later that year a list was published of species that cannot be hunted or their products exploited, which includes the Asian elephant. It is legal to buy whole tusks and ivory tusk-ends from privately owned domesticated elephants and to transport these with the proper permit. It is also legal to sell carved ivory.

NEPAL

Nepal joined CITES in 1975; thus imports and exports of elephant ivory are illegal. Domestic trade without a permit has been illegal since 1973, and no permit has ever been given.

SINGAPORE

Singapore joined CITES in 1987. Internal sales of raw and carved ivory were banned in 1989, except for ivory stocks that had been registered before November 1986. A permit is needed to import, export, re-export, transport by sea, possess, sell or display CITES-scheduled species; otherwise the offender may be fined up to 5000 Singapore dollars (USD 2900 in 2001) and spend up to a year in jail. When asked, vendors say they are selling old stocks of worked ivory.

Daniel Stiles



A Chinese visitor shops for ivory in a Bangkok luxury hotel.

SRI LANKA

Sri Lanka joined CITES in 1979. In 1981, all elephant tusks and carvings had to be registered with the Wildlife Department. Only registered ivory can be sold domestically. Since 1993, anyone caught with unregistered ivory is subject to two years in prison and a fine of 30,000 Sri Lankan rupees (USD 400 in 2000). Individuals can still own elephants and ivory deriving from these elephants and have it carved and willed to descendants, but no ivory can be legally exported or sold. All elephant hunting was banned in 1937.

THAILAND

Thailand joined CITES in 1983. The internal trade in all wild elephant products has been illegal since 1960, but the internal sale of raw and worked ivory from domesticated Thai elephants is legal. If an official tries to arrest a trader or shopkeeper, the latter will state that his ivory came from domesticated Thai elephants. This is a major loophole in the law.

VIETNAM

Vietnam joined CITES in 1994. A series of government laws and decrees prohibit the hunting of ele-

phants and other listed wild species and the use, trade and transport of products derived from them. In 1993 the exploitation and trade of species on the government's list of threatened species was prohibited.

Sources and raw ivory prices

CAMBODIA

The most important source of raw ivory within Cambodia is from illegally killed Cambodian elephants. Cambodians and also Vietnamese, often in organized gangs, are poaching the remaining elephants, whose numbers have fallen sharply to a few hundred (Heffernan et al. 2001). The second source for carvers is from the 144 domesticated elephants that still remained by 2000, mostly their tusk tips (Weiler and Chheang Dany 2001).

After the fall of the Khmer Rouge government the price of wildlife products, including ivory, rose through the 1980s and early 1990s as the economy grew. Tusks over 10 kg were USD 227/kg, average-

sized ones USD 182/kg and those less than 3 kg 114/kg in 2001.

LAOS

Virtually all raw ivory carved in the country comes from the southern provinces of Laos from poached elephants. Elephant numbers have fallen significantly, from about 2500 in 1989 to an estimated 1000 in 2000 (Santiapillai and Jackson 1990; WWF 2002), while domesticated elephants are thought to be over 1000.

Larger pieces and tusks were sold for USD 250–300/kg in 2001. Several raw tusks less than 10 cm in length were seen for sale. Prices have risen over the decade, probably more because ivory is scarce than from an increase in demand (table 1).

MYANMAR

Most ivory comes from the forested areas of Kachin and Shan States in the north and north-east of the country, with a little from the central Pegu Yoma Mountains. Myanmar still has the largest population of both wild and domesticated elephants in South East Asia. Most elephant poaching is by soldiers in the Myanmar army and in the ethnic minority armies. Chin tribes on the border with India sell Indian tusks to middlemen who resell them in Mandalay. Tusk tips and tusks from dead domesticated elephants are sold to carving workshops and shop owners.

Buyers said they could get permits from the Forestry Department to transport legal raw ivory and also that officials at the military check points could be bribed if undocumented ivory were found.

Table 1. Past and present ivory trade indicators for South and South East Asia

Country	Year	Price of raw ivory, 1–5 kg (USD)	Retail outlets (no.)	Workshops (no.)	Craftsmen (no.)	Minimum no. items
Cambodia	1991	150	–	–	–	–
	1992	340	–	–	–	–
	1994	400	–	–	–	–
	2001	338	59	–	~ 30	1,773
Laos	1998	100	–	–	–	–
	1990	200	–	–	10+	–
	2001	250–300	63	4	5	1,424
Myanmar	1981	26	–	–	–	–
	1995	239	–	–	> 60	–
	2001	142	53	~ 11	~ 40	5,801
Nepal	1979	140	–	–	30–50	–
	1982	92–115	–	–	8+	–
	1991	187	–	–	–	–
	1998	242	71	–	–	1,454
	2001	166–207	57	2	4	1,546
Singapore	1979	140	–	–	30–50	–
	2001	–	23	0	0	2,700
Sri Lanka	1979	170	–	–	107	–
	1987	110	–	–	–	–
	2001	300?	22	6	~ 14	620
Thailand	1979	99	–	–	–	–
	2001	159	194	–	~ 70	88,179
Vietnam	1989	150	–	–	–	–
	1990/1	100–200	> 80	–	63–83+	–
	2001	350–500	50	> 7	> 22	3,039

– no data

In Yangon a tusk tip weighing between 1.5 and 5 kg cost USD 142/kg. It would cost the same or slightly less in Mandalay. A tusk weighing more than 15 kg was USD 355–497/kg. Small pieces ranged from USD 42.50–85/kg.

NEPAL

Tusks can be obtained when wild elephants in Nepal die. The population, however, is very small, found mostly in and around Bardia National Park in the west of the country. More frequently, ivory comes from cutting off tusk tips from domesticated elephants; females do not have tusks but only very small tushes, which cannot be pruned. Nepal's domesticated elephant population is also small, and as in all these countries, most are females, so the supply of ivory is limited. Rich Nepalis sell some tusks to traders from old private stocks. Nepal also receives a few tusks smuggled in from north and north-east India.

The price of good-quality raw tusks as offered by a trader to a shop owner or carver in the Kathmandu area was USD 187/kg in early 2001, a decline from 1998 when it reached an all-time high of USD 242/kg, implying a decrease in demand.

SINGAPORE

All ivory entering Singapore for the domestic market is worked. Most of it comes from China with origins in Africa. In 1979 Martin found that most of the raw ivory carved then was from Africa and sold wholesale in Singapore for USD 140/kg.

SRI LANKA

Those dealing in ivory would not say where tusks came from nor their price, except to say they were priced not by weight but individually by quality. Most come from dead or poached elephants around the town

Daniel Stiles



Most of Vietnam's carved ivory items are of Chinese subjects, reflecting the taste of the principal buyers. The ivory industry in Vietnam is dying as the government is now enforcing its wildlife laws more effectively.

of Polonnaruwa, from Wilpattu National Park or occasionally from those killed by land mines in the north. It is unlikely that raw ivory is smuggled into Sri Lanka as the risk is too great compared with the pay-off. In 1999, however, the Fauna and Flora Protection Task Force of the Customs Department seized several carved ivory pieces in Colombo port from a ship coming from Ghana (Kambe 2000). A little worked ivory still comes in from India.

One pair of 25-cm tusks was seen for retail sale priced at USD 556/kg, but it could have been bought for up to 50% less after bargaining.

Esmond Martin



One of the sources of raw ivory in South and South East Asia is tusk tips, which are cut from live domesticated elephants.

THAILAND

Most ivory sold in the country is not from Thai elephants. Strong evidence based on data from carvers and shop owners and on shipments of raw ivory that were intercepted by the Thai authorities from 1995 to 2000 (Associated Press 2000; Srikrachang and Jaisomkom 2001) suggests that most ivory is smuggled in from Africa. Ivory is also smuggled in from Myanmar's border town of Tachilek across to Mae Sai in Thailand, a major route for ivory smuggling for at least a decade. Poaching of Thai elephants has not been common in the 1990s. Numbers of domesticated elephants at around 2500 with an estimated 600 being adult males with tusks (R. Lair, pers. comm. 2000) are probably greater than those in the wild, so tusk tips are frequently used by the carvers.

The wholesale price for an average African or Asian tusk of 5 kg was USD 159/kg; small tusks were USD 68/kg and tiny pieces cost USD 23/kg in 2000.

VIETNAM

Several informants in both Ho Chi Minh City and Hanoi named Dak Lak Province, and specifically the town of Ban Ma Thuot, as the source of their raw

ivory. Even more than in Cambodia, the once-large elephant population has been virtually wiped out in recent years, falling from 1750 in 1989 to an estimated 135 in 2000 (Kemf and Santiapillai 2000). Raw ivory is thus smuggled in from Cambodia and Laos. Perhaps 200 or so domesticated elephants in Vietnam in 1996 (Lair 1997) supplied a little ivory.

Tusk tips were USD 350-500/kg while poor-quality tusks sold for USD 171-233/kg in 2001. A major workshop owner was buying African ivory smuggled in from Angola by a Vietnamese for USD 300/kg in 2001. He said he would telephone a contact in Angola when he needed ivory. Prices rose from earlier years because of economic liberalization and the increase in tourism.

Ivory workshops

CAMBODIA

Most ivory craftsmen live in and around Phnom Penh. In 1994 there were about 30 (Martin and Phipps 1996), and in 2001 the figure was about the same. Older carvers are still teaching young men to carve. A little carving is still sometimes done in Pursat, Battambang and Siem Reap if ivory is available. Local ivory is enough to satisfy demand as Cambodians, who are the main



These African pieces were found for sale in Ho Chi Minh City, Vietnam.

buyers, cannot afford large pieces. Very small (2–3 cm) Buddha amulets are the main items produced.

LAOS

Three woodcarving teachers at the National School of Fine Arts in Vientiane carve ivory Buddha amulets and other small items when commissioned. An antique shop in the Morning Market employs two carvers. These are the only five carvers now working on ivory in Laos because demand is low. In 1990 there were 10 carvers in Vientiane and a few in Luang Prabang (Martin 1992a).

MYANMAR

In Yangon, some workshops are in people's homes in the suburbs, where carvers still work with hand tools and vices. One ivory workshop is near the Shwedagon Pagoda along with wood carving workshops. Five workshops with about 10 craftsmen were found. They are provided with ivory (usually less than 1-kg pieces) and work on commission for dealers,

who sell ivory items to shops and embassies. Some carvers are moving to Mandalay where there is more raw ivory. In Mandalay, about 32 ivory carvers work in three main workshops, fewer than in 1989 (Luxmoore 1989) and 1995 (Martin 1997), some working part-time for more than one workshop.

NEPAL

In 1982 there were eight ivory craftsmen, all using hand tools, but by 1991 only three were left because of difficulties in obtaining tusks. By 1998 only one carver was still active, and he was earning less in 2000 than he had two years earlier, now earning on a par with a skilled worker such as a carpenter rather than as an artisan. An artistic tradition practised for hundreds of years in Nepal had virtually stopped.

SINGAPORE

In 1979 Martin counted 30 to 50 ivory carvers in Singapore, but ivory carving had stopped by 1990 because of government bans.

SRI LANKA

Although in 1979 about 100 ivory carvers were working (Martin and Martin 1990), now there are only about 10 in Polonnaruwa and perhaps 4 in Kandy, working from their homes. Most of the workshops, especially the larger ones in Galle and Kandy, have stopped ivory carving because of government crackdowns.



Daniel Stiles

Quite large carved tusks can still be found in Myanmar. This elephant bridge was for sale in the entrance to the Shwedagon Pagoda in Yangon.

THAILAND

The main ivory-carving centre is Phayuha Kiri, a traditional small town with 12 shops selling mainly wholesale ivory items. At least 50 ivory craftsmen work freelance, mostly from their homes, and some are attached to the shops. The carvers obtain tusks from dealers and sell worked items to shop owners. Over 85% is jewellery that can be made quickly with electric-powered drills. About 20 ivory carvers work in the second main ivory carving centre, in and around Bangkok. Most Bangkok shopkeepers obtain their ivory items from Phayuha Kiri. Chiang Mai is no longer an important ivory carving centre, and dealers usually obtain ivory items from Phayuha Kiri to sell to the two main ivory shops in the town.

VIETNAM

Traditionally, the skill of ivory carving was passed down from father to son, but the practice is dying out, as educated boys do not want to do what they now perceive as manual labour. There are about four carvers in Hanoi and three or four families are involved in carving in small villages around Th'u'ong Tin, just south of Hanoi, but most of these are carving in wood and bone as there is little market for ivory. Ho Chi Minh City shopkeepers said their ivory was carved in Ban Ma Thuot, Hué and a village 70 km from the capital. The number of carvers is dropping as ivory prices rise and demand falls.

Retail outlets and prices for worked ivory

CAMBODIA

Some 54 souvenir and jewellery shops plus one antique shop offered 1683 ivory items for sale in Phnom Penh with 78 more items on display in a souvenir shop in Siem Reap next to the Angkor Wat ruins. Most of the items were Buddha amulets (82%) locally carved in Phnom Penh and flower buds worn as jewellery (9%) costing around USD 5 each. Most were bought by Cambodians, although some Thais and French also buy the Buddhas.

LAOS

Out of 182 shops, 63 were selling small amounts of ivory items, totalling 1424 pieces. Most were 3–4-cm Buddha amulets and pendants. These items were also carved from bone and deer antler, which were hard to distinguish from ivory. The bigger items were antiques, as there was little demand for new large pieces. Mounted and carved tusks could be as small as 6 cm because of the shortage of ivory.

Vendors said that the sale of ivory items had remained stable and slow over the past five years. Mostly Laotians bought the amulets, but Chinese from

China, Hong Kong and Thailand and some Japanese bought other items in Vientiane. Europeans bought antiques in Luang Prabang.

MYANMAR

A total of 53 shops carried 5801 ivory items in Mandalay and Yangon. None was seen in Bago. Shops must be registered with the government to sell worked ivory, gems, gold and antiques.

The increased price of raw ivory was forcing up prices of worked ivory a little, but vendors said that the retail ivory trade was good and had been growing over the past three years. Some Burmese-worked ivory goes to China and Thailand.

In Yangon the main buyers in order of importance were ethnic Chinese from Thailand, Hong Kong, Singapore, Malaysia and China; Japanese and Indians; and occasionally wealthy local officials. In

Mandalay, some vendors said that Germans, Italians and Spanish also bought worked ivory. Because of the CITES export ban a vendor will, if asked, write on the receipt that the item is bone, or the customs officer is simply bribed.

NEPAL

Ivory items were found in 57 of the 200 curio and jewellery shops in Kathmandu. In 1998, 71 out of 184 shops were selling ivory (Martin 1998). In 1998, 1454 ivory items were counted, and in 2001, 1546. Only 38% of the items were made in Nepal compared with 53% in 1998. China followed with 33%, India with 22%, Tibet with 6%, and Japan, Hong Kong and Europe 1%. Indians and Tibetans smuggle worked ivory into Nepal by road while some shop owners order items from China, Hong Kong and Japan or go there to purchase them.

Daniel Stiles



Selling of ivory in Sri Lanka is strictly prohibited. These pieces in Colombo were brought out of a hiding place to show the investigator, posing as a prospective buyer.

Retail prices in US dollars have remained about the same from 1998 to 2001; shop owners are starting to phase out ivory as it is not profitable enough. The main retail buyers were French, Germans, Italians and Japanese. Despite an increase in tourism from 1990 to 1997 (Shrestha 2000) ivory sales have fallen by 90% since 1990.

Daniel Stiles



SINGAPORE

Some 23 shops out of 158 were selling 2700 ivory items, mostly smuggled in from Beijing and Guangzhou in China and from Hong Kong. Retail prices were higher in 2001 than before 1990, as Chinese source prices had increased. The lowest prices were in Chinatown, as perhaps they were actually pre-1986 stocks. Other vendors said they had stopped selling ivory after it was made illegal. Overall, Singapore prices were the highest seen in the study. The most common item was the name seal, bought by East Asians, as were Chinese figurines. Singaporean Chinese preferred larger items.

SRI LANKA

Out of 113 antique and craft outlets, 22 were selling 620 ivory items in the towns surveyed. Kandy, Polonnaruwa and Colombo sold the most, followed by Negombo, Beruwala and then Hikkaduwa. Dambulla, Galle, Ratnapura and Sigiriya had no ivory. In Colombo, unlike elsewhere, nearly all the items were kept in cupboards or closed safes as the vendors feared government inspectors.

Nearly all items were carved in Sri Lanka, with a few from India and China. One bust was carved on a tusk from central Africa. Prices were highest in Colombo, then in Kandy, then in the coast towns, and finally in Polonnaruwa, near where elephants are currently poached.

Singapore sells a wide variety of illegally imported ivory items from China and Hong Kong. The hippo tusks on the right carved in Hong Kong probably originated in Uganda.

Shopkeepers are willing to issue false receipts for the ivory items stating they are cow or water buffalo bone to enable export and destination import. Sales were quite slow, the vendors said, with prices lower than five years ago. Many vendors said they had stopped buying ivory, but this was not so in the tourist centres, mainly Kandy.

Mainly Portuguese and Dutch collectors buy the ivory antiques while British, Dutch, French and Portuguese tourists buy newer, cheaper items. The Japanese were the main buyers until the mid-1990s, when the civil war with the Tamil Tigers discouraged their visits.

THAILAND

In Thailand, 88,179 ivory items, the great majority trinkets, were counted in about 194 shops in the three main centres. Bangkok sold 38,510 items in 164 antique and curio shops, with the main buyers being Americans, Europeans and Japanese; next were Taiwanese. In Chiang Mai, 9 shops offered 80% of the 10,020 ivory items for sale with the main clients being Hong Kong Chinese, Malaysian Chinese, Singaporeans and Taiwanese. In Phayuha Kiri, 12 shops offered 39,649 items, most offered wholesale

but some sold retail to Chinese, Japanese and Taiwanese.

Daniel Stiles

VIETNAM

In all, 3039 ivory items were found in 50 outlets out of the 276 visited, mostly in Ho Chi Minh City but also in Hanoi. All tusks seen for retail sale were at least 30 cm in length, unlike in Laos. There were 10 African items in three shops in Ho Chi Minh City, including three busts for USD 700–1000 that had been there for five years.

Vendors reported that retail sales of ivory had dropped since 1995 after Vietnam joined CITES. Prices of larger items had stayed the same over the past five years because demand for them had declined despite their scarcity, but smaller pieces had increased considerably in price since 1990/1 (Martin 1992b) as they are more popular, being easier to smuggle. In Ho Chi Minh City the main buyers were ethnic Chinese from East Asia, with Taiwanese preferring the larger items. In Hanoi, Chinese, Japanese and Vietnamese buy ivory, as well as Americans and French.

Discussion

The number of ivory items in Thailand greatly exceeds that in any country in Africa (Martin and Stiles 2000). The Ivory Coast and Egypt, the African countries with the most ivory for sale, together only had a little over 40,000 items compared with over double that amount for Thailand. The weight of ivory items displayed for sale in Thailand also exceeded that in any African nation. The rankings of countries in South and South East Asia based on estimated weight of worked ivory for sale were, in descending order, Thailand, Myanmar, Singapore, Vietnam, Nepal, Sri Lanka, Cambodia and Laos. The total number of ivory



Buddhas are common ivory objects in Bangkok, Thailand.

items seen in these 8 countries was about 105,000 (table 2) compared with 110,000 counted in the 15 countries surveyed in Africa in 1999, but in terms of weight, African countries had more ivory for retail sale than South and South East Asia.

Retail prices for ivory items were highest in Singapore; next were those in Vietnam, where raw ivory was the most expensive because it was scarce; items were cheapest in Myanmar, where raw ivory was the least expensive. Thailand's raw ivory and worked ivory prices were also fairly low, as Asian ivory has to compete with the lower price of imported African ivory, with comparable tusks costing the same within Thailand.

Some data are available from past studies to compare the ivory trade today with that of previous years (table 1). The data show that raw ivory prices in dollars were higher in 2000–2001 than for any of the years before 1990. But mid-1990s prices in Cambodia, Myanmar and Nepal were higher than those in 2001. The number of ivory carvers has decreased notably in Laos, Nepal, Singapore, Sri Lanka and

Table 2. Ivory trade indicators for South and South East Asia in 2000–2001

Country, town	Retail outlets	Work-shops	Craftsmen	Price/kg raw ivory (USD)			Minimum no. items
				< 2 kg	2–5 kg	> 10 kg	
Cambodia							
Phnom Penh	55	–	~ 30	150	350	450	1,683
Siem Reap	4	–	–	–	–	–	90
Laos							
Luang Prabang	10	0	0	–	–	–	78
Vientiane	53	4	5	–	250–300	–	1,346
Myanmar							
Mandalay	19	~ 6	~ 30	–	142	> 350	2,363
Yangon	34	5	10	43–85	142	–	3,438
Nepal							
Kathmandu	57	2	4	–	166–207	–	1,546
Sri Lanka							
Colombo	6	0	0	–	–	–	102
Kandy	7	~ 3	~ 4	–	–	–	355
Negombo	3	0	0	–	–	–	19
Polonnaruwa	3	3	~ 10	–	–	–	116
SW coast	3	0	0	–	~ 300	–	27
Singapore	23	0	0	–	–	–	2,700
Thailand							
Bangkok	164	–	~ 20	23–68	91–182	–	38,510
Chiang Mai	18	–	6?	–	–	–	10,020
Phayuha Kiri	12	–	> 50	23–68	91–182	–	39,649
Vietnam							
Hanoi	13	5*	~ 20*	–	350–500	–	777
HCMC	37	> 1	> 2	–	350–500	–	2,262
TOTAL	521	~ 30	~ 200	–	–	–	105,081

– no data

* including Th'u'ong Tin village 20 km south of Hanoi

Vietnam, and the number of ivory retail outlets has decreased in Nepal, Singapore and Vietnam. The minimum number of ivory items seen in Nepal in 1998 and 2001 was about the same.

Why were pre-1990 South East Asian prices for tusks lower than in 2001 while those in Africa were higher before 1990 than in 1999 (Martin and Stiles 2000)? Immediately after the 1990 CITES ban, raw ivory prices rose in Asia and fell in Africa as exports from Africa dropped, increasing the supply in Africa and reducing it in Asia. Illegal trade routes have since been developed to send ivory from Africa to Asia, so the price rises in raw ivory seen since 1990 in a few African countries may be related to this. But demand for raw ivory is greater in nearly all of Asia than in

Africa today, with local supplies of Asian ivory dwindling, with constricted imports of African ivory in the 1990s, and with a booming tourist economy in the Asian region, resulting in higher prices there. The Asian ivory market has suffered since the 1997 economic crisis. Recent reductions in raw ivory prices reflect this and perhaps also come about as a result of increased imports of illegal African ivory to Thailand.

Ivory demand has probably declined in Cambodia, Laos, Singapore and Vietnam since the mid-1990s. The number of shops selling ivory items has declined in Singapore because of the decrease in customers. The raw ivory price in Cambodia and the number of ivory craftsmen in Laos have definitely declined, suggesting decreased demand, as the sup

ply is available. Informants said that business was slower in Vietnam than in the past, in spite of price rises for both raw and worked ivory, which are due to ivory scarcity and not to increased demand.

In the mid-1980s, Thailand exported 200,000 (plus or minus 50,000) pieces of worked ivory a year and many Bangkok shops displayed large quantities of ivory (Luxmoore 1989). Although the number of tourists has increased significantly in Thailand from 1990, the CITES ivory ban has probably kept the Thai ivory market at roughly the same level as it was in the 1980s, although almost all sales are now internal rather than wholesale exports. Work carried out by TRAFFIC in Thailand in 1997 supports this view for the 1990s (Nash 1997).

Myanmar's raw ivory prices have been rising steadily since 1981 as measured in local currency, but because of the depreciation of the kyat, the USD price has fluctuated. In 1981 the price was USD 26/kg. By 1995 prices had skyrocketed to USD 239/kg but in early 2001 had fallen to USD 142/kg for medium-sized tusks. The kyat price was 45,000/kg in 1995 and 100,000/kg in 2001, an increase of more than 100% in Burmese terms. Vendors said that business had been increasing since the early 1990s, explaining the kyat price increase. Although the number of craftsmen has decreased since 1995 as old carvers retire, the remaining craftsmen may have increased their productivity to keep up with the demand.

Ivory demand in South Asia has declined over the years in response to rising prices and increased risk related to selling ivory, as evidenced by the decline in the number of ivory retail outlets and craftsmen in Nepal and Sri Lanka. Virtually no worked ivory has been displayed in India since the CITES ban, and the number of ivory craftsmen has declined significantly since 1989 (Vigne 1991).

Unlike in Africa, no shop owner or vendor in South or South East Asia mentioned the 1999 approved auctions of government ivory stocks in southern Africa to Japan. This was either because they did not find them significant or more likely had never heard of them. Some ivory craftsmen had heard of the auctions but did not think them relevant to their business. The auctions thus did not cause the ivory trade to increase in these two regions as had been feared and as had occurred in a few African markets.

Views in general of the future of the ivory trade were pessimistic. Craftsmen are not encouraging

younger members of their families to learn the art. In Nepal, they doubt that any market will remain for their carvings in another 10 years. In Vietnam, many have given up ivory carving and in Sri Lanka, where the government has cracked down on the ivory trade, it is a dying profession. Even in Thailand the craftsmen in Phayuha Kiri fear dwindling supplies of tusks in the future. Only in Myanmar, where there is currently a healthy ivory market, is there any optimism.

Conclusions

Although the ivory trade has declined from 1990 in Cambodia, Laos, Nepal, Sri Lanka and Vietnam, the trade seriously threatens their small and dwindling wild and domesticated elephant populations. Although Singapore's ivory trade has also declined significantly since 1990, the country puts pressure on both Asian and African elephants as newly carved ivory from China is still imported. In Myanmar, the ivory trade increased from 1990 to 1995, when it peaked, but since then it has remained stable or has slightly declined. The number of wild and domesticated elephants in Myanmar can sustainably support the current level of trade within the country. Myanmar's exports of tusks and worked pieces to Thailand and China, however, may exceed sustainability. Thailand's ivory trade has remained stable and large since the late 1980s. The country's elephant population is thought to have remained stable since then as it illegally imports large amounts of raw ivory from Africa, and secondarily from Myanmar.

The wholesale price of raw ivory was higher in 2001 than in the late 1980s in the countries surveyed. In 2001 the average tusk price was over five times higher than in Africa (USD 250 versus USD 45). This high price has put severe pressure on Asian elephants, and if this demand continues, the poverty-stricken rural people will risk poaching even more, as the economic returns are high.

None of the governments for the countries surveyed has control over the ivory trade. Although the number of craftsmen has decreased in the 1990s in general, Chinese businessmen continued to smuggle ivory items to many Asian countries, and even some Western tourists, despite the negative publicity in their countries, have continued buying ivory trinkets. The number of foreign tourists and businessmen visiting South and South East Asia, more than 20 million a year, has been

increasing at a rate of over a million a year, ensuring that the demand for ivory will continue.

The governments of these countries need to improve their domestic legislation and increase enforcement, as India has done. Laos must join CITES, and all countries in the region need to enforce CITES regulations to stop the import and export of raw and worked ivory.

It is far more economical to control the marketing side of the ivory business than to prevent elephant poaching. If there is a significant decline in the ivory market, ivory prices should fall and elephant poaching decrease dramatically. A high demand for ivory in only a few countries can affect elephant populations in many others. If CITES and the national governments of the countries involved do not improve and enforce their laws and decrees, the ivory markets and buyers will continue to claim the lives of many African and Asian elephants.

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