

Current Status of Asian Elephants in Lao PDR

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Introduction

The Lao People's Democratic Republic is a landlocked country bordered by Vietnam, Thailand, Cambodia and China. It has a total land area of 236,800 km² with an estimated population of just over 5.5 million people and a population growth rate of 2.3%. A low population density and rugged terrain has contributed to relatively large remaining forested areas and a rich and diverse faunal and floral assemblage. Despite this, the high population growth rate coupled with a natural resource-based economy is leading to increased pressure on remaining natural forests and biodiversity in the country. The natural vegetation types in Lao are mixed deciduous forest and semi-evergreen forest with dry forests in the south. Almost all of the mixed deciduous and semi-evergreen forests have been logged. The northern part of the country mostly consists of cultivation and degraded habitats. There is more forest in the central and southern parts.

Lao PDR has a rich culture and history in which the Asian Elephant plays a prominent role. Lao people regard the Asian elephant as a symbol of the power and potential of the forest. Statues and carvings of elephants adorn temples and houses throughout the country. The Asian elephant also features in spiritual and cultural ceremonies and festivals held throughout Lao PDR. In particular, the 'Elephant Festival' is an annual event which draws thousands of national and international visitors (Fig. 1). It brings together domestic elephants from five districts in Xayabouly Province. In 2009 there were 60 elephants at the festival. The festival aims to raise awareness of Asian elephants, their important role in the history and culture of Laos, and to promote national tourism that can generate income and help conserve domestic elephants.

For many hundreds of years elephants have helped humans to explore and exploit wild landscapes in Lao PDR. Elephants were extensively used in logging operations to transport cut timber and supplies over terrain that is impassable for vehicles. As new technologies emerge logging elephants are less required for such operations and are increasingly used in the tourism sector. Even today elephants in Lao PDR continue to carry travelers through the forests providing a unique vantage point. Researchers, naturalists, and scientists also continue to use the elephant as a means of exploring and carrying equipment.

Wild elephants

Current distribution

Current wild population is estimated to be about 600 to 800 (National Elephant Workshop, at Department of Forestry, Lao PDR, June 2009). They are thought to exist in 23 isolated and fragmented populations (Figs. 2 & 3). A recent survey conducted by the Wildlife Conservation Society and WWF Laos Program, provided an estimate of 132 elephants in the largest population in Nakai Nam Theun (Table 1). The Nakai Nam Theun population is under threat because

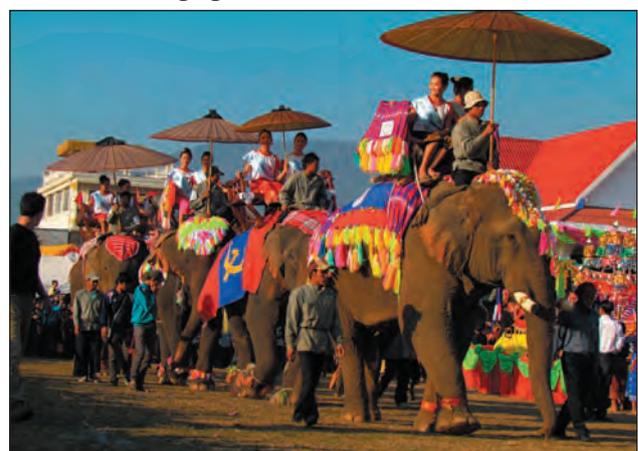


Figure 1. Elephant festival 2011 in Paklay.

Table 1. Estimated Asian elephant population sizes (N) in known elephant habitats, population trends, poaching intensity, HEC threat, and habitat conversion threat (HCT) in Lao PDR (WWF 2009).

No	Elephant habitat	Province	N	Population	Poaching	HEC	HCT
1	Say Phou Louag	Bolikhamxai	10	declining	low	yes	no
2	Ban Na	Bolikhamxai	30	declining	high	yes	yes
3	Boualapha	Khammoun	20	declining	no	yes	yes
5	Dong Amphan	Attapeu	30	stable	low	yes	yes
6	Dong Khanthung	Champasak	20	declining	low	yes	yes
7	Dong Phou Vieng	Savannakhet	25	declining	high	yes	no
9	Nonggouy	Bolikhamxai	5	declining	medium	yes	yes
10	Phou Khao Khouay	Bolikhamxai	15	declining	medium	yes	no
11	Nakai Nam Theun	Khammoune	132	stable	medium	yes	yes
12	Nam Et	Houa Phanh	10	declining	low	yes	yes
13	Nam Ha	Louang Namtha	20	declining	medium	yes	yes
14	Nam Kading	Bolikhamxai	15	stable	no	yes	no
15	Nam Pouy	Xayabouly	100	declining	high	yes	yes
16	Sanakham	Vientiane	10	declining	high	yes	yes
17	Nam Xam	Houa Phanh	5	declining	no	yes	no
18	Phou Dending	Phonsaly	50	declining	low	yes	no
19	Phou Loun	Attapeu	10	stable	no	yes	no
20	Phou Thun	Xe Kong	30	declining	medium	yes	yes
22	Phou Xan He	Savannakhet	10	stable	high	yes	no
23	Phou Xieng Thong	Salavannh	10	declining	no	no	no
24	Xe Ban Nouan	Salavannh	10	stable	no	no	no
25	Xe Pian	Champasak	5	declining	high	no	no
26	Xe Xap	Xe kong	30	stable	no	no	no

their best habitat will be inundated by the Nam Theun dam. Other populations in the country are believed to be smaller and most are isolated, although all remain potentially important for elephant conservation.

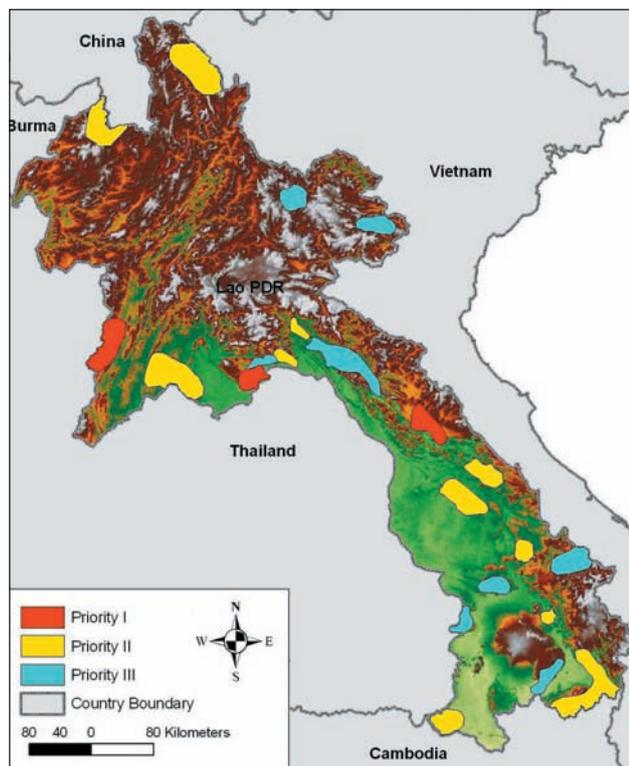


Figure 2. Priority elephant conservation landscapes.

Past distribution

Historically the Lao PDR was often described as ‘Lan Xang’ (Land of a Million Elephants). In the late 1980s, the elephant population was estimated to be between 2000 - 3000 animals (Venevongphet 1992). Previous surveys documented the presence of elephant populations in and around at least 23 established National Protected Areas, which cover 14% of the land area (Duckworth & Hedges 1998). A comprehensive review in 1998 indicated that healthy numbers of elephants also occurred outside of the protected area system (Duckworth & Hedges 1998).

Conservation status and threats

Conserving elephants is difficult in Lao PDR, because of the species’ fragmented distribution, large ranges, crop destruction tendencies, and their value to poachers. One main problem in the conservation of elephants is conserving the geographical extent and the habitat quality of their ranges. Nevertheless, their conservation is crucial because elephants directly or indirectly affect forest structure, regeneration, and consequently other animal and plant species (Sukumar 1989; Boonratana 1997). Much of suitable elephant

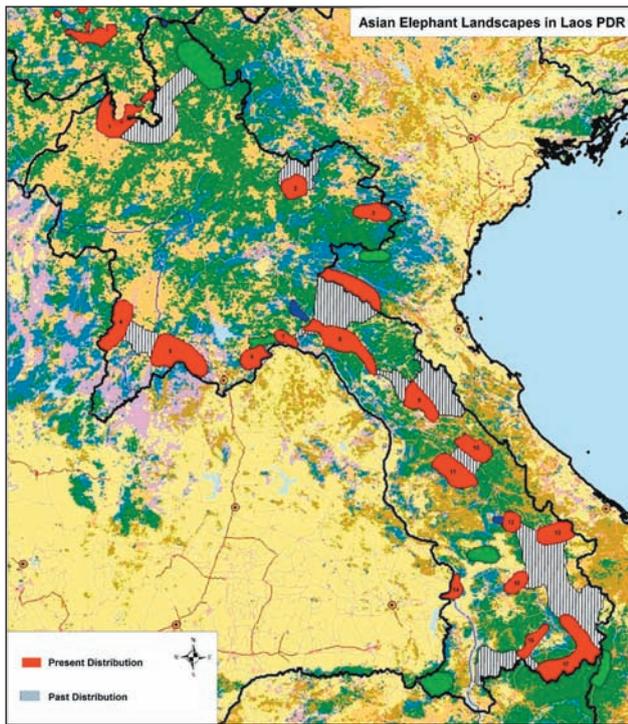


Figure 3. Past and present elephant distribution in Lao PDR.

habitat has been lost to widespread conversion of forested lands to both permanent and shifting cultivation (Santiapillai & Jackson 1990).

The legal status of elephants in Lao is dependent on the elephant's classification as "wild" or "domestic". Domesticated elephants are viewed as livestock and are managed by the national Department of Livestock and Fisheries. Wild elephant management is undertaken by the Department of Wildlife and Forestry.

The Lao PDR became signatory to the CITES convention in 2004, therefore trade and international sale of this globally endangered species is subject to regulation. The government of Lao PDR banned the capture of elephants from the wild for domestication in the late 1970s. In Lao PDR, Asian elephants are listed in the 'Restricted Species Category I' since 2001. According to the Regulation, 'Restricted Species' are rare and nearly extinct aquatic and wild life species of high value and of special importance and use for the society and the natural environment. By the same regulation, the restrictions imposed on the Restricted Species of Category I, with respect to the Asian elephant, include:

- Strictly prohibiting its removal, export and import, unless authorized by the Ministry of Agriculture and Forestry for the purpose of scientific research and experimentation, presentation as gifts to foreign guests and propagation.
- Strictly prohibiting hunting of this species in all seasons, unless authorized by the Ministry of Agriculture and Forestry for the purpose of scientific research and experimentation, and protection when such animals threaten humans and agriculture.
- Strictly prohibiting the rearing and possession of this species unless authorized by the Ministry of Agriculture and Forestry.
- Strictly prohibiting the purchase and trade of this species for the purpose of commercially supplying export-oriented processing plants and restaurants, guesthouses, pubs, hotels and markets.
- Strictly prohibiting the use of dangerous and destructive hunting methods such as using explosives, chemicals or poisons, electricity, automatic weapons, rifles, etc., which would impede the animals' reproduction.

Overall, very little quantitative information is available on elephant numbers, distribution, origins of human elephant conflict (HEC), the real costs of these conflicts, or economic impacts of HEC at local, district, provincial and national levels (FAO 2002). This makes it difficult to formulate government policies and develop management practices to deal with HEC situations.

The main threats to Asian elephants in Lao PDR, are poaching, habitat loss and HEC. Annually up to about 10 elephants are reported killed illegally from poaching and HEC (Fig.4). Where convicted, those responsible receive fines and jail terms. Poaching involves both local and transboundary poachers. Poaching of elephants is mainly for ivory but also for other products for trade, such as trunk, feet, tail and skin. Habitat loss results from conversion of forests to agricultural lands (permanent and shifting), logging, hydropower projects and infrastructure development.

Human-elephant conflict

Incidents of conflict between elephants and humans, such as crop raiding and deaths of humans or elephants, are on the increase in Lao PDR (FAO 2002). Crop damage is the most prevalent form of HEC in Lao PDR. Elephants commonly damage rice, both dry upland and wet irrigated rice. Other crops that are often targeted during elephant raids include banana, coconut, cassava, corn, sugarcane and pineapple. During HEC monitoring in the Nakai area between 2007 and 2009 a total of 17 different crop types were damaged and destroyed by elephants. Groups of elephants can destroy large areas of a single crop in a single night. One example of this was a raid during a single night in Nakai when a small group of elephants (most likely 2 individuals) destroyed 93 banana trees (WCS pers. comm.). Elephants may also cause damage to property such as fencing, field huts, and irrigation systems



Figure 4. Elephants illegally killed in (A) Nam Pouy National Protected Area, Xayaboury province in 2008 and (B) Attapeu in 2009 .



Figure 5. Property damaged by elephants.

(Fig. 5). In the Nakai area this type of damage is prevalent in the dry season. HEC may not directly impact livelihood but can still have a negative effect upon people's lives. An example of this is people not going to the forest to collect non-timber forest products or firewood because they are afraid of encountering elephants. During the major cropping season farmers may guard their rice fields due to the threat of elephant raids and as such forgo opportunities to participate in other livelihood or village activities. In Lao some farmers no longer plant crops such as banana and pineapple because these crops are frequently raided by elephants. These indirect costs of HEC are very difficult to monitor and quantify in term of monetary cost. Nonetheless, they do impact people's livelihoods.

HEC Mitigation and Elephant Management

HEC mitigation is mainly based on guarding fields and chasing elephants from crop fields using fire crackers (Fig. 6). Some NGOs such as WWF together with the Department of Forests are active in this field. They have conducted training workshops and awareness programs for villagers. Conservation organizations (eg. WWF, WCS) and the government also conduct surveys and collect data on elephant distribution, threats etc.

Captive elephants

Lao PDR has a strong tradition of domestication and use of elephants as work animals, both in the north (Sayaboury Province) and south



Figure 6. Guarding crops with fire crackers.

(Champassak Province). The captive population of elephants in Lao PDR has been declining over the last few decades. The number of domesticated elephants in Lao PDR in late 1980s was estimated to be 1332 animals (Venevongphet 1988) and in 2000 as 864 (Norachak 2002). The current population of captive elephants is estimated to be approximately 500 individuals (Elefant Asia, pers. comm.). However their use in the logging industry and in the few elephant tourist camps makes them very important for the rural Lao economy. The decline in captive elephant population can be explained by several factors which include high mortality rates, poaching, illegal exports, and very low birth rates. Domestic elephant populations mostly rely on wild elephants for breeding. There are few young animals and perhaps less than 100 reproductive females in the captive population (S. Duffillot & G. Maurer, pers. comm.). Most captive elephants are owned privately. Generally domestic elephants are worked hard and receive poor health care, resulting in poor condition. Elefant Asia, a French NGO working in Laos since 2002 is active in promoting better management and health care of elephants.

Although work availability and demand for elephants is declining, the situation has not reached the same critical state as in other countries (e.g. Thailand). There is still time to learn from experience elsewhere, and to initiate proactive forward planning regarding the future use and role of the domesticated elephant population, especially as regards deriving socio-economic benefits (e.g. elephant-based ecotourism) and linkages with conservation of wild elephants.

References

- Boonratana R (1997) *A Statewide Survey to Estimate the Distribution and Density of the Sumatran Rhinoceros, Asian Elephant and Banteng in Sabah, Malaysia*. WCS, New York.
- Duckworth JW & Hedges S (1998) *Tracking Tigers: A Review of the Status of Tiger, Asian Elephant, Gaur, and Banteng in Vietnam, Lao, Cambodia, and Yunnan (China), with Recommendations for Future Conservation Action*. WWF Indochina Programme, Hanoi, Vietnam.
- FAO (2002) *Human/Elephant Conflict Resolution in Lao PDR*. Technical report of the UNDP/FAO/GoL mission, Food and Agriculture Organization of the United Nations, Vientiane.
- Norachack B (2002) A regional overview of the need for registration of domesticated Asian elephants. In: *Giants on our Hands: Proceedings of the International Workshop on the Domesticated Asian Elephant*. Baker I & Kashio M (eds) FAO, Bangkok, Thailand. pp 8-14.
- Santiapillai C & Jackson P (1990) *The Asian Elephant: An Action Plan for its Conservation*. IUCN/SSC Asian Elephant Specialist Group, Gland.
- Sukumar R (1989) *The Asian Elephant: Ecology and Management*. Cambridge University Press, Cambridge, UK.
- Venevongphet (1988) The status of elephant in Lao PDR. In: *Draft Proc. of the IUCN/SSC Asian Elephant Specialist Group Meeting*. Santiapillai C (ed) pp 15.
- Venevongphet (1992) *Wildlife Trade in Laos*. Paper presented at the CITES Asia Regional Meeting. Chiang Mai, Thailand.
- WWF (2009) *Proceeding of National Elephant Workshop*. Organised by Department of Forestry, Lao PDR.