

Ecotourism as an Alternative to Upland Rubber Cultivation in the Nam Ha National Protected Area, Luang Namtha

by Steven Schipani

Tourism arrivals in Laos continue to rise, reaching over one million people in 2005. It seems that visitors are primarily interested in the country's natural and cultural attractions. There is concern now that forested lands used for community-based ecotourism may be earmarked for conversion to rubber plantations. Since 2002, both ecotourism and rubber cultivation have become important economic activities in Luang Namtha province. This paper reports on the financial benefits that ecotourism is generating around the Nam Ha NPA, arguing that it generates financial benefits for local people while protecting the environment and culture of Laos. Rubber may provide less profit and negatively affects national biodiversity. It is concluded that ecotourism activities and rubber plantations can both be conducted viably, but not in the same immediate areas.

In 2005, the Lao National Tourism Administration (LNTA) estimated that the tourism industry generated over US\$146 million, making it the country's top earner of foreign exchange. During the same year, after a decade of spectacular growth, the Lao PDR welcomed over one million visitors for the first time since the government opened the country to international tourists in the early 1990s (LNTA, 2005a). Bouttavong et al. (2002) estimate that culture and nature-based tourism make up over half of the total value of the entire Lao tourism industry. Realising that tourism is a major employer and foreign exchange earner stimulating economic activity across a wide range of sectors, the government has embraced tourism centred on the country's natural and cultural attractions as part of its strategy to reduce poverty and contribute to socio-economic development (Allcock, 2004). Within a wider regional context, tourism is one of 11 flagship programmes in the ten-year strategic framework of the Greater Mekong Subregion (GMS) Economic Cooperation Programme (ADB, 2005). This aims to use tourism to reduce poverty and contribute to the conservation of cultural and natural resources.

Laos, located at the heart of the GMS with an abundance of nature and culture-based tourist attractions, is well-placed to take advantage of the socio-economic benefits that tourism is capable of producing (Jamison, 2003; Goodwin et al, 1998). Despite rapid growth over the past decade, there is still a pressing need to improve rural and urban infrastructure, upgrade human resources, and strengthen inter-agency coordination to better plan for and sustainably manage the assets forming the basis of the Lao tourism industry. At the same time, ongoing socio-economic development plans reflect long-standing government policy to end shifting cultivation and promote agro-forestry, especially in the mountainous north where opportunities to pursue wet-rice cultivation are limited (GoL, 2003). One such scheme gaining momentum in Luang Namtha, a sparsely -populated province bordering Myanmar and China in the northwest, is to encourage communities to plant rubber (*Hevea brasiliensis*) trees. The idea is that villagers will produce rubber latex for export, either as sole proprietors or under various land-stewardship and revenue sharing agreements with Lao or international investors, many of whom are Chinese. In Luang Namtha rubber was pioneered in a small number of plots in 1994. The first latex tapping began in 2002, about the same time that the LNTA and UNESCO were implementing a pilot community-based ecotourism project in the Nam Ha National Protected Area (UNESCO, 1998).

*Ecotourism and rubber cultivation are now
competing with each other for forested land*

Since 2002, both ecotourism and rubber cultivation have gone on to become important economic activities in the province, and the community-based ecotourism programme developed by the Nam Ha Ecotourism Project was adopted as a national model after receiving several international awards (Lyttleton & Allcock, 2002). It could be though that these two activities are now competing with each other for the forested land available in the north of Laos. This paper reports on the financial benefits that ecotourism has generated for local stakeholders in and around the Nam Ha National Protected Area (Nam Ha NPA) from 2000 to 2006, in an effort to provide land-use planners with a broader perspective on an alternative livelihood activity (community-based ecotourism) already taking place on forested land in and around the Nam Ha NPA that may be earmarked for conversion to rubber plantations.

Other subjects that deserve further attention but are not explored in this paper are the accelerating loss of biodiversity due to conversion of natural forest to monocrop rubber, reduced harvests of non-timber forest products on cleared land, the reduction in size and diversity of the Namtha and Sing Valley watershed forests, soil erosion brought about by massive land clearance on steep slopes, and the social changes that this new agricultural production system is bringing about. For an in-depth analysis of these and other important issues related to rubber cultivation in Luang Namtha, see the *Para Rubber Study* commissioned by the GTZ Rural Development in Mountainous Areas Programme (Alton et al, 2005).

*Conversion of natural forest to
monocrop rubber is accelerating loss
of biodiversity*

The Nam Ha National Protected Area

The 222,400 square-hectare Nam Ha NPA falls entirely within Luang Namtha's borders, and is contiguous with the Shiang Yong Protected Area in Yunnan, China. Based on an analysis of LANDSAT imagery in 2000, 32% of the NPA contains unbroken dense, mixed deciduous forest and 47% is a mosaic of forest types of varying maturity (Hedemark & Vongsak, 2003). Thirty-seven large mammal species including Asian Tiger, Malayan Sun Bear, Clouded Leopard, Asian Elephants and Black-Cheeked Crested Gibbons have been confirmed in the NPA, in addition to over 288 species of birds (Tizard, 1997). At present there are 19 villages within the protected area's boundaries and an additional 85 villages just outside its borders. These rely heavily on the NPA's forests for food, fuel, medicine and cultural purposes (Nam Ha NPA & WCS, 2004). The majority of people living in and around the Nam Ha NPA are Ahka, Kmhmu, Lanten, and Hmong. Because of its significance in terms of habitat and diversity of species, the Nam Ha NPA has been designated an ASEAN Natural Heritage Site. The cultural and natural resources of the Nam Ha NPA are also the province's main tourist attractions, with over 70% of tourists stating that they are interested in guided tours into the protected area (Schipani & Marris, 2002).

Ecotourism in Luang Namtha

From 1998–2004 the number of annual tourist arrivals to Luang Namtha increased from 18,600 to 41,658 and during that period the province consistently attracted about 5-7% of the entire Lao tourism market. In 2005, Luang Namtha welcomed over 49,000 visitors (LNTA, 2005). Also rising is the average daily expenditure of tourists, which increased from \$9 per day in 2000 (Schipani & Pakasy, 2000) to \$16 per day in 2005 (LNTA, 2005b). There are a total of 50 accommodation establishments with 536 rooms and 18 restaurants spread over the province’s five districts, with most concentrated in Namtha and Muang Sing. Since the late 1990s, culture and nature-based tourism has established itself as one of the province’s top earners of foreign exchange and is a major employer. Based on 2005 arrival and expenditure data, it is estimated that tourism in Luang Namtha generated over \$3.15 million in foreign exchange that year.

Interviews with international tourists in Luang Namtha show that the most popular activities (table 1) are multi-day forest trekking, locally-guided visits to ethnic minority villages, and guided river and cave tours. This type of nature and culture-based tourism is referred to in this paper as ‘ecotourism’ because it meets a number of criteria outlined in the Lao National Ecotourism Strategy and Action Plan (LNTA, 2005c). Specifically, ecotourism in Luang Namtha (i) employs and generates financial benefits for local people; (ii) provides appropriate small-group settings for cultural exchange; (iii) minimises adverse cultural and environmental impacts; (iv) has a strong educational component; and (v) generates public funds for environmental and cultural protection.

Table 1: Main interests of international tourists in Luang Namtha 2004–2005

Activity	2004 (n = 210)	2005 (n = 170)
	% indicating an interest	
Forest Trekking	77	78
Visiting Ethnic Villages	74	75
Visiting Waterfalls	44	54
Rafting/Kayaking	35	43
Mountain Biking	29	42
Safaris	40	41
Visiting Caves	40	40
Seeing Cultural Shows	-	29
Camping	20	24
Bird Watching	21	19

To participate in most of the activities shown in table 1, tourists must book a tour through a local guide service or tour company. In 2005 there were four provincial operators and two national companies in Luang Namtha selling tours to areas in and around the Nam Ha NPA. Table 2 shows that these ecotourism-related businesses employ 138 local people as guides and office staff, a high percentage of whom are ethnic minorities. Typical pay for town-based guides is \$10 per day, and most guides report that they work anywhere from 1–20 days per month. Office staff are usually paid a base salary and sales commission, with earnings ranging from \$50–\$200 per month.

Table 2: Characteristics of tour operators in Luang Namtha, 2005

Operator Name	District	No. of Active Employees/Guides	Tour Types/no. of tours
1. Luang Namtha Guide Service	Namtha (est. 2000)*	59 male 15 female (34) ethnic minority	Trekking (5) River tour (1)
2. Luang Namtha Bike Tours	Namtha (est. 2003)	3 male 1 female (4) ethnic minority	Mountain bike tours in the province (3)
3. Muang Sing Guide Service	Sing (est. 2001)	24 male 3 female (23) ethnic minority	Trekking (5) Eco/cultural tours (1)
4. Vieng Poukha Guide Service	Vieng Poukha (est. 2003)	18 male 3 female (16) ethnic minority	Trekking (3) Cave tour (2)
5. Green Discovery	Namtha (est. 2000)	10 male 0 female (2) ethnic minority	Trekking (5) River rafting (3) Mountain Biking (5) Camping (1)
6. Vientiane Travel & Tour/Exotissimo	Sing (est. 2004)	2 male 0 female (0) ethnic minority	Trekking (1)
Total		138 (79 ethnic minority)	35 tours

*est. = established

The 35 tours regularly sold in Luang Namtha also generate income and employment for an estimated 30 villages that provide a variety of goods and services to tour groups. Villagers work as guides (over 100 village guides have been trained), provide food, beverages and lodging to tourists on overnight tours, sell handicrafts, provide some land- and river-transport to tour groups, and are paid by the Provincial Tourism Office and Nam Ha NPA Management Unit

to maintain trekking trails. From March 2001 to February 2006, a total of 2,574 trekking and river tours were sold in Namtha and Sing districts, generating \$293,049 in gross receipts and \$174,036 in financial benefits for local service providers. If the modest revenue generated in Vieng Phoukha is added to these totals, the gross provincial ecotourism tour-sales revenue for the industry's first five years rises to \$305,520.

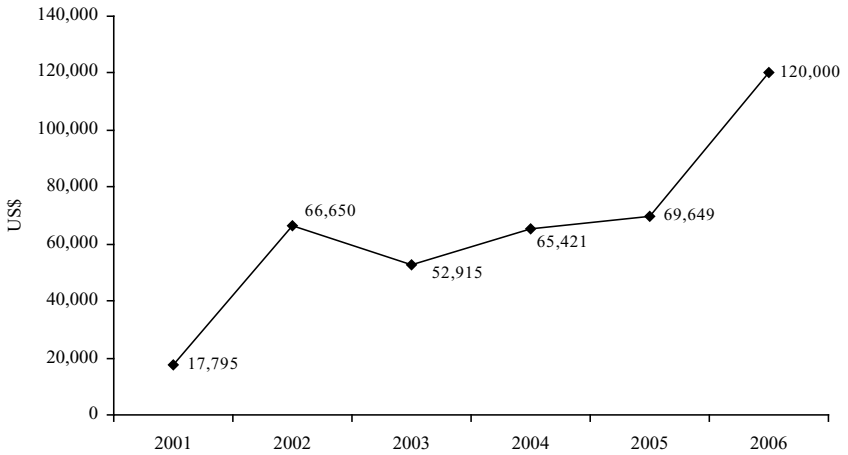
Table 3: Tour operator sales data and cash flow in Luang Namtha. 2001-2006

	No. of Tours	No. of Tourists	Sales Revenue (US\$)	Benefits to Local People	PTO taxes	NPA Permits	Provincial Taxes	Village Fund	Other Expenses
Luang Namtha Guide Service (2001-Feb 2006)	1,414	7,165	150,051	103,565	6,982	7,155	2,770	10,262	19,279
Green Discovery (2002-Feb 2006)	564	2,110	76,963	39,022	3,265	2,160	6,538	0	20,320
Muang Sing Ecoguides (2003-Feb 2006)	596	2,214	66,035	31,449	2,206	0	1,165	2,790	6,544
Total	2,574	11,489	293,049	174,036	12,453	9,315	10,473	13,052	46,143

PTO = Provincial Tourism Office

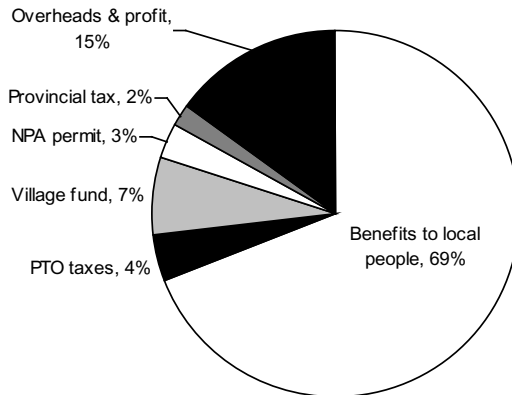
What is most encouraging is the success that is following the multi-million dollar investments made by the Lao government and donor agencies to develop the infrastructure and human resources needed to establish ecotourism and better manage the Nam Ha NPA. 2006 proved to be Luang Namtha's most lucrative year yet in terms of number of tours sold, public and private sector revenue generation and job creation at the village level. In the first two months of 2006, 979 tourists purchased 248 tours, generating sales revenue of \$33,060. Based on these figures, a conservative estimate of \$15,000 monthly sales turnover for the four months of the high-season, \$10,000 per month for the mid-season, and \$5,000 per month for the low-season months, will result in a total of \$120,000 in revenue for 2006 (figure 1).

Figure 1: Total annual ecotourism tour sales revenue in Luang Namtha, 2001-2006



Based on Jan-Feb 2006 sales data from four tour operators

Figure 2: Luang Namtha Guide Service revenue distribution, 2005

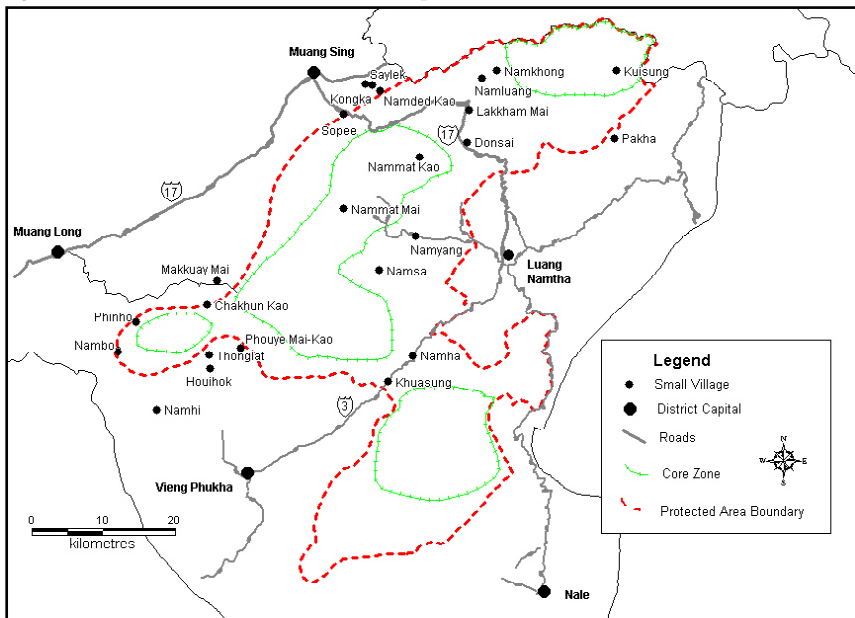


Rubber and Ecotourism in the Nam Ha NPA

By 2005, over 4,580 ha of degraded forest and fallow swidden fields had been cleared and replaced with small to intermediate rubber plantations in close proximity to a number of trekking routes in Muang Sing and Namtha district (Alton et al, 2005). Thus far clearance has mainly been limited to corridors along roads: Route 3, which runs north-south between

China and Thailand, Route 17A connecting Luang Namtha to Muang Sing, and also along most rural roads radiating from Muang Sing. A large concession was recently granted to a Sino-Lao consortium which plans to plant up to 3,000 ha on the southwestern periphery of the NPA in Vieng Phoukha (Vieng Phoukha Department of Forestry, 2006). Figure 3 shows that the encroachment of rubber into the Nam Ha NPA and its adjoining older-growth forests is presently most prominent along route 17A. Based on the trend of expansion from 2000–2005, there is a real threat that more rubber will be planted inside the protected area in the future.

Figure 3. Ecotourism areas and areas with rubber plantations in and around the Nam Ha NPA, 2005



Experience in Luang Namtha shows that once natural forest is cleared and an area converted to rubber plantations, it immediately loses its attractiveness to tourists seeking ecotourism activities, and existing tours must be relocated or suspended. For example, in 2005, following the removal of natural forest cover where trekking trails once existed, it was necessary to re-route two tours in Namtha, one in Muang Sing and one in Vieng Phoukha. In Muang Sing, land clearance has caused one formerly popular trekking trail to stop operating altogether.

Discussion and Recommendations

From a protected area management standpoint, the introduction of rubber into the NPA contradicts Prime Ministerial Decree 164 (GoL, 1993) and the 1996 Forestry Law (GoL, 1996), which state that the primary objectives of Lao Protected Areas are to conserve biodiversity, protect watersheds, maintain ecological stability and protect scenic beauty for leisure and research. Establishment of monocrop rubber plantations in protected areas meets none of these objectives. Ecotourism as it is presently practiced in Luang Namtha arguably meets all of them.

*Ecotourism is generating significant
levels of foreign exchange without
clearing large tracts of land*

Understandably, land-use planners and local villagers in Luang Namtha are actively looking for new income generating activities and ways to diversify the local economy, especially by using what is commonly perceived as ‘unproductive land’, i.e. degraded forest and fallow swiddens. While planting rubber can be a viable alternative income generating activity for some families - as has been demonstrated in Had Yao Village (Alton et al, 2005) - so is community-based ecotourism in close to 30 villages. Ecotourism in Luang Namtha is generating immediate and significant levels of foreign exchange without clearing large tracts of land. Consequently, through indigenous Lao business ventures, economically important non-timber forest products are preserved and there is no loss of local land stewardship or ecological services.

Alton et al. (2005) have calculated that the total revenues or benefits of planting one hectare of rubber trees in Luang Namtha, undiscounted for a thirty-year period, is \$23,148. Depending upon the level of fertilisers and other inputs used, total variable costs range from \$3,471 to \$6,303, and the net returns range from \$18,204 to \$19,677, thus placing the annual net value of the venture at \$617 per hectare. How does the value of the present provincial investment in rubber (4,580 ha) compare to the value of the provincial tourism industry? Based on the above

assumptions, the province's 4,580 hectares of rubber will produce an annual income stream of \$2,825,860, which is about 10% lower than the \$3,152,512 generated by the provincial tourism industry in 2005. Most rubber earnings will not come on line for a number of years, while ecotourism is generating revenue today. What about prospects for future earnings growth in the ecotourism sector? Assuming that the province can sustain growth in tourist arrivals on a par with 1998–2005 (when the number increased from 18,600 to 49,258), by 2013, when the majority of rubber planted in 2004–2005 will begin to yield latex, the province can expect to receive 79,916 tourists. Using conservative expectations that daily expenditures will rise to \$27.2 per day (based on 2000–2005 trend data showing a \$1.4 per year rise in daily expenditures) with the average length of stay increasing by only one day to five days, Luang Namtha's estimated gross revenue from tourism will be \$10,868,576 in 2013. This is about 3.8 times higher than the province will earn from 4,580 ha of rubber.

*Increasing the amount of land under rubber
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ecotourism industry and result in a painful
blow to the local economy*

Based on 2004 net-value calculations by Alton et al, for rubber to approach the earnings that tourism will generate, about 17,615 ha of rubber are needed, along with 13,550 labourers to maintain the plantations. Increasing the amount of land under rubber cultivation to 17,615 ha would be especially troublesome if it means further encroachment into the Nam Ha NPA. Doing so would probably devastate the provincial ecotourism industry and result in an immediate and painful blow to the local economy. Moreover, since both the number of annual tourism arrivals and latex export prices are vulnerable to forces largely outside the control of villagers in Luang Namtha, it is prudent to minimise controllable internal risk factors for both industries. For ecotourism, this means that the resources which support it i.e. natural forest cover, wildlife and ethnic minority culture, need adequate protection. For rubber, it is critical that the provincial authorities ensure that technical resources and extension services,

labour, land tenure and equitable contractual agreements are in place to make certain rubber will produce the income streams envisioned by farmers and investors.

Conclusion

Experience from Luang Namtha shows that ecotourism activities and rubber plantations can be conducted viably in the same province, but not in the same immediate areas. Designating which areas will be converted to rubber plantations, and which areas will be set aside for ecotourism activities is therefore one priority for provincial planners. Since the forests of the Nam Ha NPA already provide ecotourism income, food, medicine, and ecological services, and are an irreplaceable repository of biodiversity, it is strongly recommended that the authorities in Luang Namtha formulate and enforce a long-term zoning plan that protects the profitable ecotourism industry and limits further introduction of rubber into the Nam Ha NPA. If the current rate of land clearance and rubber encroachment into the Nam Ha NPA continues to go unchecked, the province will not be able to sustain its profitable and growing ecotourism sector, and the thousands of people that rely on the NPA's diverse forests for ecotourism, food and ecological services may soon find themselves bankrupted by Luang Namtha's dubious 'rubber boom'.

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