

Muong Nhe Nature Reserve

Alternative site name(s)

Muong Nhe-Muong Cha, Muong Te

Province(s)

Lai Chau

Status

Decreed

Management board established

Yes

Latitude

21°50' - 22°35'N

Longitude

102°10' - 102°58'E

Bio-unit

10b - Northern Indochina



Conservation status

The first attempt to establish a protected area at Muong Nhe was made on 8 July 1976, when Decision No. 6/QD-TKNN of Lai Chau Provincial People's Committee decreed the establishment of a wildlife reserve at the site (Anon. 1993). Subsequently, Muong Nhe was included on Decision No. 194/CT of the Chairman of the Council of Ministers, dated 9 August 1986, which decreed the establishment of a 182,000 ha nature reserve (MARD 1997).

In 1991, a field survey of Muong Nhe Nature Reserve was conducted by WWF and the former Ministry of Forestry. This field survey led to the preparation of a feasibility study, which proposed establishing a nature reserve of around 300,000 ha (Cox *et al.* 1992). In 1993, FIPI prepared an investment plan for Muong Nhe Nature Reserve. This investment plan gave the area of the nature reserve as 396,176 ha, comprising a strict protection area of 109,625 ha, a forest rehabilitation area of 268,566 ha and an agriculture and residential area of 17,985 ha (Anon. 1993). On 24 June 1993, this investment plan was approved by Lai Chau Provincial People's Committee, who then submitted the investment plan to the former National Planning Committee and the former Ministry of Forestry for approval. However, because of large demographic changes in the Muong

Nhe area, the investment plan was not approved at the ministerial level. Instead, the former Ministry of Forestry and the Ministry of Planning and Investment requested the provincial people's committee to prepare a revised investment plan. Consequently, a second investment plan was prepared in 1996, which recommended establishing a 310,216 ha nature reserve, comprising a strict protection area of 173,025 ha and a forest rehabilitation area of 137,191 ha (Anon. 1996).

The second investment plan was approved by Lai Chau Provincial People's Committee, by Official Letter No. 8/TT/UB, dated 18 December 1996, and by MARD, by Official Letter No. 1262/NN-KHTD, dated 19 April 1997 (Anon. 1999). Despite the approval of the investment plan by MARD, the release of funds was not approved by the Ministry of Planning and Investment (Le Trong Trai pers. comm.). Because the funds requested by the second investment plan were not released, Lai Chau Provincial FPD prepared a third investment plan, based upon the second one, which gave the area of the nature reserve as 172,480 ha (Anon. 1999). However, this investment plan has not been approved at any level (Nguyen Duc Tu pers. comm.).

At the present time, all forest land within the proposed boundary of Muong Nhe Nature Reserve is under the management of Muong Lay and Muong Te District FPDs. In the last decade, there have been

major demographic changes in and around the nature reserve, including the settlement of large numbers of migrants, with the result that forest cover has decreased and remaining forest areas are severely fragmented. During their review of Vietnam's Special-use Forests system, BirdLife International and FIPI calculated that establishment of Muong Nhe Nature Reserve with an area of 314,000 ha would result in the inclusion of over 250,000 ha of agricultural land, scrub and non-natural grassland within the national Special-use Forests system. Consequently, they recommended seeking ways to reduce the area of non-forest through redefinition of the nature reserve's boundary (Wege *et al.* 1999).

In response to this recommendation, BirdLife and FIPI conducted a rapid field survey of Muong Nhe in November 2000. Based on the results of this rapid field survey, the two organisations recommended a significant reduction in the area of the nature reserve (Nguyen Duc Tu *et al.* in prep.). Consequently, on the proposed list of Special-use Forests currently being prepared by FPD and FIPI, the area of Muong Nhe Nature Reserve is given as only 50,000 ha (FPD and FIPI in prep.).

Topography and hydrology

Muong Nhe Nature Reserve is located in Muong Te and Muong Lay districts in the extreme north-west of Vietnam. According to the second investment plan, the nature reserve is bounded by the Black River in the east, the Ba Cha region of Muong Lay district in the south, the international border with Laos in the west and the international border with China in the north (Anon. 1996). The topography of Muong Nhe Nature Reserve is dominated by medium-high mountains. The average height of these mountains is around 1,200 m but there are several peaks above 1,800 m, and the highest point, Mount Phu Nam Man, reaches 2,124 m.

Biodiversity value

According to the third investment plan, Muong Nhe Nature Reserve supports only 47,400 ha of forest, equivalent to 15% of the total area of the nature reserve. This figure comprises 9,920 ha of lowland evergreen forest (distributed at elevations below 800 m), 19,850 ha of lower montane evergreen forest

(distributed at elevations between 800 and 1,800 m), 1,705 ha of upper montane evergreen forest (distributed at elevations above 1,800 m) and 15,925 ha of bamboo. The remaining area of the nature reserve comprises 204,201 ha of grassland, and 43,980 ha of shifting cultivation and scrub (Anon. 1999). The dominant vegetation type at Muong Nhe Nature Reserve is, therefore, grassland, which accounts for 66% of the total area. This vegetation type is dominated by *Imperata cylindrica*, *Themeda gigantea*, *Thysanolaena maxima*, *Saccharum spontaneum* and *Erianthus arundinaceus* (Nguyen Duc Tu *et al.* in prep.).

Before the 1990s, Muong Nhe was considered to be an important area for the conservation of large mammals. For instance, Cox *et al.* (1992) estimated that there were more than 200 Asian Elephant *Elephas maximus* at Muong Nhe in the early 1970s. However, following the border war with China in 1979, automatic weapons became more widely available in the area, and the population sizes of most large mammal species declined. By the time of the WWF/Ministry of Forestry survey in 1991, large mammals were already scarce at Muong Nhe: Tiger *Panthera tigris* was described as "rare", Gaur *Bos gaurus* was described as "possibly facing extinction" and Asian Elephant was described as "almost extinct" (Cox *et al.* 1992).

Based on the results of the BirdLife/FIPI rapid field survey, there is no evidence for the continued occurrence of Asian Elephant at Muong Nhe, while other large mammals only survive in small, isolated groups, as a result of habitat fragmentation and hunting pressure.

In addition, the BirdLife/FIPI team received reports from local people that indicate that White-cheeked Gibbon *Hylobates leucogenys* may still occur in the nature reserve (Nguyen Duc Tu *et al.* in prep.).

The feasibility study prepared by WWF and the former Ministry of Forestry contains a provisional list of 222 bird species (Cox *et al.* 1992), while the first and second investment plans report that 270 bird species occur at Muong Nhe Nature Reserve (Anon. 1993, 1996). However, as it is unclear whether these data were collected by field survey, compiled from past reports or predicted based on known distributions, few

conclusions can be drawn from these figures. A more reliable source of information on the avifauna of Muong Nhe is the field survey conducted by Frontier-Vietnam in 1997. This field survey recorded 158 bird species in the nature reserve and the area immediately to the south, including one globally threatened species: Blyth's Kingfisher *Alcedo hercules* (Hill *et al.* 1997). In 2000, a second globally threatened bird species, Short-tailed Parrotbill *Paradoxornis davidianus*, was recorded at Muong Nhe by Nguyen Duc Tu *et al.* (in prep.).

Conservation issues

To date, a management board for Muong Nhe Nature Reserve has not been established, the nature reserve boundary has not been clearly demarcated, and no conservation awareness activities have been carried out. Almost none of the people who live inside the nature reserve are aware of the existence of the protected area, as a result of which violations of nature reserve regulations are widespread and regular (Nguyen Duc Tu *et al.* in prep.).

The natural habitat at Muong Nhe Nature Reserve has been severely fragmented and reduced in area, principally as a result of shifting cultivation and associated fire. The remaining areas of natural habitat are under increasing human pressure, because of natural population growth and in-migration (Nguyen Duc Tu pers. comm.).

Because of the remoteness of the area, no commercial logging is taking place inside the nature reserve. However, all housing materials used by the inhabitants of the nature reserve come from the forest. Exploitation of these materials reportedly takes place without any control by the commune authorities or the FPD. Other forest products that are exploited by local people include fuelwood, rattans, bamboo shoots and honey. Grazing of livestock is an additional problem, as it impedes the natural process of forest regeneration (Nguyen Duc Tu pers. comm.).

One of the biggest threats to biodiversity at Muong Nhe Nature Reserve is hunting. Information from local people indicates that Asian Elephant had largely been eradicated from the area by 1990, and that, by 2000, Gaur and Tiger had met with the same fate. Although remnant populations of the latter two species are

reported to survive, it is very unlikely that hunting activities will be curtailed rapidly enough to prevent their local extinction. Sambar *Cervus unicolor* is another species that has become increasingly rare, and the only ungulates which remain relatively common are Indian Muntjac *Muntiacus muntjak* and Wild Boar *Sus scrofa*. Almost all households in the nature reserve keep firearms, and many children possess crossbows for hunting small mammals and birds. With the current high levels of in-migration, levels of hunting are unlikely to decrease in the near future (Nguyen Duc Tu *et al.* in prep.).

Other documented values

Remaining forest areas in the nature reserve have an important role in protecting the water resources of local communities and the watershed of the Black River.

Related projects

The national 135 Programme is being implemented in the area. A number of infrastructure development projects are being funded under this programme, including the construction of schools, health centres and irrigation systems. However, the programme budget of only VND 400,000,000 (US\$29,000) per commune is too low in comparison with the infrastructure requirements of the area.

Between 2000 and 2009, a project entitled *Development of the Muong Cha Economic and Defense Zone in Lai Chau Province* will be implemented in Cha Nua, Cha Cang and Si Pha Phin communes, Muong Lay district, and Muong Nhe and Muong Toong communes, Muong Te district. This project will also focus on infrastructure development, including the construction of a road from Muong Te town to Muong Nhe commune in the heart of the nature reserve, and another road linking Muong Toong and Muong Nhe communes. These roads are an important prerequisite for economic development in the area but are also likely to increase the human pressure on the natural resources of Muong Nhe Nature Reserve.

Literature sources

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