

Hoang Lien Son-Sa Pa Nature Reserve

Alternative site name(s)

Day Hoang Lien; Hoang Lien; Hoang Lien-Sa Pa; Hoang Lien Son; Nui Hoang Lien; Sa Pa

Province(s)

Lao Cai

Status

Decreed

Management board established

Yes

Latitude

22°08' - 22°23'N

Longitude

103°46' - 104°00'E

Bio-unit

10b - Northern Indochina



Conservation status

Hoang Lien Son-Sa Pa Nature Reserve is located in San Sa Ho, Lao Chai, Ta Van and Ban Ho communes, Sa Pa district, Lao Cai province. Hoang Lien Son-Sa Pa Nature Reserve (then called Nui Hoang Lien) was included on Decision No. 194/CT of the Chairman of the Council of Ministers, dated 9 August 1986 (MARD 1997). This decision decreed the establishment of a 5,000 ha nature reserve for the protection of "high-mountain forests, mono-*Fokienia hodginsii* stands and valuable medicinal herbs" (Cao Van Sung 1995). An investment plan, prepared in 1993, defined a 29,845 ha nature reserve in Sa Pa and Than Uyen districts (Anon. 1993). In 1997, the area in Than Uyen district was placed under the management of the Song Da Watershed Protection Forest management board. An investment plan for the revised nature reserve was prepared in 1997, which gave the area of the nature reserve as 19,991 ha (Nguyen Quang Hung *et al.* 1997). The boundary of the nature reserve was revised again in 1998 to include areas in Ban Ho commune, and the area of the nature reserve calculated from a digitised version of the current boundary is 24,658 ha (Tordoff *et al.* 1999).

Topography and hydrology

Hoang Lien Son-Sa Pa Nature Reserve is located in the Hoang Lien mountains, which are an extension of the Ailao Shan mountains in China, the south-eastern extent of the Himalayan chain. The nature reserve is located on the north-east flank of these mountains and includes Vietnam's highest peak, Mount Fansipan (3,143 m). The lowest point is 380 m but most of the nature reserve lies above 1,000 m. The flanks of the mountains are very steep. Between Mount Fansipan and Sa Pa town, lies the Muong Hoa valley, which becomes wider towards the east of the nature reserve (Tordoff *et al.* 1999).

Hoang Lien Son-Sa Pa Nature Reserve is drained by the Muong Hoa and Ta Trung Ho rivers, which feed the Nam Po river and, finally, the Red River. Forest in the nature reserve has an essential role in water catchment protection, particularly forest at high elevations, which captures water by condensation and contributes it to stream flow (Tordoff *et al.* 1999).

Biodiversity value

Hoang Lien Son-Sa Pa Nature Reserve contains 11,071 ha of natural forest (Tordoff *et al.* 1999). Variations in altitude, topography, hydrology and micro-climate within the nature reserve have produced

a wide variety of habitat types, which can be broadly classified into scrub, savanna, submontane dry evergreen forest, montane deciduous forest, sub-alpine forest and dwarf bamboo (Tordoff *et al.* 1999). Plant species richness (2,024 known species of vascular plants) and levels of endemism (one quarter of Vietnam's endemic species) are both very high relative to other protected areas in Vietnam (Nguyen Nghia Thin and Nguyen Thi Thoi 1998). For these reasons, the site was selected as a Centre for Plant Diversity by the IUCN Plant Conservation Programme (Davis *et al.* eds. 1995).

Mammal diversity and abundance are relatively low as a result of intensive hunting pressure. However, Hoang Lien Son-Sa Pa Nature Reserve supports a high diversity of other animal groups. Three hundred and forty seven bird species have been recorded in and around the nature reserve, including four restricted-range species and 49 species that are restricted in Vietnam to north-west Tonkin. The nature reserve protects approximately half of Vietnam's known amphibian species, including several species that are endemic to the area. Invertebrate diversity is also very high, and many species of invertebrate discovered at the site are known from nowhere else in the world (Tordoff *et al.* 1999).

In the *Biodiversity Action Plan for Vietnam*, Hoang Lien Son-Sa Pa Nature Reserve is rated "A" for biodiversity value (the highest rating) (Government of SRV/GEF 1994).

Conservation issues

Over-exploitation of natural resources, together with clearance of land for cultivation and by accidental fire, is rapidly destroying the natural vegetation cover of Hoang Lien Son-Sa Pa Nature Reserve. Already, natural forest covers less than half the area of the nature reserve, and continued human disturbance threatens those areas that remain. Where forest has been cleared or burnt, soil fertility has decreased, and it will be a long time before the forest regenerates (Tordoff *et al.* 1999).

Cardamom *Amomum aromaticum* cultivation, timber extraction and the collection of non-timber forest products are leading to deterioration in forest quality and changes in species composition. However,

the long-term effects of these activities will be less severe as, firstly, some canopy cover remains, and, secondly, nutrients are not lost through erosion. If these activities cease, the forest may be able to recover relatively rapidly (Tordoff *et al.* 1999).

The nature reserve has been established and a management board has been formed. A headquarters building has been built, the boundaries of the nature reserve have been demarcated, and signboards have been posted displaying nature reserve regulations. The staff of the nature reserve are currently implementing fire-prevention activities. They are also implementing forest management schemes to replant bare forest land, regenerate degraded forest and protect natural forest. Local people are being involved in the implementation of these schemes to a greater or lesser degree. However, beyond fire prevention and social forestry, the nature reserve staff do not have any resources to enforce nature reserve regulations, although a request for funding for this and other activities has been submitted to central government and is awaiting a response (Tordoff *et al.* 1999).

Other documented values

Hoang Lien Son-Sa Pa Nature Reserve contains many species of plants with proven uses as medicine, ornament, food or timber. The nature reserve is already utilized as a source of medicinal plants for research and cultivation, but the full potential of the site has yet to be realized. The nature reserve is an important source of building materials, fuel, food, medicine and income for local people, many of whom are heavily dependent on these resources. The nature reserve plays an important role in watershed protection, both for local people (for whom water availability is a limiting factor in agricultural productivity) and the Red River system as a whole. The natural resources and scenic beauty of the area have great potential for the development of tourism, which has already begun, with organized tours to climb Mount Fansipan (Tordoff *et al.* 1999).

Related projects

In 1997-1998, Frontier-Vietnam and the Institute of Ecology and Biological Resources conducted a one-year biodiversity survey of the nature reserve and made

recommendations for its conservation (Tordoff *et al.* 1999).

Since 1998, Frontier-Vietnam have been implementing an environmental education programme in Sa Pa district, focused on the four communes within the nature reserve.

Sa Pa district was selected as a case-study for the *IUCN Capacity Building for Sustainable Tourism Initiatives Project*. This project included an investigation of the potential for eco-tourism development in the area.

Oxfam GB are currently implementing education and agriculture programmes in Sa Pa district.

Frontier-Vietnam, are currently implementing a project to investigate the potential of medicinal plant cultivation as an alternative source of income for ethnic minority people in and around Hoang Lien Son-Sa Pa Nature Reserve.

Ethos, a UK-based NGO, are currently implementing a project to provide education and vocational training to ethnic minority people in Sa Pa district.

CraftLink are currently implementing a project to promote handicraft production by ethnic minority people in Sa Pa district.

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