

Kalon-Song Mao Nature Reserve

Alternative site name(s)

None

Province(s)

Binh Thuan

Status

Decreed

Management board established

No

Latitude

11°20' - 11°32'N

Longitude

108°16' - 108°34'E

Bio-unit

05b - South Annam



Conservation status

Kalon Song Mao 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 20,000 ha nature reserve (MARD 1997). To date, however, an investment plan for the nature reserve has not been prepared and a management board has not been established (Le Trong Trai and Tran Hieu Minh 2000). Kalon Song Mao was not included on the 2010 list (FPD 1998), the approval of which would have resulted in the removal of the site from the national system of Special-use Forests. However, following their analysis of Vietnam's protected areas network, BirdLife and FIPI recommended that the status of Kalon Song Mao be reassessed prior to any decision about degazettement being made (Wege *et al.* 1999).

Consequently, in December 1999, BirdLife and FIPI conducted a rapid field survey of Kalon Song Mao, which resulted in the recommendation that the site should be retained within the national Special-use Forests network with an area of around 40,000 ha (Le Trong Trai and Tran Hieu Minh 2000).

Topography and hydrology

Kalon Song Mao Nature Reserve is located in Phan Son and Phan Lam communes, Bac Binh district. The

nature reserve is situated in the transition zone between the coastal plain of south-central Vietnam and the Central Highlands: over a 50 km transect running from south-east to north-west, altitudes increase from 20 to over 1,000 m. The highest point in the nature reserve is 1,136 m. The nature reserve is drained by the Luy and Ca Giay rivers and their tributaries.

Biodiversity value

The principal vegetation types at the nature reserve are evergreen forest, semi-deciduous forest and deciduous forest. Evergreen forest is distributed on ridges and mountainsides, from middle elevations up to the highest peaks within the nature reserve. This forest type is characterised by a 25-30 metre-high closed canopy dominated by species in the Fabaceae, Fagaceae, Dipterocarpaceae and Sapindaceae families. Semi-deciduous forest occurs at lower elevations, mainly from 200 to 500 m, along stream and river valleys. The dominant tree species are *Lagerstroemia calyculata*, *Cratoxylon* sp. and *Peltophorum pterocarpum*. Deciduous forest is a derived formation, which is mainly developed from semi-deciduous forest following exploitation or shifting cultivation. The dominant tree species are *Dipterocarpus tuberculatus*, *D. obtusifolius* and *D. intricatus*. Secondary vegetation types at the Kalon Song Mao reserve include bamboo forest, grassland, scrub and scrub with scattered trees.

Common species include *Imperata cylindrica*, *Saccharum* sp., *Spondias* sp., *Cratoxylon* sp., *Aporosa* sp., *Lagerstroemia calyculata* and *Phyllanthus emblica*. During the BirdLife/FIPI survey, several timber species of high economic value were recorded, including *Shorea cochinchinensis*, *Azelia xylocarpa*, *Dalbergia cochinchinensis*, *D.* sp., *Pterocarpus macrocarpus* and *Anisoptera cochinchinensis* (Le Trong Trai and Tran Hieu Minh 2000).

Local people interviewed during the BirdLife/FIPI survey reported that, before 1986, large mammals, such as Elephant *Elephas maximus* and Gaur *Bos gaurus*, were still abundant in the area. Gaur were reportedly still present in 1988-1989 but the species was said to have almost disappeared by 1992. Animal species reported to be still present in the area include Giant Muntjac *Megamuntiacus vuquangensis*, Indian Muntjac *Muntiacus muntjak*, Sambar *Cervus unicolor*, Buff-cheeked Gibbon *Hylobates gabriellae*, Douc Langur *Pygathrix nemaeus* (probably Black-shanked Douc Langur *P. n. nigripes*), Silvered Leaf Monkey *Semnopithecus cristatus*, Bear Macaque *Macaca arctoides*, Clouded Leopard *Pardofelis nebulosa*, Asiatic Black Bear *Ursus thibetanus*, Sun Bear *U. malayanus* and Dhole *Cuon alpinus* (Le Trong Trai and Tran Hieu Minh 2000).

During the BirdLife/FIPI survey, local people reported the occurrence of several bird species of conservation importance, including Green Peafowl *Pavo muticus*, Silver Pheasant *Lophura nycthemera*, Siamese Fireback *L. diardi*, Great Hornbill *Buceros bicornis* and Oriental Pied Hornbill *Anthraceros albirostris* (Le Trong Trai and Tran Hieu Minh 2000). Further survey work is required, however, to confirm the presence of mammal and bird species reported to occur at the site.

Conservation issues

Between 1975 and 1982, the Kalon Song Mao area was under forest enterprise management. After 1982, management responsibility for the area was transferred to the district FPD. In 1993, timber and other forest products began to be massively exploited in the Kalon Song Mao area, with a particular focus on high-value timber species, such as *Dalbergia cochinchinensis*, although the level of activity had declined significantly

by 1996. Despite the decline in commercial timber extraction, small-scale exploitation of forest products, such as timber, fuelwood and pine resin, by local people still continues at Kalon Song Mao. Other causes of forest degradation and loss at Kalon Song Mao are clearance for agriculture and forest fires, the latter of which are particularly frequent in semi-deciduous and deciduous forest during the dry season (Le Trong Trai and Tran Hieu Minh 2000).

During the 1970s, there were some populations of Elephant and Gaur at Kalon Song Mao but these species have since been eradicated from the area. The main causes of the loss of these species, and declines in the populations of other animal species, are loss of suitable habitat and unsustainable levels of hunting. Although many local people continue to hunt animals for food and for sale, this activity is not a major source of income because animal species with high economic value are becoming scarcer and there is no organised wild animal trade in the area (Le Trong Trai and Tran Hieu Minh 2000).

Other documented values

The forest lying within the nature reserve and surrounding areas has an important role in protecting the watershed of the Ca Giay irrigation reservoir, which provides water for the thousands of hectares of wet-rice cultivation in the lower Mao river basin. This forest also protects the watershed of a planned hydroelectric scheme on the Luy river.

Related projects

Around half the forest area at Kalon Song Mao is under the management of Ca Giay Watershed Protection Forest, the management board of which is under the control of Binh Thuan Provincial Forest Development Department. The budget for implementing activities at Ca Giay Watershed Protection Forest comes from the national 661 Programme (the Five Million Hectare Reforestation Programme), which replaced the 327 Programme (the Programme for Reforestation of Unused Lands and Bare Hills) in 1999. Funds from the 661 Programme are used for reforestation, forest protection contracts, fixed agriculture and settlement programmes, clean

water, irrigation systems and poverty alleviation activities (Le Trong Trai and Tran Hieu Minh 2000).

The Committee for Ethnic Minorities and Mountainous Areas is currently implementing a project in Phan Son commune, in collaboration with Bac Binh District FPD. The project started in 1994 by establishing a forest protection group with 12 members from the commune. The group acts under the guidance of the district FPD, and each member gets paid VND 250,000 per month (Le Trong Trai and Tran Hieu Minh 2000).

Literature sources

Le Trong Trai and Tran Hieu Minh (2000) [A rapid field survey of Kalon Song Mao Nature Reserve \(Binh Thuan province\) and Lo Go-Sa Mat Nature Reserve \(Tay Ninh province\), Vietnam](#). Hanoi: BirdLife International Vietnam Programme and the Forest Inventory and Planning Institute. In English and Vietnamese.