

# Kalon-Song Mao Nature Reserve

## Alternative site name(s)

None

## Province(s)

Binh Thuan

## Area

20,000 ha

## Coordinates

11°20' - 11°32'N, 108°16' - 108°34'E

## Agro-ecological zone

South-eastern

## Decreed by government

Yes

## Management board established

No

## Investment plan prepared

No

## VCF eligibility criteria met

A, B

## Social screening criteria met

None

## Conservation needs assessment prepared

No

## Operational management plan prepared

No

## Tracking tool completed

No

## Map available

Yes

## Management history

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). In December 1999, BirdLife International and the Forest Inventory and Planning Institute (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).

To date, however, an investment plan for the nature reserve has not been prepared and a management board has not been established. Moreover, Kalon-Song Mao is not included on a list of Special-use Forests to be established by the year 2010, prepared by the FPD of MARD (FPD 2003).

## Topography and hydrology

Kalon-Song Mao Nature Reserve is located in Phan Son and Phan Lam communes, Bac Binh district, Binh Thuan province. The nature reserve is situated in the transition zone between the coastal plain of south-central Vietnam and the southern Annamite mountains: 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 values

The principal vegetation types at the nature reserve are evergreen forest, semi-evergreen 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-evergreen 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-evergreen 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 Nature 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*, *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 Asian 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 Large-antlered Muntjac *Muntiacus vuquangensis*, Red Muntjac *M. muntjak*, Sambar *Cervus unicolor*, Yellow-cheeked Crested Gibbon *Hylobates gabriellae*, a species of douc (probably Black-shanked Douc *Pygathrix nigripes*), Silvered Leaf Monkey *Trachypithecus cristatus*, Bear Macaque *Macaca arctoides*, Clouded Leopard *Pardofelis nebulosa*, Asian 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 the globally vulnerable Green Peafowl *Pavo muticus*, and the globally near-threatened Siamese Fireback *Lophura diardi* and Great Hornbill *Buceros bicornis* (Le Trong Trai and Tran Hieu Minh 2000). Further survey work is, however, required 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*. However, the level of commercial timber extraction 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 the site are clearance for agriculture, and forest fires, the latter of which are particularly frequent

in semi-evergreen and deciduous forest during the dry season (Le Trong Trai and Tran Hieu Minh 2000).

During the 1970s, there were populations of Asian 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 catchment 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. This group acts under the guidance of the district FPD (Le Trong Trai and Tran Hieu Minh 2000).

Inventory and Planning Institute. In English and Vietnamese.

## Conservation needs assessment

A conservation needs assessment has not been conducted for the site.

## Operational management plan

An operational management plan has not been prepared for the site.

## Eligibility against VCF criteria

Kalon-Song Mao is currently ineligible for VCF support because it is not under appropriate conservation management.

Criterion	Eligibility
A <sub>I</sub>	SA6 - Di Linh Corridor
A <sub>II</sub>	
B <sub>I</sub>	Decision No. 194/CT, dated 09/08/86
B <sub>II</sub>	Nature Reserve
B <sub>III</sub>	Under provincial management
C <sub>I</sub>	
C <sub>II</sub>	

## Social screening requirements

A social screening report has not been prepared for the site.

Criterion	Eligibility
A	
B	
C	
D	

## 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