





# Pa Co-Hang Kia Nature Reserve

# Alternative site name(s)

Hang Kia-Pa Co

### Province(s)

Hoa Binh

#### **Status**

Decreed

## **Management board established**

Yes

## Latitude

20°41' - 20°46'N

## **Longitude**

104°51' - 105°01'E

#### **Bio-unit**

10b - Northern Indochina



## Conservation status

Pa Co-Hang Kia Nature Reserve is located in Pa Co, Hang Kia, Bao La and Pieng Ve communes, Mai Chau district, Hoa Binh province (Hoa Binh Provincial FPD 2000). Pa Co-Hang Kia was included on Decision No. 194/CT of the Chairman of the Council of Ministers, dated 9 August 1986 (MARD 1997), which decreed the establishment of a 1,000 ha nature reserve for the conservation of "limestone karst forest, gymnosperm species [and] rare wildlife" (Cao Van Sung 1995). An investment plan for the site was prepared by FIPI in September 1993, and was subsequently approved by the then Ministry of Forestry. The area of the nature reserve stated in the investment plan is 7,091 ha, comprising a strict protection area of 2,681 ha and a forest rehabilitation area of 4,410 ha (Duong Coi 1993). The site has a management board, established by Hoa Binh Provincial People's Committee (Hoa Binh Provincial FPD 2000).

# Topography and hydrology

Pa Co-Hang Kia Nature Reserve is located in the extreme west of Hoa Binh province, on the border with Son La province. The site lies on the limestone massif which extends south-east from the Son La plateau to

Cuc Phuong National Park. The main physical feature within Pa Co-Hang Kia is a high ridge, which reaches 1,536 m in the north-west of the nature reserve, and gradually decreases in altitude to the east. Most of the nature reserve lies above 500 m.

The geology of the site is characterised by limestone, which is partly of a non-karst nature, and has been eroded into a series of rugged, steep-sided hills between some flatter valleys. There are flat valley bottoms in the north of the nature reserve, in which are located a number of human settlements. Surface water is seasonal in the nature reserve, even in the populated valleys. Water sources dry up during the dry season, and rains are quickly absorbed into underground systems.

# **Biodiversity value**

Tran Le Hung *et al.* (1994) report that "there are still hundreds of hectares of primary forest in the inaccessible limestone karst as well as on the high mountain peaks". However, most of the forest in the nature reserve is restricted to ridges and hill tops, while valley bottoms have been cleared for wet rice cultivation and lower slopes for shifting cultivation of maize and cassava.

Three orchid species thought to be new to science were recently discovered at the site. However, because the remaining forest at the site is heavily disturbed and fragmented, and continues to be degraded as a result of human activities, it is unlikely that Pa Co-Hang Kia has high importance for the conservation of bird and mammal species.

## **Conservation issues**

Pa Co-Hang Kia is home to the only Hmong communities in Hoa Binh province (Tran Le Hung *et al.* 1994). Also, the south of the nature reserve is inhabited by members of the Thai ethnic group. The clearance of land for agriculture has led to the loss of much of the natural vegetation in the nature reserve.

#### Other documented values

Hang Kia cave, in Hang Kia commune, and the Hmong ethnic minority market in Pa Co commune receive small numbers of domestic and foreign tourists from Mai Chau village to the east. The forest provides numerous products for local residents, who "believe that their life cannot be separated from the forest" (Tran Le Hung *et al.* 1994).

# Related projects

No information.

#### Literature sources

Duong Coi (1993) [Investment plan for Hang Kia-Pa Co Nature Reserve, Mai Chau district, Hoa Binh province]. Hoa Binh: Hoa Binh Provincial People's Committee. In Vietnamese.

Hoa Binh Provincial FPD (2000) [FPD questionnaire]. Hoa Binh: Hoa Binh Provincial Forest Protection Department. In Vietnamese.

Tran Le Huy, Nguyen Van Lan, Nguyen Tuong Van, Pham Quang Thu and Dao Huong Lan (1994) Natural resources and socio-economy of Pa Co and Hang Kia communes in Mai Chau district, Hoa Binh province. Unpublished report to the Renovation of Strategies for Forestry Development Project.