

# Chu Prong Proposed Nature Reserve

## Alternative site name(s)

None

## Province(s)

Gia Lai

## Status

proposed

## Management board established

No

## Latitude

13°18' - 13°38'N

## Longitude

107°34' - 107°52'E

## Bio-unit

10a - Central Indochina



## Conservation status

Chu Prong is not included on any government decision regarding the Special-use Forests system (MARD 1997). However, in 2000, BirdLife International and FIPI carried out a field survey in south-western Chu Prong district. The results of this field survey were used to prepare a feasibility study, which recommended establishing a 50,104 ha nature reserve in Ia Mo, Ia Lau and Ia Puch communes (Tran Hieu Minh *et al.* in press). Chu Prong is included on a proposed list of protected areas currently being prepared by FPD and FIPI (FPD and FIPI in prep.).

The forest land in Chu Prong district is currently under the management of Chu Prong Forest Enterprise and the provincial FPD. The forest enterprise has operated in the area since 1977, although it ceased logging in 1992. Since the cessation of logging, the main activities of the forest enterprise have been forest protection and management. Also at the site, there are army bases in Ia Puch and Ia Mo communes, which are responsible for the security of the area (Tran Hieu Minh *et al.* in press).

## Topography and hydrology

Chu Prong proposed nature reserve is situated in south-western Gia Lai province and borders Cambodia

to the west and Dak Lak province to the south. The topography of most of the site is relatively flat, with an average elevation of around 200 m. In the north-west of the site, there is an area of low mountains, the highest of which, Mount Chu Prong, reaches an elevation of 732 m.

The drainage of Chu Prong proposed nature reserve is from north-east to south-west. The river systems of the proposed nature reserve are typically seasonal, with the exception of only the largest streams and rivers. The three principal rivers at the site, the Ia Lop, Ia Mo and Prek Drang, all belong to the Mekong river system. The Ia Lop river is the largest of these rivers, flowing from east to west, and forming the border between Gia Lai and Dak Lak provinces.

## Biodiversity value

During the recent BirdLife/FIPI field survey, 458 species of vascular plant were recorded at Chu Prong proposed nature reserve. Eight of these species are listed in the *Red Data Book of Vietnam*: *Afzelia xylocarpa*, *Dalbergia cochinchinensis*, *D. olivieri*, *Haldina cordifolia*, *Irvingia malayana*, *Pterocarpus macrocarpus*, *Sindora siamensis* and *Terminalia triptera*. A single plant species is listed in the 1997 IUCN Red List of Threatened Plants: *Alyxia divaricata* (Tran Hieu Minh *et al.* in press).

There are four main vegetation types at the proposed nature reserve: lowland deciduous forest, lowland semi-deciduous forest, evergreen riverine forest and seasonally inundated grasslands (Tran Hieu Minh *et al.* in press).

Deciduous forest covers most of the proposed nature reserve below 400 m. This forest type is characterised by an open canopy, with a maximum canopy cover of 50 to 60%, a canopy height of 10 to 20 m, and a simple botanical composition. This forest type is dominated by tree species in the Dipterocarpaceae, Combretaceae and Fabaceae families, including *Dipterocarpus tuberculatus*, *D. obtusifolius*, *D. intricatus*, *Shorea obtusa*, *S. siamensis*, *S. roxburghii*, *Terminalia alata*, *T. corticosa*, *Xylia xylocarpa*, *Pterocarpus macrocarpus* and *Dalbergia nigrescens* (Tran Hieu Minh *et al.* in press).

Semi-deciduous forest occurs at elevations above 400 m, and is typically stratified into four or five layers. The canopy layer is c.30 m high, and is dominated by the deciduous tree species *Lagerstroemia calyculata*. The sub-canopy is 10 to 20 m high, and is dominated by small and medium-sized evergreen trees, such as *Crypteronia paniculata* var. *affinis*, *Antheroporum pierrei*, *Syzygium cumini*, *Polyalthia cerasoides* and *Xylopiella vielana* (Tran Hieu Minh *et al.* in press).

Evergreen riverine forest occurs in narrow strips along major streams and rivers, and has a poorly defined vertical structure. These evergreen intrusions are dominated by moisture-loving tree species, such as *Salix thorelii*, *Ficus racemosa*, *F. altissima*, *F. benjamina*, *Diospyros* sp., *Rhaphiolepis indica*, *Vatica odorata* subsp. *odorata*, *Buchanania arborescens* and *Elaeocarpus macroceras*. Sometimes, deciduous tree species, such as *Dipterocarpus alatus*, *Hopea odorata*, *Azizia xylocarpa* and *Lagerstroemia calyculata* can be found in this forest type (Tran Hieu Minh *et al.* in press).

Seasonally inundated grasslands occupy only a small area of the proposed nature reserve, yet are an important habitat type because they support populations of large waterbirds and globally threatened mammals (Tran Hieu Minh *et al.* in press).

During the BirdLife/FIPI survey, 40 species of mammal, 171 species of bird, 36 species of reptile, 11

species amphibian and 11 species of fish were recorded at the proposed nature reserve. Twelve of the mammal species are listed in the 1996 IUCN Red List of Threatened Animals and 15 are listed in the Red Data Book of Vietnam. The most notable mammal records include Tiger *Panthera tigris*, Gaur *Bos gaurus*, Banteng *B. javanicus*, Brow-antlered Deer *Cervus eldii*, Golden Jackal *Canis aureus* and Silvered Leaf Monkey *Semnopithecus cristatus* (Tran Hieu Minh *et al.* in press).

Eight species of bird recorded during the BirdLife/FIPI survey are globally threatened or near threatened: Germain's Peacock Pheasant *Polyplectron germaini*, Green Peafowl *Pavo muticus*, Brown Hornbill *Anorrhinus tickelli*, Grey-headed Fish Eagle *Ichthyophaga ichthyaetus*, Rufous-winged Buzzard *Butastur liventer*, White-rumped Falcon *Polihierax insignis*, Spot-billed Pelican *Pelecanus philippensis* and Lesser Adjutant *Leptoptilos javanicus* (Tran Hieu Minh *et al.* in press). Germain's Peacock Pheasant is a restricted-range bird species, and the record from Chu Prong indicates that the proposed nature reserve lies within the South Vietnamese Lowlands Endemic Bird Area (Stattersfield *et al.* 1998).

Of the 47 reptile and amphibian species recorded at Chu Prong, 16 are listed in the Red Data Book of Vietnam and three species are endemic to Vietnam. Information from local people indicates that Siamese Crocodile *Crocodylus siamensis* may still occur in the Ia Lop river (Tran Hieu Minh *et al.* in press).

## Conservation issues

Logging, hunting, fishing, forest fire and clearance of land for cultivation are all threats to the forest and wildlife at Chu Prong proposed nature reserve. Prior to 1980, Chu Prong district was largely covered in undisturbed forest, which supported substantial populations of ungulates, Asian Elephant *Elephas maximus* and globally threatened bird species. However, the logging activities of the forest enterprise during period from 1977 to 1991 negatively affected the habitat and wildlife of the area (Tran Hieu Minh *et al.* in press).

Hunting and trapping of wildlife is currently uncontrolled within the proposed nature reserve. Hunting is a particular threat to populations of large

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mammals and birds, such as wild cattle, Brow-antlered Deer, wild cats, Green Peafowl and large waterbirds. People who hunt in the Chu Prong area include soldiers, local people and hunters from outside the area. Fishing is also having a significant impact upon the fish populations of the proposed nature reserve's major watercourses. During the BirdLife/FIPI survey in early 2000, up to 10 fisherman were encountered at the site each day (Tran Hieu Minh *et al.* in press).

Shifting cultivation is being practiced within the proposed nature reserve, with the effect that the forest is being fragmented into a mosaic of habitat types. Evergreen riverine forest is the natural habitat type most affected, as the banks of rivers and streams are often the first areas to be cleared for cultivation. As with hunting, forest clearance for cultivation is uncontrolled at the site. An additional threat is deliberate burning of the forest. This practice is associated with hunting, and leads to changes in the structure and composition of the forest (Tran Hieu Minh *et al.* in press).

The multifarious threats faced by the fauna and flora of the proposed nature reserve are all exacerbated by increasing human population pressure, resulting from in-migration into the area from provinces in northern Vietnam. In-migration leads to increases in forest clearance and hunting pressure (Tran Hieu Minh *et al.* in press).

## Other documented values

Chu Prong proposed nature reserve lies in the catchment of the Mekong River. Forest at the proposed nature reserve plays an important role in watershed protection: regulating water flow, preventing floods and erosion during the rainy season, and providing local communities with sufficient water for irrigation and domestic use (Tran Hieu Minh *et al.* in press).

## Related projects

To date, Chu Prong Forest Enterprise has issued forest protection contracts to local people for a total of 6,000 ha of forest land, including over 3,000 ha within the proposed nature reserve. Funding for this initiative comes from the national 661 Programme (Tran Hieu Minh *et al.* in press).

Three communes in the buffer zone of Chu Prong proposed nature reserve participate in the 135 Programme, which provides capital for infrastructure and community development activities, including establishing health stations, developing irrigation schemes, and developing the road network (Tran Hieu Minh *et al.* in press).

## Literature sources

Le Trong Trai and Tran Hieu Minh (2000) Biodiversity survey and recommendations for establishment of Chu Prong Nature Reserve, Gia Lai province. Lam Nghiep [Vietnam Forest Review] June 2000: 17-20. In Vietnamese.

Le Trong Trai and Tran Quang Ngoc (2000) [Summary of field survey and assessment of two proposed protected areas in Gia Lai province]. Unpublished report to Birdlife International Vietnam Programme and the Forest Inventory and Planning Institute. In Vietnamese.

Nhan Dan (2000) [Chu Prong Nature Reserve: habitat for many large mammal species]. Nhan Dan [The People]: 4 October 2000. In Vietnamese.

Saigon Times (2000) Urgent help to the wild. Saigon Times 4 November 2000.

Tran Hieu Minh, Le Trong Trai, Le Van Cham and Nguyen Van Sang (in press) [\[A feasibility study for the establishment of Chu Prong Nature Reserve, Gia Lai province, Vietnam\]](#). Hanoi: BirdLife International Vietnam Programme and the Forest Inventory and Planning Institute. In Vietnamese.