

# Cat Tien National Park

## Alternative site name(s)

Cat Loc, Nam (Bai) Cat Tien, Tay (Bai) Cat Tien

## Province(s)

Dong Nai, Lam Dong and Binh Phuoc

## Status

Decreed

## Management board established

Yes

## Latitude

11<sup>0</sup>21' - 11<sup>0</sup>48'N

## Longitude

107<sup>0</sup>10' - 107<sup>0</sup>34'E

## Bio-unit

05b - South Annam



## Conservation status

Cat Tien National Park consists of three sectors: Nam Cat Tien in Dong Nai province, with an area of 38,302 ha; Tay Cat Tien in Binh Phuoc province, with an area of 5,141 ha; and Cat Loc in Lam Dong province, with an area of 30,435 ha. Hence, the total area of the national park is currently 73,878 ha (G. Polet pers. comm.).

The first government decision related to Cat Tien is Decision No. 360/TTg of the Prime Minister, dated 7 July 1978, which decreed the establishment of a 35,000 ha protected forest at Nam Cat Tien (MARD 1997). Subsequently, an investment plan was prepared, which proposed upgrading Nam Cat Tien to national park status, with a total area of 38,900 ha (FPD 1998). This investment plan was approved on 13 January 1992, by Decision No. 08/CT of the Chairman of the Council of Ministers (Anon. 1993a). On the same day, a management board was established for the national park (Cat Tien National Park Management Board 2000).

The Tay Cat Tien and Cat Loc sectors of Cat Tien National Park were initially separate protected areas. Decision No. 194/CT of the Chairman of the Council of Ministers, dated 9 August 1986, decreed the establishment of a 10,000 ha nature reserve at Tay Cat

Tien (MARD 1997). At a meeting held at the former Song Be Provincial People's Committee on 11 January 1993, the area of Tay Cat Tien was defined as 5,134 ha (Anon. 1993a). However, an investment plan specifically for Tay Cat Tien Nature Reserve was never prepared (Gilmour and Nguyen Van San 1999).

Following the rediscovery of Javan Rhinoceros *Rhinoceros sondaicus* in the area in 1989 (Schaller *et al.* 1990), an investment plan was prepared for the establishment of Cat Loc Rhinoceros Sanctuary. This investment plan gave the total area of the rhinoceros sanctuary as 30,635 ha, comprising areas previously managed by Cat Tien and Loc Bac Forest Enterprises (Anon. 1992). The investment plan was approved by Official Letter No. 686/CV of Lam Dong Provincial People's Committee, dated 23 October 1992 (Anon. 1993b). However, the site remained under the direct management of Cat Tien District People's Committee until 1996, when a nature reserve management board was established.

Decision No. 08/CT of the Chairman of the Council of Ministers, dated 13 January 1992, requested the former Ministry of Forestry to prepare a comprehensive investment plan, which would combine Nam Cat Tien National Park, Tay Cat Tien Nature Reserve and Cat Loc Rhinoceros Sanctuary into a single management unit with national park status (Gilmour and Nguyen Van San 1999). The first version

of this investment plan was completed in June 1993, and proposed a total area of 74,219 ha for the national park (Anon. 1993a). However, this investment plan was not approved by the government.

In 1997, FIPI and the FPD of MARD, with the support of WWF, prepared a revised investment plan for Cat Tien National Park. This investment plan gave the total area of the national park as 73,100 ha (Anon. 1997). This investment plan was approved on 5 December 1998, by Decision No. 1090/TTg of the Prime Minister (Cat Tien National Park Management Board 2000), at which time management responsibility for the national park was transferred from the provincial people's committees to MARD.

Cat Tien is included on the 2010 list as a 73,878 ha national park in Dong Nai, Lam Dong and Binh Thuan provinces (FPD 1998). The national park currently has 175 members of staff, including 109 forest guards, head office staff, a legislation section, 2 mobile units and staff assigned to 19 guard stations (Cat Tien National Park Management Board 2000).

## Topography and hydrology

The Nam Cat Tien sector of Cat Tien National Park is located in Dac Lua commune, Tan Phu district, Dong Nai province. The Tay Cat Tien sector is located in Dang Ha commune, Bu Dang district, Binh Phuoc province. The Cat Loc sector is located in Tien Hoang, Gia Vien and Phuoc Cat II communes, Cat Tien district, and Loc Bac commune, Bao Lam district, Lam Dong province.

The topography of Cat Tien National Park varies greatly among the three sectors. The Cat Loc sector is situated at the western extent of the Central Highlands and, consequently, is rather hilly. Although elevations only reach 659 m, the hills are relatively steep. The Nam Cat Tien and Tay Cat Tien sectors are situated in the lowlands of southern Vietnam, at the foot of the Central Highlands. The topography of these sectors is characterised by low, gentle hills, the highest of which reaches an elevation of 372 m.

The Dong Nai river, the second largest river in southern Vietnam, flows through the national park, forming the western boundary of the Cat Loc sector and the eastern boundary of the Nam Cat Tien sector.

The numerous streams that originate in the national park drain into this river. The lowlands in the north of the Nam Cat Tien sector are poorly drained, and support an area of swamps and lakes, which expands and contracts seasonally.

## Biodiversity value

Cat Tien National Park supports a variety of habitat types, including primary and secondary lowland evergreen forest dominated by species in the Dipterocarpaceae; primary and secondary lowland semi-deciduous forest, dominated by *Lagerstroemia* spp; freshwater wetlands with open lakes and seasonally inundated grasslands, containing *Saccharum spontaneum*, *S. arundinaceum* and *Neyraudia arundinacea*; flooded forest, dominated by *Hydnocarpus anthelmintica* mixed with *Ficus benjamina*; and a range of secondary habitat types, including grassland and areas dominated by bamboo (G. Polet pers. comm.).

The flora of Cat Tien National Park includes more than 1,300 species of vascular plants, among which are 34 species listed in the *Red Data Book of Vietnam* and many valuable timber species, such as *Azela xylocarpa*, *Dialium cochinchinensis*, *Dalbergia oliveri* and *Pterocarpus macrocarpus* (Vu Van Dung, pers. comm.).

To date, 77 mammal species, 318 bird species, 58 reptile species, 28 amphibian species and 130 fish species have confirmed to occur at the national park. These include a large number of globally threatened species (G. Polet pers. comm.).

Cat Tien is one of the most important sites for the conservation of large mammals in Vietnam. Among the large mammal species that have been confirmed to occur at the national park are Asian Elephant *Elephas maximus*, Javan Rhinoceros, Wild Boar *Sus scrofa*, Sambar *Cervus unicolor* and Gaur *Bos gaurus*, of which the later three species reportedly occur at high densities relative to other areas in Vietnam (Ling 2000). Of the large mammal populations at Cat Tien National Park, the most significant one is that of Javan Rhinoceros. This is the only known population of this species in Vietnam and the only known population of the sub-species *R. s. annamiticus* in the world. However, the population size and range of this species

at the national park has declined over the last two decades, and current estimates put the population size at seven or eight individuals and the range at 6,500 ha (Polet *et al.* 1999).

Cat Tien National Park is also a nationally important site for primate conservation, supporting populations of several primates of conservation concern, including Black-shanked Douc Langur *Pygathrix nigripes nigripes*, Pig-tailed Macaque *Macaca nemestrina* and Buff-cheeked Gibbon *Hylobates gabriellae* (Ling *et al.* 2000).

Cat Tien National Park is situated in the South Vietnamese Lowlands Endemic Bird Area (EBA), and supports populations of all three bird species that occur in this EBA: Orange-necked Partridge *Arborophila davidi*, Germain's Peacock Pheasant *Polyplectron germaini* and Grey-faced Tit Babbler *Macronous kelleyi* (Stattersfield *et al.* 1998, Polet and Pham Huu Khanh 1999a). Cat Tien is also an important site for the conservation of waterbirds. Among the globally threatened waterbird species that have been recorded at the site are White-shouldered Ibis *Pseudibis davisoni*, White-winged Duck *Cairina scutulata* and Lesser Adjutant *Leptoptilos javanicus* (Polet and Pham Huu Khanh 1999a).

One globally threatened species that previously occurred at Cat Tien National Park but appears to have been eradicated is Siamese Crocodile *Crocodylus siamensis*. A survey for this species in 1999 found no evidence for its continued occurrence at the national park (Bembrick and Cannon 1999). However, there exist plans to release captive-bred animals into the wetlands at Cat Tien National Park in the near future (Vietnam News 2000).

## Conservation issues

A total of 9,442 people live inside Cat Tien National Park. These people belong to the Kinh, Tay, Chau Ma and Stieng ethnic groups (Cat Tien National Park Management Board 2000). The human population of the buffer zone, which comprises 32 communes and one town in eight districts, is, however, far higher: Gilmour and Nguyen Van San (1999) give a figure of 170,000 people. Most of the inhabitants of the buffer zone can be grouped into indigenous ethnic minorities (the Chau Ma and Stieng), ethnic minorities who have

recently migrated from provinces in northern Vietnam (including the Tay, Nung, Dao and Hmong), and Kinh settlers who came to the area since 1975. Each of these groups have different land-use strategies and different impacts on the natural resources of the national park (Gilmour and Nguyen Van San 1999).

Gert Polet, manager of the *WWF Cat Tien National Park Conservation Project*, identifies four main conservation issues at the national park. Firstly, forest land is being converted into agricultural land, reducing the area of habitat for globally threatened species, such as Javan Rhinoceros, Asian Elephant, Gaur and Orange-necked Partridge. This conversion is being undertaken by people residing within the national park boundaries, especially in the Cat Loc sector, which supports the Javan Rhinoceros population. Secondly, illegal exploitation of timber, rattan, mammals, birds and fish is still taking place inside the national park. Thirdly, land within the national park designated as agricultural land is not under the management of the national park management board, which only controls land designated as forest land. Poor coordination among different local government agencies is resulting in an emphasis on agricultural development instead of biodiversity conservation in the agricultural land within the national park. Finally, there exist plans to construct two hydro-electric dams, the Dong Nai 3 and Dong Nai 4, on the Dong Nai river, upstream of Cat Tien National Park. Such developments may cause a reduction in the peak discharge of the Dong Nai river. A high peak discharge is required to cause a reversal of flow in the Dak Lua stream and thus to supply the wetlands in the north of the Nam Cat Tien sector with water. Construction of the dams may, therefore, lead to a reduction in the size of these important wetlands, with implications for migratory and resident waterbird species, fish species, and grazing mammals (G. Polet pers. comm.).

A number of conservation measures are currently being planned or implemented at Cat Tien National Park. Conversion of forest land into agricultural land was brought largely under control following the integration of the three sectors into a single national park in 1998, and the subsequent recruitment and deployment of extra FPD staff (G. Polet pers. comm.).

With the assistance of the WWF project, the management plan of Cat Tien National Park is under

revision. In the new management plan, it is expected that the national park will be zoned, and that, for every zone, specific management activities will be formulated. The boundary of the national park will be revised to exclude areas of agricultural land near the boundary that have little biodiversity value. A number of human settlements within the national park that are situated in areas of high biodiversity value will be scheduled for resettlement, while other human settlements will be allowed to remain within the national park but only under specific terms and conditions and within clearly demarcated areas (G. Polet pers. comm.).

Both the national park managers and the WWF project are actively pursuing continuous exchange of information and coordination between different local government agencies and between different government levels. This is being achieved by means of face-to-face contacts, regular meetings and seminars (G. Polet pers. comm.).

The WWF project and WWF-US have provided training and equipment for FPD staff, in order to enable them to operate more effectively and more confidently while on patrol. Two special mobile teams will operate in the area of the Cat Loc sector where the Javan Rhinoceros occur. These teams will consist of FPD staff and local villagers (G. Polet pers. comm.).

The WWF project is seeking ways to reduce the dependency of local people on the natural resources of the national park by developing community development activities which bring about conservation benefits (G. Polet pers. comm.).

The WWF project and the national park managers are monitoring the status of the planned hydro-electric dam developments on the Dong Nai river. At the same time, they are trying to gain a better understanding of the hydrological interactions between the Dong Nai river and the wetlands in the north of the Nam Cat Tien sector. Associated with this, studies are currently underway to nominate the wetlands as a wetland of international importance under the Ramsar Convention (G. Polet pers. comm.).

## Other documented values

The forest at Cat Tien National Park has an important role in protecting the watershed of the Tri An reservoir, one of the most important sources of water for domestic and industrial use in Ho Chi Minh City.

In addition, Cat Tien National Park receives a growing number of domestic tourists, many of whom visit on day or weekend trips from Ho Chi Minh City. The national park is also gaining in popularity amongst specialist foreign tourists, including birdwatchers. The proximity of the national park to Ho Chi Minh City, its location on the route between Ho Chi Minh City and Da Lat city, the well developed tourism infrastructure at the site, and the ease at which wildlife can be seen relative to other sites in Vietnam, are all factors in favour of growth in the tourism sector. However, if not carefully managed and guided, mass tourism may pose a threat to the biodiversity of the national park. There is, therefore, a need to develop tourism in a controlled and environmentally sensitive manner.

## Related projects

WWF and MARD are currently implementing the *Cat Tien National Park Conservation Project*, with funding from the governments of the Netherlands and Vietnam. This project began implementation in May 1998 and is projected to continue until April 2003. The long-term objectives of this project are to: conserve the remaining tropical forest at Cat Tien and its full complement of biodiversity; maintain a viable population of Javan Rhinoceros resident within Cat Tien National Park; protect a critical part of the water catchment of the Tri An reservoir; and enhance public awareness of the physical and biological values of the national park and its surroundings, and improve income-generating opportunities for the national park and the local population (G. Polet pers. comm.).

To achieve these integrated conservation objectives, communities living inside and adjacent to the national park must be directly involved in all aspects of project planning, design, delivery and monitoring. The immediate objectives of the project are, therefore, to: establish effective national park management; conserve important habitat types and increase population sizes of nationally and globally threatened species resident in the national park;

establish wildlife research and habitat monitoring programmes; enhance public awareness of the physical and biological values of the national park and its environs; improve income-generating opportunities for the national park and the local human population, through the development of tourism infrastructure; and reduce the dependency of the local human population upon natural resources in the national park (G. Polet pers. comm.).

From these objectives, it follows that the primary target of the project is the ecosystem of Cat Tien National Park. The more immediate targets of the project are the Cat Tien National Park staff and the people living in the vicinity of the national park (G. Polet pers. comm.).

The activities of the project can be grouped into four main areas: capacity building, research, community development and conservation education. Capacity building activities include training of national park and relevant district staff, provision of equipment and infrastructure, and maintenance of roads and trails within the national park. Research activities include studies of the ecosystem and socio-economy of the area, with the aim of formulating a revised management plan for the national park and underpinning development-oriented interventions in the buffer zone. Community development activities are restricted to those that lead to a reduction in the human pressure on the natural resources of the national park. Conservation education activities are aimed at schools within and around the national park, as well as visitors to the national park. These activities include production of educational materials, training of teachers and construction of a visitors' centre (G. Polet pers. comm.).

A second major donor-assisted project currently being implemented at Cat Tien National Park is the *Forest Protection and Rural Development Project*. This project is being implemented by the provincial authorities and MARD, with funding from the government of Vietnam, World Bank and the government of the Netherlands. This project began implementation in September 1999 and is projected to continue until August 2003. The aim of this project is to reduce local people's dependency on the natural resources of the national park by initiating and executing community development activities that can

be expected to have conservation benefits, including land allocation and rural infrastructure development, in the buffer zone (G. Polet pers. comm.).

The US Fish and Wildlife Service have funded three smaller WWF-implemented projects at Cat Tien National Park. The first of these was an awareness campaign for Javan Rhinoceros in Vietnam. This project was implemented between October 1999 and August 2000, and involved the production of educational materials targeting school children living in and around the national park; and policy and decision makers at the central, provincial, district and commune levels (G. Polet pers. comm.).

The second project to be funded by the US Fish and Wildlife Service was a genetic analysis of Javan Rhinoceros dung samples, in order to assess the size and composition of the population. This project was implemented between June 1999 and December 2000, in collaboration with WWF-Indonesia and Columbia University (G. Polet pers. comm.).

The third project, which is currently on going, is entitled *Status of Asian Elephants in Cat Tien National Park*. This project began implementation in October 2000, and will continue until December 2001. The project is being implemented in collaboration with the Asian Elephant Research and Conservation Centre, Bangalore, India, and the Institute of Ecology and Biological Resources. Project activities include training for national park staff in elephant census and monitoring techniques, year-round monitoring activities, analysis of data on elephant status at the national park, and formulation of a management plan for elephants at the national park and in surrounding areas (G. Polet pers. comm.).

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