

1 Legal Framework

The Vietnamese Government today considers conservation of biodiversity and natural resources to be a high priority. The second phase of the 'Biodiversity Action Plan' (2000 – 2005) included as one of its priorities, the conservation of biodiversity (both in situ and ex situ) and of the most important ecosystems. To achieve this, three broad objectives were defined: (1) protection of endemic ecosystems or ecosystems threatened by unmanaged human pressures; (2) protection of over-exploited components of biodiversity; (3) identification and promotion of tools and methods to evaluate biodiversity resources.

Within this framework, the GOV has decided to concentrate its efforts on the development and implementation of national-level management tools, and the methods and means by which it can inventories, characterise and conserve genetic resources, with a particular focus on animal biodiversity with economic or cultural values.

2 Project Goals

The goal for the project is to contribute substantially to the conservation for wild large bovid species in Vietnam, through a dual approach of local and national components:

- (1) Defining the principles of sustainable in-situ management of wild large bovid species by providing support to the Cat Tien NP (Cat Tien component),
- (2) Establishing the genetic and demographic basis for management of wild large bovid species populations throughout Vietnam (national component).

This project is financed by the French Global Environment Fund (FFEM) through the French Development Agency (AFD) in Hanoi.

3 Cat Tien National Park Component

Cat Tien National Park has considerable biological value. It is one of the last refuges of numerous species and contains high levels of biodiversity. It shelters a large number of plant and animal species which are amongst the most threatened, not just in Vietnam, but globally. Several species in the NP are endemic to Vietnam or the Indochina peninsula. The biodiversity of the NP was recognised through its inclusion in the global network 'Global 200 Ecoregions' developed by WWF (Annamite Range Moist Forests and Forests of the Lower Mekong Complex) and also the UNESCO 'Man and Biosphere' network in 2001.

The presence of the last large lowland evergreen forest in Vietnam also makes Cat Tien NP one of the highest priorities for conservation management in the country.

This was enhanced by the discovery of the second global population of the Javan Rhinoceros (*Rhinoceros sondaicus annamiticus*), which is probably the rarest extant mammal in the world. Due to the existence of a large number of biotopes and efficient management activities by NP staff, Cat Tien represents one of the last refuges for large mammals in Vietnam.



Cat Tien National Park is one of the few places in South East Asia that is still inhabited by a relatively important and potentially viable population of Gaur. Even though this population is isolated from others located on the border regions with Cambodia and Laos, it has become very important because of the rapid decline in Gaur numbers in Vietnam. In recent years, the number of Gaur throughout Asia has reduced considerably.

The total number of Gaur in Vietnam is estimated at a maximum of 500 individuals and the total number of Banteng at a maximum of 150 individuals. The Cat Tien National Park harbours around 10%

of the total number of Gaur in Vietnam, with at least 50 individuals in the NP. Banteng and wild water buffalo have not been recorded recently in the NP, but it is possible that some individuals survive in the southern sector.

3.1 Need for the Project

In Vietnam, conversion of forests to agricultural land and poaching have acted to considerably reduce Gaur populations, which now only exist as small, isolated populations in fragmented habitat. If poaching continues at its current levels, Gaur populations in Vietnam are doomed to extinction.

The Gaur population in Cat Tien NP is potentially viable in the medium to long-term thanks to the meta-population dynamics of several groups of Gaur and the presence of optimal habitat. Several factors could however affect the viability of this population: (1) pressures from poaching; (2) modification of Gaur habitat in the NP's buffer zone; (3) impacts of domestic cattle that graze on the NP boundaries; and (4) long term risks linked to genetic and demographic isolation.

Currently, poaching does not seem to be aimed directly at large mammals. However, the demand for 'bush meat' in the large towns to the east is becoming more and more important and it is urgent that this is controlled. Poaching also has indirect negative impacts by disturbing Gaur herds or by injuries caused to animals by traps set for smaller mammals (e.g. deer, sambar, muntjacs).

The conversion of habitat used by Gaur into agricultural land also represents an indirect threat. This problem is particularly important to the west of the NP where Gaur herds use the neighbouring State Forest Enterprises that are less well protected than the NP. Domestic cattle can also have a negative impact on the Gaur population in

the NP. Their presence on the boundaries of the NP raises not only risks relating to genetic pollution of the wild Gaur population, but can also cause disturbance of Gaur populations and competition for food resources.

At this stage it is necessary to conduct research into the genetics and ecology of the population of Gaur in the Cat Tien National Park; firstly in order to analyse the problems of isolation of this population from the rest of the core population and its fragmentation into two sub-populations (one in the northern sector and one in the southern sector), then to analyse the dynamics of these two sub-populations to identify the interaction between the herds and the impact of factors of decline. This information can then be used to optimise the selection of conservation actions to be implemented

Firstly it will be necessary to define a management plan that will allow an increase in numbers in the park, then to implement it and analyse the results obtained. Until the results of this research become available and there is a sound comprehension of the factors acting on the dynamics of this population, several measures should be implemented as a matter of urgency. It will be necessary to enhance the protection of the Gaur population in NP, and the buffer zone and eliminate the intrusion of domestic cattle into the NP. Finally, the quality of habitat could be improved for example by maintaining grasslands by controlled fires or by installing salt licks.

The desired objective should be to maintain, or re-establish if necessary, the meta-population dynamics between the herds and act at the same time to reduce the factors having the greatest impacts on the viability of the population. The current status of the Gaur population in the NP and the rapid disappearance of other populations in Vietnam highlight the importance of these actions. Without prejudicing the outcomes of the project, the reintroduction of Banteng to Cat Tien NP could be considered based on the information obtained from the Cat Tien NP component of the project as well as the national component of the project. This species is native to Cat Tien and is easily bred in captivity.

3.2 Project Contents

Institutional, technical and scientific support to the NP and its buffer zone will allow concerned stakeholders to conserve this remarkable ecosystem and specifically, the relict population of Gaur. At the end of its implementation, the project has the particular aim of restoring this population of Gaur by increasing population numbers. The specific objectives of Cat Tien National Park component are:

3.2.1 Support to implement the management plan 2003 – 2008 of the NP with a particular focus on activities linked to the wild large bovid species

This will ensure the successful implementation of the management of Cat Tien NP and its buffer zone. This plan has been prepared and agreed between stakeholders for the period 2003 to 2008 and was based upon the model of the Yok Don NP management plan. In this area, financial contributions from FFEM will target as a priority the actions in the management plan that are best directed towards the conservation of Gaur. The following actions will be financed by the FFEM project:

Action 1 – Equipment for forest guard stations.

Action 2 – Supplement management actions in the NP and Buffer Zone in relation to the conservation of large bovid species.

Action 3 – Security fencing installation.

Action 4 – Equipping and reinforcing mobile poaching patrols.

Action 5 – Upgrading the Technical and Scientific Department and creation of a monitoring unit for Gaur in the NP.

3.2.2 Enhance the management and in situ conservation of the wild bovid species in Cat Tien NP through a better understanding of their ecology and behaviour in the current constrained conditions.

The improved management of the residual population will be achieved through the following actions:

Action 1 – Development and implementation of a demographic and telemetric evaluation of individuals and the herds.

Action 2 – Analysis of the viability of two sub-populations of the NP and their habitats using Population and Habitat Viability Analysis (PHVA).

Action 3 – Implement the management recommendations which can at this stage be envisaged.

3.2.3 Enhance the understanding / training of stakeholders associated with the NP to support the conservation of wild bovid species

Target groups for training will be political decision makers and provincial institutions, trainers, management board of the NP, NP personnel and communities in the buffer zone.

3.2.4 Contribute to the future plans for development of the NP and surrounds.

The development strategy will be defined by the Director Plan; without anticipating the results of this, certain directions can be identified as maintenance of vegetation corridors. The inventories of biodiversity carried out in forest areas managed by the State Forest Entreprises (SFEs) located partially in the buffer zone have highlighted the biological interest of these areas. Maintenance of these areas is important as it will assure the connectivity between the NP and the matrix of surrounding habitat. The NP is directly connected to five forest (three of which are being logged) in the north, south and west. These connections are essential to maintaining dynamics of ecosystems, flora and fauna of the NP, in particular Gaur. Several herds of Gaur in other areas have been observed within the SFEs. The SFEs are conscious of the importance of these habitats that they have been trying to manage in a sustainable fashion, and of the conservation lobby, and have been investing in biodiversity conservation in the areas under their control. The project should reinforce this step with a particular focus on wild bovid species.

3.3 Project Implementation

The Ministry of Agriculture and Rural Development (MARD) is the ministry responsible for Cat Tien NP and has responsibility for all the actions of the projects and payment of the counterpart financing to allow the project to be implemented. The FPD provides it support to MARD in the evaluation and verification of the actions of the project, and in the NP in the achievement of the project objectives in the field as well as the laboratory. The management board of Cat Tien NP will be responsible for execution and implementation of the Cat Tien NP component of the project. The management board was created on the 13th January 1992 by Decision No. 08/CT of the Council of Ministers at the time that the investment plan for the NP was approved. The management board has under its responsibility all the NP staff. The Department of Planning and Finance of the NP will be delegated the management budget financed by FFEM. This department has already successfully managed budgets for the WWF project in the past. It will sign a financing agreement with the AFD on the Cat Tien NP component of the project.

Provincial Peoples Committees of the buffer zone provinces: Dong Nai, Binh Phuoc and Lam Dong, as well as the communes in the peripheral area will be the institutional partners for all the issues associated with rural development and local natural resource management in particular work on the Forest Protection and Rural Development Project. CIRAD (Centre de Coopération Internationale en Recherche agronomique pour le Développement) and FISF (Fonds International de la Sauvegarde de la Faune) will be solicited for interventions related to technical subjects of which they have particular skills.