

## World Heritage Sites

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## TAÏ NATIONAL PARK CÔTE D'IVOIRE

*This Park is the largest remaining forest in West Africa and the last large island of the original Upper Guinean forest that once reached from Ghana to Guinea-Bissau. Its vast size should ensure that its rich natural flora, threatened mammals such as the pygmy hippopotamus, eleven species of monkey, tool-using chimpanzees, and the ecological network that sustains them, will continue to exist.*

*Threats to the site: The Park is in good condition but civil unrest and encroachment by refugees have aggravated poaching of deer and monkeys for bushmeat, tree clearance for farms, gold-mining and logging.*

### COUNTRY

Côte d'Ivoire

### NAME

Taï National Park

### NATURAL WORLD HERITAGE SITE

1982: Natural World Heritage Site inscribed under Natural Criteria vii and x.

### INTERNATIONAL DESIGNATION

1977: Designated a Biosphere Reserve under the UNESCO Man & Biosphere Programme (620,000 ha).

### STATEMENT OF OUTSTANDING UNIVERSAL VALUE [pending]

### IUCN MANAGEMENT CATEGORY

II National Park

### BIOGEOGRAPHICAL PROVINCE

Guinean Rain Forest (3.01.01)

### GEOGRAPHICAL LOCATION

In south-west Côte d'Ivoire about 160 km south of Man and 60 km from the coast, between the Cavally River on the western border with Liberia, and the Sassandra River on the east, between 5° 15' to 6° 07' N and 6° 54' to 7° 25' W.

### DATES AND HISTORY OF ESTABLISHMENT

1926: Declared a Forest Reserve and Wildlife Refuge (560,300 ha);

1933: Declared a *Reserve Speciale de Faune*;

1955: Decreed a *Forêt classée*; 1956: decreed a *Réserve Intégrale* by Arrêté 56.87 (425,000 ha);

1972: Declared a National Park by Presidential Decree 72-544 (350,000 ha); *Réserve de Faune du N'Zo'* (72,300 ha) carved out of the original area by Decree 72-545;

- 1973: Park reduced by Decree 73-122 by 20,000 ha which was added to the Reserve;
- 1977: Status redefined by Decree 77-348 which added a peripheral zone (96,000 ha) around the Park;
- 1977-81: Logging, hunting, clearing, foraging and settling in the peripheral zone officially phased out;
- 1978: Designated a Biosphere Reserve under the UNESCO Man and the Biosphere Programme;
- 2006: N'zo Reserve incorporated into the Park

## LAND TENURE

State, in the districts of Guiglo and Sassandra. Administered by the *Direction de la Protection de la Nature* (DPN) of the Ministry of Environment, Waters and Forests with technical and scientific management by the national *Office Ivoirien des Parcs et Reserve*. Until 2002 it was in the charge of the *Project Autonome pour la Conservation du Parc National de Tai* (PACPNT).

## AREA

Core zone, 330,000 ha, buffer zone, 20,000 ha. The N'zo Reserve to the north has been added to the park which, with a buffer zone, now totals 536,000 ha. 8,500 ha were lost to a reservoir. Haute Dodo and Rapide Grah *Forêts classes* also adjoin Park to the south. (UNESCO, 2006, 2009).

## ALTITUDE

80m to 396m (Mt. Niénokoué)

## PHYSICAL FEATURES

The Park is situated on a PreCambrian granitic peneplain of migmatites, biotites and gneiss which slopes down from the gently undulating drier north to more deeply dissected land in the south where the rainfall is heavy. This plateau at between 150-200 meters is broken by several granite inselbergs formed from plutonic intrusions, including the Niénokoué Hills in the southwest. A large zone of varied schists runs north-east to south-west across the park, dissected by tributaries of the main watercourses which run parallel to it: the Nze, Meno and Little Hana and Hana rivers, all draining southwest to the river Cavally. In the wet season these rivers are wide, but in the dry season become shallow streams. The northern border of the adjoining N'Zo Faunal Reserve is formed by the large reservoir behind the Buyo dam on the N'Zo and Sassandra rivers. There is some swamp forest in the northwest of the Park and in N'Zo. The soils are ferralitic, generally leached and of low fertility. In the southern valleys there are hydromorphic gley and more fertile alluvial soils (DPN, 1998). Gold and some other minerals exist in small quantities

## CLIMATE

There are two distinct climatic zones of sub-equatorial type. Annual rainfall ranges from a mean of 1700 mm in the north to 2200 mm in the southwest, falling from March/April to July, with a shorter wet season in September to October. There is no dry season in the south but in the north it is marked from November to February/March, accentuated briefly by dry northeasterly *harmattan* wind. These only began to affect the region about 1970 after half the country's forests had been felled. There is only a small temperature fluctuation between 24°C to 27°C due to oceanic influence and the presence of forests, but mean diurnal temperatures can range from 25°C to 35°C. The relative humidity is high (85%). The prevailing winds are monsoonal from the south-west. In 1986 Côte d'Ivoire suffered a 30% rainfall deficit, possibly due to loss of forest cover: 90% of the country has been deforested in the past fifty years resulting in greatly diminished evapotranspiration (DPN, 1998; Reizebos *et al.*, 1994).

## VEGETATION

The Park is one of the last remaining portions of the vast primary Upper Guinean rainforest that once stretched across present-day Togo, Ghana, Côte d'Ivoire, Liberia and Sierra Leone to Guinea-Bissau. It is the largest island of forest remaining in West Africa remaining relatively intact. Its mature tropical forest lies within a WWF/IUCN Centre of Plant Diversity and in the centre of endemism of eastern Liberia and western Côte d'Ivoire, probably as the result of having been an Ice Age refugium, having over 50 species endemic to the region. The Park contains some 1,300 species of higher plants of which

54% occur only in the Guinean zone. The vegetation is predominantly dense evergreen ombrophilous forest of Upper Guinean type of 40-60m emergent trees with massive trunks and large buttresses or stilt roots.

Two main types of forest can be recognised grading from diverse moist evergreen forest with leguminous trees in the southern third to moist semi-evergreen forest in the north. Large numbers of epiphytes and lianes form an important element at the lower levels including *Platyserium* spp., *Nephrolepis biserrata*, *Drymaria* sp. and *Asplenium africanum*. The Sassandra moist evergreen forest on schistose soils in the south-west is dominated by species such as ebony *Diospyros gabunensis*, *D. chevalieri*, *Mapania baldwinii*, *M. linderi* and *Tarrietia utilis*, with numerous endemic species, especially in the lower Cavally Valley and the Meno and Hana depressions near Mont Niénokoué. The last stands of the large endemic tree *Kantou guereensis* are here. The poorer soils of the north and south-east support species such as palm *Eremospatha macrocarpa*, west African ebony *Diospyros mannii*, *D. kamerunensis*, *Parinari chrysophylla*, *Chrysophyllum perpulchrum* and *Chidlowia sanguinea*. Species such as *Gilbertiodendron splendidum*, *Symphonia globulifera* and *Raphia* occur in the swamp forests of river backwaters and oxbows. The inselbergs are vegetated, according to their substrate, with savanna-like grassland and deciduous trees such as *Spathodea campanulata*. Plants thought to be extinct such as *Amorphophallus staudtii* have been discovered in the area. Since commercial timber exploitation officially ceased in 1972, the forest has recovered well, although large areas are dominated by planted species.

## FAUNA

The fauna is fairly typical of West African forests but very diverse, nearly 1,000 vertebrate species being found. The Park contains 140 species of mammal and 47 of the 54 species of large mammal known to occur in the Guinean rain forest, including twelve regional endemics and five threatened species. The region's isolation between two major rivers has added to its particular character. Mammals include 11 species of monkey: West African red colobus *Procolobus badius* (EN), diana monkey *Cercopithecus diana diana* (VU), Campbell's monkey *C. campbelli*, mona monkey *Cercopithecus mona*, lesser spot-nosed and putty-nosed monkeys *C. petaurista* and *C. nictitans*, white-thighed colobus *Colobus vellerosus* (VU), olive colobus *Procolobus verus*, sooty mangabey *Cercocebus atys lunulatus* (VU), the dwarf galago *Galagoides demidovii* and potto *Perodicticus potto*. There were in the Taï forest more than 2,000 West African chimpanzees *Pan troglodytes verus* (EN) in the 1980s. In 2003 Herbinger *et al.* recorded 4,500, in the area with perhaps 1,500 in N'Zo and nearby reserves. But UNESCO in 2009 cited only 516 within the Park. They are noted for using tools (DPN, 1998).

Also found are two bats, Buettikofer's epauletted fruit bat *Epomops buettikoferi* and Aellen's roundleaf bat *Hipposideros marisae* (VU), Pel's flying squirrel *Anomalurus pelii*, giant ground pangolin *Smutsia gigantea*, tree pangolin *Phataginus tricuspis* and black-bellied pangolin *Uromanis tetradactyla*, Liberian mongoose *Liberiictis kuhni* (VU), African golden cat *Caracal aurata*, leopard *Panthera pardus*, forest elephant *Loxodonta africana cyclotis* (VU), which in 2001 numbered only about 100 individuals in the south of the Park compared to some 1,800 in 1979, red river hog *Potamochoerus porcus*, forest hog *Hylochoerus meinertzhageni ivoriensis*, pygmy hippopotamus *Hexaprotodon liberiensis* (EN: 500 in 1996), the only viable population remaining in the Côte d'Ivoire, water chevrotain *Hyemoschus aquaticus*, western bongo *Tragelaphus e. euryceros*, African forest buffalo *Syncerus caffer nanus* and an exceptional variety of forest duikers including Jentink's duiker *Cephalophus jentinki* (EN), banded duiker *C. zebra* (VU), Ogilby's duiker *C. ogilbyi*, black duiker *C. niger*, bay duiker *C. dorsalis*, yellow-backed duiker *C. silvicultor*, Maxwell's duiker *Philantomba maxwellii*, and the royal antelope *Neotragus pygmaeus*. Forest rodents include rusty-bellied brush-furred rat *Lophuromys sikapusi*, Edward's swamp rat *Malacomys edwardsi* and woodland dormouse *Graphiurus murinus*. Also recorded in the park is the defua rat *Stochomys defua*, which is characteristic of secondary forest. There are also two crocodiles, African long-snouted and African dwarf *Crocodylus cataphractus* (VU) and *Osteolaemus tetraspis* (VU), Home's hinged-back tortoise *Kinixys homeana* (VU) and 35 other species of reptile. Also 53 species of amphibians including the very local toad *Amietophrynus taiensis* (CR) and a reed frog found only in 1997 *Hyperolius nienokouensis* (EN), a rare freshwater mollusc *Neritina tiassalensis* (CR) and many thousands of invertebrate species including 57 dragonflies, 95 ants, 44 termites and 78 scarabid beetles (DPN, 1998).

The Park lies within one of the world's Endemic Bird Areas. At least 250 bird species have been recorded to date, 28 being endemic to the Guinean zone. There are 143 species typical of primary forest, including African crowned hawk-eagle *Stephanoaetus coronatus*, white-breasted guineafowl *Agelastes meleagrides* (VU), rufous fishing owl *Scotopelia ussheri* (EN), brown-cheeked hornbill *Bycanistes cylindricus*, yellow-casqued hornbill *Ceratogymna elata*, western wattled cuckoo-shrike *Campephaga lobata* (VU), white-necked picathartes *Picathartes gymnocephalus* (VU), rufous-winged illadopsis *Illadopsis rufescens*, green-tailed bristlebill *Bleda eximius* (VU), yellow-bearded greenbul *Criniger olivaceus* (VU), black-headed rufous warbler *Bathmocercus cerviniventris*, Nimba flycatcher *Melaenornis annamarulae* (VU), Lagden's bush-shrike *Malaconotus lagdeni* and copper-tailed glossy starling *Lamprotornis cupreocauda*. The Gola malimbe *Malimbus ballmanni* (EN) has been recorded nearby in the Gola forest and white-eyed prinia *Prinia leontica* (VU) nearby to the north (Fishpool & Evans, 2001). More on birds is given in Thiollay (1985).

## CONSERVATION VALUE

This is one of the last important remnants of the vast primary tropical forest that once stretched from Ghana to Guinea-Bissau, and is by far the largest remaining island of Upper Guinean forest in West Africa. Its vast size should ensure that its rich natural flora, its threatened mammals - pygmy hippopotamus, eleven species of monkey, tool-using chimpanzees, and the ecological network that sustains them, will continue to exist. The Park lies within a Conservation International-designated Conservation Hotspot, a WWF Global 200 Eco-region, a WWF/IUCN Centre of Plant Diversity and in one of the world's Endemic Bird Areas.

## CULTURAL HERITAGE

The original tribes of the forest region were the Guéré and Oubi who preserved the chimpanzee populations since they did not eat them for totemic reasons. French influence dated only from the mid 19th century.

## LOCAL HUMAN POPULATION

There was little settlement in the area before the late 1960s when reservoir construction in the N'Zo valley and, later drought in the Sahel, pushed people southwards. A population in the area of about 3,200 in 1971 had grown to 57,000 twenty years later. The Park is now neighboured by 72 villages and there are hundreds of illegal squatters in the Park. Of the three main groups of farmers, the rural Bakoué and Kroumen cleared forest selectively, sparing medicinal trees; by contrast, the native Baoulé, and incomers who include refugees displaced by the dam on the N'Zo river, from the Sahel and from the conflicts in both Liberia and Côte d'Ivoire who now form 90% of the population, have indiscriminately fragmented and destroyed much of the forest in the buffer zone. In its place, cash and food crops are planted in shifting cultivation in order to lessen the mortality from malaria. The east side of the Park has suffered most from this. These people neither support the Park, nor are informed about it by the authorities (DPN, 2002; Gartshore *et al.*, 1995).

## VISITORS AND VISITOR FACILITIES

Visitor facilities were initially proposed in only one zone near Djiroutou in the south-west, which comprised mainly secondary forest resulting from previous forestry and farming. There were in 2001 about 230 visitors a year, depending on the degree of security, 90% of them western foreigners. This trickle stopped until about 2006 owing to civil conflict. Ecotourists were hoped for, but the training and cooperation of local people and entrepreneurs are necessary. A visitor centre has been created. Activities include guided walks, especially to watch the habituated groups of tool-using chimpanzees, also mountain trekking and canoeing. Since 1998, supported by GTZ, the traditionally styled 10 chalet 20-bed Eco-hotel Touraco on the Park border has catered to ecotourists. There are also small tented camps within the Park. The Ecotourism Project of the *Projet Autonome pour la Conservation du Parc National de Taï*, offers among other activities a guided visit to a habituated chimpanzee community in the southern part of the Taï.

## SCIENTIFIC RESEARCH AND FACILITIES

The Park was the site of a Man & Biosphere project on the effects of human interference within the natural forest ecosystem. This was a vast research project carried out under the auspices of the

Institute for Tropical Ecology and the Centre for Ecological Research at the University of Abobo-Adjamé in the nearby town of Taï. International scientific cooperation was exemplified by the Ivorian, French, Italian, German and Swiss teams which worked together on various research programs. This level of research continues. The site and research projects have great potential for training and scientific study. ORSTOM has worked here for a number of years. In 1984 a Dutch team surveyed the area, using an ultra-light aircraft for low altitude photography to identify dying trees for use as timber. There has been Ivorian research into forest termites, included under the IUCN/WWF Plants Campaign 1984-1985; and by the government Institute of Forestry into plantation crops. Between 1989 and 1991 BirdLife International conducted the Tai Avifaunal Survey, summarised in Gartshore *et al.* (1995). The Dutch Tropenbos Foundation published a detailed fully referenced study of the Park in 1994 (Reizebos *et al.*). From to 1985, Swiss researchers studied chimpanzees, continuing until 1994 into the transference of an ebola virus to humans and antibodies for it to be found in other animals.

There is an ecological station (*L'Institut d'Ecologie Tropicale*) in the Audrenisrou basin in the core zone and a German team base at Fedfo camp in the buffer zone. There is also a Biosphere Reserve station 18 km south-east of Taï village, which consists of several prefabricated houses, a communal kitchen, two well-equipped laboratories, and an electric generator. It is controlled and financed nationally and managed by 2-3 Ivorian personnel. Between 1993 and 2002 the *Project Autonome pour la Conservation du Parc National de Taï* (PACPNT), financed by GTZ, KfW and WWF with the DPN, worked to improve management and surveillance, monitored and inventoried the condition of the flora and fauna, launched pilot conservation projects with local people, and made comparative studies of seven species of monkeys. Phase I reported in 1997 and Phase II in 2002. This project has produced over 50 papers covering subjects such as tool-using and the ebola virus in chimpanzees and the fauna as a potential source of foods and medicines. In 2002 technical and scientific management of the Park was assigned to the national *Office Ivoirien des Parcs et Reserves* which covers management policy, wardening, research, education and communication for all parks. A Scientific Council of the involved NGOs international and local, was set up. A second research station and a canopied walkway on the east side of the Park have been. However, a national workshop on the forest zone held in 2002-3 focused on the lack of scientific research, monitoring, evaluation, coordination with foreign institutions and access to research done; also the persistence of low levels of popular participation and sustainable development of protected forest lands (UNESCO, 2003). A better inventory of the forest's resources is still needed.

## MANAGEMENT

Taï Forest is managed by the *Direction de la Protection de la Nature* (DPN) of the *Ministère des Eaux et Forêts*, with technical and scientific management by the national *Office Ivoirien des Parcs et Reserves*. It is almost completely surrounded by a buffer zone, the *Taï Zone de Protection*, about 5-10 km wide, which has the legal status of a managed faunal reserve. Contiguous on the north, and now integrated into the National Park, is the N'zo Reserve. Taï Forest is surrounded by six *forêts classés*: Scio, Duekoué, Issia, Monts Kourabahi, Goin-Débé and Cavally and borders two others, Haute Dodo and Rapide-Gras which are important to the preservation of the core site and in providing corridors for wildlife. In 1982 the Park was put forward as a pilot project to demonstrate a national conservation strategy prepared under an IUCN/WWF Project. The *Ministère des Eaux et Forêts* withdrew timber concessions within the Park from the large companies. The early aims were to increase the size and regularity of patrols, to seek recognition of the Park's judicial status by local courts, to remove illegal farmers in the buffer zone and gold miners within the Park, and to run an education and public awareness campaign. In July 1988, the authorities permitted existing plantations within the park to continue for three more years, when they were destroyed and no new plantations permitted. Aerial surveys revealed that the perimeter track where bulldozed was generally respected, but perimeters unmarked or marked by only a 5m-wide cut were not, and the buffer zone forest became severely degraded, especially in the east. However, a vehicle access track around the whole 350 km perimeter of the Park has greatly improved the effectiveness of patrols.

It is debated whether the buffer zone should continue as a transitional area for sustainable use by the expanding population as at present, or be integrated into the Park. Gartshore *et al.* in 1995 recommended that degraded areas should be replanted to extend forest conditions and the local people should be informed about the reasons for conserving the Park. Not knowing these, they have no motive

to support it. In the zone, agriculture is allowed, and between 1996 and 2001 the *Gesellschaft für Technische Zusammenarbeit* (GTZ), with the Mars Corporation led a project to promote the conservation of the forest as a cocoa agro-forest, widely planting nurse-trees for the crop, but plantations or settlements are now prohibited as are hunting, clearing, forest exploitation, fire, camps, and even the exercise of customary rights. This has made difficulties with the local people who have always depended on the forest for some resources. In 2000-1 a study by the Dutch Tropical Forest Aid Programme - Tropenbos examined the effect of bushmeat and commercial hunting on the wildlife of the region in preparation for the resumption of legal hunting in Côte d'Ivoire (Caspary *et al.*). It recommended breeding programmes, research, intensified surveillance and monitoring and experimental controlled hunting.

Between 1993 and 2009 the *Project Autonome pour la Conservation du Parc National de Taï* (PACPNT), project, financed by GTZ, KfW and WWF with the DPN, monitored the condition of the Park. Amongst the main aims of the project were the conservation and bio-monitoring of the wildlife, restoration of vegetative cover, the sustainable use of the natural resources in and around the Park, the improvement of infrastructure and equipment and the furtherance of public awareness (DPN, 2002). The findings were published in 2002. These stated that surveillance in the National Park was amongst the best in the region and there were decreasing numbers of rebels in the Park. Anti-poaching patrols had reduced poaching, with an average of 90 people arrested each year, 81% of them poachers, followed by gold miners and farmers; and in 2001 there were only 25 arrests. Monitoring was done with the assistance of local people many of whom had been poachers. The density of monkeys seems to have increased between 1998 and 2001 and no large species had disappeared from the Park.

The civil conflict which started in 2002 did not seriously affect the Park except for poaching. Satellite images showed positive forest growth in degraded areas. Park boundaries had been completely demarcated using a GPS and entered into a database. Before the conflict, an environmental education program had been developed and ecotourism was being planned (IUCN, 2003). The government had not in 2003 issued its plans for the re-opening and control of hunting in the Park (IUCN, 2003). By 2005 the WWF with KfW/GTZ, Tropenbos and the Ministry of Agriculture and Animal Resources were continuing within PACPNT to provide technical support to the Park management authorities in surveillance, ecotourism, monitoring and evaluation, and by developing and coordinating an environmental education program. Anti-poaching operations have been effectively re-established in the park; and ecological monitoring is providing data for park management and on populations of flagship species (WWF, 2005).

By June 2006 security had returned and the Park was in good condition, affected mainly by passing refugees fleeing civil war which had increased the amount of poaching, much of which was commercial. In most respects - reforestation of degraded land, increase in key species - it was improving and could only benefit from clearer delineation of its borders and implementation of the management plan. By 2006 a ten-year management plan had been prepared for Taï with N'zo covering improved surveillance, ecological management, zoning, revived international cooperation and implementation of the plan, with ancillary plans for financial and ecotourism development and extension of socio-economic measures and environmental education from the east to the west side of the Park. The feasibility of ecological corridors to the Liberian forests was being considered (Collin & Boureïma, 2006; UNESCO/IUCN, 2006). By 2009 76% of the property was covered by patrols and monitoring by several foreign partner organizations notable the Wild Chimpanzee Foundation, revealed that most species had increased in number despite the continuing poaching, gold panning and agricultural encroachment. To secure support on the periphery a group, *Cellule d'Appui aux Mesures Riveraines*, had developed 87 revenue-generating micro-projects (UNESCO, 2009).

## **MANAGEMENT CONSTRAINTS**

The principal threat to the wildlife has been bushmeat poaching mostly of duikers and primates for the restaurant trade. In the past tree clearance for timber and farms, both shifting and settled were troublesome, but now, along with subsistence hunting, fishing and gold extraction are lesser problems. Meanwhile insufficient past funding resulted in inadequate training and equipping of staff. In 1965 settlers had at first been encouraged by the government, but when the Park was created in 1972 they were then evicted. This bred resentment and resistance which aggravated both subsistence and

commercial poaching and logging. Refugees from the north, from Liberia and during the present civil war have exacerbated the problems. A perimeter road designed to define the boundaries and make protection more effective opened up large areas of the Park to illegal timber contractors, shifting cultivators, marauders and poachers, especially on the east.

In 1977, there were said to be many elephants even in the buffer zone. In 2001, due to disturbance, dramatically increased ivory poaching and a lack of effective protection, only about 100 remained. Other species taken include monkeys and antelopes for bushmeat and crocodile and leopard for skins. The Tropenbos report in 2001 revealed some 20,000 subsistence hunters, 600 semi-professional hunters and 60 professional hunters on the periphery of the National Park. Their take showed the impoverished range of wildlife in agricultural areas, but take-off by professional hunters within the Park and neighbouring gazetted forests, was largely of primary forest species, particularly monkeys and bovidae. In the west, more than 50% of the bushmeat was of protected species (IUCN, 2002). By 2002 poaching had virtually emptied the forest of the larger vertebrates, and poachers were shooting hornbills to eat. In the east, there were poaching camps with wide well maintained trails. In the early 1990s a World Bank-financed road from Abidjan along the coast opened the south of the Park to poaching: chimpanzee populations documented in 1990 had disappeared by 1994. The prohibition of hunting threatens the survival of traditional subsistence hunting. Meanwhile, due to the lack of political will and ability to enforce the law and civil unrest 1999-2004, large-scale commercial poaching increased. Well-armed well-trained guards would be essential to control the intended reintroduction of legal hunting (IUCN, 2002).

The Côte d'Ivoire is the most completely deforested country in West Africa. Theoretically, the Tai forest is a *forêt classée*, but after independence, the region became the country's principal producer of rough timber, and vast blocks were clear-felled with enormous waste of timber. Until 1984 deforestation is said to have progressed at the rate of 2.5% of the forest every year, especially in the north where 70,000 ha were temporarily ceded for exploitation. Aerial surveys in 1988 revealed increasing degradation of the forest, but encroachment by timber companies, previously most severe in the north, had ceased, and the forest there was regenerating. But logging continued in the N'zo Faunal Reserve until 1992. The Forest cover in the interior is satisfactory as poachers generally observe the official boundaries of the National Park. But in many places the boundaries of the park and property are not clear to the local people. The buffer zone is fragmented and severely degraded, and in the east, heavily encroached on by slash and burn agriculture: by 2009 3,000 ha of the park were being farmed by 1,200 families. The clearing and encroachment have begun to isolate the forests of the Park and the Reserve from the rest of the country's forests though the west is less severely affected. Following clearance, cash crops such as cocoa, coffee, maize, coco yam, sweet potato and okra are planted. In the south, southwest and part of the north adjacent to the protected area, large areas have never been logged except within easy reach of new roads such as the road bordering the southern boundary where extensive felling has taken place. Gold panning is still carried out in the central region, largely in the watersheds of the Hana and Little Hana rivers, with large areas of forest in low-lying backwater zones cleared for prospecting digs. Recently Ebola fever and anthrax have begun to attack the chimpanzee population.

## **STAFF**

About 100 staff from the Ministry of Water and Forest Resources plus members of the Abidjan University Institute of Tropical Ecology (undated information).

## **BUDGET**

Between 1981 and 1985 this was 100 million francs CFA (US\$200,000). During 1982-88 WWF granted the Tropical Forest Campaign and Project 3207 US\$285,000. In 1988-89 WWF funds totalling SFr850,000 (US\$ 530,000) were earmarked for the purchase of vehicles, a three-year management advisory contract, boundary demarcation, and an education and awareness programme. A similar sum was provided by the government over the same period. In the 1990s WWF and USAID funded a project to curb illegal activities. From 1993 to 2009 PACPNT was funded by GTZ, KfW and CIM (Germany), by WWF, Tropenbos (Netherlands) and CSRS (Switzerland) for surveillance, ecotourism, equipment and staff training. In 2002 US\$30,540 was granted by UNF towards training assistance (UNESCO, 2003). In 2008 the total amount of international assistance received was US\$ 30,000 for technical co-operation,

US\$7,500 for preparatory assistance and US\$60,154 for training assistance (IUCN, 2008a). Between 2008 and 2012 the government will fund only 50% of park costs though a national back-up fund exists (UNESCO, 2009).

## LOCAL ADDRESS

Ministère des Eaux et Forêts, Direction des Parcs Nationaux et Réserves Analogues, BP V 178, Abidjan, Côte d'Ivoire.

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## DATE

1982. Updated 5-1989, 9-2009, May 2011.