

The infrastructure engineer

How the African forest elephant contributes to saving ecosystems

Situated in the heart of the Congo Basin, Odzala-Kokoua National Park is one of the most botanically diverse areas on the planet. While the park's surface area is largely made up out of dense rainforest, it includes some of the northernmost stretches of savannah and features natural forest clearings known as *bais* which are of particular value for local wildlife due to their year-round provision of fresh vegetation and minerals.



The most notable aspect of this park is its varied mammal and bird life: Western lowland gorilla and chimpanzee populations, bongo antelopes, sitatungas, bushbucks and giant forest hogs are found here, as well as spotted hyenas (one of the only places in the world where you can find spotted hyena in a dense rain forest habitat), seven duiker species and many endangered bird species, such as the blue turaco and a great variety of hornbill. Odzala is best known for its forest elephant, an animal recently added to the IUCN list of species and acknowledged as a threatened one. DOB Ecology's partner African Parks assumed management of Odzala in 2010.

The recent assessment by the IUCN reveals a shocking decline in the population numbers of the African forest elephant (*Loxodonta cyclotis*): approximately 86% over a period of 31 years. This decline is mainly due to the increase in poaching but also land use changes and deforestation of elephant habitats. It is important to know that the African forest elephants are slow breeding animals ([Read more](#)). This is an unexpected finding as their smaller size relative to savanna elephants would assume them to have a higher intrinsic growth rate. The main reason for this is that despite a huge abundance of vegetation in forests, most of the edible vegetation is high in the canopy and so forest elephants graze in scattered forest clearings and browse on the foliage, bark and fruit of wood plants within their reach – providing important nutrition in their diet. The population growth of forest elephants was found to be impacted by the availability of nutritional feed in the natural habitat. Human impacts such as deforestation and poaching greatly affect the growth of forest elephants. Since they depend on scattered clearings and fruit-rich patches in between the forest, the elephants are at risk to being ambushed by poachers in those open areas.

Watch wildlife camera footage here:

<https://player.vimeo.com/video/559323671>

<https://player.vimeo.com/video/557102911>

Threats to Odzala's ecosystem

Odzala-Kokoua National Park hosts one of the most significant populations of forest elephants in the region. Because they use specific migratory routes and congregate in bais, it is important that the park continues to monitor and collar elephants. Odzala faces many threats to the ecosystem, including commercial and subsistence hunting for bushmeat, elephant poaching for ivory and the construction of roads on the periphery of the park, which exacerbates the problem of poaching as it provides easy access to the previously isolated forest.



Program

Odzala-Kokoua National Park

Goal

Odzala-Kokoua National Park was established in 1935 and marked as a Biosphere Reserve in 1977. It covers an area of 13,650 km² in which more than 4,400 plant species have been recorded, as well as 106 different mammal species.

The partnership between DOB Ecology and African Parks consists of two parts: the development and protection of Odzala-Kokoua National Park and a fundamental innovation in park management and nature conservation - not only in this park and within African Parks, but also to be shared in the conservation community: the Conservation Performance Cycle.

With the help of technology and research, new knowledge and data is generated quickly and reliably, which can be directly linked to the operational work on the ground. In this way, impact and progress can be monitored much more effectively and results can be adjusted and readjusted. This approach will be applied in Odzala-Kokoua National Park, but will eventually also be integrated into the management of other African parks. In addition, the experiences will be actively shared with others who are active in preserving and managing protected areas (including all DOB Ecology Partners).

Partner

African Parks





African Parks

African Parks is a non-profit conservation organization that takes on the complete responsibility for the rehabilitation and long-term management of national parks in partnership with governments and local communities in Africa. Currently 19 national parks and protected areas are being managed in 11 countries all over Africa, covering over 14.2 million hectares. African Parks' aim is to restore each park so that it can become ecologically, socially and financially sustainable in the long term. Hereto the organization has adopted a business approach to conservation by pioneering the concept of Public-Private Partnerships (PPPs) in protected area management. Central to the concept of a PPP is a separation of responsibilities between the state and African Parks. The state is the owner of the park and is responsible for legislation and policy, while African Parks is responsible for the execution of management functions and is accountable to the state for performance. This is achieved through long-term agreements with the host governments.

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Important drivers

In Odzala, elephants are important drivers for the maintenance and restoration of the ecosystem. Due to their digging activity in bais, they help to maintain and keep bais open and prevent them from being encroached by vegetation. This allows other large herbivores such as buffalos, situngas and hippos to access necessary quantities of vegetation in a dense forest habitat. Elephants often use the same paths for generations to travel between different foraging areas. These paths can be wide and provide routes for other smaller animals to use in the thick forest. Forest elephants have a very broad diet and forage on a large diversity of plants. With their foraging behaviour, they help boost species diversity in forests as their dung is full of seeds from the many plants they eat. In fact, some seeds only germinate after passing through the elephant's digestive tract.

Results so far

When African Parks first assumed management of Odzala, the central area of the park had not been patrolled for several years. Poacher camps had been established in many of the bais as the animals that visited these open areas for minerals and salt were easy targets. One of the main priorities of park management was the establishment of a strong mobile ranger force, capable of covering the vast area of the park.

In 2020, the park additionally created an Intelligence Unit that collects and analyzes information on organized poaching and bushmeat trafficking networks. The intelligence-based approach prevents poaching incidents rather than react to them. This strategy is showing positive results: the unit confiscated 47 firearms, 9,014 rounds of ammunition, 30,275 snares, over 20 tons of bushmeat and over 400 kilograms of ivory.

By reducing poaching and thanks to targeted research projects such as GPS-collaring elephants to be able to identify migration corridors and important elephant distribution areas, the elephant population in Odzala has remained stable for the last 5 years with an estimated population of about 7,200 elephants.