

Cultural values	<ul style="list-style-type: none"> • Sacred sites • Traditional rites (drums, staf...) closely related to the rain forest
Economical values	<ul style="list-style-type: none"> • Climate change mitigation and control at local, regional and global levels • Protection of the sources of main rivers bringing water to surrounding populations • Conservation of plants of economic value

Main pressures

- **Poaching**
- **Pollution of rivers** with chemicals used for fishing purposes or coming from the surrounding croplands.
- **Harvesting of vegetal products** (raffia for roof making, medicinal plants, wood for fire or for charcoal burning etc.)

1. Context : from where are we starting ?

Legal status and date of establishment

The Kakum Conservation Area was legally gazetted as a National Park and Resource Reserve in 1992 under the Wildlife Reserves Regulations (LI 1525) under the administrative jurisdiction of the Wildlife Department.

Land owner: **State**

Management institution

Wildlife Division department of the Forestry Commission is responsible for the management of Kakum national park (KNP).

On-going projects

There is no on-going project but many projects have been carried out in a recent past:

- USAID project, \$5,4 million, focused on law enforcement, capacity building and infrastructures development (including the walkway built in 1995 and the visitor center built in 1997). It also put in place a trust fund (capital needed to generate benefits: \$2 million) dedicated to the maintenance of the Kakum walkway, 2 castles of Cape Coast and to support communities' livelihood. But since 2001, some donors have taken their investment back so that no more benefits have been generated since.
- 3 other projects focused on farmers/Elephant conflicts around Kakum: \$14 000 project \$12 000 world Bank project and \$200 000 FAO project

Neighboring stakeholders

- Private sector:

There is no private enterprise located close to Kakum except farmers that are using the land all around the park. Farmers are organized and represented at the community board. NB: there is also palm oil exploitation not so far from Kakum. Parrots of Kakum are used to feed on waste of palm nuts in this exploitation.

- Communities:

There are 45 000 persons living in 52 villages close to Kakum. These people are represented by 6 parliament chiefs.

- Associations and NGOs:

Microsphere is working on agricultural habits and method of farmers located all around the PA.

Protected area boundary demarcation

The boundaries are demarcated with a track that is maintained by surveillance patrols. Some pillars remain in some places. It seems that there is no conflict with the bordering population that is using the land for cocoa farming. Crop land stops at the PA limit but doesn't go inside. These farmers use pepper fences to avoid elephant's damage in their farm.

Protected area regulation

Regulation is detailed in the wildlife regulations, 1971 LI 710. This regulation precises that hunting, animal or plant capture, fires, and pollution are prohibited in the PA.

2. Planning : where do we want to be how will we get there ?

Management plan objectives

A new management plan is under development. The previous management plan (1996-2006) mentioned the following conservation objectives:

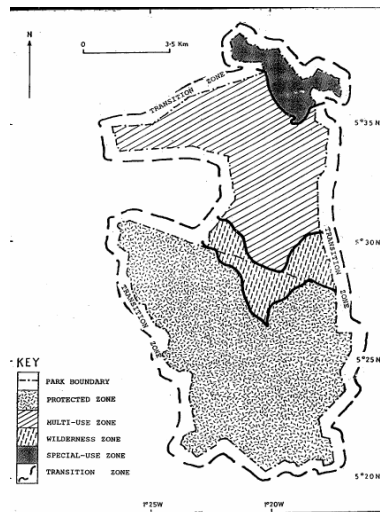
1. To actively protect and conserve all natural resources and aesthetic features in the Kakum National Park and maintain it as a fine example of tropical rainforest ecosystem and as a source of biodiversity;
2. To exploit the parks' potential for tourism and develop and maintain it based on recreational, educational and aesthetic appeal for the benefit and enjoyment of all visitors;
3. To integrate the National Park into the district and regional development processes, especially into those of the communities in the immediate vicinity of the park to ensure wider acceptance of the park's values and co-operation for the protection of the park and its resources;
4. To improve Wildlife Department's field staff welfare, discipline, motivation and capabilities ;
5. To increase the number of visitors to the Park and revenue generation potential of the Park.

Protected area design

The PA is composed of 2 parts that have distinct status: a forest reserve in the North and a wildlife reserve in the South. The previous management plan (1996 to 2006) described 5 zones with different management objectives:

- The **protected zone**: human intrusion will be kept as minimal as possible and only limited to trails and walking should be the only means of entry. Access restrictions to be applied include number of visitors allowed, time, season and generally only non-motorized entry will be permitted.
- The **multi-use zone**: the objectives for this zone are to provide for the sustainable utilization of wild resources from a near natural ecosystem and providing facilities for game viewing and observing nature. Sustainable harvest of botanical resource that are traditionally used will be allowed in this zone.

- The **wilderness zone**: in this zone the maintenance of the natural environment takes priority over all other uses, whilst accommodating limited and infrequent visitor use in an environment substantially free from human influence and alteration.
- The **special use zone**: the admitted farms were pillared by Forestry Department but the pillars have been removed by the farmers to allow them illegally expand their farms. The policy within this zone is to prevent the expansion of the farms and to control other activities that are environmentally unfriendly. There will be no hunting within the zone and no active management is anticipated.
- The **transition zone**: the WD authority has no jurisdiction over the zone. However, it is within this zone that cooperation between WD and local communities must be developed to ensure appropriate planning and sustainable development of wildlife outside the two reserves.



Source: 1996 management plan

But this proposed zoning has not been implemented on the field. Indeed, even if some harvesting activities are legally authorized, they have not been permitted by the park managers in order to protect this damaged northern part of the PA that has been already heavily exploited in the past.

Practically the PA (all zones) is managed as a unique zone where harvesting is completely forbidden. At the moment, tourism activities are restricted to the southern part of the park (close to the walkway).

Management plan

The previous management plan (MP) has been drafted in 1996 and is outdated since 2006. A new MP is under development.

Regular work plan

Management actions are implemented all along the year but there is no specific planning that detail the annual objectives and actions that have to be done.

Monitoring and evaluation

The previous management plan (outdated since 2006) didn't mention any indicators that estimate the success of management actions undertaken. But park managers estimate that 80% of the planned activities have been realized.

3. Inputs : what do we need ?

Human resource

Permanent staff includes 46 persons responsible for law enforcement, 10 tour guides, a tourism officer, a law enforcement officer, a community officer and a park manager. Temporary staff includes 8 tour guides coming from the neighboring villages. The park manager feels that this team is sufficient but could be more effective if completed with 2 positions: a deputy tourism officer and a deputy law enforcement officer.

Research

Research activities depend on external funding and remain occasional. Some independent researchers are currently working on birds, butterflies and forest elephants. But the park manager identified some other topics that would be useful in terms of PA management decision making.

Financial resource

In 2011, the annual budget allocated by the Wildlife Division represented 37 000 Cedis. This budget was only about 12 000 Cedis for the previous years.

4. Management processes : how do we go about it ?

Natural resource management

Some invasive species (*Chromolaena odorata*) occupy open spaces around and within the PA. No particular management actions are undertaken to stop their spread. Ecological monitoring is ensured by law enforcement staff during their patrols. All these data are analyzed thanks the MIST software.

Law enforcement

46 staff is dedicated to law enforcement. Collaboration between PA staff and police and justices services of the 3 districts where Kakum is located, is working well. MIST software is used to monitor the patrolling system.

Resource inventory

Inventory on elephants and butterflies have been carried out.

Management of staff

Law enforcement staff is well trained thanks to the annual training of the Mobile Training Unit of wildlife Division. Tour guide staff is trained in a specific tourism school before performing an internship in a PA to learn the specificity of ecotourism.

Management of budget

The trust fund put in place thanks to USAID project to ensure maintenance of the walkway doesn't generate benefits any more since 2001. Walkway entrance fees are only used for the maintenance of the walkway, the visitor center and 2 tree hides. The annual budget allocated by the Wildlife Division is used for other management activities and maintenance of 1 tree hide, the rain forest lodge and headquarter).

Infrastructure and equipment

Infrastructures (base camp, 3 tree hides, visitor center, walkway) are sufficient and well maintained. As the trust fund created by the USAID project doesn't generate any benefits yet, the budget necessary to maintain the walkway is provided through the entrance fees paid by tourists. The Ghana Heritage Conservation Trust NGO is responsible for the maintenance management of the walkway, the visitor center and 2 tree hides.

3 vehicles and several motorbikes are also available. But there are only 7 GPS for 36 daily active law enforcement agents which, is not sufficient.

Education and awareness

Education and awareness activities started on 1994. Many students and pupils come to visit Kakum and its visitor center which aims at sensitizing people to environmental issues. The community staff of the PA also organizes films showing and debates in the neighboring villages. In the last 6 months of 2011, 3 000 children have been concerned by the awareness actions.

Sensitization particularly deals with ecosystem services provided by the forest and promotion of pepper fences to reduce farmers/elephants conflicts.

Interactions with the users of the surrounding land (public and private stakeholders)

Conflicts between farmers and forest elephants are a real issue especially on the East and West side of Kakum. Ghanaian government doesn't pay for animal damages in farmland. PA staff promotes the use of pepper fences to minimize the destruction of cocoa cropland by forest elephants. This method works well since 4 years now.

Even if some areas have been identified, there is no CREMA around Kakum yet. There is a high level of collaboration between the PA staff and one of the neighboring community which proceed itself to arrests of poachers with the police and then call the PA staff to ensure the follow up of the prosecution.

Role of communities regarding to management decisions of the PA

2 Protected Area Management Advisory Boards (one for the northern part of the PA and the other for the southern part) bring together representatives of communities, farmers, district assembly, parliament chiefs and PA staff. These boards participate in the process of PA management updating. They also meet 3 times per year to deal with issues regarding PA management (PA staff attitude regarding to local population, farmers/elephants conflict, invasive plants in bordering areas of the PA, etc.).

Tourism

About 130 000 visitors come to visit Kakum each year. They come to visit the canopy walkway, or go for a small hike in the forest. The park manager wishes to develop new services for tourists such as bird watching, butterfly watching and a 2 days hike in the forest. Some tour operator include Kakum in their tour. There is no official memorandum of understanding between them and the PA staff but all their activities are known and controlled by PA staff.

5. Outputs : what did we do and what products and services were produced ?

Visitor facilities

There are only few visitor facilities inside the park (a small lodge at the entrance and 3 tree hides within the park) as many other facilities are available in Cape Coast (30 min drive from Kakum).

The restaurant inside the PA is managed by a private enterprise.

Fees and taxes

The entrance fees for protected areas in Ghana are determined by the Chief Wildlife Officer and are subject to periodic changes to reflect the economic trends in the country.

All entrance fees (other than walkway fees) are transferred to Wildlife Division headquarter.

NB/ walkway fees are used for its maintenance.

Condition of values

925 butterfly species are known in Ghana. More than 650 of them exist in Kakum national park. Butterflies are good indicators of the level of biodiversity.

The ecological monitoring gives an estimation of elephant distribution. Nevertheless there is no scientific data on the evolution of forest elephant's population and other species identified as heritage values populations over time. Condition of these values is therefore unknown.

Access control

Surveillance patrols are responsible for the maintenance of the boundary demarcation.

According to the PA staff, the access to the park is efficiently controlled.

Economic benefits for communities

Communities don't benefit from any natural resource harvesting within the PA. Some PA permanent staff and 8 tour guides are coming from the communities and are temporally employed by the PA.

There is no percentage of the entrance or walkway fees dedicated to communities.

Some compensating activities are promoted by local NGOs within surrounding communities.