

Ghana REDD+ Benefit Sharing Field Dialogue

Field Trip Background Information

1st Site – Monday 2nd December, 2013.

Kakum National Park

Background and Location

The Kakum National Park was originally established in 1931, as a forest production reserve and was gazetted as a national park only in 1992 after an initial survey of avifauna was conducted. The area is covered with tropical rainforest. The uniqueness of this park lies in the fact that it was established through the initiative of the local people and not by the State Department of wildlife who are responsible for wildlife preservation in Ghana. It is also the only park in Africa with a canopy walkway and has an important Bird Area recognized by the Bird Life International with the bird area fully overlapping the park area. As of 2012, the densest population of forest elephants in Ghana is located in Kakum. Hundreds of species of butterflies and birds can be viewed from the Walkway early in the morning and if visitors are lucky, they may catch a glimpse of the Spot-nosed, Campbell's, Black and White colobus monkey (*Colobus polykomos*) and Olive Colobus. Kakum is one of the country's top tourist sites attracting an estimated 50,000 visitors each year.

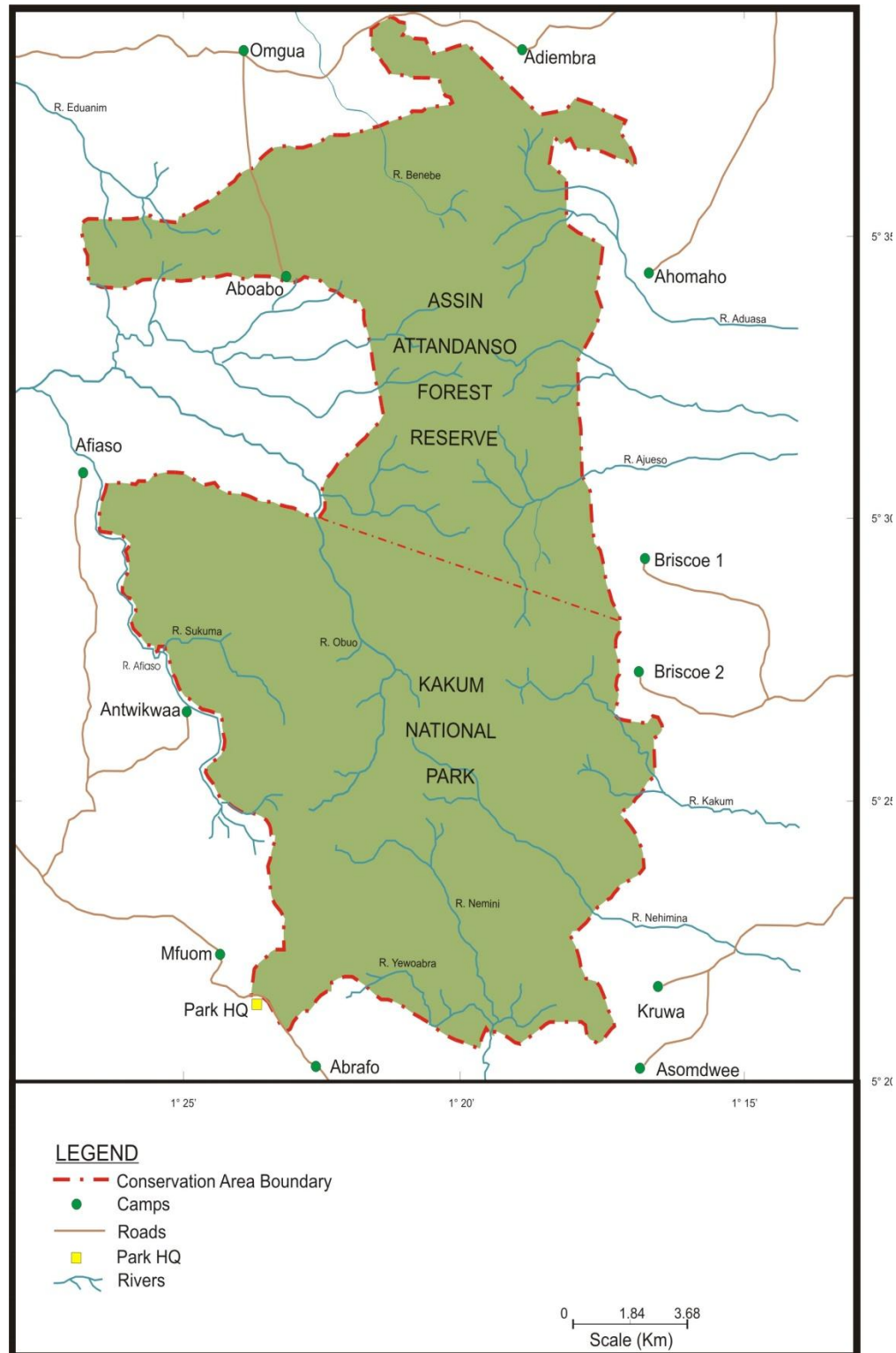
Kakum National Park is situated about 30km north of Cape Coast, Central Region capital and about 170km from Accra. Geographically, Cape Coast lies between latitude 5 degrees south to 6 degrees 3 minutes north and longitude 1 degree 35 minutes east to 2 degrees 30 minutes west. The park is surrounded by 33 villages and also agricultural lands where food crops and cocoa are grown.

Area:

The park covers an area of about 375square kilometers (including Assin Attandanso Resource Reserve) and it is comprised of mostly undisturbed rainforest. The vegetation type is moist evergreen rainforest with tall hardwood trees up to 65m in height. The site has a sun bird trail

developed to incorporate three ecosystems; the rainforest, the secondary forest and a pond environment for visitors to watch birds. The park's attractions include the following

A map of Kakum conservation area showing the major communities.



The Canopy Walkway: It is Africa's first and only rainforest walkway, composed of 350 meters of suspended bridge and seven tree platforms that reach the height of 30 meters above the forest



floor.

From the treetops, visitors experience a unique and spectacular view of the rainforest ecosystem and have the opportunity to see flora and fauna, which otherwise could not be viewed from the ground.

The dominant vegetation type in Kakum is the moist forest. Other vegetation types encountered in the park include swamp forests (permanent and periodic) and riverine forests. Also reported are the Boval vegetation of *Hildergardia barteri*-*Polycarpaea tenuifolia* community found in exposed granite rocks and in shallow soils. 105 species of vascular plants consisting of 57 trees, 10 shrubs, 9 climbers, 17 herbs and 12 grasses are reported from the park. Epiphytic plants are also reported to grow on the trees and shrubs are orchids and ferns and also figs. Logging operations were prevalent in the park between 1975 and 1989. It is, however, noted that the logged areas have regenerated secondary forest consisting of a thick green mantle and vine tangles. This does not extend over the entire park, as much of the dense forest still remains conserved.

Employment profile in the Area

The Kakum National Park and its surrounding has considerable potential for development in agriculture, forestry, tourism, and mining, and provides livelihoods for many through the people living around the park. Over 63% of the population is engaged in the agriculture and related sectors of the economy. Both commercial and subsistence agricultural activities are practiced, with cocoa being the main commercial crop. Cocoa accounts for 70-100% of household incomes of cocoa farmers. In the districts where large scale cocoa farming is practiced within the area, annual returns in terms of family income are high and the standard of living is appreciable.

Subsistence agriculture is largely practiced with production of food crops such as cassava, plantain, and maize. The average food crop farmer has limited contact with the product markets and is unlikely to use fertilizers, insecticides or high yielding seed varieties.

Menial short term sources of employment such as daily labour on farms constitute the next highest average source of employment in the area, employing an average of 37% of the population. These jobs are usually not captured as major employments due to the fact that they are very short term and not as sustainable.

Portal Plantations and Experiential Learning Centre, Bedum, Ghana

Location and Background

Portal Limited is one of the seven national pilot sites selected by the Ghana REDD+ Working Group to serve as a learning site for the implementation of REDD+ activities in the country. Portal Limited is a privately owned forest restoration and learning centre located at Bedum in the Breman-Asikuma-Odoben-Brakwa District of the Central Region of Ghana. It covers an area of 210 acres (85ha).

The Central Region is one of the ten regions in Ghana and the site falls within the moist semi deciduous south-eastern forest zone of Ghana. This forest zone is rich in primary timber species such as Mahogany, Utile, Wawa, and Edinam. Secondary species like Esa, Otie and Onyina form a good proportion of timber stock. The zone is characterised by a two peak rainfall regime with annual average of between 1500mm to 1750mm. The 210 acres of the site is divided into 9 compartments of average 25 acres each. 4 compartments have been planted with indigenous species such as Mahogany, Ofram, Wawa, Edinam and Niangon and fast growing trees including bamboo. The other 4 compartments contain high value essential oil plants such as Cananga odorata (Ylang ylang), which can be used in making soap, candles and body lotions. The last compartment has been set aside for the construction of an eco-tourism village which will involve tree houses, bird watching houses and honey bee centre. This conservation area has been restocked with indigenous trees to maintain bio diversity and habitat.

Major land-use issues and trends

The main drivers of deforestation and forest degradation in the area are fuel wood collection and illegal chainsaw operations. Portal Ltd. is introducing bamboo charcoal as an alternative to address the problem of fuel wood collection in the area. Bamboo was selected because it is a fast growing species and regenerates on its own and therefore there would be a continuous supply of fuel wood.



Model and Activities

Portal has a total work force of 17 workers and aims to amongst other things, create employment opportunities; build relations between younger and older generations; strengthen the community; personal and professional growth; create business opportunity for the community; develop a self sustaining business model which addresses social and environmental issues, and can be replicated/scaled-up.

This project concept has evolved in response to the land tenure challenges in Ghana where families or stools own over 70% of the land. Various challenges faced by the company with regard to land acquisition has revealed that a Mosaic Forest landscape approach where Portal operates as an anchor company and involves farmers and communities as out growers would be the most favorable approach. It will entail reforestation, timber plantation, essential oil cultivation and processing. Development of facilities and training mechanisms for out-growers and communities in the new agro forestry models is also envisaged under this model.

The Portal model is based on a mix of high value herbs and spices capable of value addition at source such as Cardamom, Vanilla Nutmeg Black Pepper, including high value essential oil crops such as Ylang Ylang Patchouli Jasmine and Geranium. There are plans to also include lesser value citronella and lemon grass due to their high demand as a mosquito repellants. This model ensures income from a wide variety of crops, which are intercropped with the trees. Different maturation periods ensure that there is a constant incremental rise of long-term income during the entire life cycle of the tree crop.

10 acres of the pilot site has been dedicated for the production of cut-flowers. As part of Portal's efforts to integrate gender initiatives into its activities, it is supporting a pilot flower farm and landscaping centre by partnering with Eden n' Eve Ltd. Eden n' Eve cultivates and sells Heliconia and Orchid flowers on the local markets and are working towards expanding to the international market. Initial production capacity of the flower farm was 2,500 flowers/ year but has now increased to over 8,000/ year. Eden n' Eve have 6 dedicated women working on the flower farm. This initiative has great prospects as it has the potential of reducing unemployment and poverty among women in the area.

Since its inception 12 years ago, the company has:

- Planted 20,000 Cedrella and indigenous trees
- Planted 4,000 black pepper vines with a projected output of 10-12 tons a year and a revenue of \$40,000 a year at today's price.
- Planted 8,000 ylang trees, 6,500 of which are flowering with a projected flower sales income of \$320,000 a year or \$1,200,000 a year if processed into oil.
- Planted 4,500 Heliconia flowers - Gender initiative centered around the flower farm initiated by Eden and Eve.
- Initiated conservation area and bamboo Eco-tourism nature resort. The communities provide the security and protection for the trees because they see a direct benefit from doing so as these crops are intercropped with them.

Portal Ltd is developing REDD+ model for the site by adopting a Mosaic Forest Landscape Restoration approach. A 2008 assessment of the carbon sequestration potential of the site indicates a potential of 21000 metric tons of carbon per year. However the land area would have to be scaled up to 30,000 hectares in order to for it to be viable carbon project for tradable REDD+ credits. Active engagement and involvement of chiefs and communities is very critical in facilitating this vision as well as the use of an integrated Agro-forestry approach which involves a balance of land uses to meet needs of the growing population, in terms of bio diversity conservation and habitat protection, recreational and economic utilization of forest resources in a sustainable way.