

Status Report for Ghana's
Kalakpa Resource Reserve

Resources and people in crisis



Kalakpa Resource Reserve

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Executive Summary

The Government of Ghana created the Kalakpa Resource Reserve in 1975 to preserve its valuable and rare combination of dry forest and short grassland savannah. It is one of the last intact examples of Guinean bush savannah and an important part of the nation's heritage. Located about 100 km northeast of Ghana's capital, Accra, the reserve has great potential for tourism with its dramatic landscape of hills and plains, as well as good opportunities for wildlife viewing. Resident wildlife includes Buffalo, Kob, Oribi, Waterbuck, the Red River Hog and several types of monkeys, plus abundant species of birds and butterflies.

However, in spite of 30 years of good intentions, Kalakpa has not become a reserve in reality. Only about 500 visitors visit the reserve each year and there are few facilities for them. Worse, the residents within the reserve have never been relocated and their numbers are growing rapidly – currently totaling about 2,500 in settlements of up to 500 people. Residents of about 15 fringe communities also utilize the reserve for part or all of their livelihoods. The human population has exceeded the reserve's carrying capacity and is rapidly destroying its natural resources.

These residents are extremely poor and have few options. They rely almost completely on Kalakpa's resources for their livelihoods. Most households farm and raise livestock. There are an estimated 5,700 cattle within the reserve and overgrazing is common. Burning is used to clear land for farming and to flush game for hunting. Cutting of wood for charcoal production and cooking fuel is depleting forested areas.



Storm clouds forming over Kalakpa's savannah

Because the residents' inhabitation is illegal, the government provides no services. There are no boreholes or piped water, no schools, no health clinics, no formal roads or other communal facilities. Illiteracy rates are high, with 47% of the residents never having received any formal education. Use of polluted water from rivers and streams results in high rates of disease and, in the dry season, residents must sometimes walk hours to find any water.

The rapid depletion of Kalakpa's resources is placing both the reserve and its residents in a downward spiral that must be reversed to avoid disaster. Between 1970 and 2000, 40% of the large mammal species in the KRR became locally extinct. Soil fertility is estimated to have declined by 20% in the past 20 years.

Once Kalakpa's resources are gone the nation will lose an important part of its heritage and the opportunity to improve community livelihoods through sustainable ecotourism. The Wildlife Division of the Ghana Forestry Commission, along with SNV and other partners, has developed an Action Plan to halt the destruction of Kalakpa and help its residents. The Action Plan will relocate illegal residents to new communities outside the reserve, provide residents with training in sustainable livelihoods, protect Kalakpa's resources and develop infrastructure and tourism facilities. The scale of the project is formidable, but further inaction will result in even greater cost and complexity as the human population continues to grow and their source of livelihood disappears. The plan now needs funding support.

Ecological Significance

Kalakpa Resource Reserve (KRR) is a remarkable 325 km² protected area in Southeastern Ghana containing one of the last intact examples of Guinean bush savannah. It features a spectacular combination of dry forest and short grassland savannah. The KRR lies roughly 100 km northeast of Ghana's capital, Accra, and 20 km south of Ho, the regional capital of the Volta Region. The reserve's natural attributes, along with a lush terrain, good opportunities for wildlife viewing and close proximity to Ghana's capital city, provide excellent potential for ecotourism.

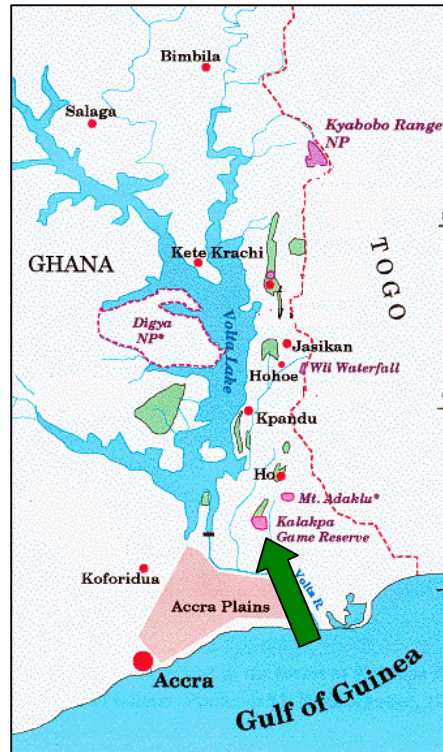
The KRR lies in the ancestral homelands of the Abutia and Adaklu people. In the 1960s-1970s, it became a hunting ground where expatriates from Accra and Tema stalked buffalo and other game. In 1975, in recognition of the area's ecological significance and its value in preserving the nation's heritage, the government of Ghana gave the land official status as a reserve. This designation required that all inhabitants be relocated outside its boundaries (which has yet to occur), but the intent was to allow local people benefit from conservation through sustainable use of its resources.

Kalakpa is probably the only place in southern Ghana where indigenous wildlife is found in coexistence with the indigenous vegetation type. It also features a strikingly beautiful landscape, bordered to the west and north by the Abutia hills which are part of the Togo Range. To the south and east it is flanked by low lying plains. Adaklu Mountain (595 meters above sea level) is a prominent and beautiful landscape feature to the northeast of the reserve (see cover).

Within the KRR, the Kalakpa River forms the central spine of a group of more than 10 generally southward-flowing rivers and streams. Remnants of the closed canopy riverine forests that once proliferated along the major water courses remain. These are narrow bands of forest up to 50 meters wide where canopy cover reaches 90% in some areas,

underlain by dense herbaceous undergrowth.

The reserve is home to both savannah and forest species of animals, including grazing herbivores, notably the Kob (*Kobus kob*), Buffalo (*Syncerus cafer nanus*), Oribi (*Ourebia ourebi*) and Waterbuck (*Kobus defassa*). There are several resident species of monkeys. Kalakpa



also possesses the Red River Hog (*Potamochoerus pocus*), a species which is becoming increasingly rare across Ghana due to the disappearance of riverine forests. Most of the antelopes are concentrated in the savanna grasslands in the northwest of the reserve, in particular the area least disturbed by hunters and settlers, with abundant grass and shrubs for grazing and browsing.

Kalakpa is also rich in birds and butterflies. A limited four-day survey recorded 148 species and the total number is estimated at about 200 species. Known bird species include the Congo serpent eagle (*Dryotriorchis spectabilis*), Nkulengu rail (*Himantornis haematopus*) and the Rosy bee-eater (*Merops malimbicus*). The estimated 227 butterfly species exceeds other reserves with similar habitats, such as Shai Hills and Mole. Existing footpaths offer excellent views and are good for bird-watching.



Given these many attributes, Kalakpa should be a popular ecotourism attraction where thousands of visitors come each year to experience the natural beauty of these unique habitats and see abundant wildlife. Residents in communities bordering the reserve should be prospering from a wealth of tourism-related jobs and reaping the benefits of welcoming tourists to their villages for services and cultural events. Sustainable natural resource management should be assuring that these assets will be preserved for future generations to provide improved livelihoods and preserve Ghana's natural heritage. But this is not the case. The resources of Kalakpa are rapidly being destroyed.

The Problem

A Reserve and Its People in a Downward Spiral

Officially Kalakpa may be a resource reserve, but in the more than 30 years since it was created, it has never become a reserve in reality. Currently the number of visitors to Kalakpa is estimated at only a few hundred per year. There are no proper tourism facilities. The KRR staff attempts to function with extremely poor staff facilities and outmoded equipment.

The resource reserve designation means it is illegal to live within Kalakpa's boundaries, but the government has never summoned the resources to relocate the population and secure the



Above: carrying wood harvested from Kalakpa
Right: a bag of charcoal produced illegally in the reserve



reserve. To make matters worse, the population of illegal residents is growing steadily – now totaling about 2,500 people. Their settlements vary in size from a few huts to more than 500 inhabitants.

A few of the residents were legal landowners to whom the government paid partial compensated to move out (although some now claim they did not receive payment). But nearly all of the residents are illegal settlers and there is no established process for the government to relocate them. Given their extreme poverty, the settlers have few options. They depend

almost entirely on the reserve’s natural resources for their livelihoods. Permanent houses are illegal, so residents make “temporary” huts of clay and thatch. The reserve’s informal roads and dirt tracks are impassable about half of the year during the rainy season. Most residents must walk or bicycle.

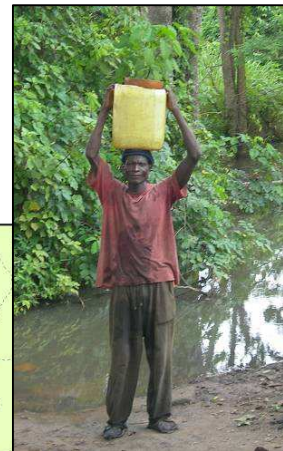


Clay and thatch huts in Fosime village within Kalakpa

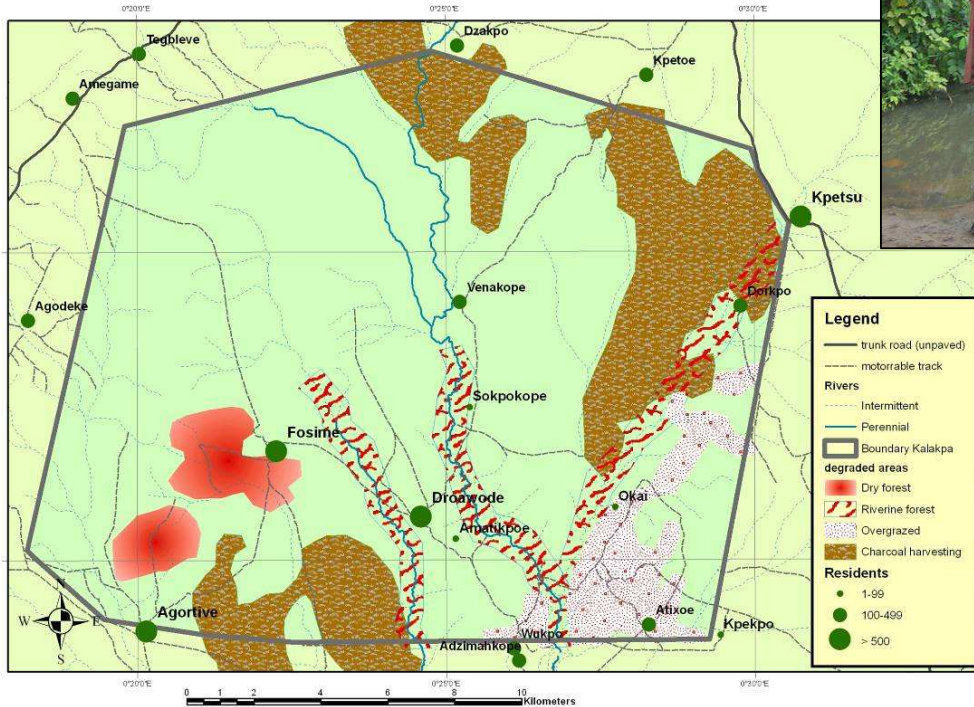
Since policy prohibits the government from providing any services to these illegal residents, there are no facilities inside the reserve – no schools, electricity, health facilities, or piped water or boreholes. The lack of such basic amenities further exacerbates residents’ poverty. During the dry season, they may have to walk hours to find water from disease-ridden rivers, pools and dams. Cholera, Bilharzia (Schistosomiasis), Guinea Worm, and River Blindness (Onchocerciasis) are prevalent and often are untreated due to lack of access to medical care.

These problems are compounded by high rates of illiteracy and perpetuated by the absence of schools. Nearly half of the residents (43%) have received no formal education whatsoever and only 17% have education beyond primary school. None of the residents surveyed had attended tertiary education.

The KRR’s illegal inhabitants, along with others living near the boundaries, have exceeded the carrying capacity of the land and, since the population is growing at between 2-5% per year, Kalakpa’s resources are rapidly being consumed.



Above: finding even unsafe drinking water may take hours of walking during the dry season



Left: human impact on Kalakpa

On average, households in the reserve engage in seven livelihood activities. Of the most common activities, farming and livestock rearing are the most destructive to Kalakpa's natural environment. While prohibited inside the KRR, these activities are practiced by over 90% of the reserve's households. The principle crops grown are maize, cassava, okra, beans, oil palm, groundnut and plantain. Most farmers use only handheld tools. The traditional system of bush burning to prepare land for cultivation creates severe land degradation, requiring the clearing and farming of more land to achieve the same yields. Some of the goods produced within the reserve are regularly being taken for sale at nearby markets in Ho, Kissifluid and Mafi-Kumase.

Kalakpa's wildlife has been over-exploited since the 1960s, when the land was a hunting ground for mainly expatriates. After the creation of the reserve in 1975, the local population continued to harvest wildlife for bush meat. While traps, snares and packs of dogs are often used for hunting, the most popular method is bush burning. The fire drives out wildlife which is then killed with a rifle, catapult, club or cutlass. From a land use perspective, this form of hunting is highly destructive, but it is deeply engrained in the local culture.

Kalakpa residents also raise domestic livestock including cattle, goats, sheep, pigs and fowl. Cattle grazing occurs on the lush grasses growing on the sandy loam soils to the south of the Avator River. The large cattle population in the reserve, estimated to be at least 5700, has resulted in overgrazing. Most cattle are sold at the Mafi-Kumase market, but some buyers come from Ho and Accra to buy directly from herd owners.



Above: cattle grazing in the reserve ♦ Below: clearing land with fire

Illegal harvesting of wood is a massive problem inside the KRR. One village involved in charcoal production takes an average of 100 bags of charcoal to the Ho and Mafi-Kumase markets every day. In addition, wood is the only fuel available to most residents. People inside and outside the reserve also harvest non-timber forest products (NTFPs), such as poles and rope, from Kalakpa's riverine forests. Grass is harvested for thatch in many locations.

Beekeeping is an economically important activity for many KRR settlers, but local harvesting methods are destructive to hives and may not be sustainable. A typical beekeeper sells around 60 to 100 bottles of honey per year to supplement family income. The wax from honeycombs has a variety of uses, including the sealing of cotton thread.

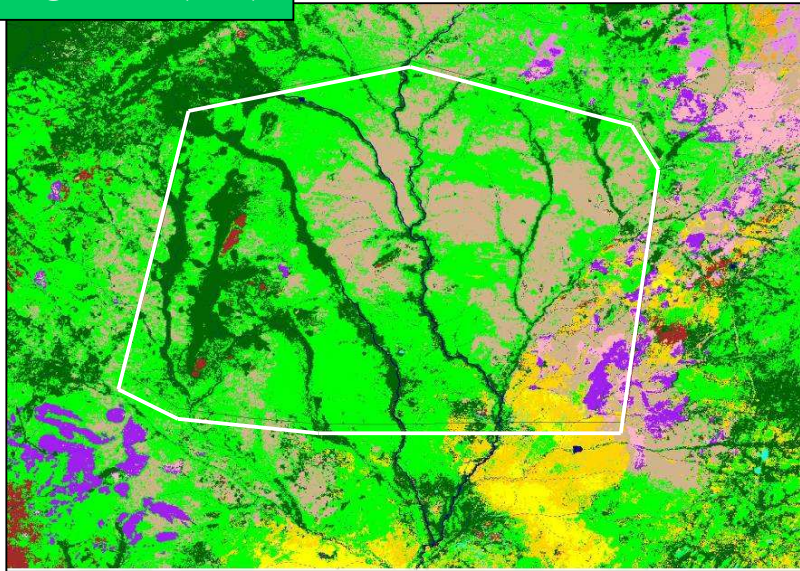
At least 15 fringe communities utilize the reserve for one or more purposes. Residents in eight of the 15 villages state that they use the reserve for three activities or more. The distance to the reserve from these eight villages varies from 50 meters to four kilometers. Their main activities are hunting, collecting climbers, charcoal production and beekeeping.

As the resources of the reserve are depleted, the livelihoods of the already-poor residents will further degrade. Residents are thus locked in a downward spiral that will result in their own destruction, as well as Kalakpa's. The scale of this disaster is reflected in the wildlife population. Between 1970 and 2000, 40% of the large mammal species in the KRR became locally extinct. In the past 20 years, the productivity of the reserve's soil has declined by an estimated 27%.

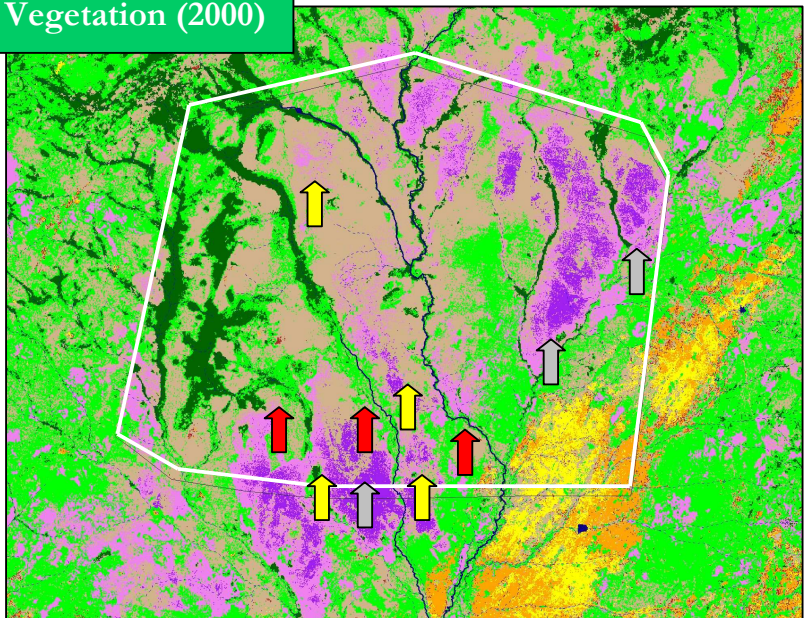
Human impact on Kalakpa is also dramatized by comparing vegetation changes documented by satellite images from 1990 and 2000. The remote sensing images below (as well as the map on page 6) show an alarming rate of destruction:

- Closed canopy forest (shown in dark green in the images) was reduced 44%. The red arrows below indicate some of the areas of most dramatic change.
- Open canopy (shown in light green in the images) declined nearly 58%. The yellow arrows indicate some areas of most dramatic change.
- Burnt areas (shown in purple) increased from less than 3% in 1990 to 20% in 2000. The grey arrows indicate some areas of most dramatic change.
- Tall grass (shown in orange) was reduced to 58%, while short grass cover increased four-fold.
- Length of the riverine forests decreased by more than 50%.

Vegetation (1990)



Vegetation (2000)



	Close canopy
	Open canopy
	Dense herbs
	Short grass
	Tall grass
	Heavily burnt
	Burnt
	Bare area
	Built-up area
Streams	
	Perennial
	Permanent
	Water
	Reserve boundary



The Solution

Participatory Development

The primary obstacle to achieving sustainability for the Kalakpa Resource Reserve is the presence and livelihood activities of 2,500 illegal inhabitants. Although given the mandate by the Government of Ghana, the Wildlife Division of the Forestry Commission does not currently have the means to resettle illegal residents or to effectively enforce KRR regulations. To the extent that the Wildlife Division has enforced regulations, the result has been increased tension with residents.

While the process of relocating the illegal inhabitants, providing them with sustainable livelihoods and effectively enforcing KRR regulations is daunting and will be costly, the alternative of continued inaction will have even more dire and expensive consequences. The government will ultimately need to serve the reserve's population regardless of whether it is relocated or remains in place. The question is whether the government and its partners will act now, when the KRR can still be saved, or later, when there will be no resources remaining to justify the existence of the reserve. If procrastination continues, the opportunity to preserve an important part of Ghana's heritage will be permanently lost, along with the potential for improved livelihoods from sustainable ecotourism.



Women making gari from cassava to sell at the market

It is encouraging that a study of Kalakpa's illegal residents found that 88% of households interviewed are willing to relocate if they are compensated for their homes, crops and land. In order to effectively secure the KRR, it may also be necessary to compensate and relocate an



Wildlife Officer addressing Fosime village residents

additional 500 people who live immediately adjacent to the reserve's border. It is also noteworthy that Kalakpa's residents themselves acknowledge degradation of the reserve's landscape, although they may not agree about the causes. Some 64% of the population has seen an environmental change over a period greater than one year.

The planning process for Kalakpa is complex. Before residents can be relocated, homes and facilities must be designed and built in the new settlement areas. To be successful, this process must engage the residents themselves, as well as a number of government agencies and other

stakeholders. The cost of this undertaking can be reduced by involving the residents themselves in construction activities.

Traditional authorities play a very important role in this process and are an important link in Ghana's political structure. The KRR is located in the Abutia and Adaklu traditional areas. Each traditional area has a paramount chief who is assisted by a number of sub-chiefs with village and clan chiefs beneath them. Their rules and guidelines are generally obeyed by their citizens.

Ghana is also divided into 10 governmental regions, each of which is subdivided into administrative entities called districts, each of which has a District Assembly (DA). While monitored by the central government, DAs are substantially autonomous, with the power to levy local taxes, pass laws and implement projects. The KRR spans three districts and their DAs have a critical role in the resolution of KRR's problems.



Market day at Kissiflui near Kalakpa

A number of central government ministries and offices must also play a role. These include the Ministries of Health (regarding clinics), Education (schools), Food and Agriculture (extension services), and Justice (legal matters), as well as the police (enforcement) and surveyors (registering boundaries).

Action Plan

The government's Wildlife Division has been working in partnership with SNV, the Netherlands Development Organisation to break the impasse at Kalakpa and devise solutions. A Kalakpa Action Plan was prepared in 2007 with the goal of protecting the reserve, halting further degradation and allowing natural resources to recover. The plan addresses:

- Involving the community and other stakeholders in a productive dialogue
- Creating a Protected Area Management Advisory Board, in which the population is invited to participate in the management of the reserve
- Resolving management problems and conflicts with the resident population
- Compensating and relocating KRR residents into new communities outside the reserve
- Creating sustainable livelihood options for residents and people living near the reserve's borders
- Consolidating and protecting the KRR
- Building infrastructure required for the reserve and for tourism

A number of other activities have also commenced. A planning team (consisting of the park manager and representatives from the Forestry Commission, the Ghana Wildlife Society and SNV) has begun an integrated planning approach to involve all stakeholders. SNV will facilitate this planning process and provide other support, while the Wildlife Division will carry out most activities.

The team has visited all of the communities in the reserve. Several community meetings were held to resolve old conflicts. Community representatives attended a workshop presenting the concepts of collaborative resource management, as well as opportunities for income generation through community-based tourism. Participants toured existing Volta Region community-based tourism sites including Wli, Tafi Atome and Mt. Afadjato.

About 400 new homes are needed at an estimated cost of \$2500 per house. It is envisioned that this cost would be part of the compensation package paid to residents who, in turn, would participate in building their houses through a self-help program. Ghana's Volta River Authority is considering a proposal to provide financial support for compensation.

Two research projects have been completed, including a socio-economic survey of KRR residents by students from the University of Utrecht and a natural resources assessment by a British researcher. Field maps were digitized for use as base material by Wildlife Division.

The District Authorities have been addressed several times, resulting in their commitment to the planning process and involvement in resolving the relocation issue. At the DAs' suggestion an ad-hoc planning committee has been formed, comprised of the three districts authorities, traditional leaders, the Wildlife Division and NGOs (Ghana Wildlife Society and SNV). The ad-hoc committee has been meeting regularly since November 2006, focusing on dialogue with the communities in and around the reserve. They have also arranged meetings with Members of the Parliament.

Through the paramount chiefs and chiefs on the committee, potential relocation areas have been identified and investigated. An estimated 5,000 acres (2,000 hectares) is required. Two areas have been identified where chiefs, elders and landowners are willing to either lease or sell land to accommodate new settlements. A third area is under investigation.

Residents will be required to contribute their own labor through self-help projects to build structures and facilities in the new communities. The self-help concept will also be utilized to facilitate the transition of residents to sustainable livelihood activities. Each household will receive training and required tools for one income-producing activity of their choice among more than 10 options, but will be required to invest their own labor in the chosen activity. Included are woodlot establishment, bamboo plantation management, grasscutter and snail rearing, horticulture, beekeeping, mushroom growing, small stock rearing (goats, sheep and pigs), fish production, bamboo processing, block production, craft development and tourism activities.

Providing residents with opportunities for sustainable livelihood activities is also a key to protecting Kalakpa. For example, many residents of the KRR earn their living from making charcoal. At present, they cut live trees in the reserve's savannah landscape. Under the Action Plan residents will be trained to use a rotational scheme under which new woodlots are established each year as older lots are harvested. Kilns will be locally built to optimize the charcoal burning process and decrease risks of fire. Tree nurseries will be created to produce seedlings. These actions will not only create employment, but will also generate a sustainable income for a larger number of households.



Children at Okai village within Kalakpa

A total population of 13,000 people both inside the KRR and in its fringe communities will benefit from the preservation and sustainable development of the reserve. These actions are in concert with other key government programs, including the Ghana Poverty Reduction Strategy (GPRS) and the Millennium Development Goals (MDGs). The actions also demonstrate the Wildlife Division’s commitment to implementing its Collaborative Resources Management Policy (2000), as well as SNV policy and Ghana’s Biodiversity Conservation Strategy.

The next step for the project is to obtain funding for the Action Plan, while securing a commitment from the government to resolve compensation and relocation issues.

Budget

The project is presented in five modules which represent all aspects of the Action Plan. Donor support will be sought for these modules. The Government of Ghana must resolve the payment of compensation to residents. The budget addresses a period of three years.

Kalakpa Action Plan Budget

<i>Module</i>	<i>Year 1</i>	<i>Year 2</i>	<i>Year 3</i>	<i>Budget (US\$)</i>
Communication & awareness raising	148,390	44,440	47,190	240,020
Relocation	449,020	840,400	478,500	1,767,920
Socio-economic development	272,635	161,535	139,535	573,705
Civil works	520,300	1,216,600	566,500	2,303,400
Park development	1,001,110	218,460	137,885	1,357,455
SUM	2,391,455	2,481,435	1,369,610	6,242,500

Highlights of the five modules are listed below.

Module I: Communication and Awareness Raising

- Organize and mobilize stakeholders to build support for the Action Plan and to execute it, as well as empower residents to have a voice in outcomes. Stakeholders include residents of KRR and adjacent communities; Traditional Authorities; Regional Ministers and District Assemblies; and central government entities such as the Wildlife Division of the Forestry Commission; Ministries of Health, Education, Justice, Food and Agriculture, and Tourism and Diasporan Relations; Ghana Police; and Surveyor’s Office
- Disseminate information in the form of printed materials, films and a regular radio program
- Select and train two Community Liaison Officers, a Livelihood Development Coordinator and a Wildlife Ranger
- Train and provide continuing education for the KRR’s existing workforce of 42 people, more than a quarter of whom cannot read or write.
- Collect additional natural resource and socio-economic data to support Action Plan implementation

Module II: Relocation

- Consult and negotiate with Traditional Authorities and other stakeholders to identify, secure and develop relocation areas
- Survey relocation areas and develop zoning and property deeds
- Create boreholes and wells and other communal facilities
- Build community schools and health clinics
- Facilitate the process of the construction of 400 homes by residents as part of a self-help program
- Provide expanded government services to communities bordering the KRR, including borehole repairs or installations, electricity, schools and health clinics

Module III: Socio-Economic Development

- Launch a Protected Area Management Advisory Board (PAMAB) to allow residents to share responsibilities and opinions regarding the management of Kalakpa in a democratic manner
- Provide training to PAMAB participants
- Create one or more Community Resource Management Areas (CREMAs) to allow communities near Kalakpa to use natural resources in a sustainable manner
- Provide alternative livelihood training and equipment to facilitate the adoption of sustainable livelihood activities

Module IV: Civil Works and Park Development

- Plan and construct roads for patrolling, game viewing and to serve as firebreaks
- Mark the 65 km boundary of the reserve and maintain a road around the border to permit improved boundary maintenance and to facilitate anti-poaching actions
- Plan and construct two additional dams to provide water for wildlife during the dry season, with the additional benefits of sport fishing and wildlife viewing
- Construct three fire towers and firebreaks along the reserve boundary and major roads to reduce bush fires
- Construct a new KRR headquarters and information centre for visitors
- Extend electricity to ranger patrol camps and rehabilitate facilities
- Develop a tourism plan and construct basic tourist facilities, including a picnic site, two small camp sites, a community chalet and walking trails
- Replace Kalakpa's very old existing pickup truck and tractor with two new 4x4 vehicles, a tractor and three motorbikes
- Acquire ranger field equipment, including firearms, tents, communications and GPS



Truckload of charcoal going to market

Appendices

For More Information

Wildlife Division of the Ghana Forestry Commission, P.O. Box 239, Accra, Ghana. Telephone: (233-21) 666351. Fax: (233-21) 666127. Web site:

www.fcghana.com/forestry_commission/wildlife.htm.

SNV Netherlands Development Organisation, No. 6 Mankata Close, Airport Residential Area, P.O. Box KIA 30284, Airport-Accra, Ghana. Telephone: (233-21) 776198. Fax: (233-21) 772332. Web site: www.snvworld.org/ghana. Email: TvanderSluis@snvworld.org.

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