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# **Cross River Gorilla** *Gorilla gorilla diehli*

## **Gorilla Agreement** **Action Plan**

This Action Plan is based on the following document: *Regional Action Plan for the Conservation of the Cross River Gorilla (Gorilla gorilla diehli)*. Oates et. al. 2007. IUCN/SSC Primate Specialist Group and Conservation International, Arlington, VA, USA.

*Revised version of UNEP/CMS/GOR-MOP1/Doc.7b, November 2009  
Incorporating changes agreed at the First Meeting of the Parties to the Agreement on the  
Conservation of Gorilla and their Habitats (Rome, Italy, 29 November 2008)*

*English Action Plans include additional editing not included in French versions.*

## **Action Plan**

### **Cross River Gorilla (*Gorilla gorilla diehli*)**

#### **Species Range**

Nigeria, Cameroon

#### **Summary**

This plan outlines a programme of action that, if put into effect, could ensure the Cross River Gorilla's survival. The actions recommended are estimated to cost \$4.6 million over a five-year period; around one-third of these funds have already been committed through government and donor support for general conservation efforts in the region. About \$3 million therefore remains to be raised.

The recommendations in this plan fall into two categories: recommendations for actions that need to be taken throughout the Cross River Gorilla's range, and site-specific recommendations.

Among those that apply across the range of *G. g. diehli* are the following:

- Given the nature of their distribution, a landscape-based approach should be taken for the conservation of Cross River Gorillas that must include effective cooperation by conservation managers across the Cameroon-Nigeria border.
- There is a need to expand efforts to raise awareness among all segments of human society about the value of conservation in general and about the uniqueness of the Cross River Gorilla in particular.
- Community participation in conservation efforts is essential, and for this to occur there needs to be mutual understanding among government agencies, non-governmental organizations and local people.
- Ecotourism can bring benefits for conservation but can also have negative impacts. Given the precarious status of Cross River Gorillas, plans for habituating these apes for tourist viewing must be evaluated with great care, giving full consideration to all risks to the apes.
- Improvements are needed both in the existing legislation protecting gorillas, and in how the laws are enforced.
- Continued research is needed to better understand population biology, including surveys of poorly known areas (especially within potential corridors connecting population nuclei), the monitoring of known populations, and more intensive genetic sampling.

Sites identified for specific actions are:

- In Nigeria: Afi Mountain Wildlife Sanctuary, the Mbe Mountains and the Okwangwo Division of Cross River National Park in Nigeria, and
- In Cameroon: the recently declared Takamanda National Park, Mone River Forest Reserve, the Mbulu Forest, Kagwene Mountain (a gorilla sanctuary), and the Bechati-Fossimondi-Besali hill area.

Among recommendations that apply to several of these sites are the following:

- Improve law enforcement and institute a patrol system (all sites).
- Improve protected-area infrastructure (Afi, Okwangwo).
- Develop or finalize a management plan or strategy (all sites).
- Re-trace or demarcate conservation area boundaries (all sites).
- Take measures to upgrade national conservation status of sites (Takamanda, Mone, Mbulu, Kagwene).

- Elaborate community-based land-use plans within sites, in buffer zones, and/or in corridors (Afi, Mbe, Mbulu, Bechati-Fossimondi- Besali).
- Develop ecotourism plans, not necessarily focussed on gorillas (Afi, Okwangwo).
- Develop fire-protection plans (Afi, Mbe, Kagwene).

The Cameroon-Nigeria border region, where the Cross River Gorilla occurs, is a biodiversity hotspot of global significance that supports a high diversity of animal and plant species, large numbers with restricted ranges, and many of which are threatened. Threatened primates that share parts of the Cross River Gorilla's habitat include the drill (*Mandrillus leucophaeus*), Preuss's guenon (*Cercopithecus preussi*) and the Nigeria-Cameroon chimpanzee (*Pantroglydytes elioti*). Successful efforts to secure the future of the Cross River Gorilla and its habitat would, therefore, provide a wide range of important conservation benefits. We hope that this plan will assist in guiding the actions needed to improve the conservation prospects for this critically endangered ape (and for this biodiversity hotspot as a whole), and in raising the funds needed to undertake them.

### **Introduction to Range States**

The Cross River Gorillas are the most northern and western of all gorilla populations. Living in the mountainous landscape between Nigeria and Cameroon at the headwaters of the Cross River, they were described long ago as a distinct taxon *Gorilla g. diehli* and this status was recently confirmed. The global population occurs in elevation from less than 200m in the valleys to 2,000m. Fewer than 300 individuals may remain at 11 highland sites scattered across an area of some 12,000 km<sup>2</sup>. These gorillas have managed to persist in a region with dense human population, mostly because of the relative inaccessibility of their forested refuges. The Cross River Gorilla is the most threatened ape in Africa.

The hunting of wildlife to supply the large bushmeat trade is rampant throughout this part of Africa, and although gorillas are legally protected throughout their range, hunters still occasionally kill individuals. Hunting remains a serious threat to the small, tenuously connected populations. In addition, the gorillas' forest habitats continue to be eroded and fragmented by farming, burning by pastoralists, and the extension and expansion of roads. Given their small and highly fragmented population, and continuous threat to their survival, the subspecies has been listed as Critically Endangered by IUCN.

Large areas of potential gorilla habitat still connect all known localities used by gorillas, and recent genetic research indicates that migration still occurs occasionally between population centres, and the gorilla sub-populations have the potential to expand. It is therefore important to find ways to protect the corridors connecting the sub-populations and to increase the effectiveness of existing and proposed protected areas within the Cross River Gorilla's range. Concerted and sustained efforts will be required to ensure long-term survival of the Cross River Gorilla.

### **Nigeria**

The Federal Republic of Nigeria, the most populous country in Africa, is also the leading African oil producer. About one-third of the landscape across which the Cross River Gorillas are spread lies within Nigeria, and all of this area is within Cross River State. Here, gorillas occur in three areas, the Afi Mountain Wildlife Sanctuary, the Mbe Mountains, and the Okwangwo Division of Cross River National Park. The total remaining population in the country is estimated at around 75-110 individuals.

### **Existing Legislation:**

#### **National**

Protected areas are established under the National Parks Decree (No.46) of 1999, and administered by the National Park Service at the federal level. Some protected areas are also managed by the states such as the famous Yankari National Park. Great Apes are protected by both Federal and State laws in Nigeria. All wildlife in National Parks is protected by law. The Endangered Species Act of 1985 is the legal instrument through which international treaties are enforceable.

#### **International**

- CMS, 1987
- CBD, 1994
- WHC, 1974
- ACCNNR, 1968
- CITES, 1974
- CMS Gorilla Agreement, 2008

#### **Cameroon**

Cameroon has experienced relative stability in the last decades (apart from a border dispute with Nigeria over the Bakassi Peninsula, ongoing since 1992), allowing the steady development of infrastructure, agriculture and the oil and timber industries.

Cameroon is host to the Cross River Gorilla, *Gorilla g. diehli*, and the Western Lowland Gorilla, *Gorilla g. gorilla*.

A larger proportion of the Cross River Gorilla's range is located in Cameroon than Nigeria, and a proportion of the population occurs on land that has no formally protected status. The latest research indicates that between 125-185 individuals surviving in the wild in Cameroon. All Cross River Gorillas are located within Cameroon's South West Region with the exception of those in the Kagwene locality which extends a few kilometers into the North West Province.

#### **Existing Legislation:**

##### **National**

The Forestry and Wildlife Law N° 94/01 (1994) sets out the country's forestry, wildlife, and fishery regulations, and lists gorillas as Category A species, which are fully protected against hunting, capture, or sale, in whole or in part. National Parks and wildlife reserves may be established under the auspices of the Department of Wildlife and Protected Areas (DFAP) of the Ministry of Forestry and Wildlife (MINFOF), which is also responsible for the country's biodiversity in general. Cameroon has an anti-poaching Strategy (1999, revised 2000).

##### **International:**

- CMS 1983
- CBD 1994
- WHC 1982
- CITES 1981

#### **Recommended Actions**

The recommendations in this plan fall into two categories: recommendations for actions that need to be taken throughout the Cross River Gorillas' range, and site-specific recommendations.

Note: Several organizations, governmental and non-governmental, have already committed to work in partnership for the implementation of the proposed actions.

## **I. Regional Non-Site-Specific Priority Actions**

### **1. Promoting Education and Awareness**

Given the large number of people living around and within the range of Cross River Gorillas, raising awareness about the value of conservation in general and the uniqueness of these gorillas in particular must be a major component of a long-term conservation programme. Education and awareness efforts already undertaken at a number of sites in Nigeria and Cameroon have contributed to a significant reduction of gorilla hunting. These initiatives have included regular radio broadcasts in the Bokyi language in Cross River State, Nigeria, the establishment of an “outreach” program in Cameroon, and the distribution of Cross River Gorilla conservation posters in both Nigeria and Cameroon. These efforts need to be continued and expanded.

<b>Priorities for Awareness Raising and Education</b>	<b>Time Frame</b>	<b>Funding needed</b>
<ul style="list-style-type: none"> <li>Further develop and expand conservation education and outreach programs throughout Cross River Gorilla range based on school conservation clubs, use of radio and TV broadcasts, and conservation / ape films shown to local communities.</li> </ul>	5 years	\$160,000 <sup>1</sup>
<ul style="list-style-type: none"> <li>Develop locally made Cross River Gorilla conservation film/DVD for use in local villages.</li> </ul>	1 year	\$2,000
<ul style="list-style-type: none"> <li>Update education materials, such as posters and leaflets, at regular intervals.</li> </ul>	5 years	\$15,000
<ul style="list-style-type: none"> <li>Creation of regular newsletters on conservation issues and activities.</li> </ul>	5 years	\$8,000

<sup>1</sup> In Cameroon, KfW , the German Development Bank, is currently contributing around €40,000 per year to conservation awareness activities in the 31 villages surrounding the proposed Takamanda National Park.

### **Note: The Role of Primate Sanctuaries in Education.**

*Primate sanctuaries have played an important role in raising interest in monkeys and apes and their conservation. Sanctuaries established in Cross River State, Nigeria (by the Pandrillus and Cercopan NGO's), and in Limbe, Cameroon (being supported by Pandrillus), have acted as havens for confiscated wildlife in this region and as education centers. With many thousands of people visiting these sanctuaries annually, Cameroonians and Nigerians have been afforded opportunities both to see face-to-face species that today they rarely, if ever, observe in the wild and to learn about the threats faced by primates and their habitats. The Limbe Wildlife Centre (LWC) houses a group of western gorillas and the only known Cross River Gorilla in captivity; the LWC runs education outreach programs in South West Province which have collaborated with WCS outreach efforts.*

### **2. Promoting Community Participation in Conservation**

Earlier parts of this document have highlighted the fact that the Cameroon-Nigeria border region is surrounded by a high human population which directly impacts Cross River Gorillas and their habitat. There are also a large number of human settlements scattered through the gorilla's range,

while demarcated village enclaves lie inside both the Okwangwo Division of Cross River National Park in Nigeria and the proposed Takamanda National Park in Cameroon. Much of the gorilla's range falls outside protected areas, on community-managed land with little or no formal protection status. Community support and involvement in conservation activities is, therefore, crucial to securing a safe future for the Cross River Gorilla across its entire range.

Mutual understanding, trust and transparency among government, non-governmental organizations and communities are key factors in community participation, and community members should therefore be included in the development of protected-area management plans and in park management committees. Beyond this, communities may be assisted with livelihood improvements that are designed to reduce the direct impact of people on the gorillas and their habitats. To achieve this outcome, appropriate income-generating activities may be promoted, along with agricultural practices that have the potential to produce increased crop yields without further encroachment on forest habitats or the conversion of buffer zones; improved marketing techniques for agricultural produce should also be explored. These efforts may be assisted by developing community-based training centers. Donor-assisted development efforts tied to conservation projects need to make development assistance contingent on cooperation with conservation management systems.

<b>Priorities for Community-Based Activities</b>	<b>Time Frame</b>	<b>Funding Needed</b>
• Outreach programmes to raise awareness of the benefits of environmental protection (e.g., watershed maintenance and erosion control).	5	\$50,000
• Develop the capacity of local people to participate in and share responsibility for ecotourism and law enforcement.	3	\$60,000
• Develop alternative livelihood activities to reduce pressure on forest resources (e.g., non-extractive resource use, and income-generating activities such as micro-enterprises).	5	\$1,000,000 <sup>1</sup>
• Enclaves: limit all human activities to existing boundaries through the development of land-use plans; encourage resettlement outside protected areas.	5	\$150,000
• Promote land-use planning, improved agricultural practices and community forestry in areas surrounding gorilla habitat to act as a buffer zone to core gorilla sites.	5	\$100,000

<sup>1</sup> The German Development Bank, KfW, has pledged a total of €600,000 to implement development activities to support conservation in the Takamanda-Mone Technical Operations Unit (TOU). These funds will be disseminated over five years and focus on twenty-five communities.

### **3. Development of Ecotourism and Gorilla Viewing**

In certain situations, ape-based ecotourism can play an important role in raising conservation awareness and generating funds for conservation and development. The most successful great-ape tourism initiative is that built around East African mountain gorillas. Mountain gorillas have not been hunted for food, and their more open habitat can allow visual contact over hundreds of meters, so they have been relatively easy to habituate to close human presence. Lowland gorillas are generally much harder to habituate; they have experienced hunting and because the vegetation in their habitat more often impedes vision, the animals and humans often detect each other only when they are in close proximity, provoking fear and stress in both gorillas and humans. Furthermore, habituation for tourism present risks to gorillas including the introduction of human illnesses and loss of fear of humans, including hunters. Cross River Gorillas present particular challenges for habituation. In addition to their wariness of humans because of a recent history of intense hunting, and the dense vegetation in their habitat, the small population is fragmented, and

individual groups range over large areas in rugged and inaccessible terrain. Within the range of the Cross River Gorilla, several ecotourism initiatives have already been developed that do not involve gorilla viewing (for instance, at Afi), and there are many opportunities for such tourism to grow.

During workshops on the conservation of the Cross River Gorilla, potential benefits and costs from developing ecotourism were evaluated.

Recommendations were agreed with the guiding principles being that 1) *ecotourism is not limited to gorilla habituation and viewing* and 2) *ecotourism should be seen as part of an overall tourism package that includes many aspects and services*. Being mindful of these considerations, agreement was reached on the following points:

- 1) Ecotourism can bring benefits for conservation and development, but can also have negative impacts on the environment and human culture, and can distract attention from core conservation needs.
- 2) Because of the risks to gorilla health and survival from disease, stress, and vulnerability to hunting, international concern has been expressed about the habituation of gorillas, especially Cross River Gorillas, for the purposes of tourism.
- 3) Participants agreed to endorse whatever recommendations may arise from an independent feasibility study of gorilla-based tourism to be undertaken at Afi Mountain in 2006-7.
- 4) Participants will not endorse any further gorilla habituation efforts elsewhere in the Cross River Gorilla's range until any outcomes at Afi have been reviewed.

#### **4. Transboundary Conservation**

Given the distribution of and threats faced by Cross River Gorillas, a landscape-scale plan for their conservation is essential. This plan has to take account of the fact that the gorillas occur on both sides of an international border, and that cross-border conservation measures must therefore be developed. A clear transboundary approach can bring several benefits, including:

- Improvements in the control of threats that can cross boundaries, such as fire, pests, diseases, poaching, trade in bushmeat, timber and other forest products and wildlife trafficking.
- The interest of donors in transboundary protected areas.
- An increase in national commitment to conservation when this is seen as a component of international cooperation.
- The fostering of better cooperation and understanding between the nations concerned, both in conservation and in other spheres.
- The facilitation of more effective research

Transboundary conservation measures have already been developed or proposed for a number of other protected areas that lie on either side of the Nigeria-Cameroon border. These are: (1) the Oban Division of Cross River National Park and Korup National Park; (2) Gashaka Gumti and Faro National Parks and a proposed protected area at Tchabal Mbabo; and (3) Lake Chad and Waza National Parks. Many of these areas share common management problems.

<b>Priorities for Transboundary Conservation Planning</b>	<b>Time Frame</b>	<b>Funding needed</b>
• Creation of and support to national and binational transboundary conservation committees to increase dialogue and information exchange and to develop strategies.	5 years	\$20,000
• Initiation of local-level activities between protected area	5 years	\$30,000

managers and staff to develop commitment to cooperative conservation (e.g., exchange visits and joint surveys).		
• Identification of a strategic framework for transboundary conservation, with a lead organization appointed.	1 year	\$10,000
• Develop GIS database as planning tool for conservation.	2 years	\$30,000
• Seek international support and investigate options for designation as a Transboundary World Heritage Site.	2-3 years	\$5,000

## 5. Improved Legislation and Law Enforcement

### *Cameroon*

- The government needs to invest more, both in terms of finance and human resources, in wildlife surveillance measures such as anti-poaching, in addition to habitat protection.
- The 1994 Forestry and Wildlife Law needs to be reviewed and updated to take into consideration new wildlife management issues, and to re-categorize key species based on their current status.
- Cameroon needs to more actively implement CITES measures in order to reduce exploitation of apes, elephants, and turtles
- The government of Cameroon needs to improve procedures for the establishment of community hunting zones, the granting of collection permits, and the development of management plans for protected areas.
- The action plan of the new Caucus of Environmental Parliamentarians needs to be implemented to facilitate the creation and implementation of regulations.

### *Nigeria*

- Both the federal and state governments need to commit more human, material and financial resources to the sustainable conservation of wildlife, including the gorilla and its habitat.
- More effort needs to be made by the government to review the Endangered Species Decree and generally improve the implementation and enforcement of the law.
- Nigeria needs to fulfill the requirements necessary to effect the withdrawal of the suspension of trade by CITES in the shortest possible time.
- A national gorilla conservation strategy needs to be elaborated at the federal level of government in collaboration with relevant state government.
- Revision of the wildlife laws of Cross River State needs to be completed, and the new law implemented.

## 6. Research Priorities

### **a. Population Monitoring**

Though the presence of gorillas has been confirmed at eleven localities in Nigeria and Cameroon, the total area habitually used by gorillas remains unclear. Surveys in recent years have shown that the gorillas occupy significantly larger areas of habitat than had been assumed, but data from a number of sites, particularly in lowland areas, remain limited. Ongoing monitoring at all known gorilla localities is needed to better understand the gorillas' ranging patterns, map core habitat areas, and evaluate the impacts of hunting and other human disturbance. A regular research presence at the gorilla sites would also contribute to protection, community outreach, and community benefits from employment.

### **b. Distribution Surveys**

The full extent of the Cross River Gorilla's range is still not fully known. Recent surveys in

Nigeria have confirmed the presence of gorillas in an area they were thought to no longer use (Olum Hill, near Afi Mountain). In Cameroon, gorillas were thought to be present in the southern portion of Mone River Forest Reserve, but field surveys failed to produce any evidence of their presence. Also in Cameroon, a population believed to have been extirpated (Bechati-Fossimondi-Besali) was recently re-discovered. Taken together, these findings serve to emphasize the need to expand our knowledge of the gorillas' range.

Systematically conducted intensive surveys are needed to more precisely determine the full extent of the gorillas' distribution. Intensive surveys (i.e. employing multiple teams of field workers and of three or more weeks in duration) are necessary due to the low density of gorillas typical of the region, steep terrain, and difficulties involved with detecting gorilla signs in the types of forest typical of the Cross River area. Even in areas where gorillas are known to exist it is often difficult to locate any signs of gorillas. In particular, several areas stand out as needing further survey work:

1. Central and northeast Mone River Forest Reserve, and areas to the north and east of the reserve.
2. The southern portion of the Upper Mbulu forest, in the vicinity of Ashunda, Badshama, Ote, and Mbulu villages.
3. Other forests in the vicinity of Bechati-Fossimondi-Besali, and between Bechati and south-eastern Mone (including the Bamumbu Hills, the Nkong forest and the Mak-Betchou forest).
4. The highland ridges west of the currently known Boshi Extension gorilla locality in northern Okwangwo Division of Cross River National Park.
5. The Okwa Hills in the Okwangwo Division of Cross River National Park.

#### **c. Further genetic analyses**

Genetic analysis has provided valuable insights into the population structure of the Cross River Gorillas, but has been limited by the availability of samples from all gorilla localities. Collection and analysis of additional samples would allow a more detailed understanding of population structure. More intensive genetic sampling would also allow more precise calculation of migration rates between localities. Such data could be used to identify effective habitat corridors and make future demographic modeling analyses more accurate.

Genetic analysis could also be used to address one of the most elusive but basic Cross River Gorilla population parameters, population size. Analysis techniques that employ rarefaction or mark-recapture methodologies (genetic tagging) can be applied to genetic data to generate population size estimates. A pilot genetic tagging study of the Mbe Mountains is currently underway. If successful, this approach could be applied to the Cross River population as a whole.

#### **d. Cross River Gorilla Socio-ecology**

The socio-ecology of the Cross River Gorilla has been studied at two sites (Afi Mountain and Kagwene Mountain) that may not be representative of the population as a whole. Both sites are at the periphery of the gorillas' known range and have features that appear to be somewhat different from the majority of the habitat occupied by *G.g. diehli*. Studying the feeding ecology of gorillas at one of the more central localities would allow an understanding of whether observations from Afi and Kagwene are characteristic of the overall population. Obtaining more data on the gorillas' habitat requirements could help identify the ecological factors determining their present distribution in highlands, and facilitate more accurate estimation of whether currently unoccupied forest areas represent suitable gorilla habitat. Further research on Cross River Gorilla feeding ecology could be complemented by botanical surveys. A better understanding of the relationship between the gorillas' diet and the floristic composition of the Cross River region would allow more accurate estimation of which areas represent good gorilla habitat.

<b>Priorities for Research</b>	<b>Time Frame</b>	<b>Funding needed</b>
• Continued socioecological research and population monitoring.	5 years	\$500,000
• Gorilla distribution surveys.	2 years	\$100,000
• Cross River Gorilla genetic tagging and population genetic analysis project.	2 years	\$100,000
• Ecological studies at new sites.	2-3 years	\$100,000

## **II. Priority Site-Based Actions**

### **NIGERIA**

#### **1. Afi Mountain Wildlife Sanctuary**

Management of AMWS by Cross River State Forestry Commission currently receives support from a number of NGOs including Fauna and Flora International, the Wildlife Conservation Society, Pandrillus and the Nigerian Conservation Foundation. Although levels of hunting have been reduced through the creation of a team of 23 rangers, there are estimated to be more than 600 illegal farms of various sizes within the sanctuary. Widespread illegal logging in the surrounding Afi River Forest Reserve (ARFR) and the spread of farms from the intervening Buanchor enclave threaten to sever the habitat corridor linking Afi to the Mbe Mountains in the east. Although the steep mountainous slopes of the sanctuary have largely protected it from logging, the forest is frequently damaged by dry-season fires and during the 2005-6 dry season some of the gorillas left the confines of the sanctuary to feed in surrounding farms. Methods for mitigating potential gorilla-human conflict therefore need to be considered.

AMWS is currently the focus of an ambitious ecotourism drive by Cross River State Government that includes a plan for habituation of the gorillas at Afi for the purposes of tourism. This habituation proposal is currently the subject of an independent feasibility study. The sanctuary is also the proposed release site for the reintroduction of captive drills (*Mandrillus leucophaeus*) by the NGO Pandrillus.

<b>Action Needed</b>	<b>Time Frame</b>	<b>Funding Needed</b>
• Workshop to resolve issue of illegal farming in the sanctuary.	1 year	\$3,000
• Improve management infrastructure: ranger posts, sanctuary headquarter buildings, radio network, trails.	2-3 years	\$50,000
• Enforce sanctuary laws and organize effective anti-poaching patrols.	5 years	\$125,000 <sup>1</sup>
• Training to implement improved ranger-based monitoring.	1 year	\$1,000
• Survey, map and secure habitat corridors between Afi-Mbe and AMWS-ARFR	2-3 years	\$10,000
• Develop community-based land-use plans for surrounding 'buffer zone' and corridors.	2 years	\$20,000
• Complete ecotourism feasibility study.	1 year	\$10,000
• Develop a management plan.	1-2 years	\$20,000
• Workshop to develop fire protection plan.	1 year	\$1,000

<sup>1</sup> Recurrent costs, of which CRSFC currently contributes around \$10,000 for ranger salaries per year.

## 2. Mbe Mountains

Lacking any formal conservation status, traditional ownership of the Mbe forest is claimed by nine surrounding communities. Despite recommendations to the contrary, the Mbe Mountains were excluded from the newly established Cross River National Park in 1991 and subsequent attempts by the federal government to incorporate the land into the park were unsuccessful. The nine communities have formed the Conservation Association of the Mbe Mountains (Camm) and they intend to manage the area both for conservation and to provide benefits to community members. This process has been driven by a USAID-funded project known as SPACE (Sustainable Practices in Agriculture for Critical Environments) supported by a number of NGOs such as WCS and Development in Nigeria.

Monitoring of the gorillas by a local NGO, the Primates Preservation Group, and more recently by WCS has resulted in a degree of informal protection for the gorillas. Despite the lack of any formal conservation status, wildlife does appear to be more abundant in the Mbe Mountains compared to nearby protected areas. However, the mountains remain under threat from logging, agricultural encroachment, and hunting. It is hoped that the newly created community conservation area will be able to reduce such pressures whilst maintaining local support, and that Mbe will continue to link Afi Mountain with Cross River National Park and the larger block of gorilla habitat to the east.

Action Needed	Time Frame	Funding Needed
• Provide necessary support and capacity building for Camm.	2-3 years	\$30,000
• Explore lease option for sustainable conservation financing.	1 year	\$10,000
• Develop research station.	2 years	\$10,000
• Support the development and implementation of an effective community patrol system.	5 years	\$50,000
• Workshop to develop fire protection plan.	1 year	\$1,000
• Survey, map and protect corridor between Mbe and Cross River National Park.	2-3 years	\$10,000
• Formal demarcation and legal gazettelement of boundary.	1 year	\$10,000
• Develop a management plan.	1-2 years	\$20,000
• Develop community-based land-use plan for surrounding 'buffer zone' and habitat corridors.	2 years	\$20,000

## 3. Cross River National Park: Okwangwo Division

Despite the efforts of park authorities, high levels of hunting occur in most areas of the Okwangwo Division, driven by the lucrative bushmeat market. Consequently, large mammals are at very low densities almost everywhere.

A major unresolved problem for the park is the presence within it of three large village enclaves: Okwangwo, Okwa I and Okwa II. These enclaves were created during the establishment of the former Okwangwo Forest Reserve in 1930 and since that time the villages have increased greatly in population, clearing much forest for farming and expanding outside their enclaves. These farmlands threaten to divide the park in two and thereby isolate the forest and gorillas of Boshi Extension from the rest of the Okwangwo Division. Some low-intensity logging also occurs in Okwangwo, although this is probably not widespread.

Park boundaries also remain contentious: the official decree that established the park in 1991 adopted the boundaries of the former Boshi-Okwangwo forest reserves, rather than following the recommendations of park planning consultants in 1989-90. The boundaries of CRNP as a whole (both Okwangwo and Oban Divisions) need to be reviewed.

Action Needed	Time Frame	Funding Needed
• Continue enforcement of protected area laws, especially anti-poaching measures.	5 years	\$250,000 <sup>1</sup>
• Training for CRNP staff in anti-poaching measures and gorilla monitoring techniques.	1-2 years	\$20,000
• Review existing enclave relocation plans, and explore funding options.	1-2 years	\$1,000
• Finalize management plan.	1 year	\$20,000
• Review of external boundary including possible re-demarcation.	1 year	\$20,000
• Continue with efforts to build and equip new ranger posts.	3 years	\$30,000 <sup>2</sup>
• Plan for broad-based ecotourism and integrate with efforts by Cross River State Tourism Bureau.	1 year	\$1,000

<sup>1</sup> Recurrent costs currently provided by CRNP.

<sup>2</sup> CRNP could be expected to provide around 50% of these costs.

## CAMEROON

### 1. The Takamanda-Mone Landscape

The Takamanda-Mone forest landscape occupies the northern end of Cameroon's South West Province and covers an estimated 4,400 km<sup>2</sup>. This landscape, which encompasses the forest areas of Takamanda, Mone, Mbulu and Kagwene, provides habitat to all but one of the known Cross River Gorilla populations in Cameroon and forms an almost contiguous forest block that adjoins similar forests in Nigeria.

Though recognized as a biologically important area on a regional scale (Comiskey et al. 2003; Forboseh et al. in press), the Takamanda-Mone landscape has been somewhat neglected by conservation efforts. The area has inadequate numbers of forestry officers to monitor illegal forestry and hunting. To improve the survival prospects of the Cross River Gorilla and other threatened animals, and to ensure that proposed protected areas are effectively conserved, this situation needs to be urgently remedied.

### 2. Takamanda National Park

It is estimated that approximately 15,000 people rely on the forests of Takamanda for livelihood resources such as timber and non-timber forest products, particularly bushmeat, bush mango (*Irvingia* spp.), and the edible leaves of the *Gnetum* vine ("eru" or "salad"). The combination of increasing human population in the area and increasing accessibility by road is escalating pressure on the forests. Takamanda's location adjacent to the international border provides additional trans-boundary challenges for enforcement of forestry and wildlife laws. The trafficking of bushmeat across the porous international border with Nigeria, as well as to other parts of Cameroon, is rapidly depleting wildlife populations.

Action needed	Time Frame	Funding needed
• Finalize a management strategy for Takamanda National Park.	1 year	\$20,000 <sup>1</sup>
• Demarcate the boundary of the National Park.	2 years	\$30,000 <sup>1</sup>
• Improve law enforcement, including the recruitment of field-based eco-guards.	5 years	\$220,000 <sup>1</sup>
• Establish a trans-border conservation committee.	2 years	\$10,000

<sup>1</sup> KfW have pledged funds to support many activities related to the establishment of Takamanda National Park. Funding for the first four listed actions should be largely met by KfW.

### 3. Mone River Forest Reserve

Mone River was created as a Production Forest Reserve in the 1950's. Although there are no human settlements within the reserve boundaries, local people harvest timber, wildlife and other forest products unsustainably from the forest. In a 2003 review ("*Plan du Zonage*") it was suggested that Mone River's status be upgraded to that of Wildlife Sanctuary. However, the future status of Mone is now in some doubt, and it is thought that government may consider assigning this area to commercial timber exploitation. There is an urgent need to develop a conservation plan that provides protection for the gorillas in Mone, while recognizing the needs of the local people. This is especially important given the possibility, suggested by genetic data, of continuing connections between the gorillas of Mone and other neighboring forests.

Action needed	Time Frame	Funding needed
<ul style="list-style-type: none"> <li>Acquire and collate baseline biological and socio-economic information in support of a review of conservation status of Mone River F.R.</li> </ul>	1 year	\$40,000
<ul style="list-style-type: none"> <li>Elaborate a conservation management strategy for the area.</li> </ul>	2 years	\$20,000
<ul style="list-style-type: none"> <li>Re-trace the boundaries of Mone River F.R.</li> </ul>	1 year	\$25,000
<ul style="list-style-type: none"> <li>Improve law enforcement, including the recruitment of enforcement staff and the establishment of regular patrols.</li> </ul>	5 years	\$200,000 <sup>1</sup>

<sup>1</sup> Recurrent costs including salaries are to be provided by MINFOF.

### 4. Mbulu Forest

Mbulu currently has no formal management status and local people from the many communities scattered across the area utilize forest resources with few controls. The creation of a road from the town of Mamfe in the south to Akwaya in the north presents a further threat to conservation of the area. This road will allow greater access to, and facilitate habitat loss in, the forested areas that link Takamanda with Mbulu. Although forest continues to be eroded by farming, the main threat to the gorillas of this area is hunting. An infant female gorilla was caught in a snare and killed with a machete in 2001 and in early 2006 reports were received of another gorilla killed in this area. There is an urgent need to form a network of protected areas and corridors in Mbulu.

Action needed	Time Frame	Funding needed
<ul style="list-style-type: none"> <li>Acquire and analyze baseline biological and socio-economic information to plan a network of conservation areas and corridors.</li> </ul>	1 year	\$60,000
<ul style="list-style-type: none"> <li>Complete gazettelement process for two potential protected areas (Upper Mbulu, and Atolo).</li> </ul>	2-3 years	\$75,000
<ul style="list-style-type: none"> <li>Demarcate protected area boundaries and elaborate management strategies for new protected areas.</li> </ul>	1 year	\$30,000
<ul style="list-style-type: none"> <li>Improve law enforcement, including increasing numbers of enforcement staff and recruitment of Conservators for new P.A.'s.</li> </ul>	5 years	\$200,000 <sup>1</sup>

<sup>1</sup> Recurrent costs including salaries are to be provided by MINFOF.

### 5. Kagwene Gorilla Sanctuary

Kagwene Mountain Gorilla Sanctuary is surrounded by nine village communities. Intense hunting on the mountain has resulted in the almost total extirpation of large and medium-sized mammals with the exception of gorillas, which have been afforded protection over the years by a

traditional law forbidding their hunting. Therefore, the most pressing threat to the gorillas in this area is habitat loss. Pastoral cattle herders have converted large areas of the forest to grassland, while farming is creeping further up the mountain slopes. Communities around Kagwene Mountain are prepared to protect the habitat and its wildlife but their support is contingent on completion of the gazettement of the Gorilla Sanctuary. Since October 2005, a locally employed anti-poaching team has been active at Kagwene under the guidance of MINFOF and has been successful in reducing the amount of trapping on the mountain.

Action Needed	Time Frame	Funding needed
• Complete boundary demarcation of the Kagwene Gorilla Sanctuary.	1 year	\$15,000
• Elaborate a management strategy for the sanctuary, including fire-protection measures.	1 year	\$5,000
• Continue law enforcement and anti-poaching activities; finalize recruitment of MINFOF eco-guards.	5 years	\$110,000 <sup>1</sup>
• Employment of MINFOF Conservator	5 years	\$42,000 <sup>1</sup>
• Relocation of livestock currently within the sanctuary.	2 years	\$10,000

<sup>1</sup> Recurrent costs including salaries are to be provided by MINFOF.

## 6. Bechati-Fossimondi-Besali Forest

The threats to the continued survival of Cross River Gorillas in Bechati-Fossimondi-Besali are similar to those in other localities; they include subsistence and commercial hunting, habitat fragmentation, forest clearance for farming, road development and general ignorance of wildlife laws. One pressing issue is that local communities are asking traditional rulers to allow re-farming of the steep mountain slopes of Fossimondi. Another concern is whether parts of the area might be assigned to production forestry. A concerted and collaborative effort is needed to elaborate a conservation plan for this area to mitigate the growing threats.

Action Needed	Time Frame	Funding needed
• Acquire and collate baseline biological and socio-economic information in support of creating a co-managed protected area and wildlife corridors between Bechati and Mone River F.R..	5 years	\$100,000
• Produce a land-use map and review and formalize the status of the Bechati-Fossimondi-Besali Forest.	2 years	\$55,000
• Elaborate a management strategy for the area with the local Forest Community Association and village forest management committees; include demarcation of conservation area.	2 years	\$20,000
• Improve law enforcement, including increasing numbers of enforcement staff and develop community-based wildlife law enforcement mechanisms.	3 years	\$40,000
• Develop livelihood alternatives to minimize trade-offs due to the creation of a protected area.	5 years	\$70,000
• Organize workshops on illegal farming in gorilla habitat	1 year	\$2,000