



## Review of progress on the Regional Action plan for the Conservation of Chimpanzees and Gorillas in Gabon

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### Overview

#### **Western lowland gorillas and Central chimpanzees**

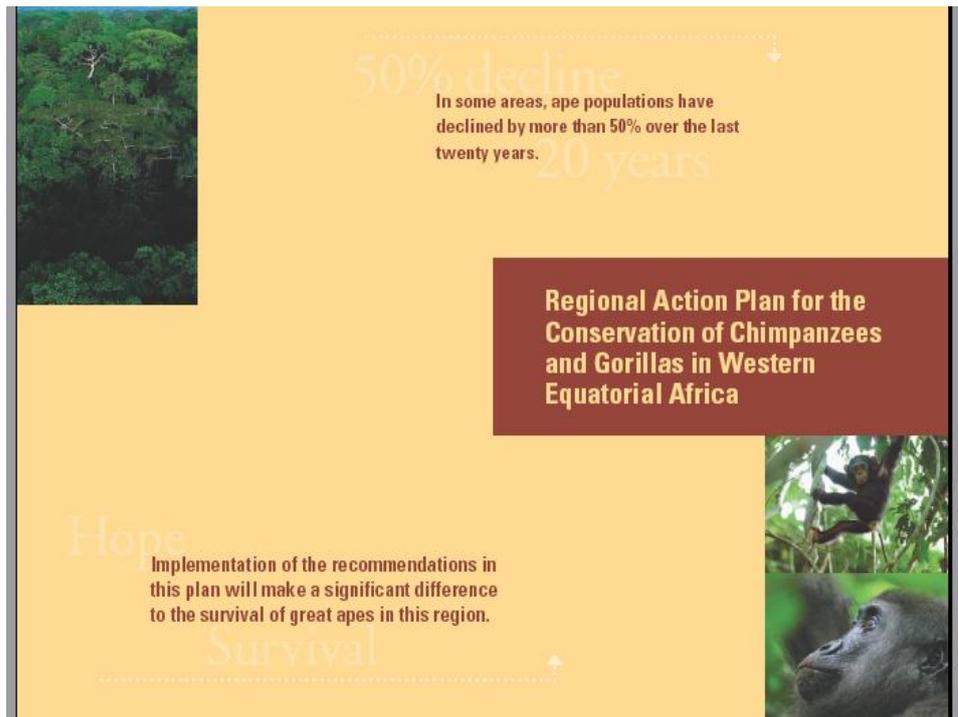
In 2005, over 70 participants convened at a meeting in Brazzaville, to draw up an Action Plan for western lowland gorillas *Gorilla gorilla gorilla* and central chimpanzees *Pan troglodytes troglodytes*. The participants included most of the conservationists and scientists active in great ape conservation in the region, plus representatives of all of the range states in which these two species occur. After the meeting, other experts who were not able to be physically present at the workshop were also asked to contribute their advice and to review the document. Because of this wide-ranging author and reviewer process, the result was the universally accepted Regional Action plan for the Conservation of Chimpanzees and Gorillas in Western Equatorial Africa ((Tutin et al. 2005); Fig. 1).

The Action Plan identified priority areas for the conservation of western lowland gorillas and chimpanzees in the countries which contain all known populations of western lowland gorillas and of central chimpanzees (Figs. 2, 3). These are: Cameroon, the Central African Republic, Equatorial Guinea, Gabon, the Republic of Congo, a small area in the Democratic Republic of Congo and Cabinda in Angola.

Priority areas (Fig. 4) were identified as a function of known or inferred population size, surface area, and importance for conservation and sustainable forest management - these last two points were assessed for the Congo Basin during a previous workshop in Libreville in 2000, also assisted by a large number of experts from across the region: (Kamdem Toham et al. 2003).

For each priority area, the site-specific threats were listed, and a series of appropriate actions listed to mitigate these threats. Each also had a timeframe, potential partners, and an estimate of the budget needed to achieve the action. An example is pasted in Fig. 5. The maximum timeframe was a five-year

one, and the Regional Action Plan is now, therefore, be out of date. Here we review what has, and importantly, what has not been done, to assist the next stage in strategic planning for great ape conservation across the region, with the focus on Gabon.



**Fig. 1. The five-year regional action plan for the area covered by all western lowland gorillas and most Central chimpanzees (Tutin et al. 2005)**

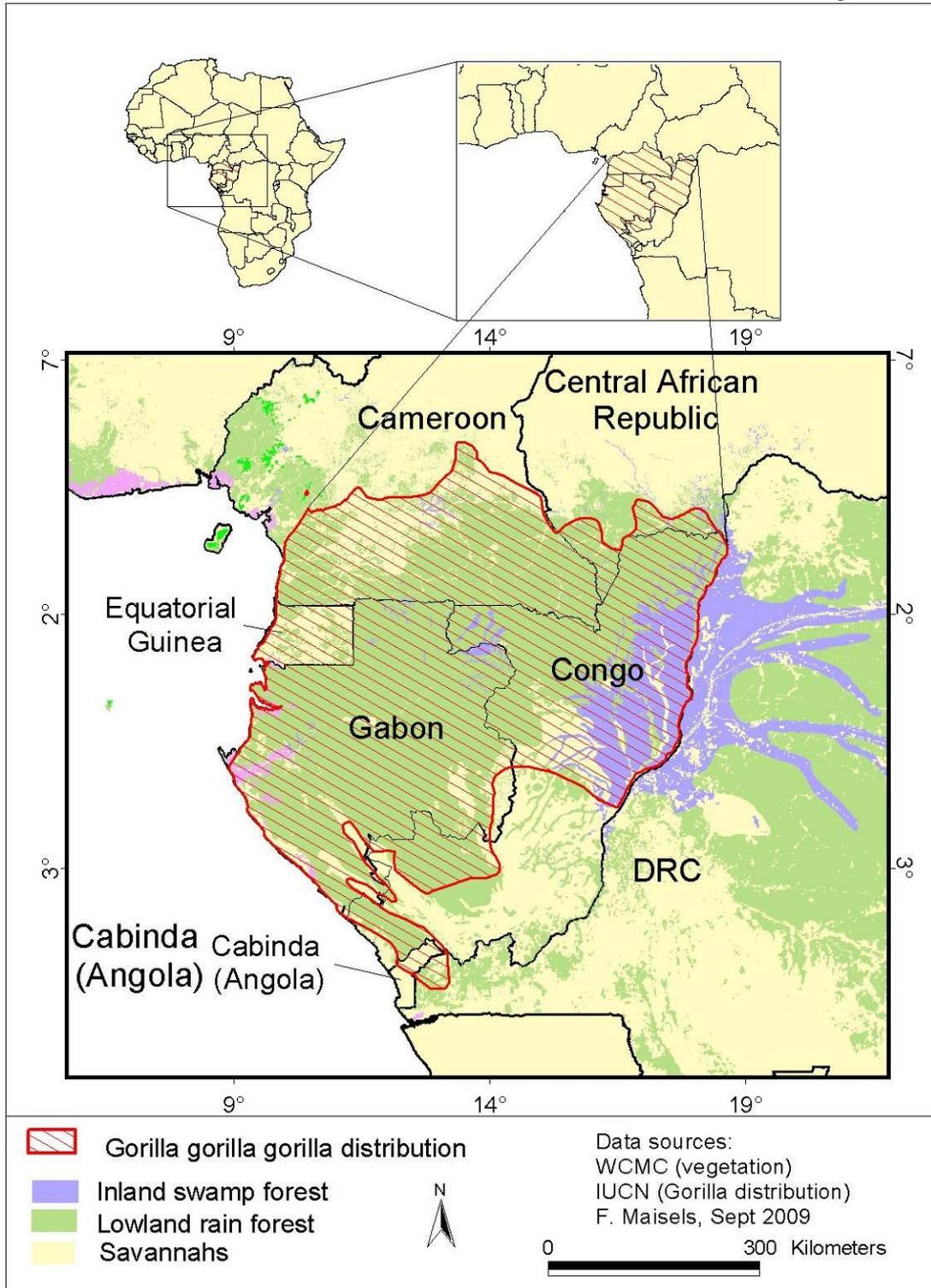


Fig. 2. Distribution of western lowland gorillas.

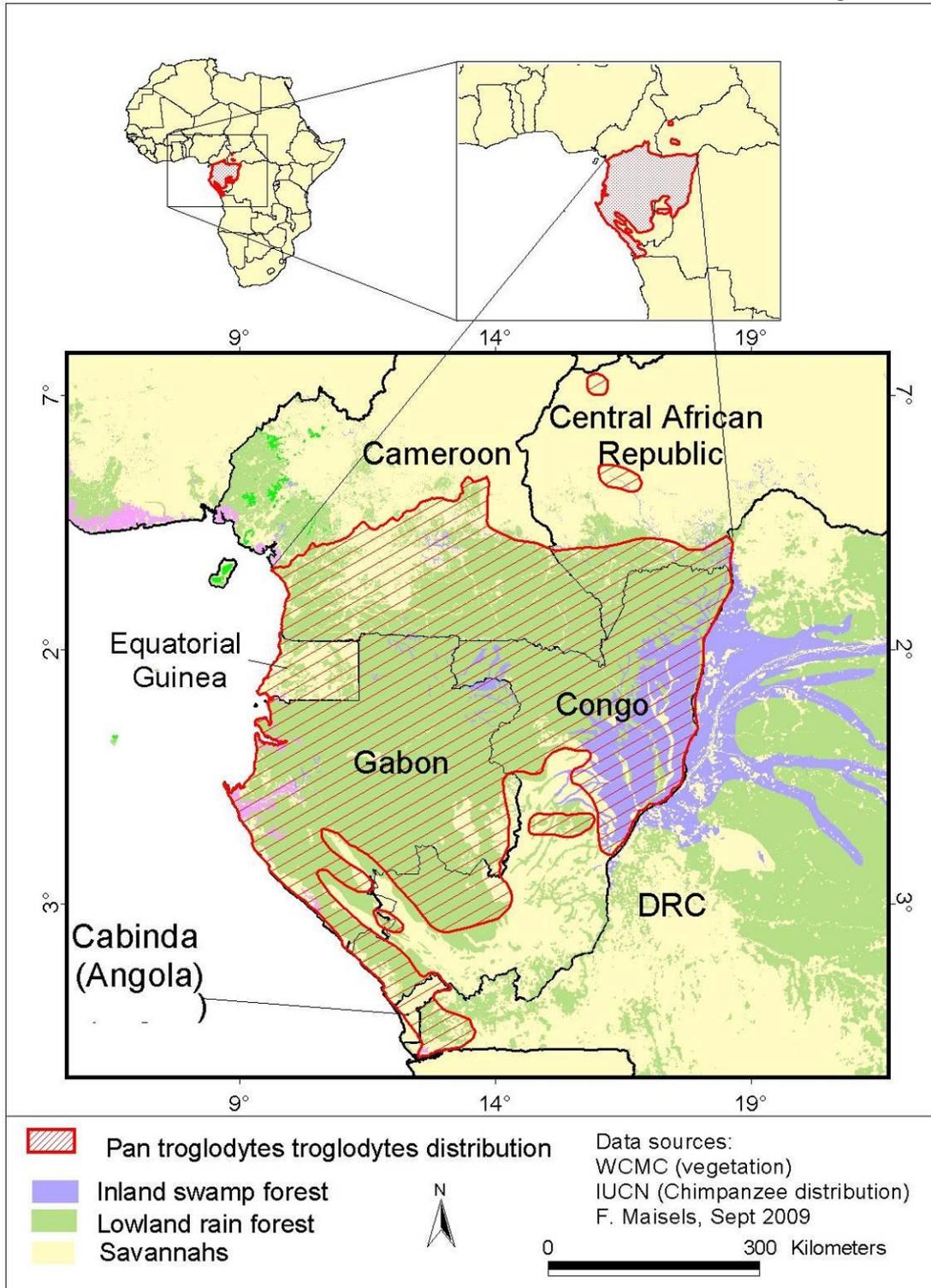
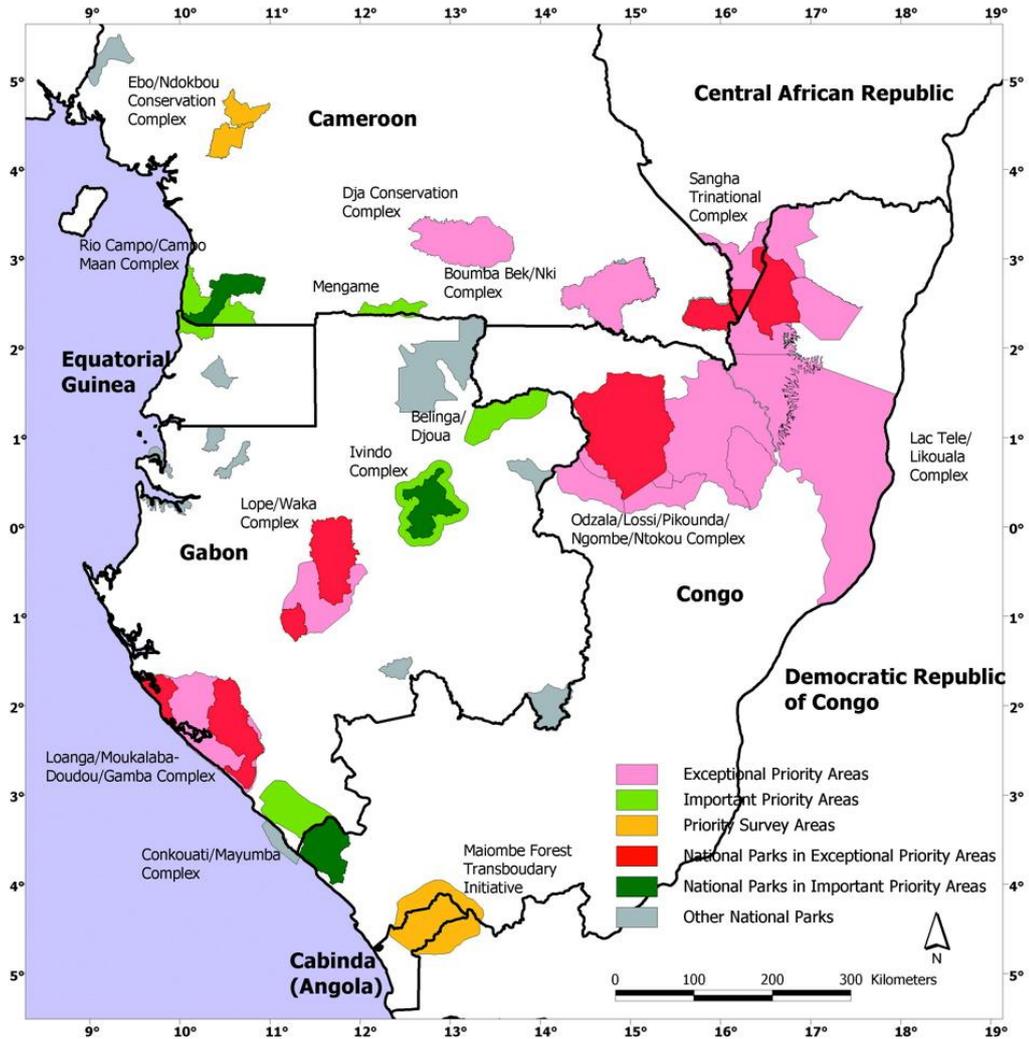


Fig. 3. Distribution of central chimpanzees.



**Fig. 4. Priority areas for the conservation of chimps and gorillas in Western Equatorial Africa, resulting from the workshop in 2005. Map by Stephen Blake.**

**Fig. 5. Example of the table of threats and necessary actions for the Important Priority Area known as the Ivindo complex.**

Regional Action Plan for the Conservation of Chimpanzees and Gorillas in Western Equatorial Africa

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**Important Priority Areas**

Workshop participants agreed to classify the following five sites as Important Priority Areas.

**Ivindo complex, Gabon**

**Major threats to great apes:**  
 Commercial hunting  
 Commercial logging

THIS NATIONAL PARK CREATED IN 2002, covers an area of just over 3,000 km<sup>2</sup> along the Ivindo river in north-east Gabon, and the additional area of this priority site for ape conservation consists of commercial logging concessions surrounding the Park. The waterfalls on the Ivindo river, south-west of the town of Makokou are among the most spectacular in Africa and, with the opportunities of viewing gorillas and elephants at Langoué Bai in the heart of the Park, this site holds potential for adventurous ecotourism.

With a long tradition of research in tropical ecology, the recently renovated IRET field station close to Makokou, in the extreme north of the Park, is an ideal base for continued documentation and monitoring of the fauna and flora of lowland tropical rainforests. Populations of great apes may have declined in the past decade and surveys are urgently needed, but the site holds enormous potential for great ape conservation if it can be effectively protected from commercial hunting.



Action Needed	Potential Partners	Timeframe	Funding Needed
Extend existing programs of health education and ape health monitoring to minimize risks of disease transmission between humans and apes.	WCS-FVP, CIRMF, DFC, CNPN	5 years	\$250,000 <sup>30</sup>
Develop and promote responsible great ape ecotourism at Langoué Bai from viewing platforms, and other appropriate areas within the broad ecotourism strategy for Gabon's National Park network.	CNPN, WCS, FIGET, private sector	3 years	\$500,000 <sup>31</sup>
Develop on-site research capacity on great ape ecology, behavior and health, through support to the IRET research station.	IRET/CENAREST, CIFOR, WCS-FVP, CIRMF, PSVAP	5 years	\$250,000 <sup>32</sup>
Sustain partnerships with logging companies in the buffer zone to reinforce the protection of apes and increase capacity to monitor population trends.	WCS, WWF, FRM, CNPN, Rougier	5 years	\$1,050,000 <sup>33</sup>
Maintain ape biomonitoring program, including training in monitoring methods for research personnel.	WCS, IRET/CIFOR, DFC, CNPN, PSVAP	5 years	\$175,000 <sup>34</sup>

Training Gabonese researchers in survey techniques. The vast areas of potential ape habitat in western equatorial Africa, combined with the difficulty of observing apes in the wild, means that surveys typically use indices of ape presence—such as nest counts—to estimate their numbers.

© IRET/Makou, WCS

<sup>30</sup> Partial funding of \$50,000 from WCS  
<sup>31</sup> Partial funding of \$50,000 from WCS, CARPE  
<sup>32</sup> Partial funding from CARPE, WCS, EU (PSVAP)  
<sup>33</sup> Partial funding from CARPE and WWF  
<sup>34</sup> Partial funding of \$75,000 from WCS, CARPE

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## What has been done since 2005?

This section goes through the different actions deemed necessary in 2005 for improved conservation of western lowland gorillas and central chimpanzees. The information was initially gathered for presentation at a workshop in Yaoundé, where WCS had been asked to present its activities on apes and elephants in the Congo Basin. Several colleagues provided information on the activities in their sites. This was updated in late 2010 and early 2011 for the CMS meeting in Kigali, again with help from many people.

Each priority area is treated separately, as in the original document.

The structure is as follows: the original table from the Regional Action Plan (Action Needed, Potential Partners, Timeframe, Funding Needed) is presented, followed by what actions actually took place since 2005, and what have been the results so far.

## Exceptional Priority Areas

### 1. Loango/ Moukalaba-Doudou/ Gamba complex, Gabon

1.1. Action Needed	Potential Partners	Timeframe	Funding Needed
Reinforce anti-poaching measures throughout the site especially on logging concessions in the buffer zones.	DFC, WCS, WWF, ANPN	2 years	\$1,200,000

**Actions taken<sup>1</sup>:** In 2008, the number of écogardes for Loango National Park was increased to 20, and to 22 for Moukalaba Doudou National Park; all were trained by the Government. In 2011, a Conservateur adjoint was appointed to Loango National Park, and the number of MINEF agents associated with the Brigade de Faunes (Iguela, Setta Cama) rose to 7. New equipment was purchased for the Law Enforcement teams including cars.

The logging company in the area, CBG, obtained FSC certification in June 2009<sup>2</sup>, by respecting a series of standards required for mitigating threats to wildlife, and to reduced impact forest management.

**Results<sup>3</sup>:**

Anti-poaching missions by the ANPN and DFC are increasing, strengthened by the arrival of new staff and equipment. For example, the Loango north team had a 300% increase in effort (number of man days) since 2008. However, the number of missions are still limited by logistical problems (e.g. lack of boats). The MIST system has been implemented in Loango NP since 2008 and Moukalaba Doudou NP since 2010. In addition to improved decision making for anti-poaching missions, the teams are now also using camera traps for surveillance.

The logging company CBG are positively disposed to do anti-poaching missions, and have agents from the Water and Forests Ministry at their site. WWF is working with CBG to implement MIST, and to use camera traps for monitoring road access.

1.2. Action Needed	Potential Partners	Timeframe	Funding Needed
Introduce measures to minimize risks of disease transmission and establish health-monitoring systems for apes, rules for all people using the site, education for villagers and tourists, and analysis of ape fecal samples.	WCS-FVP, WWF, ANPN, DFC, MPI-EVA, Kyoto University	3 years	\$450,000

**Actions taken<sup>4</sup>:** A research project in Loango National Park is currently run by the Max Planck Institute (Boesch and Robbins). WCS is not involved in health work at that gorilla habituation site, but WCS is very active with WCS's own staff in the Park. In addition, WCS developed Employee Health Protocols and good practices adopted by SINOPEC (Chinese petroleum company) in the region. WCS also worked with the Gorilla Research and Habituation Program (Kyoto University) in Moukalaba-Doudou National Park. Training in Ebola and preventative medicine protocols was given to the staff of the Gorilla Research and Habituation Program at Moukalaba-Doudou National Park.

Three separate preventative medicine training sessions were held for the staff, and one health and hygiene session was held for the local community.

Sample collection supplies were provided to field staff, with the objective of later analysis of dung for disease and parasites. The Max Planck Institute collect samples to investigate pathogens.

<sup>1</sup> Information from Ruth Starkey, WCS

<sup>2</sup> <http://cbgpog.com/cbg.php?var=pres&menu=certification&id=fsc-olb>

<sup>3</sup> Information from Ruth Starkey, WCS

<sup>4</sup> Information for both actions and results from Trish Reed, WCS

ANPN are developing its own health and safety procedures for all National Park users, which they are in the process of validating and implementing. These procedures include best practices for ape health, and are based directly on the IUCN recommendations.

**Results:** The WCS Employee Health program was adopted by field staff, and they remained free of infectious disease for the period . The oil company then in the area (SINOPEC) adopted the Employee Health Program (EHP) and good practices, as did the Kyoto-IRET Gorilla Research and Habituation Program at Moukalaba-Doudou National Park (PROCOBHA). However, a site visit by ANPN in 2011 revealed that PROCOBHA are not applying best practices. ANPN have made specific recommendations to the site to improve field procedures and camp management practices to reduce disease transmission risk.

1.3. Action Needed	Potential Partners	Timeframe	Funding Needed
Develop and promote responsible great ape tourism within the broader ecotourism strategy for this site.	ANPN, SCD, MPI-EVA, SCS, PSVAP, WWF, WCS	5 years	\$200,000

**Actions taken**<sup>5</sup>: The Max Planck Institute is habituating gorillas and chimpanzees within Loango National Park with the long-term aims of enabling ape research and tourism. The SCD ecoguides are learning about great ape conservation.

There was a gorilla orphanage in the area (Evengue Island, in a project run by SCD) which aims to reintroduce gorillas into the wild, currently managed by a vet.

**Results:** Habituation by Max Planck has had mixed success. The methods have changed over time which have resulted in an improved contact rate, Habituation is nearly completed for a large group of chimps and gorillas

The rehabilitation project (Evengue) has had some success with improved gorilla health measures in the last few years. In August 2009, six young gorillas were released on a larger island site in the Fernan-Vaz Lagoon<sup>6</sup>. A site for reintroduction is being explored. A larger island is being prepared for stage 2 of reintroduction. In 2011 Evengue rescued a new gorilla.

In 2009, Kyoto University established a collaboration with IRET at their gorilla habituation site in Moukalaba-Doudou NP, and named the project "PROCHOBHA". This project aimed to develop scientific research programs and gorillas habituation for science and tourism. One group (Group Gentil) has already been successfully habituated for research, and in December 2010 a second group (Group Huit) was identified for habituation for tourism. WWF carried out an evaluation at the site for gorilla tourism in 2010, and numerous discussions have been held between PROCOBHA, ANPN, WWF and the other major partner in MDNP (PROGRAM), in order to forge a collaboration for developing ape tourism at the PROCOBHA site. However, it remains unclear if and how this collaboration will work. PROGRAM is a local association, supported by WWF, with the to test and develop responsible tourism activities around 2 main sites, including Doussala and Mbani River. The association is developing a nascent responsible tourism product in the Doussala area and inside MDNP, and there is potential for gorilla habituation to be carried out there. WWF is about to carry out a gorilla habituation feasibility study for PROCHOBHA, PROGRAM and Max Planck.

1.4. Action Needed	Potential Partners	Timeframe	Funding Needed
Strengthen research capacity to respond to threats to apes, integrate research into site management, provide support in training, data collection and analysis, and applied protocols.	SI, University of Kyoto, MPI-EVA, WCS, WWF, ANPN, CMP	5 years	\$250,000

<sup>5</sup> Information from Ruth Starkey, WCS

<sup>6</sup> [http://www.yog2009.org/index.php?view=article&id=187%3Aagabonese-orphan-gorillas-set-free-on-an-island&option=com\\_content&Itemid=67](http://www.yog2009.org/index.php?view=article&id=187%3Aagabonese-orphan-gorillas-set-free-on-an-island&option=com_content&Itemid=67)

**Actions taken**<sup>12</sup>: The research carried out by MPI has informally helped national park management – for example, information regarding hunting sign has been helpful in pinpointing poaching activities. During 2008 the Conservateur (park manager) and the WCS technical assistant were trained in a management information system (MIST) that links georeferenced field data with patrol effort, to provide protected area management with a rapid, spatially explicit tool for visualising where problems are occurring, and how effective their law enforcement activities are at any given time, and over any time period.

**Results:** A Law Enforcement monitoring programme has been running in Loango since 2008, and began in Moukalaba-Doudo in 2011. All écogardes have been trained in data collection methods for Law Enforcement monitoring, and Focal Points have been trained in data management. Monthly reports for each park are produced that show the patrolled zones, effort and results.

PROCHOBA run an ape research program inside MDNP, but are currently not informing park management. The situation between ANPN and PROCHOBA needs to be addressed.

1.5. Action Needed	Potential Partners	Timeframe	Funding Needed
Maintain ape biomonitoring program, including training in monitoring methods for research personnel.	WCS, WWF, DFC, University of Kyoto, MPI-EVA, ANPN, CMP	1 year	\$100,000

**Actions taken:** One staff member of Loango NP was trained as part of the regional monitoring training in 2005. The WCS Lope NP monitoring team leader went to Loango in 2006 to further train other team members, including WWF staff. Loango National Park was then completely surveyed in 2006, using standard methods. Moukalaba National Park was partially surveyed by WWF staff.

The logging concession has had one complete survey by logging company employees paired with WWF technicians. However, there were concerns raised about the speed of progress (much faster than normal) of the survey teams, due to a lack of training of the logging employees, who are normally paid by the number of kilometres they travel in a day.

**Results:** Apes were present in reasonable numbers in all sectors of Loango National park; rough population estimate was 650 (95% c.i. 414-1029).

## 2. Lopé/ Waka complex, Gabon

2.1. Action Needed 2005-2010	Potential Partners	Timeframe	Funding Needed
<ul style="list-style-type: none"> <li>• <b>Extend existing programs of health education and ape health monitoring</b> to minimize risks of disease transmission between humans and apes.</li> </ul>	WCS-FVP, CIRMF, ZSL, DFC, ECOFAC, ANPN	5 years	\$250,000

### Actions taken:

Between 2004 and 2009 collaborative work between SEGC, WCS, ZSL, covered 7 years and at least 5 separate grants. In 2010, the health education program for local children continues in north Lopé schools but the health monitoring program stopped in Mikongo and SEGC in 2010.

### Results:

2 fully-equipped field laboratories for on-site fecal parasite screening were installed in 2003 by ZSL-Mikongo and in 2005 in CEDAMM. They were both operational until 2010. Two Gabonese technicians were trained in parasite screening and carcass sampling methods during that period. Parasitological analysis of a total of 476 great ape fecal samples, 55 mandrills and 108 humans was carried out using a suite of methods. An internationally-approved Health and Safety program for staff was established: this included vaccinations, annual health checks, ongoing fecal screening, regular first aid training (32 qualified first aiders locally), and best practice guidelines. A rapid-response system for epidemics was implemented. A health education program for local school-children was developed: 37 classes in 7 villages and 1 logging camp were held: 447 children received lessons each year between 2008 -2010. With the departure of ZSL from Mikongo and the change of management at SEGC this programme ended in 2010.

2.2. Action Needed 2005-2010	Potential Partners	Timeframe	Funding Needed
<ul style="list-style-type: none"> <li>• <b>Support research &amp; training programs and improve capacity for adaptive management,</b> through focused research protocols and systems to evaluate the effectiveness of management for the protection of apes.</li> </ul>	WCS, CIRMF, ZSL, USTM, ENEF, ANPN, ECOFAC	5 years	\$250,000

### Actions taken to 2010

Two cycles of monitoring were completed in Lopé in 2005 and 2009. One survey was carried out in Waka in 2006, and one buffer zone survey was carried out in the Waka-Lope corridor in 2008. Since 2005, several standard long great ape trainings have been carried out at CEDAMM; research methods and analysis in 2007 (Jeffery) and Biomonitoring in 2005, 2008 and 2011 (Maisels and Aba'a). Many other training courses have been held at CEDAMM on more generalized subjects (ecogardes by ANPN, GIS by WCS etc). A Law Enforcement monitoring protocol, MIST, was implemented in Lope National Park in 2009, providing regular information on anti-poaching effort and producing results that will be used for adaptive management.

### Results:

Data on ape distribution have been generated throughout Lope and Waka NP's, as well as the Lopé-Waka corridor. A biomonitoring Team leader was trained in Lopé in 2008, and team assistants were trained in 2007.

2.3. Action Needed 2005-2010	Potential Partners	Timeframe	Funding Needed
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<ul style="list-style-type: none"> <li>• <b>Standardize and refine protocols for training and implementation of monitoring programs</b> for great ape populations.</li> </ul>	WCS, CIRMF, DFC, ECOFAC, ANPN, ZSL	5 years	\$150,000
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#### Actions taken to 2010

In 2006 it was decided (at the GRASP ape priority population meeting in Paris) to write these protocols. Most funding came from USFWS and some from the Primate Action Fund. These are part of the IUCN Best Practice Guidelines series. Most sections of these Guidelines were available by 2007.

#### Results:

Standard IUCN best practice guidelines available on APES database and on IUCN website covering theoretical background, survey design, field implementation, training, and standardized reporting. Printed copies in French, English and Bahasa (Indonesia) available and delivered to range states.

2.4. Action Needed 2005-2010	Potential Partners	Timeframe	Funding Needed
<ul style="list-style-type: none"> <li>• <b>Improve judicial and law enforcement capacity</b> in protected areas and logging concessions, including mobile anti-poaching brigade, specialized training for local authorities, gendarmes and magistrates.</li> </ul>	ANPN, DFC, WCS, ECOFAC, USFWS	3 years	\$ 160,000

#### Actions taken to 2011

Support was provided to DFC for punctual missions in NW Lopé and buffer zone. A control post was constructed on the bridge at Ayem. ANPN has increased the number of ecogardes and trained them, and a new Conservateur was appointed to Lope National Park in early 2010 who has extensive experience with antipoaching activities in the Minkebe region. The ANPN has equipped its teams with the basic equipment required for anti-poaching, and has provided logistical support required.

The Law Enforcement Monitoring protocol MIST was implemented in 2009 in Lope, and in 2011 in Waka and Ibjoundi (south Lope). All écogardes have been trained on data collection methods, and focal points have been trained on data management. Standard monthly reports are produced showing effort and results for adaptive management. Camera traps have been used in Lope National Park since 2011 for surveillance.

#### Results:

Law enforcement efforts in Lope National Park have increased from virtually 0 effort in 2009 to 1130 man days from Oct 2010-Sept 2011. These efforts have showed that poaching still persists in the N-W of the park, with recent missions revealing that paths exist a long way south inside the park along the Offoue river, suggesting an increase in poaching there. Several missions have resulted in seizures. However the ecogardes' effectiveness is being hampered by a lack of training, funding and an undefined legal status, meaning they have to work with gendarmes, who are frequently unavailable. The construction of a new forestry camp in buffer zone NW of the park was halted due to lobbying. However poaching continues in this concession and there are no barriers on roads.

2.5. Action Needed 2005-2010	Potential Partners	Timeframe	Funding Needed
<ul style="list-style-type: none"> <li>• <b>Develop and promote responsible great ape tourism</b>, of already habituated gorilla groups and within the broader ecotourism strategy for this site.</li> </ul>	ZSL, ANPN, ECOFAC and private operators	5 years	\$ 500,000

#### Actions taken to 2010

Gorilla groups were never properly habituated and this was abandoned by ZSL in favour of generalized rainforest tourism. This in turn closed in 2010.

**Results:** No results now specific to this point.

## Important Priority Areas

### 3. Ivindo complex, Gabon

3.1. Action Needed 2005-2010	Potential Partners	Timeframe	Funding Needed
<ul style="list-style-type: none"> <li>• <b>Extend existing programs of health education and ape health monitoring</b> to minimize risks of disease transmission between humans and apes.</li> </ul>	WCS-FVP, CIRMF, DFC, ANPN	5 years	\$250,000

**Actions:** An employee health program was developed and implemented by WCS for personnel and the local community between 2004- 2006. A preventative protocol training was provided to staff, families and communities living around the periphery of the Park. The health program was extended to schools to the south of Ivindo NP (at the Rougier camps of Ivindo and Massouna). Ape health activities in Ivindo stopped in 2006.

**Results:** An Employee Health program was adopted and the staff were maintained free of infectious disease between 2004-2006. Three separate preventative medicine training sessions were given to staff and one health and hygiene session was given to the community during this period. 610 villagers in 3 villages at the periphery of park participated in health and hygiene education sessions, 106 questionnaires were given to villagers identified risky behavior, and a health education program for local school-children were developed. 6 classes in 2 logging camps were held: 234 children received lessons.

3.2. Action Needed 2005-2010	Potential Partners	Timeframe	Funding Needed
<ul style="list-style-type: none"> <li>• <b>Develop and promote responsible great ape ecotourism</b> at Langoué Bai from viewing platforms, and other appropriate areas within the broad ecotourism strategy for Gabon's National Park network.</li> </ul>	ANPN, WCS, FIGET, private sector	3 years	\$500,000

**Actions:** A fairly high end ecotourism pilot project was carried out from 2004 to Dec 2008 at the bai. This was evaluated in a formal report to the Government.

**Results:**

The report to the Government showed that (i) there had been no negative impact of tourism on animal visitation at the site, or on habitats around; (ii) the tourism product was not economically viable due to a low tourist occupancy rate, and high operation costs, but that this could be ameliorated by cost sharing of road maintenance between Government, NGOs and tour operators and probably by better publicity and (iii) formal agreements between stakeholders (tour companies, NGOs, Government) should precede any next steps. There is currently no great ape tourism in Langoué Bai, but ANPN is planning to re-start tourism activities in 2012.

3.3. Action Needed 2005-2010	Potential Partners	Timeframe	Funding Needed
<ul style="list-style-type: none"> <li>• <b>Develop on-site research capacity on great ape ecology, behavior and health,</b> through support to the IRET research station.</li> </ul>	IRET/CENAREST, CIFOR, WCS-FVP, CIRMF, PSVAP	5 years	\$250,000

**Actions :** Although great ape monitoring was carried out at Langoué Bai between 2005 -2008 and two cycles of biomonitoring carried out inside Ivindo NP, no actions relevant to building research capacity at the IRET station were taken.

**Results:** The wildlife monitoring team (two cycles) showed that there were very few apes (or even duikers!) in the forest next to IRET; and a separate study showed bay duiker populations had been depleted there (Van Vliet et al 2009).

3.4. Action Needed 2005-2010	Potential Partners	Timeframe	Funding Needed
<ul style="list-style-type: none"> <li>• <b>Sustain partnerships with logging companies</b> in the buffer zone to reinforce the protection of apes and increase capacity to monitor population trends.</li> </ul>	WCS, WWF, FRM, ANPN, Rougier	5 years	\$1,050,000

#### Actions to 2011:

Partner collaboration between WCS and several of the logging concessions around Ivindo NP (Rougier, CoraWood, CEB) resulted in a survey of the area between the railway line and the park (Rougier and CoraWood), and monitoring at bais in the CEB concession. Environmental education with workers and their families has continued. WCS is starting to evaluate how to identify chimpanzee core areas during forestry inventories.

#### Results<sup>7</sup>:

Results from the survey in Rougier and CoraWood (showing the distribution and abundance of hunting camps, snares, and elephant carcasses, as well as wildlife itself) were useful in guiding conservation action that could be taken by the two companies. Monitoring efforts (both acoustic and visual) have showed that poaching is continuing inside the CEB concession and this has guided further control by the company. WCS is now working with Rougier to improve wildlife management within the concession.

WCS has signed MOUs with two major logging companies (Rougier & CEB, both of which have FSC certification) in the landscape to collaborate on wildlife protection measures and research. Annual work plans for the third year of collaboration are under development. New proposals have been submitted for developing tailored wildlife monitoring approach for FSC certified forest. Awareness missions have been made to all logging companies operating in the buffer zone to discuss legal requirements for reduced impact management of buffer zones. An evaluation/ verification protocol for buffer zone management is under development with ANPN. An evaluation tool for wildlife management in forest concessions has been developed and tested with four companies in this landscape. Reports have been submitted to forestry companies and DGEF (Water and Forests ministry) with recommendations for improvements and repeat/ annual monitoring. DGEF are supportive of the continuation of this initiative.

3.5. Action Needed 2005-2010	Potential Partners	Timeframe	Funding Needed
<ul style="list-style-type: none"> <li>• <b>Maintain ape biomonitoring program</b>, including training in monitoring methods for research personnel.</li> </ul>	WCS, IRET/CIFOR, DFC, ANPN, PSVAP	5 years	\$175,000

#### Actions :

Two surveys were undertaken inside the Park (2004 and 2009) and in the southern buffer zone (2010). Team leaders and assistant team leaders were trained in standard 9-week courses at Lope in 2004, 2008 and 2011. Apes at Langoué Bai were monitored between 2001-2008.

**Results:** There is no significant change in ape (or elephant) density between 2004-2009. The ratio of solitaries to groups of apes has improved over the course of monitoring at Langoué Bai. This is possibly due to post- Ebola recovery. However recent observations from camera trapping studies on carnivores in Ivindo NP have revealed high rates of skin disease, possibly yaws, indicating that there

<sup>7</sup> Tim Rayden's information.

may be health problems within the population and suggesting that health monitoring needs to be carried out urgently.

#### 4. Belinga-Djoua, Gabon<sup>8</sup>

4.1. Action Needed	Potential Partners	Timeframe	Funding Needed
<ul style="list-style-type: none"> <li>• <b>Surveys of ape distribution and density throughout the site</b>, including training in monitoring methods for research personnel.</li> </ul>	WWF, DFC, IRET, WCS, ANPN	2 years	\$100,000

**Actions taken:** Reconnaissance surveys have been started (February 2011) in the area to determine the limits of an area in which we will further carry out a more precise density and distribution survey (hopefully to be started before the end of this year). This is a joint project ZSL-IRET in which a junior IRET researcher (Thierry Diop) is involved as part of the fulfilment of a MRes (University of Burkina Faso). Four recce surveys were carried out by ZSL-IRET between Feb-July 2011, and in addition a study looking at nest degradation is currently underway

A DFC agent (from the local brigade in Makokou) is also involved in the field team and then receives on-the-job training on navigation, recce and transect surveys. Concurrently we are just about starting (next monday), basic socio-economic surveys in villages located along main access roads and rivers (Djoua) to evaluate their influence on the area surveyed for apes. A joint river mission with WWF on the Djoua to collect baseline info on fishing/hunting settlements is under discussion to be organised before the next dry season. Unfortunately, the WWF mission wasn't carried out. Twelve village surveys were carried out along the Mavingo-Mekambo, Mekambo-Makokou and the Belinga route.

**Results:** Results will be available in December 2011.

4.2. Action Needed	Potential Partners	Timeframe	Funding Needed
<ul style="list-style-type: none"> <li>• <b>Measures to prevent fragmentation of ape habitat block</b>, by prevention of new human settlements and deforestation along the Zadie-Belinga road.</li> </ul>	Assemblée Departementale de l'Ivindo, DFC, ANPN, WWF	1 year	\$50,000

**Actions taken:** OLAM has opened a new forestry concession along the Zadie-Belinga route. There is a protocol d'entente being established between OLAM, WWF, SENRY, ANPN, MINEF, the prefecture and the chef the village, aimed mainly towards anti-poaching missions and the protection of wildlife in the area. OLAM have started exploiting the area, but this is selective logging under a sustainable management plan.

**Results:**

4.3. Action Needed	Potential Partners	Timeframe	Funding Needed
<ul style="list-style-type: none"> <li>• <b>Raising awareness of the need for ape conservation</b> among local actors and organizations with anti-poaching missions.</li> </ul>	DFC, ANPN, WWF	1 year	\$75,000

**Actions taken:** DACEFI has organised a week of awareness activities in schools around Makokou in April 2011 to which ZSL will collaborate as well. The aim is to increase the awareness of children about ape conservation (including health aspects).

ANPN, the Ape Alliance (the informal group gathering JGI, CIRMF, PPG, PGFV, Gabon Environnement) and ZSL have started working in March at developing guidelines for ecoguards and DFC agents to apply during ape orphan seizures, especially to mitigate disease transmission risks following 2 successive gorilla orphan seizures occurring in the area within 6 months.

The Ape Alliance also began training to MINEF and the gendarmerie in November 2011 for minimizing health risks during wildlife seizures.

<sup>8</sup> Information from [Sandra Ratiarison, ZSL](#).

**Results:** The DACEFI-ZSL collaboration visited 9 schools in April 2011 as part of their great ape awareness campaign.

The ape orphan seizure guidelines have been established but are not yet validated.

4.4. Action Needed	Potential Partners	Timeframe	Funding Needed
<ul style="list-style-type: none"> <li>• <b>Creation of a great ape sanctuary within the TRIDOM landscape</b>, based on survey results.</li> </ul>	ANPN, DFC, WWF	1 year	\$40,000

**Actions taken:** The surveys carried out in the first point will contribute to evaluate the feasibility and worthiness of the creation of such sanctuary in this area. The feasibility evaluation has been included in the annual work plan of the Direction Generale des Eaux et Forets for 2011.

**Results:**

4.5. Action Needed	Potential Partners	Timeframe	Funding Needed
<ul style="list-style-type: none"> <li>• <b>Applied epidemiological research on Ebola</b>, collection of fecal samples and autopsies of cadavers to assess impact of past Ebola epidemics and current health status of ape populations.</li> </ul>	CIRMF, WCS-FVP, GRAET	2 years	\$100,000

**Actions taken:** There are no actions to report for Belinga, but REMAGA (the Réseau d'Epidémiologie des Maladies Animales au Gabon/ the Epidemio-surveillance Network of Animal Diseases in Gabon), linked to the Ministry of Agriculture, had agents permanently based in Minkebe until 2010. Also WCS staff in Ivindo were trained in reporting wildlife morbidity and mortality in 2005-2006, including standardized data collection and fecal collection.

**Results:** As a result of a PACE workshop, REMAGA integrated Ebola surveillance into their existing wildlife monitoring program. However, REMAGA stopped its activities in the area in March 2011.

## 5. Conkouati/Mayumba complex, Republics of Congo, Gabon

5.1. Action Needed	Potential Partners	Timeframe	Funding Needed
<ul style="list-style-type: none"> <li>• <b>Develop capacity and structures for an effective law enforcement and judiciary process</b> in the Conkouati-Douli National Park and surrounding buffer zones, including training of park guards and transboundary protection efforts and policies.</li> </ul>	WCS, MEFE, MEFEPE	3 years	\$900,000

**Actions taken:** One cross-boundary marine surveillance training was done in 2008 at Mayumba (US-Navy). WCS advice and support was given to establish a transboundary co-operation agreement between Congo and Gabon.

**Results:** The transboundary co-operation agreement signed between the governments of Congo and Gabon for Mayumba-Conkouati-Douli in November 2010.

5.2. Action Needed	Potential Partners	Timeframe	Funding Needed
This action was only for the Congo side of the border.			

5.3. Action Needed	Potential Partners	Timeframe	Funding Needed
<ul style="list-style-type: none"> <li>• <b>Conduct baseline surveys of ape populations</b> and other large mammals in Mayumba National Park &amp; buffer zone.</li> </ul>	WCS, MEFE	1 year	\$50,000

**Actions taken:** Mayumba NP- recce surveys 2006, 2007, 2008, 2009, 2010, and 2011. The Mayombe has been completed (transects in the wildlife-rich area, camera traps, recce near the lagoon) under GEF finance, 2010-2011.

**Results:** No change in ape abundance to 2010 in Mayumba NP. Ape density in the area so far surveyed in the Mayombe (about 1000 km<sup>2</sup> in the centre of the mountainous area) is about 0.8 individuals / km<sup>2</sup> (95% c.l. 0.4-1.6).

5.4. Action Needed	Potential Partners	Timeframe	Funding Needed
<ul style="list-style-type: none"> <li>• <b>Establish systematic surveillance systems for the emergence of zoonotic diseases.</b></li> </ul>	WCS, MEFE, WCS-FVP, CIRMF, RKI, MSPP, LNSP, HELP-Congo	1 year	\$25,000

**Actions taken:**

Multiple mortalities of sitatunga (9) and buffalo (1) were recently reported in Mayumba (Sept-Oct 2011), and an epidemic outbreak was suspected. ANPN had no technical or human resources to intervene directly, and although immediate intervention by CIRMF or WCS was not possible, the Ministry of Health were eventually able to respond with a mission to the mortality zone to collect samples. These samples were analysed by CIRMF and a report was provided indicating no epidemic had occurred.

**Results:**

There is currently no surveillance system in place in ape priority areas in Gabon, and response systems need to be revised and clarified between all implicated partners.

5.5. Action Needed	Potential Partners	Timeframe	Funding Needed
<ul style="list-style-type: none"> <li>• <b>Implement conservation education awareness and outreach programs</b> in local communities, with specific emphasis on great apes.</li> </ul>	WCS, MEFE	5 years	\$100,000

**Actions taken:** Plan to visit all villages peripheral to park with ape conservation education activities. But finance delayed

**Results:** None to report

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