

USDA Forest Service Technical Assistance Mission to Gabon

Support to the Conseil National des Parcs Nationaux (CNPN)

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ACRONYMS LIST

CNPN	<i>Conseil National des Parcs Nationaux</i> (National Council of National Parks)
ESRI	Environmental Systems Research Institute
GIS	Geographic Information Systems
GPS	Global Positioning System
INC	<i>Institut National de Cartographie</i> (National Institute of Cartography)
JPL	Jet Propulsion Laboratory
NASA	National Aeronautics and Space Administration
USAID	United States Agency for International Development
USDA	United States Department of Agriculture
USFS IP	United States Forest Service International Programs
WCS	Wildlife Conservation Society
WWF	World Wide Fund for Nature

1. INTRODUCTION

In August 2002, President Omar Bongo created the National Parks System of Gabon by establishing thirteen parks. A visit by the United States Secretary of State, Colin Powell, and later a delegation of US Government officials in February 2003, encouraged the involvement of US technical assistance to support Gabon in confronting the challenges of implementing President Bongo's declaration. As a result of these trips, the US Forest Service (USFS) was identified as a technical assistance provider to help Gabon achieve their natural resources objectives. Working as a partner in the US Agency for International Development's (USAID) Central African Regional Program for the Environment (CARPE), the USFS has engaged with the National Council of the National Parks (CNPN) to provide technical assistance toward the development of a planning process for the national parks of Gabon. This USFS assistance has focused on the creation, through a participatory process, of park management plans for Loango and Lope National Parks, working with CNPN to build internal capacity within the Government of Gabon so that these plans can be used as models toward the creation of management plans for the other eleven parks.

USFS technical assistance toward this end began in June 2003 when a team of USFS and US Fish and Wildlife Service representatives began working with CNPN staff, government agency representatives, and conservation organization representatives at Loango National Park in developing a draft park management plan. A follow-up USFS technical assistance team traveled to Gabon in April and May 2004. The mission continued the management plan work started in 2003, further developing the Loango National Park draft management plan as well as beginning the management planning process for Lope National Park.

The trip report which follows describes the third USFS mission to Gabon on park planning issues, from June 16 – 30, 2005. The focus of this trip was to refine and finalize the management plan for Loango NP with CNPN and other park stakeholders, and to provide a workshop on the work planning process for Loango and the other national parks of Gabon. The USFS team for this mission consisted of Chris Iverson (Assistant Director for Wildlife, Threatened and Endangered Species, Rare Plants, and Planning; Washington Office), Don Fisher (Wilderness Resource Program Leader, Washington Office), Julie Luetzelschwab (GIS/Database Coordinator, Santa Fe National Forest), and Mike Chaveas (Africa Program Specialist, International Programs Office). While the first two technical assistance missions on the part of the USFS were coordinated in large part by partner CARPE NGOs and the US Embassy in Libreville, the in-country planning and logistical assistance for this third trip was handled by CNPN itself, demonstrating a greater degree of engagement and dedication to the process.

2. DESCRIPTION OF THE MISSION'S SCOPE OF WORK

This USFS technical assistance mission was designed to continue building the capacities of CNPN conservators in management planning, increase the effectiveness of Gabon's

national parks at assuring the conservation of the biodiversity contained within them, and further strengthen the ties between the two agencies. Building on the success of previous missions to Gabon, the specific objectives of this mission were to (1) assist in finalizing and refining the management plan for Loango National Park and (2) to guide, as needed, the creation of a workplan for the park. The primary focus of this assistance was on the transfer of competencies to CNPN conservators and other staff in the creation of park plans.

In order to achieve these objectives the following tasks were defined prior to the visit by the USFS team:

1. *Finalize and refine the Loango NP management plan.* This task was performed by the CNPN with the USFS team serving in an advisory / assistance role, providing input as needed on the planning process, what the plan should include and not include to be an effective and adaptive document, framing and guiding the direction of the park's management.
2. *Assistance with the creation of park workplans and the development of a workplan structure adapted to Gabon's needs.* Again acting in an advisory capacity, the USFS team assisted the CNPN in distinguishing which details should be developed in workplans versus the management plan.

The USFS team presented the approach utilized for the creation of the Loango management plan to conservators, other CNPN staff, and NGOs working in the national parks of Gabon.

3. GENERAL OBSERVATIONS

- CNPN staff and internal capabilities have demonstrated a significant amount of growth since the last visit by a USFS team. This was evidenced in the determination of CNPN to manage all aspects of hosting the USFS team, including in-country travel, housing, and other logistical support. This is seen as a positive step in strengthening the relationship between the two agencies.
- The creation of Jean Paul Obame Engome's position at CNPN, providing guidance for park management at the central level in Libreville and acting as the primary liaison for USFS assistance in Gabon, was extremely beneficial in planning this mission and it appears it will go a long way to improving the speed and efficiency of engaging USFS assistance in the future.
- CNPN seems to have high ambitions for growth and progress towards effectively managing Gabon's parks; including increasing staff numbers, improving infrastructure, researching and monitoring biodiversity, and promoting tourism. While budget and other realities may slow expectations down to some degree, it is encouraging to see this level of ambition and energy on the part of CNPN staff. Large strides in the areas listed above, as well as others, are still needed before most of Gabon's parks are fully functioning and effectively managed, and this will take time. However, CNPN appears to be demonstrating the energy and dedication needed to make these advances.

- The working group assembled in Iguela (see Appendix A for full list of participants) showed an impressive level of dedication and commitment during the workshop to finalize the management plan for Loango NP. The group was very active and energetic, and engaged in constructive and respectful debates over the broad range of issues covered in the management plan. The range and diversity of participants represented at these meetings was equally impressive. Local community members, tourism concessionaires, employees of NGOs active in the park, and individuals representing multiple levels of CNPN, including conservators from other parks, all took part in the process.
- CNPN management in Libreville has stated that they will be expecting the conservators to submit workplans for their respective parks in the near future. It should be kept in mind that the capacity of some conservators to develop these workplans will be higher than others as the level of enthusiasm and attentiveness on the part of those present at the workshop in Libreville during the second week was variable.
- Some of the interactions between CNPN and partner conservation NGOs were less than ideal. While this was not the case in all instances, there does seem to be a significant amount of tension, and even distrust, running in both directions, which is detrimental to advancing the development of park management plans, and therefore the effectiveness of the parks.
- During the workshop in Iguela, which was focused on finalizing the management plan of Loango NP, several questions arose which were identified as needing to be addressed at a national level. CNPN will soon need to begin addressing national scale policies concerning the entire national parks system. These include such issues as designing fee structures for tourism operators and making decisions regarding redistribution of revenues from the parks to local populations, as well as other issues identified as recommendations by previous USFS teams (See USFS report of April-May 2004; Iverson, Fisher, Luetzelschwab, and Othman). The recommendations section of this document presents a list of policies and regulations which need to be elaborated upon at the national level.
- A national park's management plan is an adaptive and flexible document. It serves as a guide outlining the park's objectives and how to reach those objectives through interior regulations and management zones. While the plan should be revised on a regular basis, it always remains adaptable, able to evolve as new information becomes available or as the local or regional context changes, even if these changes or new pieces of information become available in between scheduled revision periods for the plan. Although this point has been made in past reports and was emphasized during the workshops, it is worth reiterating here.

4. LOANGO NATIONAL PARK MANAGEMENT PLAN

4.1 Process utilized for completion of the plan

The primary objective of this USFS technical assistance mission was to refine and finalize the management plan for Loango National Park. Once complete, this plan, along

with the soon to be completed plan for Lope NP, can serve as a model for the other national parks of Gabon as they undertake the planning process.

Work on Loango NP's management plan began with the first trip to Gabon by the USFS in 2003. Since that time the draft plan had undergone some changes, but had not been completed. In order to finalize the plan, the USFS team met and worked with the park conservator, other CNPN staff, and representatives from NGOs, local communities, and tourism concessions (a full list of participants can be found in Appendix A). Working together over a span of six days in Iguela, the group reached consensus on alterations to the draft plan, agreed on wording, adapted the park regulations and zoning definitions, and refined the zones within the park. At the end of the first week of this mission the working group had an essentially completed management plan for Loango National Park. Only some small tasks remain to finish the plan and these were inserted into the text of the plan for completion as soon as possible. A review of each day's activities in finalizing the plan can be found in Appendix B. The final draft of the management plan, as it existed when the USFS team left Gabon, is attached in Appendix E.

The work completed to finalize the plan consisted of identifying the primary issues, needs, threats and challenges faced by the park. This list was then separated into items to be addressed in a management plan or in annual workplans. The working group then reviewed the existing draft management plan to examine whether those issues appropriate for the management plan had already been addressed or not. For those that were not already addressed, new language was inserted addressing the issue. The group proceeded through the draft plan's regulations, point by point, and evaluated whether each regulation should remain, be altered or be removed, and whether any new regulations were needed.

In the zoning section of the plan, the same activity was undertaken for the definitions of each zone. Finally, the zones themselves, as they were mapped in the draft plan, were examined and altered based on the consensus of the group. Each existing village inside the park boundaries was identified, along with all known sacred sites. Although they exist in the park's management plan, two types of zones were not mapped. One of these was the heavy infrastructure zone (Zone 7) due to a desire to keep the development of the park's administrative facilities outside the park boundary as well as any heavy tourism development. The other was the research zone (Zone 8) as research needs and priorities have not yet been concretely defined. Therefore, although these zones do not currently exist on the park map, the working group felt the potential existed for the creation of such zones in the near future and chose to keep the definitions of these zones in the management plan. More information on this part of the process can be found in section 5, Geographic Information Systems (GIS) and Databases.

4.2 Remaining tasks to complete the plan

At the time the USFS team departed Gabon, there remained several tasks that required completion before the management plan for Loango National Park could be considered complete. These tasks, listed below, are to be completed by the conservators of Loango NP or by CNPN at the national level. Each of these items can be inserted into the plan,

and it is our belief that they are all items which do not require further assistance from the USFS to complete.

1. A short description of this work session should be added to the preamble.
2. The introduction (Chapter 1) should include a brief section of one to two pages which provides general information on the park. Jason Gray of WWF developed a draft write up of such a section during the workshop in Iguela, which could be used for this purpose. This section should include the following elements:
 - a. Important resources and unique ecosystems of the park and their importance on a national scale
 - b. Reasons for the creation of the park
 - c. General description of the ecosystems and the key biological and physical resources of the park
3. A section should be added to the plan which describes primary threats, as they exist at the current time, to the park's resources. The brainstorming activity of the first day of the Iguela workshop identified some of these and this list should be consulted when writing this section.
4. Under the regulations for fishing, the definition of "commercial fishing" from the national Fishing Code should be added to clarify where the line between artisanal and commercial fishing is.
5. Under the regulations for use of the park as a cultural heritage site, CNPN needs to verify what the national definition of a village is (Number of houses? Number of people? Months of the year it is inhabited? Etc.)
6. The existing villages inside the park boundaries must be clearly and accurately delineated. It is important to note however, that the completion of this task should not delay the finalization and adoption of the park's management plan. This activity will require some time and effort, and will impact the exact boundaries of the village zones, which can be refined after the plan has been adopted.
7. Concerning the regulations which govern scientific research within the park, clarification of the role of the "scientific committee", at a national scale, needs to be obtained.
8. The plan's glossary should be completed.

5. WORK PLANNING

One of the objectives outlined in the Terms of Reference for this technical assistance mission was to assist with the creation of a park workplan for Loango National Park and the development of a workplan structure for Gabon's National Parks System.

Work planning is an essential function for the USDA Forest Service. It is used as a tool for requesting annual appropriations from the United States Congress, establishing work priorities for field units, and allocating available resources.

For construction projects (facilities, roads, and trails), the USDA Forest Service receives a separate annual appropriation from Congress. Congress requests funding proposals a year in advance for all construction projects, including those phased projects requiring

funding over several fiscal years. Workplans provide the detailed cost estimates needed for Congress to evaluate and consider the agency's funding requests.

For operations and maintenance funding (all non-construction type functions), the work planning process is used to identify priority work, consistent with the agency's Strategic Plan (which identifies broad goals and objectives for resource conservation and stewardship), and to provide the basis for agency funding requests to Congress. Once annual funding allocations are made by Congress, the funds are further allocated to field units based on those units' capabilities to accomplish the goals and objectives identified in the agency's Strategic Plan. Units then plan their annual work based on the final funding allocation, adjusting previously prepared workplans as necessary to stay within funding constraints and available resources (staffing, infrastructure, etc.)

Don Fisher provided an overview of workplans, including their purpose, utility, and a sample structure to both the working group in Iguela and the group of conservators in Libreville. The USFS team reviewed the purpose and strategy of workplans and provided guidelines for developing these plans with both groups. An outline of points discussed and descriptions of types of workplans can be found in Appendix C.

At the beginning of the work session in Iguela, the USFS team worked with the CNPN and other stakeholders, in a brainstorming session, to identify a comprehensive list of key issues for the park. Once the list was identified, the group then reviewed the list and designated each issue as either appropriate to address in the park's management plan or a workplan. Those identified as appropriate for workplans were addressed in the work planning session.

In the work planning session in Iguela, the issues identified in the brainstorming session as workplan tasks, and additional needs as identified through group discussion, were grouped and prioritized as follows:

Group 1 – immediate needs for the next fiscal year.

Group 2 – needs for the next 3-5 years, rated high, medium, and low in priority.

The Loango working group then selected two projects from Group 1 to develop as an exercise in using work planning concepts presented by the USFS team. These were the *Law Enforcement Program*, representing a single task workplan, and the *Construction and Installation of Entry Posts/Check Points*, representing a multiple task workplan. Both workplans were developed in detail to provide a complete estimate of costs and resources needed to accomplish the projects.

In Libreville, the USFS reviewed the guidelines for work planning with the CNPN conservators, as presented in Iguela to the Loango working group. As an exercise in using the work planning concepts, the conservators developed a workplan for planning, constructing, and equipping five entry posts/check points. The outcome was compared with the similar workplan prepared by the Loango working group (the workplan completed in this activity is attached in Appendix D). The conservator group then agreed to develop a program of work priorities for Akanda National Park as a work planning

exercise. The group identified the need for administrative facilities as a top priority for the park. As a continuation of the work planning training, the conservator group then developed a detailed workplan for planning, constructing, and equipping the necessary administrative buildings and staff housing needed immediately for the park.

To assist in budget planning and work planning, the conservators were provided computer generated versions of single task and multiple task workplan formats (attached here in Appendix D).

6. GEOGRAPHIC INFORMATION SYSTEMS (GIS) AND DATABASES

A high quality and standardized GIS database, skilled GIS specialists and advanced software are important for successful management and inventory and monitoring activities in the national parks of Gabon. CNPN and the NGOs operating in the national parks of Gabon (WCS and WWF) have recognized this and have taken steps towards building GIS and image processing capacity for the parks. Still, more collaboration between the organizations could benefit this effort, possibly by appointing a GIS coordinator for the parks who would work for CNPN while liaising with the NGOs.

In the first week of this trip, during the workshop in Iguela, Julie Luetzelschwab worked with Stephane Le-Duc Yeno, WWF's GIS Specialist based in Gamba, obtaining some updated GIS datasets and showing him how to perform certain tasks with the new ArcGIS software as well as demonstrating the use of DNR Garmin for downloading data from a GPS. Approximately one day was spent on zoning, reviewing the zones delimited in 2003 and making changes as needed using updated GIS datasets and improved knowledge of the parks. The transportation system inside the park was also reviewed and a determination was made of which roads should be closed and which should remain open as walking trails or motorized roads. Five access points (check points) were also mapped. A final map (see Figure 1) was made with the newly defined zones, transportation routes and check points and given to Roger Boussougou and Mr. Le-Duc Yeno. During the second week of the mission, Julie met with Jean-Paul Obame Engone and Pepin Magamamucketu (CNPN) to discuss recommendations for CNPN's GIS Department, including hardware, software, and personnel needs.

In order to effectively identify management zones in a management plan, the following GIS datasets are needed:

- Accurate park boundary
- Vegetation
- Hydrography
- Socio-economic data (local villages, sacred sites, plantations, archaeological sites, fishing areas)
- Important wildlife and plant areas (critical habitat, mineral deposits, bais, sensitive plant locations)
- Transportation (roads, trails, navigable rivers, landing strips)
- Facilities (tourist sites, camps, towers)

- Illegal activities and other threats to the park (areas of known illegal hunting, firewood collecting, invasive species, pollution sources)
- Activities in peripheral zone (concessions, plantations, subsistence use areas)

It should be noted, however, that the management and planning process of any particular park should not be held up due to a lack of any of these datasets, or because it is thought that the information is less than ideal. The state of available information is always changing and park zones can be adapted as data improves.



Fig. 1: Loango National Park Management Zones, as identified at the June 2005 Management Planning Workshop with the USFS

The U.S. Forest Service is a mentor for GIS software grants from ESRI-US, ESRI-France, and Leica Geosystems, Inc. for the national parks system of Gabon. Julie met with Jean-Paul, WWF (Bas Huijbregts), and WCS (Bryan Curran) to discuss how the licenses would be distributed and what their additional needs are. She will be submitting another grant application to ESRI in August 2005 once CNPN has determined their additional software needs. The upcoming ArcGIS training by Didier Devers (CARPE/UMD) in Lope in October and who would be attending was also discussed. DVDs and CDs were distributed with recent Landsat imagery for all of Gabon, a 90 meter elevation model for Gabon, ArcGIS service pack 3, Image Analysis and Stereo Analyst extensions installation package, the French translation package for ArcGIS, DNR Garmin, and other GIS tools. A reminder was given that they have free online ArcGIS training from ESRI's Virtual Campus available in English and they were instructed on how to sign up for it.

Additionally, Julie met with Leonard Akie (WCS/INC) and loaded Leica's Image Analysis and Stereo Analyst extensions and discussed how these should be used. Leica is doing a presentation on this specific software grant to the national parks of Gabon at the ESRI International User's Conference in San Diego in July and needed feedback on how the software will be used. Once the extensions were loaded there was an opportunity to use them and give some feedback to Leica.

For specific recommendations on the topic of GIS, databases, and the zoning process, please see section 7.3.

7. RECOMMENDATIONS

Following the USFS mission of April and May 2004, a list of recommendations was delivered to CNPN in the trip report. While there has been some progress made on those recommendations, many of them have not yet been addressed or are longer term efforts which CNPN and the Government of Gabon should continue working towards. The following list of recommendations repeats some of those made in that report of 2004 to emphasize the importance of these tasks.

7.1 National level policy needs related to park management

1. A clear policy needs to be established for the revision of national park management plans. While the management plan is always a living document and aspects of it can be revised at any time when new information becomes available, a systematic and periodic process of revising the plans should be laid out by the national office of CNPN.
2. CNPN needs to establish a national policy on public comment periods for the management plans of each park as they are developed. This should include a strategy of how to share the plan as widely as possible and make it accessible to populations which may not have access to newspapers or have low literacy rates.

- This is a topic where the USFS possesses a great deal of experience and could provide input if desired.
3. CNPN should develop a policy on concessions for tourism operators of all types. Such a policy should include an appropriate fee structure to ensure that the Government of Gabon, and by extension the Gabonese people, are getting a fair return on the investment in these parks, including private sector commercial operations being conducted in the parks. This policy should also describe the process for soliciting proposals/bids from the private sector for providing public services, submission and review of proposals/bids, and the awarding of permits for tourism development. Establishing a clear and equitable fee structure will also encourage tourism development as operators will be assured that stable rules have been established across the nation.
 4. A policy for any and all other commercial development within national parks must also be established, including permit requirements and fee structure. Assistance and input on this and the previous point can be provided by the USFS in subsequent missions to Gabon, as needed.
 5. A tourism marketing and development plan should be created for the entire national parks system.
 6. A national level policy regarding revenue sharing from tourism development with local communities surrounding the parks should be elaborated. This policy should address what percentages of revenue will be distributed to local communities and in what form. Will the funds be used for infrastructure, health, education, development of economic activities, and other similar projects in these communities or will direct payments be given to communities? If direct payments can be made, under what conditions? Who holds the authority to make these decisions should also be defined.

7.2 Park management and planning recommendations

1. CNPN is eager to be a self-sustaining entity, or to have the parks agency that will follow it be one. While this is a good goal, it will take some time. In the short term CNPN should recall that the conservation NGOs working in Gabon's parks can provide some services while CNPN focuses its own resources on other pressing management needs.
For example, during the management planning workshop in Iguela, the working group identified many research needs revolving around large mammals in the park as immediate priorities. In the short term, if there are NGOs present who are already performing this research, CNPN should focus its resources elsewhere rather than duplicating this work for the sake of being self-sustaining as soon as possible. Similarly, the NGOs have begun developing, or have already developed, GIS labs and databases at several of the parks, while CNPN is focused on having its own GIS capabilities immediately. In the future it will be important for CNPN to have this capacity in house and they should certainly begin planning towards that end, for the time being, however, this is a capacity that can be shared through partnerships and CNPN's own resources can be focused elsewhere.
Simultaneously, the NGOs should strive to be responsive to the needs of the park administration when it comes to information regarding such research and GIS

- capabilities. The NGOs should also support and assist CNPN in its goals to increase capacities within the Council and official administrations of the parks.
2. CNPN and the NGOs operating inside the national parks should consider holding a workshop or conference which would focus on maximizing the effectiveness of partnerships throughout the park system, capitalizing on the strengths of each organization, and streamlining communications and information sharing between the NGOs and CNPN by creating plans for the sharing of data and analytical resources and tools. Both groups need to work together closely to be effective in conserving the ecosystems of Gabon's parks and the great wealth of biodiversity contained within them, as well as in turning the parks into economically successful assets for the nation as a whole. The development of management plans for each park should be a fully participative process which involves all of the partner NGOs operating in that region, along with other local stakeholders. The ultimate management authority and decision making power will rest with the park administration and CNPN or the National Parks Agency which follows it. The NGOs however, have a great deal to offer in terms of resources and expertise which can inform planning and decision making processes. These resources should complement, not compete with, CNPN's own resources. These partner NGOs, in turn, should commit themselves to sharing the results of their work with the administration of the parks and to being responsive to the needs faced by them as they progress towards being effectively managed national parks.
 3. The annual budgeting process needs to be clearly defined and relayed to conservators, and should include the following: (1) expectations of conservators for completing the annual workplans at their parks, (2) timelines for submitting workplans for budget requests, and (3) timeline for making revisions to those plans once actual budgets are assigned for each park. Additionally, the conservators we met with in Libreville did not seem to know what realistic budget figures for their parks might be. This should be communicated to the conservators so that they have some idea of what they can expect to have the means to accomplish in the next year.
 4. CNPN staff in Libreville should follow up on the work planning workshop held in Libreville by using the attached templates for work planning (see Appendix D) and distributing them to all conservators with instructions and expectations of a timeline for their submission.
 5. CNPN should make it clear to all the conservators that the USFS will not be sending a team to work at every park and assist them in the creation of the management plans. On more than one occasion conservators asked when the USFS would be sending a team to assist in creating plans at their park. The USFS is committed to providing assistance on the drafting of management plans at Loango and Lope National Parks and in developing a template for protected area management planning which can be used as a guide for protected areas throughout the region. The Loango and Lope plans should then serve as models for the conservators of the other parks to develop management plans independently. While developing management plans for the rest of the national parks network, the conservators of Loango and Lope, who were present for during the USFS assistance missions, should be seen as resources by the other

conservators, who can be consulted during the process. While technical assistance teams will not be sent by the USFS to work on plans for every park, the USFS should also be considered a resource as particular questions regarding planning arise.

7.3 GIS related recommendations

1. The best available GIS data for each park should be collected for use in the creation of management zones. If a GIS specialist is not available for the management planning meetings for each park, a detailed map of each park should be printed and given to the conservator. Zones should be hand drawn, then digitized into GIS and put on a map that is included in each park's management plan. Desired transportation routes inside the parks and access points (check points) should also be determined. The GIS datasets of the zones, transportation, and access points for each park should follow a standard determined by that parks' GIS coordinator and they should be stored in a central location and available to everyone (CNPN, NGOs, etc.). ***Note – these zones are flexible and can be updated as GIS data and knowledge of the parks improves.*** Section 5 (GIS and Databases) contains a short list of the main GIS datasets that are helpful for management plan zoning.
2. In delimitation of the national park boundaries, and the boundaries of individual zones within the parks, natural borders should be utilized to the fullest extent possible. Such boundaries, which are easily discerned on the ground by park employees, local inhabitants, and others will ease enforcement and monitoring efforts and can be easily explained to those without access to park maps.
3. At the time of this USFS visit CNPN was recruiting a GIS coordinator for the national parks. This person could be responsible for coordinating training, establishing data standards, data collection, and database management for the parks and should work closely with the NGOs' GIS specialists. This person should also coordinate with the parks' GIS users and NGOs to track the use of the granted software licenses, determine additional needs, and provide feedback to the grant mentor (currently Julie Luetzelschwab). Additional CNPN GIS staff in Libreville may be needed especially during the start up phase.
4. Determine a list of data needs, priorities and national data and metadata standards for each theme. Work with CARPE (Didier Devers, didier@hermes.geog.umd.edu) on data standards as some may have already been established for the region. The October 17 – 28, 2005 training in Lope is the ideal time as Didier and GIS specialists will be there for ArcGIS training. A format (shapefile, coverage, or geodatabase) and a projection and datum to use for all the parks should be determined. Ensure CNPN and NGOs are able to provide feedback on standards before they are finalized. A geodatabase is the preferred format for GIS datasets because of its topology rules and additional functionalities, however since many people may continue to use ArcView 3.x, the shapefile format may be desired until all GIS users have converted to ArcGIS/ArcView 9.x (ArcView 3.x cannot open a geodatabase).
5. CNPN discussed hiring 1-2 GIS specialists for each park. CNPN may want to first determine if additional GIS specialists are necessary since some parks

- already have a GIS Specialist who works for WCS or WWF and have begun building a GIS database. WCS and WWF also have central GIS offices in Libreville where additional park datasets are managed. Ideally no matter whom they work for (CNPN, WCS, WWF) they will work with the parks' GIS coordinator using the national data standards established for the parks and providing finalized datasets to store in a central GIS database. It may also be desirable to group parks and have one GIS specialist responsible for the zone, e.g. one specialist for Loango and Moukalaba Doudou.
6. The parks' GIS coordinator should assimilate GIS data from sources such as INC, WCS, WWF, and other government ministries to obtain the most updated and accurate GIS datasets for the parks. CNPN should identify a central location where all the parks' data will be stored (in a standardized format) and CNPN and NGOs should have free access to those datasets. Currently quite a bit of the data is kept by Leonard Akie (INC/WCS). In the longer term, an internet ArcIMS (ESRI's Internet Map Server) site may be used.
 7. A detailed vegetation classification is also needed for the parks. This will require quite a bit of ground truthing, and accessibility to some areas is an issue, as is personnel, funding, and cloud cover on the imagery. The park managers may need to identify priority areas in each park for this level of detail. Some sources for vegetation mapping include Sassan Saatchi of JPL/NASA (<http://www-radar.jpl.nasa.gov/africamap/>) who is working on mid- to broad scale vegetation mapping of the Congo Basin using radar and other imagery, and CARPE (<http://carpe.umd.edu/> and <http://osfac.umd.edu/>) may be looking into doing another more detailed Congo Basin vegetation classification.
 8. Consider waiving or reducing research permit fees for research that is aligned with the GIS data needs for the parks' database. When possible, obtain GIS datasets from research projects which should include metadata.
 9. Garmin GPS (global positioning system) units are currently being used to GPS park boundaries and place markers on the ground. Although these units will help to improve the park boundaries, Garmins are recreation grade units that were not intended for boundary demarcation. If a boundary were in dispute for example between a park and a logging company, the park could lose the argument if a survey-grade GPS unit was not used to mark the boundary. To avoid this, it might be beneficial to have each park conservator determine portions of their boundaries that could be disputed by concessionaires, villages, etc. and these portions should be prioritized for demarcation with survey grade GPS units. Since these units with portable base stations are expensive and require training to use, it would be best to first determine if another government ministry has the equipment and expertise to help with the project, or else to look for outside support.
 10. Ensure all GPS determined park boundaries are made available to all parties and housed at the central GIS database.

8. NEXT STEPS FOR US FOREST SERVICE ASSISTANCE

During this mission, the USFS team sat down in Libreville with Jean Paul Obame Engome and Pepin Magamamucketu of CNPN Libreville; Joseph Ngowou, the Conservator of Lope NP; and Bryan Curran of WCS to discuss the next USFS technical assistance mission. This mission will focus on finalizing the management plan, already in draft form, for Lope NP, utilizing a participatory process similar to that employed at Loango NP during this mission. Additionally, CNPN requested that an expert in tourism development and management be included on this team to provide assistance and guidance in the creation of a tourism development plan for Lope NP.

The USFS Office of International Programs, represented by Mike Chaveas, will begin working with Jean Paul Obame Engome of CNPN on a draft terms of reference for such a mission soon after the completion of this trip report. The agreed upon target dates for USFS to return and provide this assistance was late October or early November of 2005, or as soon as possible thereafter.

APPENDIX A: WORKSHOP ATTENDEES

Loango National Park Management Plan Workshop – Igueula

- | | |
|----------------------------|---|
| o Joseph Ngowou | Conservator – Lope NP |
| o Christian Rembeyo | WCS |
| o Jean-Paul Obame Engome | CNPN – Chef de la Cellule d’Amenagement des Parcs |
| o Pepin Magamamucketu | CNPN - Libreville |
| o Brice Leandre Meye | Conservator – Moukalaba-Doudou NP |
| o Lucien Boussougou | CEFO – Omboue |
| o Aristide Groundou | Député/Localité |
| o Guy-Rostan Ntememba | EF/WWF |
| o Jason Gray | WWF |
| o Stephane Le-Duc Yeno | WWF |
| o Marc Dethier | WWF |
| o Roger Boussougou | Conservator – Loango NP (north) |
| o François Libya | Secrétaire General de Préfecture |
| o Jean Remy Nkombe | Conseil Départemental – Omboue |
| o Marie Madeleine Mbouroou | Conseil Départemental – Omboue |
| o Blaise Nkoghe | Manager of Gavillo – Igueula lodge |
| o Raymond Pendi | CNPN – Loango NP (north) |
| o Eric Herve Ogoula | Translator hired by CNPN |
| o Chris Iverson | USFS |
| o Don Fisher | USFS |
| o Julie Luetzelschwab | USFS |
| o Mike Chaveas | USFS |

Work Planning Workshop With Park Conservators – Libreville

- | | |
|-------------------------------|--------------------------------|
| o Pepin Magamamucketu | CNPN – Libreville |
| o Jean Paul Obame Engome | CNPN - Libreville |
| o Simon Angoueovono | CNPN |
| o Rene Bazin Assaly | Conservator – Plateau Bateke |
| o Brice Leandre Meye | Conservator – Moukalaba Doudou |
| o Joseph Ngowou | Conservator – Lope |
| o J. Paulia Edou Edzang | Conservator – Mwangnia |
| o Alphonsine Kouumba Mfoubou | Conservator – Ivindo |
| o Solange Ngouessono | Conservator – Mayumba |
| o J. Daniel Moukagni Ikapi | Conservator – Minkebe Ouest |
| o N’Safou Louembe | Conservator – Pongara |
| o Herve Ndong Allogho | Conservator – Mt. De Christal |
| o Louis Sostheme Ndong Obiang | Conservator – Minkebe Est |
| o Augustine Mihindou Mbina | Conservator – Loango (south) |
| o Chris Iverson | USFS |
| o Don Fisher | USFS |
| o Julie Luetzelschwab | USFS |
| o Mike Chaveas | USFS |

APPENDIX B: MISSION SUMMARY AND ITINERARY OVERVIEW

Thursday, June 16: USFS team departs US for Libreville via Paris

Saturday, June 18: Team arrives in Libreville at 5 am and is met at the airport by Rene Adiaheno and a delegation from CNPN. After resting up in a day room, the team flew to Port Gentil in the afternoon with Pepin Magamamucketu of CNPN.

Sunday, June 19: Flight to Omboue from Port Gentil, followed by drive to Gavillo – Iguela lodge. In the evening, the USFS team met with Mr. Magamamucketu, Jean Paul Obame (CNPN-Libreville), Roger Boussougou (Loango North conservator), Joseph Ngowou (Lope conservator), Jason Gray (WWF), Stephane Le-Duc Yeno (WWF), and Marc Dethier (WWF) to discuss, review, and revise the schedule and proposed approach for the upcoming week's work. After this meeting the team spent time examining documents of revised park objectives provided by CNPN.

Monday, June 20: As during the rest of this week, the USFS team met with stakeholders at the brigade which serves as a headquarters for park staff. Monday's meeting took place from 8:30 am to 5:30 pm. The morning session was occupied with welcoming statements and a presentation by CNPN on where the park planning process was at the time. During the rest of the work day, a brainstorming session was held to identify all the issues involving the park. These issues were then identified as items which could be addressed in the management plan or in a workplan. The day's meeting concluded at 5:30pm.

In the evening the USFS team reviewed those items which were identified in the brainstorming session and were already addressed in the draft management plan as it existed.

Tuesday, June 21: Working with the same group, from 8:30 am until 5:30 pm, the day was occupied by working through, point by point, all of the issues identified the previous day as items to be dealt with in the management plan and created new language, or altered existing language in the text until a consensus was reached that each issue was adequately addressed.

Wednesday, June 22: Building on Tuesday's activity, on this day the working group read through all of the park regulations, regardless of whether the particular issues were identified in Monday's brainstorming session or not, and discussed whether the existing language was adequate or not. As needed, some regulations were removed from the draft, some regulations were added, and in others the language was altered. Late in the afternoon session, the group began examining the zoning definitions in the same manner.

Thursday, June 23: The review of the zoning definitions were completed in the morning. The USFS team then projected the park map on a wall and allowed the group to debate the location of each type of zone, the location of villages and sacred sites, and to make changes to zones as they existed in the original draft map. Due to some passionate

discussions, all members of the working group continued discussions until well after 7 pm.

In the evening Chris Iverson departed Iguela for Omboue to catch early morning transport on Friday back to Port Gentil then on to Libreville, and ultimately Washington, DC.

Friday, June 24: The first part of the morning session was occupied with the completion of the zone mapping and refinement. Following this, the working group shifted its attention to workplans. An introduction to the concept of workplans, their purpose and benefits was given by Don Fisher. This discussion also introduced the group to templates which could be used for single and multiple task workplans (see Appendix ZZ).

The working group then went back to the list created in the brainstorming session on the first day and isolated those issues which were identified as topics to be addressed in workplans. The group was instructed by the USFS team to separate the list into items which were of immediate and pressing need and place these into a list of immediate priorities to be targeted for completion in the first year. The remaining items were to then be placed in order as “high”, “medium”, or “low” priorities. Understandably, due to the great number of needs faced by the park, the group was not able to narrow the list down substantially. In order to emphasize the costs associated with each item, the USFS team then led the group through an example of a workplan for trail construction.

Saturday, June 25: Responding to a request from the group, the USFS team presented an example of an organizational chart on a US National Forest to start the morning. This was followed by working through an example of a multiple task workplan as a group, using the example of citing, constructing, and equipping five guard posts for the park. This example seemed to be quite effective in illustrating the realistic cost of just one of the “immediate” priorities the group had identified for completion in the first year.

In the afternoon, the USFS team, accompanied by Roger Boussougou, Raymond Pendi, Stephane Le-Duc Yeno, Marc Dethier, and Blaise Nkoghe took a boat ride across the lagoon which forms the northern boundary of the park, then down the river to the Akaka camp inside the park.

In the evening the USFS team, along with the rest of the working group, were hosted at the conservator’s brigade for a close out dinner.

Sunday, June 26: In the morning the USFS worked as a group to prepare for the week ahead with all the conservators in Libreville. The afternoon was spent traveling back to Libreville via Port Gentil.

Monday, June 27: During this second week of the mission, the USFS team worked with the conservators from the other national parks, focusing on workplan development.

During this session, the USFS team briefly reviewed the process that was used in Iguela to finalize the park's management plan. Each conservator was asked to present the objectives created for their park.

This activity was followed by an introduction of the workplans, their purpose and benefits, as was delivered at Iguela. This discussion also introduced the group to templates which could be used for single and multiple task workplans.

Tuesday, June 28: Utilizing Akaka National Park as an example, a list of first year priorities of tasks was created by the group. These immediate needs were then numbered in order of highest priority. The USFS team then assisted the group in working through two examples of workplans, including the planning, construction, and equipping of administrative buildings and housing for the park staff.

Wednesday, June 29: The USFS team met with Jean Paul ObameEngone, Pepin Magamamucketu, Josef Ngowou, and Bryan Curran of WCS to discuss needs and potential timing for the next USFS technical assistance mission to Gabon. This future trip will work on refining and finalizing the management plan for Lope National Park. Once completed, this park plan, along with the plan of Loango National Park will serve as model management planning documents which will assist in guiding the planning process for Gabon's eleven other parks. As a part of this technical assistance mission, CNPN has requested that an expert in tourism development be identified by the USFS and sent as a member of the team to assist in developing a tourism development plan for Lope NP. This mission will take place in October/November, 2005, or as soon thereafter as possible.

Thursday, June 30: The morning was spent presenting a wrap-up review of the two weeks work in Gabon to the conservators and Rene Adiaheno, followed by a discussion session. That evening the USFS team returned to the US.

APPENDIX C: DESCRIPTION OF WORKPLANNING STRATEGY, PROCESS, AND COMPONENTS

- Purpose of Workplans
 - a. To provide for the implementation of the park's management plan.
 - b. To define the "program of work" for all park operations.
 - c. To set priorities for work to be accomplished.
 - d. To define the resources needed to accomplish priority work in the park.
 - e. To determine funding needs for park operations.
- Work Planning Strategy
 - a. Work planning is the process used to develop an annual program of work, which can be used to project immediate funding needs for the next fiscal year (budget request).
 - b. Work planning can serve as a valuable tool to project work priorities and budgetary needs for the next 3-5 years, particularly where projects or activities need to be phased due to complexity or costs.
- Note – draft workplans, used for budget planning and requests, will likely need to be revised once a final budget allocation to park units has been made.
- Types of Workplans – The USFS team described two types of workplans (see templates in Appendix D) that seem suitable for the development of a program of work for Gabon's National Parks:
 - a. *Single Task Workplan Template* – This workplan template is suitable for projects or activities that are relatively simple in nature, and do not require complex planning or phasing. Examples of projects or activities that would likely fall into this category would be:
 - i. Law Enforcement – annual work program for law enforcement staff (eco-guards) who are engaged in such activities as monitoring for illegal fishing and hunting.
 - ii. Park administration – covering the salary, training, and materials and supplies for the conservator, clerical and budget staff, and any other administrative staff, and their supplies (paper, pens, computers and associated supplies, Xerox machine and associated supplies, etc.) It is important to note that, as the chief administrative officer of the park, the conservator's annual salary would be included in this workplan. Therefore, if any other workplans call for efforts by the conservator, his/her salary would not be factored into that other workplan.
 - iii. Administrative Facilities Maintenance – covering the cost for annual maintenance of all administrative facilities, including staff involved in maintenance activities, cleaning materials, paints, stains, and any tools that must be purchased to accomplish this work (brooms, paint brushes, etc.). However, it should be noted here that a park with a complex administrative facilities structure (such as an office, maintenance building, and multiple staff

- housing facilities) may find the multiple task workplan format more suitable due to the diversity of facilities needing maintenance.
- iv. Park Trails Maintenance – covers the routine annual maintenance of all the park's trails, such as brushing, any needed tread repair, etc.
 - v. Park Roads Maintenance – covers the routine annual maintenance of all the park's roads, such as brushing, grading, and surface repair.
 - vi. Fleet Operations and Maintenance – covers the routine annual maintenance of the park's vehicles (and boats where applicable) and their fuel costs.
- b. *Multiple Task Workplan Template* - this workplan template is suitable for projects or activities that are somewhat complex in nature, and can be better defined and planned as multiple tasks. Due to the complexity of these projects, they are frequently phased over several years. This allows phased implementation and funding to be spread out over several years, as appropriate. Examples of projects or activities that would likely fall into this category would be:
- i. Planning and construction of a trail with a wildlife viewing component, where the tasks are as follows:
 1. Task 1 – design and layout of the trail. Includes time spent on site identifying the specific location of the trail.
 2. Task 2 – construction of the trail. Includes all tasks associated with construction of the trail, such as trail width clearing, brush removal, and tread construction.
 3. Task 3 – construction of a wildlife viewing area. Includes time spent building bench seating for visitors to use while observing local wildlife.
 - ii. Planning and Construction of Entry Posts/Check Points.
 1. Task 1 – survey of sites selected for Entry Posts/Check Points – includes clearing, and clearance for cultural resources.
 2. Task 2 – design of Entry Posts/Check Points – includes any modification of standard designs provided for National Park use by CNPN, if needed and appropriate to accommodate local conditions.
 3. Task 3 – contract for construction of the Entry Posts/Check Points – includes cost for staff to conduct periodic inspection of construction progress to assure work is in compliance with contract requirements.
 4. Task 4 – purchase and installation of all furnishing for the Entry Posts/Check Points to make them operational.

The USFS team assisted the Iguela working group and the group of conservators in Libreville is working through both of the above examples.

- Work Plan Components – The inclusion of the following elements should be considered when developing a workplan:
 - a. *Project Summary* – a brief description of the project or activity to be accomplished, with sufficient detail so it is clear what will be done.
 - b. *Personnel* - description of all personnel needed to accomplish the work, including name and or title of each position, with number of days planned for each person for this work, multiplied by the cost of the person per day, to give total personnel cost. Once again, the full cost of the conservator's annual salary is placed under only the administrative workplan.
 - c. *Supplies and Materials* - list of all supplies and materials which must be purchased to accomplish the project or activity. Include the item, quantity multiplied by unit cost, to get total supplies and materials cost.
 - d. *Contracted Services* – list all services which must be contracted to accomplish the work, including an estimate of the contract cost.
 - e. *Specialized Training* – list any specialized training that is required for this project or activity that is not routine training that the rest of the park's staff would receive. An example would be special law enforcement training for eco-guards in a Law Enforcement Workplan.
 - f. *Fleet* – list all vehicles and boats that would be needed to accomplish the work, and the days needed for each. Note – the total of days planned for any vehicle or boat, when considering all the annual work plans, cannot exceed the number of work days in the year. If they do, an additional vehicle or boat will be required to accomplish all the projects or activities.
 - g. *Project Cost Summary* – provide a total cost of the project or activity, including all personnel, supplies and materials, contracts, and specialized training.
 - h. *Phasing* – for multiple task and/or high cost projects or activities, consider a multiple year phasing plan if appropriate.
- Priority for Annual Work Plans – The USFS team recommended the following general priorities when considering development of an annual program of work. The order of importance of these priorities may be different from park to park.
 - a. *Address health and safety issues* – this includes both visitors and staff, and includes sanitation facilities and any provisions necessary to assure a safe environment to prevent injury or disease.
 - b. *Protection of critical habitats or species*.
 - c. *Resource information needs* – includes surveys, inventories, and assessments.
 - d. *Transportation needs* – includes roads and trails.
 - e. *Cultural and community needs and issues*.
 - f. *Tourism needs* – includes information and education, and marketing.
 - g. *Administrative needs* – including development of office facilities and staff housing.

APPENDIX D: WORKPLAN TEMPLATES

Single Task Workplan Format

PROJECT TITLE: _____

PROJECT DESCRIPTION: _____ (Provide brief description of the work to be performed)

Personnel Needs (List all personnel needed to accomplish the project)

(Name/Title)	(Days Planned)	(Cost Per Day)	(Total Cost)
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Supplies and Equipment (Only list items that need to be purchased)

(Item)	(Quantity)	(Unit Cost)	(Total Cost)
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Contracted Services (List any work to be done by contract with non-park personnel)

(Serviced Needed)	(Estimated Cost)
_____	_____
_____	_____

Specialized Training (List any training needed specifically for this project)

(Course Title)	(Cost of Course)	(Travel)	(Total Cost)
_____	_____	_____	_____

Vehicles (List all vehicles needed to accomplish this project)

(Type)	(Days Planned)
_____	_____
_____	_____

SUMMARY OF PROJECT COSTS (Add all costs, by category, from above)

Personnel _____

Supplies and Material _____

Contracted Services _____

Specialized Training _____

TOTAL PROJECT COST _____

Multiple Task Work Plan Format

PROJECT TITLE: _____

PROJECT DESCRIPTION: _____ (Provide an overall summary of the work to be performed)

TASK #1 (Description): (Provide a brief description of the task to be performed) _____

Personnel Needs (List all personnel needed to accomplish this task)

(Name/Title)	(Days Planned)	(Cost Per Day)	(Total Cost)
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Supplies and Equipment (Only list items that need to be purchased)

(Item)	(Quantity)	(Unit Cost)	(Total Cost)
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Vehicles (List all vehicles needed to accomplish this task)

(Type)	(Days Planned)
_____	_____
_____	_____

TASK #2 (Description): (Provide a brief description of the task to be performed) _____

Personnel Needs

(Name/Title)	(Days Planned)	(Cost Per Day)	(Total Cost)
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Supplies and Equipment (Only list items that need to be purchased)

(Item)	(Quantity)	(Unit Cost)	(Total Cost)
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Vehicles (List all vehicles needed to accomplish this task)

(Type)	(Days Planned)
_____	_____
_____	_____

TASK #3 (Description): _____ (Provide a brief description of the task to be performed)

Personnel Needs

(Name/Title)	(Days Planned)	(Cost Per Day)	(Total Cost)
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Supplies and Equipment (Only list items that need to be purchased)

(Item)	(Quantity)	(Unit Cost)	(Total Cost)
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Vehicles (List all vehicles needed to accomplish this task)

(Type)	(Days Planned)
_____	_____
_____	_____

(Add additional TASKS if needed)

(For Total Project)

<u>Contracted Services</u> (List any work to be done by contract with non-park personnel)	(Estimated Cost)
_____	_____
_____	_____

Specialized Training (List any training needed specifically for this project)

(Course Title)	(Cost of Course)	(Travel)	(Total Cost)
_____	_____	_____	_____
_____	_____	_____	_____

SUMMARY OF PROJECT COSTS (Add all costs, by category, from above)

Personnel _____
Supplies and Materials _____
Contracted Services _____
Specialized Training _____

TOTAL PROJECT COST _____

Recommended “Phasing Implementation” for projects to be funded over multiple years:

Phase	Funding Proposal
Phase 1: Task(s) number _____	Year 1- _____ XAF
Phase 2: Task(s) number _____	Year 2- _____ XAF
Phase 3: Task(s) number _____	Year 3- _____ XAF

EXAMPLE: Multiple Task Workplan Created by Working Group of Park Conservators in Libreville, June 2005

Plan de Travail - Tâches multiple

TITRE DU PROJET: _ Construction de 5 postes de contrôles

DESCRIPTION DU PROJET: _ Planification, construction, et équipement de 5 postes de contrôles.

TACHE #1(Description): Planification des postes de contrôles

Personnel nécessaire (Enumérer tous les personnels nécessaires pour l'achèvement du projet)

(Nom/titre)	(Les jours planifier)	(Le coût par jour)	(Coût total)
adjoint du conservateur	7	20,000	140,000
eco-guardes (2)	7	10,000	140,000

Services contractés (Enumérer tout travail qui doit être fait par contrat avec des personnels qui ne travail pas pour le parc)

(Service nécessaire)	(Estimation du Coût)
----------------------	----------------------

Provisions et Equipement (Liste des articles que vous avez besoin d'acheter)

(Article)	(Quantité)	(Coût d'unité)	(Coût total)
GPS	1	600,000	600,000
Boussole	3	50,000	150,000
Carte	1	40,000	40,000
Appareil photo	1	300,000	300,000
Machettes	2	2,500	5,000
Tente	3	75,000	225,000
Bâche	1	15,500	15,500
Trousse de pharmacie	1	100,000	100,000
Torche	3	3,500	10,500
Piles de GPS/appareil	2 pkt	3,800	7,600
Piles de torche	6 pkt	2,400	14,400
Ampoule	2 pkt	1,200	2,400
Sac	3	50,000	150,000
Paquetages	3	5,000	15,000
Sac de couchage	3	30,000	90,000

Véhicules (Enumérer tous les véhicules nécessaires pour compléter ce projet)

(Type)	(Les jours planifier)
Land Cruiser	3
Pirogue	4

TACHE #2 (Description) : Construction de les 5 postes

Personnel nécessaire (Enumérer tout les personnels nécessaire pour l'achèvement du projet)

(Nom/titre)	(Les jours planifier)	(Le coût par jour)	(Coût total)
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Services contractés (Enumérer tout travail qui doit être fait par contrat avec des personnels qui ne travail pas pour le parc)

(Service nécessaire)	(Estimation du Coût)
Construction des 5 postes	40,000,000

Provisions et Equipement (Liste des articles que vous avez besoin d'acheter)

(Article)	(Quantité)	(Coût d'unité)	(Coût total)
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Véhicules (Enumérer tous véhicules nécessaire pour compléter ce projet)

(Type)	(Les jours planifier)
Land Cruiser	12
Pirogue	12

TACHE #3 (Description) : L'équipment des postes

Personnel nécessaire (Enumérer tout les personnels nécessaire pour l'achèvement du projet)

(Nom/titre)	(Les jours planifier)	(Le coût par jour)	(Coût total)
comptable	5	17,000	85,000

Provisions et Equipement (Liste des articles que vous avez besoin d'acheter)

(Article)	(Quantité)	(Coût d'unité)	(Coût total)
lit	20	25,000	500,000
matelas	20	20,000	400,000
lampes pétrole	25	3,000	75,000
Projecteur	5	60,000	300,000

Radio – fixe	5	1,500,000	7,500,000
Alimentation	5	500,000	2,500,000
Antenne	5	400,000	2,000,000
Radio – portable	10	500,000	5,000,000
Transformateur	5	1,500,000	7,500,000
Batterie (acmltr)	5	30,000	150,000
Panneau solaire	10	500,000	5,000,000
Table	5	60,000	300,000
Chaise	30	15,000	450,000
Placard	5	70,000	350,000
Réchaud – Gaz	5	50,000	250,000
Gas	5	50,000	250,000
Equip – cuisine	5	100,000	500,000
Fourniture – bureau	5	60,000	300,000
Matériel d'entrer	5	100,000	500,000

Services contractés (Enumérer tout travail qui doit être fait par contrat avec des personnels qui ne travail pas pour le parc)

(Service nécessaire) (Estimation du Coût)
Installation panneau solaire et mat. de com._____ 2,500,000

Véhicules (Enumérer tous véhicules nécessaires pour compléter ce projet)

(Type) (Les jours planifier)
Land Cruiser 365
Pirogue 365

(Pour le Projet en Total)

Services contractés (Enumérer tout travail qui doit être fait par contrat avec des personnels qui ne travail pas pour le parc) (Service nécessaire) (Estimation du Coût)

Formation spécialisée (Enumérer toute formation nécessaire pour les personnels du parc pour ce projet)

(Titre de cours)	(Le coût)	(Voyage)	(Coût total)
_____	_____	_____	_____

RESUME DES COUTS DU PROJET (Ajouter tous les coûts, par catégorie)

Personnel	365,000
Provisions et Equipement	35,550,400
Services contractés	42,500,000
Formation spécialisée	_____

LE COUT TOTAL DU PROJET 78,415,400 F CFA

APPENDIX E: MANAGEMENT PLAN FOR LOANGO NATIONAL PARK, FINAL DRAFT (as of June 30, 2005)

MANAGEMENT PLAN

Management Plan for the Loango National Park

Foreword

This draft management plan is the result of several work sessions. The first session was held at Iguela in June 2003 (ref. USG Mission Report June 2003; task list for the Loango Park management plan, June 2003). A later work session held in Libreville from April 27 - 30 undertook a comprehensive review of the results of the Iguela work session, and incorporated a number of changes and improvements to the plan. **(Task – add a description of the third session in Iguela, June 20 – 25, 2005, - Roger)**. These two sessions were led by a team of USFS experts who were invited to Gabon by National Park Commission under a collaborative effort between the governments of Gabon and of the United States. The following people have made contributions to this document: Roger Boussougou, Augustin Mihindou, Joseph Ngowou, Roger Azizé, Manassé Mba, Omer Ntougou, Franck Ndjimbi, Aurélien Mofouma, Bas Huijbregts, Anabelle Honorez, Edward Truter, JG Collomb, Julie Luetzelschwab, Chris Iverson, Don Fisher and Melissa Othman **(Task – add the names of the participants at the 2005 session, e.g., Jean-Paul Obame, Jean Remy Nkombe, Mike Chaveas, etc. - Roger)**. Some important and relevant points about additional areas and the park's internal regulations identified during the work session at Lopé in 2004 were also incorporated.

Chapter 1 – Introduction

The plan is designed to provide a guiding framework for the management of the Loango National Park. It presents the legal authorities, defines the goals and objectives, identifies the rules and regulations that apply within the park to achieve these goals and objectives, and lastly, identifies special management areas with particular rules and regulations in order to specify the main management lines related to specific issues. The plan should also describe implementation, monitoring and inventory actions to undertake (this section is not included in the plan yet). The plan is a decisional document. It defines the rules and procedures to follow in order to achieve a series of goals agreed upon beforehand. The rules and goals are based on the best available data. New data may stress the need for changes, which will be included in amendments and revisions to the plan.

The authority responsible for developing, implementing and successfully executing the park's management plan is designated in of the law of Gabon. The Gabon Forestry Code (Law No. 016/01) stipulates:

- Article 79: *All national parks are subject to a specific management plan that can be revised.*
- Article 80: *The management plan described in Article 79 above has force of law by virtue of a decree issued by the Cabinet following a motion from the Minister of Water and Forests.*

In addition, according to the Decree which establishes the Loango National Park (Decree N° 613/PR/MEFEPEPN),

- The Article stipulates: *In accordance with the provisions of Articles 79 and 80 of the above-mentioned Law No. 16/2001 dated December 31st, 2001 (Forestry Code), the Loango National Park shall be covered by a management plan which shall have executory force in accordance with the decree adopted by the Cabinet.*

The park conservator and his team, in collaboration with NGOs, local communities, other ministries and other parties concerned will coordinate the development of this first plan and its later revisions. The planning process must be transparent and all documents produced must be made available to the public. The conservator recommends and submits the plan, or the revisions of the plan, to the institution in charge of managing national parks for official adoption (it should be clarified if the institution is the CNPN, the Ministry of Water and Forests or a new administration). The institution may also approach various interested parties for help in assessing the plan or its revisions. The plan (or its revisions) only becomes official when it is signed by the institution in charge of managing national parks. It shall therefore have force of law. The conservator and his team are responsible for implementing the management plan. The implementation of the plan is detailed in a separate document – the annual work plan. The management plan must be reviewed at least every five years (but it can be revised at any time). The review process includes the following tasks:

- Assessing if the regulations to determine if they effectively contribute to achieving the plan's objectives;
- Assessing if the objectives of the original plan are still relevant;
- Assessing if new regulations should be developed.

(Task: the introduction should also include a brief section of one or two pages to provide general information on the park. This section should describe the following elements: (Roger)

- The major resources and ecosystems that are unique to the park and their importance at the international level;
- The reasons the park was created;
- A general description of the ecosystems and key biological and physical resources within the park;
- The introduction written by Jason Gray from WWF.

Chapter 2 – Goals and Objectives of the Park

Definition of the Park:

A national park is a tract of land where plants, animals, geomorphologic and historical sites and other types of landscape enjoy special protection status, and inside which tourism is organized and regulated. (Forestry Code, Law No. 016/01 Article 75).

Global Objective

To ensure long term protection and development of Gabon's national parks

Specific Objective

To encourage the development of ecotourism through the protection of ecosystems in the Loango National Park, within an ecoregional context and with the participation of all actors concerned

Objectives of the Park:

The management objectives present in a general way the key principles that are indispensable for good management of the park. All the regulations, rules of procedure and zoning regulations must comply with the objectives of the park.

The Loango National Park is a protected area designed for:

- Breeding, protecting and preserving fauna and flora, in particular species typical of lagoons and coastal areas. This objective also includes providing support to scientific research that would contribute to achieving the national park's management, zoning and conservation objectives.
- Managing habitats, with particular focus on the protection of the biodiversity of ecosystems (lagoons, forests, savannah, coastal areas), and the integrity of the national park in order to ensure that ecological processes occur in an entirely natural way.
- Protecting sites, landscapes or geological formations of scientific or esthetical importance for the public benefit and for recreational purposes (this objective should be defined in greater detail for specific areas that will be identified by resource people in the field).
- Developing tourism activities which comply with conservation objectives generate income to facilitate the management of the national park and contribute to the development of local communities. The management approach should particularly promote local, national and international investments in tourism, as well as environmental education for all types of tourism.
- Ensuring the participation of interested parties, particularly the local populations, in conservation activities. This objective includes:
 - Protecting natural resources within the park in order to ensure that local populations living in the surroundings can pursue their traditional livelihood activities in the vicinity of the park.
 - *NOTE 1: this point was deleted for Lopé. Kate said that, from a scientific point of view, this was not tenable. I think she meant that the wells located outside were more important than the spring inside the park, but I am not sure. We can discuss this point for Loango.*
 - Ensuring participation of all interested parties in the resolution of conflicts that have an incidence inside or outside the national park.
 - Promoting a participatory process in park management planning.
 - Promoting environmental education.
- Encouraging local employment. The national park should make every effort to contribute to the development of local communities.

(Task: Add a chapter on threats to park resources, using as a guide the list prepared for the brainstorming activity - Roger)

Chapter 3 – Internal Regulations

The internal regulations define the rules that apply to the whole park.

General Principle

The general principle is that all activities are forbidden, unless they are clearly authorized by the internal regulations or by special approval by the park administration. This principle is in keeping with the mandate of the decree that established the Loango National Park. In particular, the Article 7 of Decree No. 613/PR/MEFEPEPN sets out:

- *Tourist activities inside the national park of Loango will be organized in accordance with the management plan specified in the above-mentioned Article 6.*
- *All other activities are normally forbidden inside the national park with the exception of those resulting from traditional rights of use.*

Failure to respect the measures outlined in the internal regulations exposes the offender to sanctions as provided for by the law.

Beach, estuary and river resources:

- The use of vehicles alongside beach and estuary ecosystems for tourist purposes is prohibited. However, the park administration may authorize the use of such vehicles on the beach for the purpose of park management and administration as well as research.
- It is prohibited to pollute the beach.
- It is prohibited to damage or destroy mangroves.
- All activities, particularly those that impact the environment, must maintain the aesthetical nature and the ecological characteristics of shores.
- Disembarkation inside the park is limited to landing stages that are designated for this purpose and which are connected to approved roads or trails.

Infrastructure:

- Any project for construction of heavy infrastructure must be submitted to the park administration for review, and then transmitted to the National Park Agency for approval.
- Projects must comply with the park objectives and the internal regulations.
- All constructions must be in harmony with the environment and be included in a development plan for park infrastructure.
- An environment impact assessment must be conducted prior to beginning any construction project inside the park or in the buffer zone. The Gabon Environment Code (Law No. 16/93) sets out:
 - *Article 67: Works, constructions or industrial facilities undertaken by public or private companies, which due to their size or their incidence on the ecology, might endanger the environment, must be the subject of a preliminary impact assessment that will be submitted to the Minister in charge of environment for review according to the legislation applicable by this law.*
 - *Article 68: The impact assessment is a tool for analysis and forecast aimed at identifying, assessing and avoiding negative impacts to health, environment quality, natural resources and ecological balance that could result directly or indirectly from project works or the construction of facilities.*
 - *Article 70: The impact assessment is a prerequisite to obtaining the operation permit; however it is not required if the Environment Minister considers that the size and the duration of the operation, as well as the technical methods*

used, do not indicate any risk of significant negative impact on the environment.

- The construction of the following heavy or permanent infrastructure is prohibited inside the park, with the exception of specific areas identified for park management and tourism development
 - Hotels,
 - Administrative buildings (including offices, housing, schools, health centers, museums, reception centers, surveillance antennae,
 - Research stations,
 - Communications antennae,
 - Landing strips
- Light or temporary infrastructure may be built inside the park for tourism, monitoring and research activities. Their construction is subject to approval from the park administration.
- Site use for light and heavy infrastructure is subject to payment of rental dues that are calculated in proportion to the area used.
- For light infrastructure, the site use period is fifteen years renewable, under conditions defined by the park administration. For heavy infrastructure the duration is twenty-five years renewable, under conditions defined by the park administration.
- Payment of rental dues is effective on the date the management plan is adopted.
- The use of the existing landing strip at Iguela is authorized until the end of construction works for the Omboué – Iguéla road, and / or the construction of a landing strip in the vicinity.
- The design and construction of new landing strips in the park is forbidden.
- The park administration may grant special authorization for the construction of a communication antenna for administrative use under the park management. In such a case, the location, the size of the antenna and any other environmental aspect must be taken into account so as to mitigate negative environmental impacts.
- The existing antennae which are no longer in use should be dismantled by the users, who is also held reclaim the site. The existing antennae that are still in use must be permitted to remain and maintained by the users who must comply with all environmental standards.

Forestry:

- Forest development activities and forestry concessions are prohibited inside national parks. *In no case may forestry works permits be granted for protected areas. (Article 70, Forestry Code, Law No. 016/01).*
- *The concession of protected areas is forbidden. (Forestry Code, Law No. 016/01, Article 213).*

Fires:

- Fire is a savannah ecosystem management practice used by the park administration as well as the villagers under the supervision of the park administration.
- All fires must be scheduled in a fire plan and notified in writing based on field surveys (i.e., prescribed ignition).

- All fires that are not part of the fire plan or not authorized by the conservator are considered illegal and must be extinguished.

Fishing:

- Commercial fishing as described in the Fishing Code is prohibited. (**Task – add the definition of commercial fishing from the Fishing Code - Roger**)
- All types of fishing are prohibited in the Lourie Lagoon.
- Aquaculture is prohibited inside the park.
- It is prohibited to introduce foreign species.
- Sport fishing is authorized inside the park with the exception of areas reserved for small-scale and subsistence activities, and protection and research areas. However, all sport fishing activities are subject to a national fishing permit issued by the competent authorities and a park entrance permit for tourists delivered by the park administration (see Fishing Code, Article 30).
- Traditional subsistence fishing is permitted in the park with the exception of full protection and research areas. Only riparian populations recognized by the village committee may practice this activity.
- Small-scale fishing is prohibited except in the areas reserved for this activity. Small-scale fishing is strictly controlled and quotaed by the park administration.
- Fishing Code (Decree No. 62/MEFPE). Pertinent Articles:
 - *Article 29: a leisure fishing permit is delivered by the Minister in charge of fisheries to any person who wishes to practice fishing in maritime, river, lake or lagoon areas for leisure or tourist purposes.*
 - *Article 30: a scientific fishing permit is delivered free of charge by the Minister in charge of fisheries. Fish catch must be handed over to the Fisheries administration.*
 - *Article 43: the following activities are prohibited:*
 - *Fishing in spawning grounds and near river mouths;*
 - *Capture of lobsters, juvenile fish and fully or seasonally protected fish species.*
 - *The use of monofilament nets.*

Cultural Heritage:

- At the time the park was established, there were eight villages (Yombé, Obiro 1, Obiro 2, Bonne Terre, Sounga, Mwambatsango, Éwongué, Menguélé) (**Task – check out the national law that gives the definition of a “village” - Roger**) ; six cemeteries (N'dola, Bonne Terre, Issaga, Ntoungwanero, Oghingo, Ignoungou) ; and two historical sites: the Site of the English (Iguela) and the Site of King Boga. There were also two villages (Sette Cama (Portuguese) and Sainte Anne) on the border of the buffer zone. (**Task – delineate all the sites – Roger**).
- Only those villages that existed on the date the park was created are recognized as such.
- The villages that already exist inside the park may be retained as long as their presence is not a threat to the park's integrity=. The villages documented have been identified and delineated.
- *The exercise of traditional rights in relation to fishing and hunting is prohibited in protected areas (parks) and elsewhere it shall comply strictly with the regulations. However, the classification laws determine the rivers and water bodies where the populations may exercise their traditional rights (Forestry Code, Law N° 016/01*

and Article 259). (See village areas and subsistence fishing areas for traditional regulated activities).

- Existing cemeteries inside the park may be retained, but no new cemeteries may be made (see Sacred sites area).
- Art objects and historical or archaeological sites must be protected from tourist activities and cannot be removed from the park.
- Any project that may have negative impacts on an historical site must be preceded by an impact assessment / feasibility study and obtain approval from the park administration.
- If an historical site is discovered during the installation of a project, the latter shall be interrupted and activities shall be resumed after an impact assessment / feasibility study is carried out and approval obtained from the park administration.

Minerology and Geology:

- Prospecting and extraction of the park's mineral or geological resources are prohibited. (**Task – see the Park law– Jean Paul, Roger and Augustin**).

Tourism and Leisure:

- *The use of national parks for tourism purposes consists in creating and managing tourist activities and complexes. This provision applies to the construction of heavy and light infrastructure inside the park's approved areas.*
- Tourism activities inside the park must conform to national standards.
- The tourism operator is under obligation to remit to the park administration the entrance fees paid by visitors that he brings to the park.
- All visitors must pay an entrance fee to the park administration.
- Tourist tours inside national parks must be organized exclusively by authorized people in conformity with the modalities set out by the law and current regulations. The park conservator is the person entitled to authorize and permit tourism activities that are compatible with the park management plan.
- The park administration is responsible for elaborating a tourism development plan.
- All commercial tourist operators must hold a trade agreement, an exploitation permit, and enter into a concession agreement with the Park Agency, and sign a contract with the park administration.
- Camping is prohibited inside the park except by special authorization from the conservator, in which case it is limited to specially designated areas.
- Hiking trails must respect the ecology of animal species.
- *Inside the park it is also prohibited to:*
 - *Travel (move about) by night or camp without special permission;*
 - *To camp beyond areas that have been set up and equipped for camping;*
 - *To bring in dogs or any other domestic animal;*
 - *To throw away, and to leave outside areas designated for this purpose, paper, boxes, bottles, tins and other wastes;*
 - *To make any marks or drawings on plants and equipment.*

Community Development:

- The community forests located inside the buffer zone may be retained, but they may not be extended in the park.

- The local populations often depend on subsistence farming in the surroundings of national parks. The park fauna could be a threat to farming fields and agricultural practices. Consequently, the authority responsible for managing national parks may help the local communities in protecting their fields. The protection of farming fields must not conflict with the park's objectives. The killing of animals that are considered to be damaging should be a last recourse.
- The park administration shall help communities in setting-up village committees that will be involved in discussions on the park management. The committees shall be purely an advisory body.
- In matters of employment, the priority shall be given to village communities established inside or near the park.
- In collaboration with other development actors, assist the populations in identifying and implementing community projects and capacity-building activities.

Soil and Water:

- Farming activities are prohibited inside the park, with the exception of village areas. Even inside village areas, no farming activity shall be practiced on river banks and slopes.
- Any land use activity (e.g., agriculture) must be properly planned and implemented in such a way that irreversible consequences on water and soil quality are avoided inside national parks and in adjacent areas. Waste management inside the park shall conform to the standards established by the national parks agency.
- *It is prohibited to discharge, spread or introduce wastewater, wastes and residues or any other material that could endanger the aquatic environment and the related elements, or cause health risks and damage living and non biological resources. (Environnent Code, Law N° 16/93, Article 12).*

Transportation and Access:

- Access to the park is regulated by a permit system administered by the conservator.
- All accesses to the park, other than that of park agents, must be through entrance posts built by the park administration. However, the park administration may deliver special authorizations for research activities.
- Visitors who enter the park must be accompanied by a person who has the conservator's permission.
- Villagers living inside the park are entitled to enter the park to reach their village. However, all traditional activities are limited to village areas only.
- Land transportation:
 - Hiking and camping are limited to designated trails and camping sites;
 - Motor vehicles are not authorized in the park unless a permit is delivered by the park administration. The number and type of vehicles, as well as the frequency and the seasonal use of vehicles is defined by the park administration. Vehicle use is limited to authorized roads and trails;
 - Tourists are not authorized to drive a motor vehicle inside the park;
 - Vehicle driving speed inside the national park is limited to 30 km/hour;
 - The entry and departure of all motor vehicles must be notified to the park management authority;
 - The planning and construction of new roads must be in conformity with the park objectives and must have minimal impacts on the environment.

- Air transportation:
 - Flights below 200m above the park are prohibited unless a special permission is delivered by the park administration.
 - Hydroplane landing is limited to specific areas.
 - Helicopters are not authorized to land in the park except under activities authorized by the administration or for medical emergency assistance.

Scientific Research:

- Any researcher must obtain a research permit from the CENAREST (*Centre National de la Recherche Scientifique et Technologique*) to carry out scientific research inside the park
- Research projects inside the park must be approved by the park research committee. (**Task – check out the role of the scientific committee**) ;
- For scientific or development reasons, the park agency can carry out or control the slaughter or capture of animals, the sampling of plants or other gathering activities inside the park;
- Scientific hunting and scientific capture permits are delivered for scientific purposes to representatives of scientific organizations identified by the park agency. The latter are thus entitled to kill or capture wild animals;
- It is prohibited to sample floral species and capture faunal species for commercial reasons;
- Research activities are permitted all over the park.

Fauna and Flora

- Hunting is prohibiting inside the park.
- *Photographic hunting by natural persons or legal entities for a commercial or professional objective is subject to a permit delivered by the competent administration and an authorization from the park agency.*
- *Licensed tourist operators are considered to carry out commercial or professional activities, and may therefore obtain generic photography permits for the use of their clients during tourist tours.*
- It is prohibited to kill, wound or capture wild animals. In exceptional cases, capturing a wild animal may be authorized by the park administration for sanitary surveillance, wild populations studies or to restoration of animal populations into other parks.
- The observation of animal species inside the park must respect the standards defined by the National Park Agency.
- It is prohibited to gather plants, invertebrates, vertebrates, eggs, bones, teeth, horns, and elephant tusks. Such prohibition also applies to scientists who hold a research permit, except if they have special permission from the park administration. This measure does not apply to animals with a known scientific interest that are found dead have.
- It is prohibited to disturb or harass the fauna. Harassment means approaching animals too closely or carrying out noisy activities that would cause the animals to flee; it is also prohibited to feed animals or to carry out any other harmful activity.
- If an animal is a danger to the public, particularly the villagers, tourists, permit holders or the park administrators and their families, the park administration may decide to remove or kill the animal in question after an assessment of the various options

- It is prohibited to introduce any type of weapon or ammunition that could be used for hunting purposes; carrying, possessing and using weapons are also prohibited, with the exception of park management staff.
- For security reasons the populations established inside the park are entitled to keep weapons in the village precincts.
- Subject to a scientific assessment at the request of the park administration, it is permitted to reintroduce indigenous species into the park.
- It is prohibited:
 - *To transport and sell dead or live animals, venison, bodies or hunting trophies;*
 - *To introduce eggs, live wild species, seeds, seedlings, grafts, cuttings and plants without prior authorization from the park agency after obtaining the opinion of the park administration;*
 - *To destroy, capture and collect eggs (and) nests, to uproot, mutilate, transport, buy and sell plants, seeds, seedlings, grafts and cuttings;*
 - *To provoke animals.*

Chapter 4 – Zoning

Introduction

The zoning process is aimed at identifying management orientation for a specific area in the park in order to take into account the specific needs or possibilities or to provide a management strategy targeted at particular or exceptional resources. This type of management is generally more precise and more restrictive than internal regulations. Zoned areas are mutually exclusive. Resource inventories based on a préciséd geographic information system (GIS) are important zoning tools. Whenever possible, the zoning process takes natural ecological features into account so that they are easily recognized in the field.

Zone 1: Full Protection Zone

The objective of this protection zone is to identify of areas that are important and/or sensitive from an ecological or historical point of view, and to ensure greater protection than the standard level of protection provided elsewhere in the park. The following rules apply to such zones:

- All activities likely to destroy, damage or modify the natural environment are prohibited.
- Scientific studies must be in line with conservation objectives and obtain authorization from the park administration.
- Tourism activities are not authorized in this zone.
- All fishing activities are prohibited.
- Construction of roads, trails and infrastructures is prohibited.

Zone 2: Village Zone

The objective of this zone is to identify the villages and adjacent areas located inside the park prior to the latter's creation. The village zone encompasses the village (habitation area) as well as the adjacent area used for traditional activities, and which is delineated in collaboration with the authority responsible for park management and the villages.

- The traditional activities carried out by the inhabitants of the villages inside the national park are defined by the park authorities in collaboration with the villagers.
- *The exercise of traditional rights is intended to satisfy both individual and collective needs of village communities ; the exercise of such rights specifically concerns the following activities (Forestry Code, Law No. 016/01, Article 215) :*
 - Tree use for timber, and branches and dead wood use for firewood;
 - Gathering of non-timber forest products such as barks, latex mushrooms, medicinal and edible plants, stones and climber species;
 - Grazing in the savannah and in open lands and use of branches and leaves for animal fodder;
 - Subsistence farming;
 - Grazing rights and water use;
 - Subsistence or traditional fishing;
 - Subsistence hunting. The basic concept is that hunting is prohibited inside the national park, but there are exceptions which are strictly regulated for villagers established inside the park prior to its creation;
- Small-scale fishing is authorized but is strictly regulated and subject to a permit delivered by the fisheries brigade and an authorization from the park administration.
- If the activities cause negative impacts on the environment, the park administration can modify the extent or the duration or otherwise totally suspend the activity in question.

Zone 3: Small-scale and Subsistence Fishing Zone

The objective of this zone is to identify areas where only small-scale or subsistence fishing is authorized in order to reserve fishing resources exclusively for the villages and the local inhabitants. In the exploitation of resources, priority is given to subsistence fishing.

- Only the local village communities are authorized to practice subsistence fishing activities under the participatory control of the park management authorities and fishing associations.
- Sport fishing is prohibited.
- Small-scale fishing is authorized but regulated.
- Traditional fishing rights should be exercised using the means and equipment included on the list established by order of the national parks agency.

Zone 4: Common Fishing Zone

The objective of this zone is to identify areas where sport, subsistence and small-scale fishing are authorized.

- Small-scale, subsistence and sport fishing activities are authorized.
- *Traditional fishing rights must be exercised using the means and equipment included on the list established by order of the national parks agency.*
- Small-scale fishing is authorized only for the local population, but it is regulated.

Zone 5: Sacred Sites Zone

- The objective of this zone is to identify and fully protect sacred sites, including cemeteries, and limit access to them. Access to such areas, no matter what the activity, is prohibited to people who are not members of the local community.

- The control of these zoning regulations is defined by an agreement between the park management authorities and the local populations.

Zone 6: Light Infrastructure Zone

The objective of this zone is to identify the areas where light infrastructure can be constructed. Light infrastructure are not permanent (e.g., platforms for setting up tents or camp sites). They may be installed for research, tourism or administrative purposes.

The construction of light transit and accommodation infrastructure for monitoring, tourism and research purposes is authorized

Zone 7: Heavy Infrastructure/Tourist Development Zone

The objective of this zone is to identify specific areas in the park where heavy or permanent infrastructure can be built for research, tourism or administrative purposes.

- The construction of permanent facilities is authorized in this zone only.

Zone 8: Research Zone

The objective of this zone is to allow a smooth implementation of research projects, as an exclusive activity.

- Any other activity is strictly prohibited.
- Long-term research activities are encouraged following approval of projects by the research committee.
- Only scientists holding authorization from the park administration may enter the research zone.

Chapter 5 – Implementation Planning

This point was not addressed in 2004.

NOTE FOR THE REVISERS – The implementation plans mainly devolve upon the conservator and his staff. These plans generally consist of an annual work plan for the year in progress and annual work plans for the following two or three years. These plans can be revised every year. This process was presented in Libreville by Don Fisher, USFS, in April 2004 and in June 2005 (see the USFS Mission Reports April 2004 and June 2005 for detailed information regarding the implementation plans.). The implementation plans outline the annual activities that the park administration should take into account, what the conservator has to and plans to undertake during the year to administer the park and meet park management objectives. The workplans show budgetary needs in view of collectively establishing annual budget requirements to ensure park management. Here are some examples:

- Identify staffing requirements and assume supervision responsibilities;
- Design, build and maintain administrative facilities.
- Design and manage a permit allocation system for all pertinent activities (research, tourism, camping, etc.);
- Consult the local communities in order to understand their problems, concerns and needs and to educate them in park management;
- Delineate and survey park boundaries;
- Implement park regulations;
- Conduct resource inventories;
- Delineate authorized roads and trails; close non-authorized roads and trails ;
- Conduct environmental education sessions;

- Information management (GIS, inventory data; illegal activities, park usage).

Chapter 6 – Monitoring and Assessment

This point was not addressed in 2004.

NOTE FOR THE REVISERS – This chapter has not been discussed and should be the topic for a separate workshop or work session that will identify monitoring and assessment needs. The objective of monitoring and assessment is to determine if management plans and annual work plans are effectively contributing to achieve the planned goals and objectives for park management. These elements can help in developing annual work plans for the implementation of management plans. Monitoring and assessment tasks should focus on rare resources, on activities authorized by the conservator, or on basic information needs for the park administration. Monitoring/assessment should also include a component on research and inventory needs to ensure good management of the park. The identification of important research and inventory needs should consist of a participatory process involving park managers, major NGOs, tourism operators, local populations and researchers. The park manager needs not necessarily carry out research and inventory works, but such process helps in the collective identification of priorities by common agreement and the coordination of data collection activities. Appendix A shows a diagram of data required to ensure park management that could be examined and revised during the work session.

Chapter 7 – Glossary

A few terms to be defined;

Constitution

Laws

Decree of application

Internal regulations

Key species

Beaches

Estuaries

Subsistence fishing

Small-scale fishing

Sport fishing

Industrial fishing

Hunting (a picture should be excluded)

Personal picture

Commercial picture

Villages (names and locations)

Camp sites (names and locations)