Mission to Democratic Republic of Congo, September 29 – October 21, 2006

Trip Report for International Programs,
USDA Forest Service, Washington, D.C.

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Cover photo: Salonga National Park, by Bruce G. Marcot

SUMMARY

This report summarizes results of an exploratory trip to western Democratic Republic of Congo (DRC) during 29 September - 21 October 2006 by Bruce G. Marcot and John Sidle of USDA Forest Service (FS). The purpose of the trip was to provide the national government of DRC, through assisting U.S. Agency for International Development (USAID) and World Wide Fund for Nature (WWF), with a process for land management planning in Salonga National Park which could serve as a template for planning in other forest protected areas in the country.

Our field expedition took us from Kinshasa to Monkoto, with field explorations there into Salonga National Park and in villages along the non-park "corridor" between North and South blocks of the park. We interviewed personnel of l'Institut Congolais pour la Conservation de la Nature (ICCN), local village chiefs and village members, government administrators, park guards, researchers, and others, and attended the opening ceremonies of a new training session for park guards. In Kinshasa, we participated in a 3-day workshop in which a park planning framework was presented to ICCN and amended.

Our conclusions and recommendations are as follows. ICCN needs to bolster their planning expertise (essentially, hire and train park planners). Much of DRC wildlife in the study area is heavily poached for bushmeat; park guards are in dire need of more staff, firearms, training, basic field gear, and other logistical support. FS should remain directly involved with the planning process, including supportive scientific work, via web, email, and periodic visits.

INTRODUCTION AND SETTING

During September 29 to October 21, 2006, Bruce Marcot and John Sidle of USDA Forest Service (FS) visited Democratic Republic of Congo (DRC) for the International Programs office of FS. The overall purpose of the trip was to provide assistance to ICCN and U.S. Agency for International Development (USAID) to help outline a potential land management plan in particular for Salonga National Park and in general as a planning framework for possible use in other forest parks in the country. Specifically, FS engaged Terms of Reference with World Wide Fund for Nature (WWF), the lead NGO for the Salonga National Park portion of the project (Appendix 1).

We met with ICCN and USAID personnel in Kinshasa and representatives of numerous non-government organizations (NGOs) and government offices engaged in USAID's Central African Regional Program for the Environment or CARPE (http://carpe.umd.edu). We traveled to Monkoto and Salonga National Park with, and were hosted there by, members of WWF and Wildlife Conservation Society (WCS).

This report summarizes our project Terms of Reference, specific travel itinerary, contacts, observations, and suggestions and recommendations to FS.

TERMS OF REFERENCE

The complete Terms of Reference for FS-WWF contact -- "Development of a Vision and Management Plan Strategy Document for Salonga National Park" -- are provided in Appendix 1. The portion pertaining to FS responsibility was in item 2, viz., FS will provide collaboration and technical expertise for developing the management plan strategy document for the national level workshop.

TEAM MEMBERS AND CONTACTS

The trip was coordinated by Michael Chaveas and Melissa Othman of the Africa Program, FS International Programs. In Kinshasa, we coordinated principally with John Flynn and David Yanggen of USAID and with Lisa Steel (landscape lead for Salonga National Park) of WWF. Additional contacts were made with researchers and managers of NGOs and the national government, including: Bila-Isia Inogwabini ("Ino", WWF's landscape lead for Lac Tumba), John Hart (WCS), Gay Reinartz (Zoological Society of Milwaukee, WI), and others.

The core team of the field expedition in DRC included Lisa Steel and Omari Ilambu (also assigned to Salonga National Park) of WWF, Robert Nwiniyihali of WCS, and Bruce Marcot and John Sidle of FS, who were also joined in the field by various WWF and other NGO members, principally Alfred Yoko.

Team members and contacts made in DRC are listed in Appendix 2.

TEAM SCHEDULE AND ITINERARY

Our 2006 itinerary entailed travel from our respective work locations (Portland, Oregon for Marcot, and Chadron, Nebraska for Sidle) to Kinshasa, DRC, September 29-30; meetings in Kinshasa with USAID and WWF during October 1-4; internal flight from Kinshasa to Monkoto DRC on October 5; use of pirogue (dugout canoe), trail bike, and trekking in the vicinity of Monkoto and into Salonga National Park during October 6-13; and return to Kinshasa via airplane on October 14 for meetings and the major planning workshop with ICCN, USAID, and other groups during October 15-20. We departed DRC on October 21.

MAIN FINDINGS

Initial Meetings in Kinshasa

Meetings at WWF.-- We spent much of the initial time headquartered at the WWF office in Kinshasa, working on trip planning with Lisa Steel and Omari Ilambu, and on workshop planning also with Dr. Andre Kamdem Toham. We also initially met with Didier Divers, Inogwabini Bila-Isia, and others there.

Meeting with ICCN.-- On 3 October we visited the ICCN office in Kinshasa, principally with Pasteur Cosma Wilungula Balongelwa (Administrateur Délégé Générale, ADG) and his staff including Benoit Kisuki (technical general director, ADT), and Nestor Lubutu (involved in partnership with Lukuru Wildlife Resource Project, LWRP).

Pasteur Balongelwa briefed us on a recent park planning workshop held in Goma, DRC that, in part, presented park planning concepts and processes from Tanzania and Uganda and that concluded that DRC needed a national strategy and process for its park planning. The ADG noted that Salonga National Park in particular needs a site director, which should be mentioned in the park plan; the park currently has a "conservateur" for each of six sectors, but no one conservateur overseeing them. The ADG also noted the need to consolidate all scattered data and information available on the park. The ADG said that the role of ICCN at the national level is to provide overall guidance for each conservateur in each protected area and park, which is to each have its own planning team. ICCN needs an overall strategic plan for such guidance operations at the national scale. A German agency for technical cooperation (GTZ) was providing some assistance in this area.

The ADG's vision for Salonga National Park for the next 5 years includes a survey of the entire park to gain knowledge of all areas; development of a park management plan; and bolstering the capacity for the park. Also needed is a stable financial structure for park planning and a means to fund new activities; current finances cover only minimal management activities. Thus, fiscal out-year planning and projections should be part of the Salonga National Park management plan.

Meeting with USAID.-- We also met with John Flynn at USAID in Kinshasa, who clarified that our trip goal is to help develop a strategy for developing a management plan for Salonga National Park. John noted that ICCN is developing a national level planning process framework, and this corresponds to CARPE's planning guidelines.

John Flynn also clarified that the FS has helped develop the "strategy document" which consists of steps to take to get to a management plan. The strategy document is for the entire landscape, and can also be adapted to any zone within the landscape, such as the Salonga National Park protected area. John Flynn shared his expectations that the Salonga National Park workshop scheduled for late October at the end of our visit should develop a vision statement for park planning and a strategy to develop the park plan, and that the workshop attendees should include the national level.

CARPE's goal is to have management plans developed and "adopted" for all landscapes by 2011, although there is no one legal authority to adopt such plans. Eventually, John suggested, there may be a need to do environmental impact assessments (EIA) if current CARPE program thresholds are being exceeded. EIAs could be done at zone or landscape scales. John Flynn offered that the most serious impacts from timber concessions are -- in sequence of cause and effect -- roads, slash and burn agriculture, hunting, and clearing. Salonga National Park is surrounded by logging concessions. John told us of a USAID-funded project in Gabon on "reduced impact logging" in which FS, Tropical Forest Foundation (TFF), and FORM International (Holland) were involved, as well as Caterpillar Corp. and others. This was a 3-year demonstration program that cost $0.5 million. It looked only at direct logging operations, not secondary impacts on wildlife, forest fragmentation, etc.

Field Visit to Monkoto and Salonga National Park

Salonga National Park (Parc National de la Salonga, PNS) was created in 1970 and is the largest tropical forest park in Africa at 3,656,000 ha (and the second largest in the world). PNS is an IUCN Category II protected area and was further designated a Natural World Heritage Site in 1984 and given the status of World Heritage in Danger in 1999 because of poaching and effects of war militias in the area on wildlife and the forest ecosystem. PNS is administered by ICCN. During our visit to PNS we made many observations of occurrence of species and biodiversity (Appendix 3).

Ordonnace 69-041 establishing PNS merely gives the boundaries of the park. ICCN's *Stratégie de la Conservation dans les Aires Protégées de la République Démocratique du Congo* repeats the longstanding mission of ICCN :

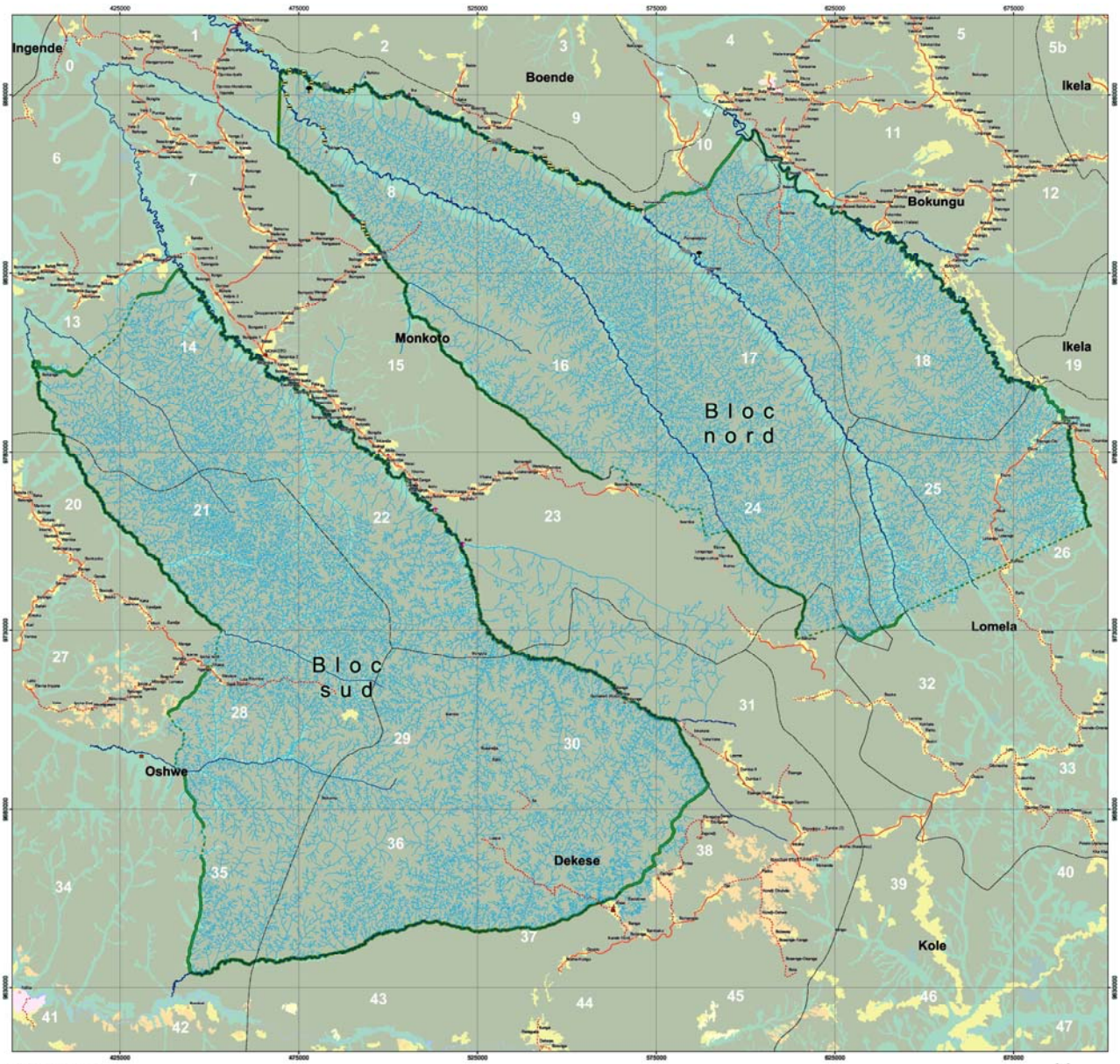
1. Assurer la protection de la faune et de la flore dans les réserves naturelles intégrales ou quasi intégrales ;
2. Favoriser en ses milieux la recherche scientifique et le tourisme dans le respect des principes fondamentaux de la conservation de la nature ;
3. Gérer les stations dites de «capture » établies dans ou en dehors des réserves.

There are no other documents offering advice on the management of a protected area in DRC.

PNS is embedded within the broader Salonga-Lukenie-Sankuru (SLS) Forest Landscape as delineated by CARPE. SLS is 102,847 km^2 and occurs in the Cuvette Centrale region of DRC. SLS straddles four provinces: Equateur, Bandundu, Kasai Orientale, and Kasai Occidentale. Forests of SLS comprise 5% of the forest cover of the Congo Basin and is not a particularly diverse flora. Some 152,000 people reside in SLS, mostly Mongo and small numbers of Batwa, Ngombe, and Mbole. Population density within SLS but outside Salonga National Park is 3.2 people/ km^2.

The ICCN administrative hierarchy for Salonga National Park is as follows: ADG --> ADT --> chief conservator for Salonga National Park (position currently unfilled) --> Salonga National Park bloc directors (North Block, South Block) --> sector conservators (3 in the North Block, 3 in the South Block) --> patrol posts (PP, field guards). Sector conservators are the rough equivalent of FS district rangers.

Parc national de la Salonga



Projection UTM 34S
WGS 1984
Unité de la carte : kilomètres

1:400.000

0 37,5 75 150 Kilomètres

N

- Forêt dense semi-decidue
- Forêt dense sempervirente de terre
- Forêt dense sur sol hydromorphe
- Forêt secondaire et complexe rural
- Prairie inondée
- Savane arbustive
- Savane arbustive inondée
- Savane herbeuse
- Cultures
- Sols nus ou urbains
- Eau permanente
- Eau non permanente

- Limites du parc
- Limites du parc à valider
- Territoire

Rivières
- Rivières principales
- Rivières secondaires et tertiaires

Routes
- Routes
- Routes à valider

Villages
- Villages
- Villages à valider

Infrastructures
- Port
- Camp de pêcheurs
- Piste d'aérodrome
- Station de travail (ICCN, ZSM, MPI)
- Poste de patrouilles (ICCN)

Faune
- Nid de bonobo
- Elephant

Réalisation

Unité d'environnemétrie et de géomatique – Université catholique de Louvain
Department of Geography - Universiteit Gent
Juin 2004
Dans le cadre du projet SYGIAP – N° UN/10/006 de la Politique Scientifique Fédérale
http://geoweb.rug.ac.be/sygiap/

Sources:

Les données vectorielles relatives aux rivières, routes, occupation du sol, villages, limites administratives et les limites du parc sont issues :
- de l'Institut Congolais pour la Conservation de la Nature http://www.iccnrdc.cd/
- des données AFRICOVER http://www.africover.org
- de la "Carte générale de la République Démocratique du Congo" au 1:2 000 000 – I-mage Consult http://www.i-mage.be/
- de la carte "Salonga National Park : Land use and Land cover" - Remote Sensing Solutions GmbH http://www.rssgmbh.de/
- World Conservation Society – http://wcs.org/
- de la numérisation d'images Landsat ETM+ orthorectifiées 178/60 et 178/61 du
- de la numérisation d'images radar orthorectifiées de juin/juillet 2003 – INTERA
- de la numérisation du Modèle numérique de terrain de février 2000 - Shuttle Radar Topography Mission (SRTM) http://www2.jpl.nasa.gov/srtm/

Les relevés de faune, la localisation de villages et infrastructures et le tracé de certaines rivières sont issus des relevés GPS effectués par :
- Zoological Society of Milwaukee – relevés entre 2000 et 2003 http://www.zoosociety.org/
- World Conservation Society – janvier et mai 2003 http://wcs.org/
- Jo Thompson - avril 2004
- Jonas Eriksson – novembre/décembre 2002

La toponymie des villages est issue des données vectorielles et relevés GPS cité ci-dessus et des "Cartes du territoire" au 1:200 000 de Monkoto (1958), Boende (1958), Bokungu (1958), Lomela (1959), Dekese (1948), et Oshwe (1955) de l'Institut Géographique du Congo Belge.

We flew into the village of Monkoto which is located within the non-park "corridor" that separates the north and south blocks of the park and that is adjacent to the northern boundary of the south block, on the northern banks of the Luilaka River. In Monkoto, we stayed in the WWF office and bunkhouse, a very nicely-kept building.

Kinshasa Workshop

In Kinshasa, we helped structure and participated in a 3-day workshop over 18-20 October, on "Developpment d'un Canevas pour un Plan de Gestion du Parc National de la Salonga (PNS) [Workshop on Developing a Management Plan for Salonga National Park]." John Sidle spoke on "Présentation d'un canevas modèle pour le développement d'un plan de gestion (y compris le définition d'USFS d'un plan de gestion [US Forest Service guide to protected area management planning in central Africa]." The presentation drew from an ICCN document on planning as well as planning experiences in the United States, especially FS planning (Appendix 4).

The workshop was attended by 16 people from ICCN, WWF, WCS, Zoological Society of Milwaukee, and others. We used breakout groups and overall discussions to develop a vision statement for park planning for PNS and an overall planning strategy.

The breakout groups were used to devise the elements and strategies for parts of a management plan: defining the planning team, planning strategy, objectives, and zoning.

One breakout group addressed park planning objectives, noting that they should be feasible, clear and concise (not ambiguous), measurable, for a given time period, compatible with the vision statement, tiered to desired conditions, and involve stakeholders, and that they should be the basis for specific guidelines and prioritized. Park planning objectives also should derive from a threats assessment and tier to desired or ideal conditions.

In prior workshops, WWF identified and listed the following PNS stakeholders:

- public administration -- police, security, Department of Environment, agriculture
- local population -- notables, chiefs (traditional), community-based organizations, local NGOs
- religious communities -- Catholic, Protestant, others
- user groups -- hunters, fishers, NTFP collectors, farmers
- gender distinction -- men, women
- Bantus and Pygmys
- ICCN

- traders and merchants

The workshop identified the following information as necessary for development of park planning objectives: the vision statement, threats assessment, scoping of stakeholder expectations, and assessment of the feasibility or capacity of the system, including financial, human, biological and ecological, infrastructure, social, institutional, administrative, research, and tourism potential. The workshop also listed who should be involved in identifying park planning objectives, viz., stakeholders, technical experts such as economists and ecologists (for determining the limits, capacity, and capability of the system), legal advisors, and park partners. However, the actual park planning objectives would be written by the planning team. How the objectives are to be measured would be defined by the planning team.

The workshop attendees also discussed the role of alternatives and effects analyses in a park planning process, such as was presented as an example by the FS participants. It was noted that alternatives would all adhere to the stated objectives and could vary in how to meet those same objectives by varying microzoning, guidelines, etc.

The FS team suggested a list of terms that may need to be clearly defined for park planning, as in a glossary (see Appendix 5).

The workshop sketched out a structure of a management planning process, including vision, objectives, guidelines, delineation of microzones, alternatives to guidelines and microzones, effects analyses of the alternatives, selected alternative, and implementation of the selected alternative including development of management guidelines, zones, regulations, monitoring, and research activities, which might feed back into later development of other alternatives should an update to the plan be desired. The workshop ended with participants sketching out work activities, assignments, and due dates for completion of the planning strategy and identification of the core planning team. I would be useful for CARPE, WWF, FS, and others if the CARPE web site could devote a section to the above planning matters including assignments and due dates.

DISCUSSSION AND RECOMMENDATIONS

Discussion of Key Findings

PNS is a very large protected area and huge logistical issues remain to ensure its security and management. Many years of neglect have left the park exposed to poaching, transit, and village development. In many areas it is as if the park designation does not exist and forests are readily entered and exploited. ICCN carries out inadequate but improving patrols with poor infrastructural support and lack of direction from ICCN headquarters in Kinshasa (see interviews in Appendix 6).

A few scientists currently are studying and monitoring bonobos, forest elephants, and Congo peacock and some are attempting to classify the forest via satellite imagery and ground-truthing. WWF evaluates socio-economic conditions in the Salonga-Lukenie-Sankuru landscape and has placed a coordinator at Monkoto. The serious nature of degradation in DRC's protected areas is recognized by ICCN (*Stratégie de la Conservation dans les Aires Protégées de la République Démocratique du Congo*):

Etat de lieux des AP.

Les APs de la RDC comprennent 7 Parcs Nationaux (les Parcs Nationaux des Virunga, de la Garamba, de Kahuzi-Biega, de la Salonga, de l'Upemba, de Kundelungu et de la Maiko), la Réserve de Faune à Okapi, le Parc marin des Mangroves et environ 57 Domaines et Réserves de Chasse. Cinq de ces AP sont inscrites au statut des Sites du Patrimoine Mondial de l'UNESCO. Il s'agit des Parcs Nationaux des Virunga (PNVi), de la Garamba (PNG), de Kahuzi-Biega (PNKB) et de la Salonga (PNS) ainsi que de la Réserve de Faune à Okapis (RFO).

Les menaces qui s'exercent sur ces AP et leurs ZT respectives sont nombreuses. Les plus importantes sont: le braconnage, l'occupation des terres à l'intérieur des AP par les populations et les bandes armées, l'exploitation illégale des minerais et l'exploitation forestière. A cela s'ajoutent d'autres menaces telles que la pauvreté grandissante, l'explosion démographique, les effets des guerres et de l'instabilité politique aussi bien dans la RDC que dans certains pays voisins. A ce jour, l'ICCN continue à subir les effets désastreux d'une administration multiple dans sa gestion des ressources naturelles. Toutes ces menaces ont eu des conséquences néfastes sur le statut des AP.

Du point de la faune, il a été enregistré de considérables réductions des populations animales au point que certaines espèces sont présumées disparues (éléphants au PNKB) et, d'autres, se font rares (zèbre au PNU). Les grands troupeaux des populations animales de jadis n'existent pratiquement plus. La flore n'a pas été non plus épargnée. De vastes étendues de végétations ont été détruites et, avec elles, plusieurs espèces floristiques. Nonobstant ce sombre tableau, les espoirs restent permis. En effet, les AP possèdent encore des noyaux de différentes espèces animales et de colonies représentatives de la flore à partir desquels le repeuplement est tout à fait possible.

Les ressources humaines dans les AP sont insuffisantes tant quantitativement que qualitativement. Actuellement, certaines AP n'en disposent même plus.

En ce qui concerne les infrastructures, d'une façon générale, seules les AP créées à l'époque coloniale (PNVi, PNG et PNU, les Domaines de chasse de Gangala-na-Bodio et de Maika-Penge) ont été dotées d'infrastructures immobilières et de surveillance. Celles qui n'ont pas été détruites par les guerres, sont

aujourd'hui vétustes. Les AP établies après l'indépendance, n'ont jamais été dotées de ce type d'infrastructures, exception faite de la Réserve de Faune à Okapis et du Parc National de Kahuzi-Biega.

Dans l'ensemble des AP, l'équipement de brousse, les matériels roulants et ceux d'ordonnancement ont été pillés et font cruellement défaut.

En dépit de la situation de guerre, la recherche et le monitoring se sont poursuivis, bien qu'à un niveau relativement bas, dans les Sites du Patrimoine Mondial. Dans d'autres AP, par manque de planification et des ressources, la recherche et le monitoring n'ont jamais fonctionné.

Alors qu'un tourisme prospère, tant de vision que cynégétique, commençait à se développer dans certaines des AP (Virunga et Kahuzi-Biega), l'environnement économico-financier et sécuritaire l'ont littéralement étouffé.

L'état des finances de l'ICCN n'est guère florissant. De ses trois sources de financement, en l'occurrence les subsides de l'Etat, les recettes propres et l'appui des partenaires, seule cette dernière subsiste sous une forme relativement substantielle dans les Sites du Patrimoine Mondial. Il faut toutefois relever, que le Gouvernement continue à assurer d'une façon irrégulière, des salaires modiques essentiellement pour le personnel de la Direction Générale et des Aires Protégées se trouvant dans la région contrôlée par l'ex-Gouvernement.

En bref, la situation générale de l'ICCN telle que dépeinte ci haut est très préoccupante.

In many ways ICCN is back to square one when the park was created in 1970. At that time, the major problems were peaceful evacuation of people from the park, surveillance of the park and installation of patrol posts. By the end of 1973 there were 30 park guards. By the end of 1974 patrol posts or stations had been established at Monkoto, Loile, Watshi Kengo, Eunga –Lomela, Yenge, Ala, Lokofa, and Buangi. Existing equipment consisted of un camion tous terrains, deux pick-up tous terrains, un jeep, une baleinière de 10 tonnes à moteur marin de 36 cv, and six pirogues à moteurs hors-bords et une phonie á Monkoto. Future years would see the construction of other stations such as Anga and Mondjoku and other patrol posts but even in that era overall capacity was limited. Logistics remain fundamental to the proper management of PNS.

During the 1980s and 1990s management, operations and support declined greatly long before the years of civil war. WWF and others are now assisting with support and training. Indeed, the European Union had just begun a training of park guards while we were at PNS. These activities, like those activities in the early 1970s, are taking place in the absence of a management plan. That is to be expected. Work cannot wait for a management plan. Still, management plans are expected to replace or enhance whatever interim documents and activities are underway. A plan will pin down on paper responsibilities, actions, and expectations for PNS.

Clearly, there are several major reasons for PNS planning (also see Appendix 4):

- the burgeoning incidence of poaching and illegal bushmeat trade in the protected areas

- killing of forest guards
- the need to set objectives, standards and guidelines
- human populations within the boundaries of PNS
- uncontrolled access to PNS and uncontrolled exploitation of its resources
- lack of direction on what to inventory and monitor
- severe declines in populations of forest elephants, hippos, and other large animals to the point of local extirpation
- lack of capacity in the forest guard field force
- inadequate staffing of forest guards
- inadequate to nonexistent salary for forest guards and other field officials
- inadequate materials and field gear for forest guards and other field officials

The *Stratégie de la Conservation dans les Aires Protégées de la République Démocratique du Congo* also signals the importance of planning:

> Compte tenu de l'ampleur des défis à relever et bien que l'ICCN soit habitue à formuler les plans d'action, il est apparu impérieux de généraliser et de systématiser la culture de la planification a tous les niveaux dans la structure fonctionnelle de l'entreprise.
>
> Il est évident qu'il sera ainsi créé une bonne référence pour le monitoring et l'évaluation de l'application de tous les plans valides a tous les niveaux de gestion de l'ICCN en même temps qu'il sera facilité à tous nos partenaires de comprendre la quintessence de nos ambitions, de nos réalisations et des informations utiles pour l'investissement.
>
> Dans cette perspective, l'ICCN doit privilégier de se doter des outils appropries de planification qu'il faut envisager comme un processus en ayant à l'esprit qu'un bon plan doit être facilement interprété et applique par le gestionnaire.

The *Stratégie* also recognizes the importance of strengthening the management capacity of protected areas: *Suite à la conjoncture économique, sociale et politique difficile qu'a connue la RDC à la fin des années 80, accentuée par les guerres entre 1996 et 2003, le Gouvernement Congolais n'a pas été en mesure de répondre à ses obligations vis-à-vis de l'ICCN (salaires, fonctionnement, investissement). Ceci n'a pas permis à l'ICCN de remplir convenablement sa mission à l'égard des AP.*

Recommendations for Planning in DRC and Opportunities for Future FS Involvement

In light of the above dire circumstances, the FS team, WWF, and WCS concurred that the initial plan for PNS should focus on logistics and training. We recommended the following, especially regarding management and infrastructure, be given priority in the ongoing planning process. Items marked with "*" are more pressing priorities.

Management and Infrastructure

- ✓ * Increase ICCN staff to adequate levels for patrols and effective law enforcement, biological surveys, and administration.
- ✓ * Provide increased funding for park guards.
- ✓ * Provide professional equipment needed by ICCN staff for patrols and law enforcement (communication and transportation, health care, and field equipment).

- ✓ * Provide professional training for ICCN staff on nature conservation methods, including para-military and other technical training.
- ✓ Establish a clear chain of command at the PNS level to provide efficient allocation of ICCN resources for law enforcement, including reporting needs and other duties.
- ✓ Provide a stable presence of ICCN staff through new houses at sector patrol posts and stations.
- ✓ Enhance ICCN presence and positive interaction with villages and local people including the dissemination of rules and regulations and planning processes

Information Resources

- ✓ * Information will be gathered and reported on specific plant and animal and other resource conditions to meet inventory and monitoring needs.
- ✓ * Identify key indicators for inventory and monitoring.
- ✓ * Develop field and reporting methods for inventory and monitoring.
- ✓ Periodically evaluate inventory and monitoring information to determine any needed change in park management.
- ✓ Disseminate and share information on park resource conditions for educational purposes.

Scientific Knowledge

- ✓ Encourage and support scientific research on the tropical forest ecosystem in PNS.
- ✓ * Support work to develop species-habitat relationships models, particularly on bonobo, forest elephant, buffalo, and other flagship and keystone species. FS scientists and researchers can provide expertise and participation in this area.

Stakeholder Partnership

- ✓ Explore, develop, institutionalize stakeholder partnership for selected species, particularly ICCN totally protected species.
- ✓ Explore, develop, and institutionalize opportunities among stakeholders to meet park management objectives and potentially provide social, educational, and economic benefits.

Micro-Zoning

- ✓ Identify and map micro zones in the park including visitor facilities, ICCN park infrastructure, facilities and any special resource use areas.
- ✓ Develop management guidelines for each micro zone.
- ✓ Specify any special inventory and monitoring for each micro zone.

Species and Habitats

- ✓ Ensure protection of native tropical forest ecosystems and its species and habitats.
- ✓ Demonstrate conservation of all ICCN totally protected species in the park, especially elephant and bonobo.

Ecosystem Services

- ✓ Park continues to provide sources of clean water and other resources used outside of the park.

Main recommendations include the following:

- Complete the national-level park planning process.
    - This would include ICCN forming a Planning Team. The Planning Team could consist of set of core participants from ICCN and collaborators, stakeholders, and advisors from a variety of other sources and organizations as discussed during the Kinshasa workshop, such as selected NGOs, local community leaders, and others. FS could participate as ongoing advisors, collaborators, or core team participants as ICCN may desire.
- Adhere to planning schedule deadlines agreed upon during the Kinshasa workshop.
- Integrate the park planning process into the CARPE planning frameworks.

Main opportunities for FS collaboration and participation include:

- Providing FS consultants versed in protected area, wilderness, and park planning, to advise ICCN at the national level to complete the park planning process. This consultation would focus particularly on integrating local needs, village or community level resource planning, and broad-scale integration of park plans into overall landscape planning objectives.
    - ICCN is grappling with developing a national-level park planning process, using PNS as the first test case. ICCN does not have a planning department or a lead planner experienced in developing natural resource and land use plans.
    - They need guidance on various aspects of land use planning for which FS has high levels of expertise, including counsel on: appropriate methods, timing, and levels of stakeholder involvement in the planning process; integrating community needs with regional and national planning priorities; integrating protection of wildlife and forest biodiversity with conservatory use of renewable natural resources; addressing multiple spatial scales in the planning process; how to develop planning alternatives, assess their effects, and present results in a decision-aiding framework; and other topics.
- Provide FS consultants versed in forest biodiversity ecology and conservation to advise on the park planning process, its field-level implementation, and its integration with CARPE.
    - ICCN could benefit from FS technical guidance on various aspects of forest conservation as part of developing their planning process, including: developing a framework for characterizing forest biodiversity elements; identifying the ecological roles of each biodiversity element; developing a framework for classifying forest ecosystem services and identifying the value of each type of service in relation to biodiversity elements; and relating biodiversity elements and ecosystem service components to various scales of planning under CARPE.
    - ICCN could also benefit from FS guidance on indentifying, in specific protected areas and parks, priority plant and animal species (e.g., bonobo) and sensitive ecosystems (e.g., bais) requiring protection or conservation priority; potential management guidelines that would provide for such protection and conservation; and linking such priorities to CARPE planning priorities.

    - FS also can help ICCN in identification of priorities for restoration of forest conditions to provide for renewable natural resources used at the community level, and potential guidelines to provide for such restoration.
- Provide FS scientists to participate with NGOs, ICCN, and CARPE in developing wildlife-habitat relationships models.
    - FS wildlife scientists can contribute modeling expertise for helping to develop reliable models predicting presence and possibly local abundance of priority wildlife species occurring in PNS, such as forest elephant, buffalo, and bonobo. Such models can be developed as decision-aiding tools to help guide inventory, monitoring, and law enforcement activities.
- Advise CARPE to complete the various planning frameworks for macrozones and the Salonga-Lukenie-Sankuru Forest Landscape.
    - FS can provide planning expertise to CARPE to help complete the frameworks, and to specifically create natural resource and land use plans for this specific landscape, in coordination with FS guidance to ICCN as listed above on further developing their national planning framework.
- Provide FS law enforcement experts to consult with forest guards and field officials.
    - LEI experts from FS can provide guidance, training, and expertise to forest guards and field officials in enforcement. One such useful venue would be to participate in forest guard training sessions such as the one we attended in PNS.

Also, ICCN ADG Pasteur Cosma Wilungula Balongelwa in Kinshasa said he is interested in an exchange program from Uganda, Rwanda, and the U.S. (and USFS) for providing expertise on managerial and financial mechanisms in park and protected area planning. Such expertise could also include tourism.

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Our thanks to Michael Chaveas and Melissa Othman of FS International Programs for inviting us and organizing our trip, and to USAID / CARPE for providing financial support. We greatly thank our hosts and colleagues of WWF within the Democratic Republic of Congo who saw to our safety, good health, transportation, lodging, and care and feeding, particularly Lisa Steel and Omari Ilambu.

Appendix 1. Terms of reference between USDA Forest Service and WWF.

USDA Forest Service

Technical Assistance in Collaboration with the World Wide Fund for Nature on Protected Area Planning for the Salonga-Lukenie-Sankuru Landscape,
Democratic Republic of the Congo

Terms of Reference – May 2006

1. Background

The USDA Forest Service (USFS), through the Office of International Programs, is an implementing partner in the US Agency for International Development's (USAID) Central African Regional Program for the Environment (CARPE), providing targeted technical and capacity building assistance aimed at improving natural resource management in the Congo Basin. In an effort to focus this assistance in a manner which capitalizes on the relative strengths of the agency, the USFS is concentrating their efforts towards the land management planning processes of the CARPE landscapes. These landscapes were chosen for their biodiversity and conservation importance and established as foundations of regional conservation and sustainable natural resource use. These areas contain a mix of national parks and other protected areas, current or future timber and mining concessions, villages and settlements, and the neighboring forested areas on which they depend for their day-to-day resources.

The multiple-use mandate of the USFS in managing National Forests and Grasslands in the United States requires planning which integrates conservation strategies to achieve ecological sustainability as well as resource use opportunities to contribute to economic and social sustainability. Capitalizing on this experience, the USFS has been asked by USAID/CARPE to develop planning processes and management plan templates for comprehensive landscape level planning and for the three different macro-zones within those landscapes: protected areas, community use (CBNRM) zones, and extractive zones (ERZ). The USFS will develop these processes and models in collaboration with the CARPE implementing NGO landscape leads and host country governments.

Toward this end, the USFS will provide a technical assistance team to work in collaboration with the World Wide Fund for Nature (WWF) on the development of a strategy for the creation of a management plan for Salonga National Park in the Democratic Republic of the Congo (DRC). This USFS team will consist of two individuals experienced in developing protected area management plans utilizing a participatory approach. This team will lend its expertise to assist WWF, the Institut Congolais pour la Conservation de la Nature (ICCN) and their partners (Wildlife Conservation Society, Zoological Society of Milwaukee, Lukuru Wildlife Research Project; Max Planck Institute) with a workshop on protected area planning processes. This team will travel to DRC and the Salonga landscape at an as yet to be agreed upon date for a period of approximately three weeks.

2. Objectives

This USFS technical assistance mission will provide input to WWF, ICCN and their partners on the elements of effective protected area management plans and the process of developing a plan for Salonga NP. This mission will focus on transferring knowledge and capacity to key

management authorities involved with planning and the eventual implementation of the plan on the Salonga NP. The objectives of this initial mission to the Salonga landscape are:

1) Engage in a field visit to Salonga NP to gain an understanding of the ecological and socio-economic conditions of the park and its surroundings, as well the capacity, infrastructure and resources available to park staff and partners engaged in management of the park.
2) Assist WWF in performing a workshop with the goal of communicating the key elements of a NP management plan along with the process of completing the plan itself. This guidance will include a discussion of minimum data needs, public participation in the planning process, vision and objective setting, establishing rules and guidelines for the NP, and implementation and monitoring of the plan and its effectiveness. The end result of the workshop will be the adoption of a strategy document (or draft) for the creation of a management plan by ICCN, WWF and other participating partners. This workshop will be held in Kinshasa following the site visit.
3) Provide recommendations to WWF and ICCN on next steps and a timeline for completion of the management plan, following the workshop.

3. Tasks

#1: Recruitment, selection, and mobilization of a USFS technical assistance team with a combined experience encompassing protected area management planning using a participatory approach, communicating the processes necessary to complete such plans, along with a familiarity of the ecologic, social and political realities of the region.

Responsible party: USFS

#2: Prepare key points on informing the process of developing a management plan for Salonga NP for the workshop on park planning. This will include the provision of recommendations of a timeline for completion of the park plan.

Responsible party: USFS

#3: The USFS team will recommend any needed strengthening of tools and processes for information gathering and engagement of local communities that could be utilized by WWF and/or ICCN which will improve the effectiveness of the planning process and the eventual implementation of the plan.

Responsible party: USFS

#4: Identify representative areas in and around Salonga NP to show the USFS team, which demonstrate the variety of resources on the Salonga landscape, along with the threats to these resources and the challenges facing managers of the NP. Local stakeholders and other entities operating in the landscape (e.g.: local and international NGOs) should also be informed of the teams arrival and purpose of the mission, and be given an opportunity to interact with them so that the USFS team can obtain a better sense of the range of perspectives, opinions, needs, and social and economic forces acting on the NP.

Responsible party: WWF working with other stakeholders

#5: In-country logistical support:

- **a)** Inform local DRC officials of team's arrival and purpose of their engagement in region.
- **b)** Identify key participants for the workshop on management planning for the Salonga NP.
- **c)** Set agenda and facilitate proceedings of the planning workshop.
- **d)** Arrange for in-country transportation and necessary lodging reservations.

Responsible party: WWF

#6: Prior to the arrival of the USFS team, WWF will gather all available and relevant information on the NP and landscape for the team to review to allow them to familiarize themselves with the landscape and adequately prepare for the work to be done while in-country. As much as possible, this information should be sent to the USFS team electronically prior to their arrival. Any documents not available in an electronic format should be made available to the team upon arrival.

Responsible party: WWF

4. Deliverables

The USFS team will produce a report detailing activities during the mission and all results and findings of the work toward the accomplishment of those objectives listed above. This report will include, but not be limited to:

- **a)** A summary of guidance on the creation of a management plan for Salonga NP and on the process of creating such a plan in a participatory manner.
- **b)** A prioritized list of future tasks that should be addressed in advancing the park planning process for Salonga and the implementation of the plan, including any future role for USFS technical assistance. This section should include a discussion of any possible USFS role in providing more detailed assistance for land use planning for Salonga NP or for any other macro-zones within the Salonga landscape.
- **c)** Recommendations, based on experiences gained and lessons learned during this mission, for adapting the draft USFS guides for protected area planning in the CARPE landscapes.

Appendix 2. Team members and contacts made in Democratic Republic of the Congo (DR Congo), by USDA Forest Service travelers Bruce Marcot and John Sidle during September 29 to October 21, 2006.

Names marked with an asterisk (*) denote people who attended some or all of the field journey to Monkoto and Salonga National Park in DR Congo.

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Wildlife Conservation Society (WCS)
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Village Groupement Chiefs within Salonga National Park
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Chief Bokele Lomama of Village Groupement Isaka
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ATELIER SUR LE DEVELOPPEMENT D'UN CANEVAS POUR UN PLAN DE GESTION DU PARC NATIONAL DE LA SALONGA

ICCN et ses Partenaires PNS, Kinshasa, du 18 au 20 Octobre 2006, Lieu : Salle de réunion, WCS (Bureau Chanimetal)

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Appendix 3. Observations on biodiversity at Salonga National Park and environs.

Following are incidental observations of plants and animals made within Salonga National Park and in the "corridor" area around Monkoto between the north and south blocks of the park, 6-14 October 2006.

PLANTS AND ALLIES

Fungi - - - - - - - - - - - - -
cup fungi
wood bracket fungi
paint fungi
other unidentified fungi spp.
prob. *Ganoderma* sp.

Vascular plants - - - - - - - - - -
bamboo
Uvariastrum pierreanum (Marantaceae) (with yellow fruit)
Uapaca sp. (stilt rooted tree in seasonally inundated forest)
Piper sp. (low shrub)
Megaphrynium macrostachyum (understory tall herb)
Ficus spp.
palm spp.
Omphalocarpum procerum (tall tree with large sessile fruits)
Combretum sp.
Hypselodelphis violacea (understory shrub)
Diospyros sp. (poss. *D. dendo*) (overstory tree)

INVERTEBRATES

Mollusks - - - - - - - - - - - - - - -
land snail, cf. *Limicolaria subconica*

Millipedes, Centipedes (Chilopoda) - - - - - - - - - - -
African giant millipede, *Archispirostreptus gigas* (black and red forms)
giant centipede

Earthworms - - - - - - - - - - -
giant earthworm

Spiders - - - - - - - - - - - - -
huntsman spider, *Heteropoda venatoria* (Sparassidae)
other huntsman, poss. undescribed sp.
pisaurid spiders (webs along Fongo River, tributary to Luilaka River)
orb weavers, *Argiope* spp.

Insects - - - - - - - - - - - - - - -
dragonflies:
Hadrothemis defecta
Hadrothemis coacta
Trithemis dichroa
Trithemis tropicana
Orthetrum julia

tachnid fly spp. (Tachinidae)
blowfly, Congo Floor Maggot, *Auchmeromyia senegalensis*
unidentified hymenoptera, incl. thread-waisted wasp (Sphecidae), ground-nesting bees
unidentified orthopterans (grasshoppers, katydids)
"water skimmers," *Dinuteus* or *Gyrinus* (Gyrinidae)
unidentified leafhopper
various beetles, Coleoptera: Scarabaeidae and others
rhinoceros beetle, *Augosoma* [prev. *Dynastes*] *centaurus*
Belastoma sp. (Belastomatidae)
various Isopterans, incl. *Cubitermes*
various mantids (Mantidae)
phantom cranefly (Ptychopteridae)
various ants including driver ants
cockroaches
numerous unidentified moth species, including hawk moth *Deilephila nerii*
numerous unidentified butterfly species, including *Graphium polycenes*

FISH

catfish, poss. *Chrysichthys cranchii*

AMPHIBIANS

Frogs - - - - - - - - - - - - - - - -
flat-backed toad, *Bufo maculatus* (Bufonidae)
puddle frog, *Phrynobatrachus* aff. *liberiensis*
cinnamon-bellied reed frog, *Hyperolius cinnamomeoventris*
rainforest reed frog, *Hyperolius tuberculatus*

Ngoto reed frog, *Hyperolius brachiofasciatus*
forest white-lipped frog, *Hydrophylax* (prev. *Amnirana*) *albolabris*

REPTILES

Turtles - - - - - - - - - - - - - - -
no turtles seen

Lizards - - - - - - - - - - - - - - -
skink, *Trachylepis* (*Mabuya*) *maculilabrisi*
Owen's chameleon, *Chamaeleo owenii* (prev. *unicornis*)

Snakes - - - - - - - - - - - - - - -
Gapon viper, *Bitis gabonica*
olive house snake, *Lamprophis olivaceus*

BIRDS

Birds observed: "Observed" means directly sighted, heard only, or recorded and later identified from recording.

s = observed within SNP or directly adjacent to SNP along the Luilaka River
* = observed in Monkoto or elsewhere in the corridor strip
R = recorded sound
P = photographed

s,* African wood owl -
s vermiculated fishing owl -
s Pel's fishing owl - R
* Akun eagle owl -
s red-chested owlet (unconfirmed, heard only) -
s palmnut vulture - P
* red-thighed sparrowhawk - P
* African fish eagle -
s gynmogene - P
* black kite - P
s Hartlaub duck -
s African gray parrot - P
s red-fronted parrot -
* black-collared lovebird -
s African darter - P

s white-throated blue swallow - P
s African pied hornbill - P
s black-casqued wattled hornbill -
s piping hornbill - R
* white-crested hornbill -
* white-thighed hornbill - P
s,* African emerald cuckoo - R
* Diedrick's cuckoo - P
s,* Gabon coucal - R
* Senegal coucal - P
s,* European swift -
s,* African palm swift - P
s,* woodland kingfisher – P,R
* African pied wagtail - P
* red-tailed palm thrush – P,R
* olive-bellied sunbird - P
* collared sunbird - P
* Johanna's sunbird -
* pied crow – P, R
* orange-cheeked waxbill - P
s giant kingfisher -
s purple heron - P
s Cassin's flycatcher -
* African green pigeon - P
* African thrush – P,R
* yellow-throated tinkerbird - R
* spotted greenbul -
* swamp palm greenbul -
* common (black-eyed) bulbul – P,R
* village weaver - P
* velvet-mantled drongo -
* cattle egret -

MAMMALS

black-fronted duiker, immature (captured)
anamalure sp. (heard)
potto (heard, recorded)

black mangaby
red-tailed monkey
DeBrazza's monkey

hammer-headed bat, *Hypsignathus monstrosus* (heard, observed, recorded)

African (forest) elephant (sign: tracks, dung, runways, wallows, disturbed vegetation)
aardvark (sign: burrow)
red river hog (sign: tracks, wallows)

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Additional wildlife observed in Kinshasa:

red-headed rock lizard, *Agama agama*
unidentified, small insectivorous bats

Additional wildlife observed at the Bonobo "orphanage" outside Kinshasa:

frog, *Xenopus* aff. *fraeseri*
Mascarene ridged frog, *Ptychadena mascareniensis*
gecko, *Hemidactylus* aff *mabouia*
bonobo (captive propagation at "orphanage")

Appendix 4. Forest Service presentation on planning at Kinshasa workshop.

The FS team discussed the type of management planning that occurs in the U.S. and indicated that despite 100 years of experience in protected area management in the United States, there are still problems, including logistical challenges, facing protected area management.

- ✓ Dégradation des sols et des eaux
- ✓ Coup du bois
- ✓ Espèces étrangeres
- ✓ Espèces en péril
- ✓ Elles sont très demandé
    - o ressources
    - o récréation

Species have even been extirpated from U.S. national parks, national grasslands, and national forests other species are endangered or threatened with extinction. PNS faces the possible extirpation of elephants and perhaps other species due to poaching and overall lack of enforcement and management. So, even with protected area designation the conservation of biodiversity can be problematic in both DR Congo and the U.S.. With the advent of stronger laws and the development of management plans, there is better conservation direction in the United States. Indeed, management planning in most U.S. protected areas is only about 30 years old.

What is a management plan? The FS team discussed the planning process in U.S. protected areas with the view that there are some basic tenets to national park planning that can be emulated anywhere. The team discussed the structure and content of a plan, amending a plan, and other aspects. One of the major reasons for writing a plan is to have continuity among in management. With changing personnel, a management plan ensures that park management continues on the course laid out in the plan.

Les composantes principales d'un plan

- ✓ Description et valeur de l'aire protégée
- ✓ Aperçu des lois, arrêtés, décrets, etc regissant la gestion de l'aire protégée
- ✓ La vision
- ✓ Les objectifs
- ✓ Les lignes directrices
- ✓ Les alternatives et les analyzes d'impacts
- ✓ Le micro-zonage
- ✓ La suivi (monitoring)
- ✓ Chronogramme de mise en oeuvre

Le plan de gestion –qu'est -ce que c´est ?

- ✓ L' instrument fondamental pour le gestion
    - o Les règles et les politiques pour l'administration de l'AP
    - o Les modalités de gestion
    - o La differentes formes d'utilisation (zonage)
    - o Les activités permises

- Un guide obligatoire

✓ Un document qui guide l'utilisation et le contrôle des ressources naturelles dans une AP.
- dynamique, viable, pratique et réaliste
- basé sur un processus d´une planification écologique et sociale

✓ Un Plan Vivant
- Le gestion adaptative
  - Les amendements
  - Les parties prenantes
  - Les résultats du suivi (*monitoring*)
  - Changement des conditions actuelles
  - Les sérieuses menaces
  - Les populations humaines

✓ La Planification
- La complexité (Parc National des Virunga v. Parc National de la Salonga)
- L'avenir incertain
- Nouvelles données
- Le bilan ou la prévision des risques
- Les menaces

✓ La planification à plusieurs niveaux
- Au niveau de l'AP, laquelle sera l'objectif des stratégies et du management
- Au niveau de l'aire avoisinante (zone de tampon, zones annexes, zone d'influence)

✓ Le processus participatif
- La stratégie fondamentale pour arriver à un consensus concernant l´utilisation et l´avenir de l'AP.
- Résolution des conflits
- Il faut spécialement prendre en considération leur relation historique, leur identité socio-culturelle, l´utilisation des ressources, leurs attentes et le titre légal de leur relation avec l´AP.
  - Il nous apparaît aussi de plus en plus que, dans certains cas, plus flexible que celle de la réserve intégrale doit être admise.
  - Réconcilier des intérêts parfois inconciliables.
  - Il ne faut surtout pas que Parc National signifie ennuis pour la population environ, au contrairie.
  - Bien entendu, il y a des restrictions immédiates mais, à moyen et long terme, les riverains ne peuvent qu'y gagner considérablement.
    - *Le DG, ICCN, 1974*

What is the basis for Planning ?

Aux Etats-Unis: Les lois, arrêtés, décrets, politiques

✓ Nos plans et nos actions sont basés en le lois, la science, l'expérience, les politiques, et les régles

✓ Les poursuites judiciares

What is the make up and and responsibilty of a planning team ?

- ✓ Le processus de planification (l'équipe de plan, les parties prenantes, la portée géographique de la planification, etc)
    - o L'Équipe de Planification
        - ▪ Chef d'équipe et:
            - Spécialiste(s) des sciences humaines
            - Ingénieur d'eaux et forêts
            - Économiste
            - Biologiste(s)
            - Géographe (SIG)
            - autres
    - o Identifier les capacités
    - o Les résponsabilités des membres
    - o 6-7 personnes
    - o familières avec le sujet de la conservation de la nature et doivent s´identifier avec elle
    - o 2-3 personnes du groupe connaisse très bien la région.
    - o Les membres de l´équipe doivent avoir les qualités suivantes: diversité, crédibilité, motivation personnelle et capacité de dialogue.

Les tâches pour l´équipe de planification

- ✓ Définir le domaine du travail
- ✓ Rassembler les informations et les instruments sur les aspects écologiques et sociaux
- ✓ Identification des acteurs intéressés dans le processus
- ✓ Collecter des informations politico-légales des aires protégées
- ✓ Démarrer et maintenir les initiatives de communication
- ✓ Préparer les réunions de planification

Quelques Questions Clées

- ✓ Quelle est la situation de base ?
- ✓ Quelles ressources humaines et financières sont disponibles ?
- ✓ Comment le plan de gestion devrait être élaboré et exécuté ?

How much information is necessary for a management plan?

Les Informations

Comment mettre en valeur une réserve naturelle dont on ne connaît rien ou presque?

- Mokwa Vankang Izmtsho, ICCN, 1972

- ✓ Vous devez commencer avec quelque chose
- ✓ une base d´information appropriée pour les décisions à prendre.
- ✓ Ces informations élémentaires doivent être compréhensibles pour tous ceux qui sont concernés par le processus de décision.
- ✓ Il n´est pas indispensable d´avoir des connaissances précises et détaillées avant de commencer la planification et la gestion.
- ✓ L´élaboration et l´exécution des instruments managériaux vont combler ces vides d´information.

- ✓ Le niveau du détail et de la complexité
    - o Un plan simple et concis
        - ▪ Facile à lire
        - ▪ Concentrer sur les tâches importantes pour la conservation du PNS
        - ▪ Éviter le jargon scientifique et légal
- ✓ Rassembler les informations sur les aspects écologiques, économique et sociaux
    - o La collecte des informations pour obtenir une connaissance de l'AP.
- ✓ Synthèse de l'information
    - o L'AP et les alentours
    - o Le statut et les tendances des ressoures naturelles

What partners should be involved in the planning process ?

Identification des acteurs intéressés dans le processus

- ✓ Communautés, organisations, groupes sociaux et individus ont un intérêt direct et spécifique dans le management d´une AP.
- ✓ Groupes locaux représentant les différents emplois, utilisateurs des ressources naturelles
- ✓ Membres et représentants des organisations sociales et du secteur privé ayant une connexion avec l´AP: coopératives, associations de développement, ONGs, et autres
- ✓ Représentants des institutions régionales: municipalités, gouvernements locaux, universités etc.

La suivi (monitoring)

- ✓ Les espèces clés
- ✓ Les perturbations humaines
- ✓ Le braconnage
- ✓ l'impact des infrastructures
- ✓ les menaces externes

Chronogramme de mise en oeuvre

- ✓ Pour la mise en oeuvre du plan de gestion
- ✓ Définir les priorités pour l'ensemble des operations du parc
- ✓ Définir les resources requises pour la mise en oeuvre des priorités.
- ✓ Définir les besoins financiers pour l'ensemble des operations du parc

Appendix 5. Suggested glossary terms for Salonga National Park Management Plan.

stakeholder
partner
management plan (*gestion*, *management*)
planning
vision
objective
guideline (regulation?)
alternative (option)
buffer zone
buffer area
corridor
micro-zone
zone of influence
planning team
monitoring
inventory
scoping (survey, stakeholder needs assessment)
effects analysis
conservation
restoration
nontimber forest product
workshop (*atelier*)

Appendix 6. Interviews with various personnel and local officials.

Interview with ICCN officials and forest guards in Monkoto

In Monkoto we visited with local ICCN officials and forest guards, and engaged in the following question-answer session with them:

Q. How many guards work here?
A. There are 20-22 guards; the entire sector has 42 guards and 23 work in Monkoto. Out of the 23 guards, some are legally park guards, and others are not recognized by ICCN but serve to fill gaps.

Q. How many of the 23 guards go on patrols, and where do they patrol?
A. Sometimes 1 or 2 teams are sent on patrol, the teams totaling 14 guards, so 6-7 guards per team, depending on the type of patrol and previous information received prompting the patrol.

The patrols are guided by information they first get on poaching activities, provided by local poachers. Another type of patrol is sent for conducting biodiversity inventory of flora and fauna. The number of patrols is decreased if poaching is not present. Patrols can be increased as needed if the area is biologically important such as with presence of forest elephant or bonobo.

Q. What are the trends of seizures of snares, poaching camps, and so on, since the 1970s? Are the patrols effective?
A. One guard has been at Monkoto since 1973. Earlier, there were fewer poachers, but now many snares are found and there are increasing numbers of arrests of poachers with weapons. It is now more dangerous to work here. In the 1970s the economy was better, so poachers were fewer, but since 2000 we have been recovering many snares and weapons and recording many illegal activities. What we need is support for food and medicine for going on patrols.

Q. What capacity is unfilled and needed?
A. Much needed is an increase in funding for salary and bonuses; also communications gear (radios), field equipment (flashlights, etc.), and medications. Also needed are uniforms, boots, tents, trousers, shorts, rain pants, and coats. Need to be comfortable and well paid. Also need weapons and ammunition. We need to increase the staff and number of forest guards. We currently have two kins of guns, AK-47s (Russian) and Fas and Fals (Korean, Belgium). So with a patrol of 7 forest guards, only 4, maybe only 3, can carry guns.

Q. When the guard was killed last year, what was the patrol like?
A. There were 10 guards, but only 8 were armed. Only 1 poacher was armed, with a shotgun. The patrol was on a routine outing and discovered the poachers deep inside the park.

Q. What area of the park or sector is patrolled?
A. The area controlled by antipoaching is less than that controlled by poaching.

Q. What is the total number of weapons at the [Monkoto ICCN] station?
A. There are 19 guns total, but only 12 are good (functional) and 7 are bad.

Q. What wildlife species are being taken or poached?
A. Bonobo, bush pigs, red colobus, and duikers (in order of decreasing numbers).

Q. Which species are killed by guns, and which are caught by snares etc.?
A. Poachers shoot elephants but the number of elephants has declined; today they kill whatever they meet, there is no selectivity.

Q. How much wildlife is taken by gun v. snares?
A. Today, poachers use more guns than snares.

Q. How much illegal fishing is encountered? Are there river patrols?
A. Now, there are fewer fishing poachers than animal [non-fish] poachers, but there may be the same [absolute] number of fish poachers since it is now illegal to fish inside the park. Cannot arrest fish poachers [because if they are caught along the border river, it is impossible to prove that their fish were caught inside the park].

Q. Is there live animal trapping?
A. A Catholic mission, some 50 km away, had [recently] caught 1 live bonobo. A second bonobo was also reported captured upriver.

Q. How were they arrested?
A. We got information that a live bonobo was at the Mission, so we went someone to see but the bonobo had died.

For the second captured bonobo, the local people have informants, so a team of police was sent who arrested the man and brought the live bonobo to Monkoto. However, there was a "conflict of interest," as the Army and ICCN have precedence over the arrest; they said that the bonobo died and was buried but this was not so; it was actually sold for $50 to Mbandaka.

Q. Are any live animals poached, such as capturing parrots for sale in the city?
A. No, not aware of any.

Q. What are the methods of passage of bushmeat to the (black) market?
A. All animals killed and dried in the forest are put on pirogues to Mbandaka. Bushmeat pieces are put in sacks and also carried to Mbuwende via bicycles. Bushmeat is also sold locally in the Monkoto market.

Q. Is it intercepted on the river?
A. This is very difficult to do, as the poachers or traffickers travel at night. Poaching has never been controlled this way. So we have decided to start soon to control pirogues at night. Night patrols are being done now, however, on the north boundary of the north park block.

One problem is the buffer area between the park blocks, where the river is not inside the park per se, so this is hard to control. However, the local chief should deliver a paper to verify that any bushmeat transported there came [legally] from the buffer zone outside the park.

Q. Clarify the transport of bushmeat.

A. Since planes have come to land in Monkoto, people transport bushmeat to Kinshasa, but they say that the bushmeat comes from outside the park and they say that environmental organizations give them legal authority to do so.

A problem is that when poachers are arrested in Mbumende, the [guards] receive assitance. But the guards do not get such assistance in Monkoto and are actually fined $100 if the arrest is made outside the park boundaries because that is illegal (police must be called to make the arrest); this discourages arrests to be made by guards outside the park.

Q. What about protected species such as bonobo?
A. In Monkoto, there is not much support from the police. As noted, there are problems with the authorities (police) if we try to make poaching arrests outside the park. However, there is no such conflict if it involves a threatened species.

There is always conflict between the police and ICCN throughout the country because the police know the poachers, but it depends if there is good collaboration between police and ICCN authorities.

Q. What is meant by "good collaboration?"
A. Good understanding with the local authority (police).

But also, one problem is that the poachers are backed by local authorities and the poachers give the authorities office supplies etc., so there is collusion. Such problems are caused by salary sources and personal conflicts.

Also there are problems that the local guards are being accused of being the main poachers, as they don't receive regular salary, etc.

Q. Are non-timber forest products [NTFPs] harvested in the park, such as food, medicinal plants, and covering for houses?
A. There are not many arrests for NTFPs, but people used to get materials for houses -- thatch, lianas and ropes -- from the park.

Q. Les chenilles?
A. No, not from the park, collected in the corridor.

Q. Is timber cut in the park? If what species, to what extent is cutting done, and how is it transported?
A. Not around Monkoto.

But in the south [part of the park], where there is no control (the southwest of the south block), 2 people cut trees which are then pirogued to Mbandaka.

Q. Where do you get wood to make pirogues?
A. We use trees in the corridor.

Q. What wildlife is hunted in the corridor versus inside the park?
A. There is much wildlife in the corridor.

In the corridor, though, you need many days to walk to catch animals, and it is easier in the park (just 1 day's walk). In the corridor 3-5 days' walking can still result in no animals. [Distance is measured in terms of number of days walking.]

Q. What knowledge is there about elephant paths inside the park and in the corridor? Are these mappable?
A. There are very few paths from inside to outside the park, at least at present.

Q. What are the top threats to the park?
A. Poachers, armed and with snares (armed are greater threats).

Q. What is the role of the Congolese military in facilitating poaching?
A. Many poachers are soldiers, carrying letters from Kinshasa and Mbandaka generals and colonels that supposedly given them the "authority" to hunt in the park. They are very well armed. There are the paramilitary but they have the force of arms even if not strictly legal.

In 1976-77 many arrests resulted in guns being secured, and rifles were confiscated and serial numbers were recorded on the guns. Later, the same guns were found on other poachers, so this indicated complicity between the chief and poachers.

Also, there is lack of information or verification that soldiers are indeed soldiers and have the "authority" to hunt in the park. This is a problem with the paramilitary organizations.

Interview with village elders in Monkoto

We also interviewed five village "notables" (elders) in Monkoto; also present was the SNP Conservator (transl. to/from Lingala):

Q. What is your area of authority?
A. To determine problems, and to give advice on political and traditional problems.

Q. How do you interact with government officials?
A. We are supposed to collaborate, but not so in practice. Each person has their own behavior. Public administrators run for their own interest and don't implement what was promised.

Q. What is your relation with ICCN? Did you lose land [when the park was created]?
A. Yes, we lost land. We went to Kinshasa to ICCN, to engage in a "cooperative." We were told that, elsewhere, ICCN and SNP provide for development, but not here, why? Each park conservator is "getting fat;" is bushmeat going to their relatives in Mbandaka? They need to care for the local population. The park guards should respect human rights, not just arrest people. Where are the limits?

We have not completely lost our land. We don't know what other people [viz., Americans] do in the forest. We cannot build hospitals, but we still see Americans going into the forest and coming out, why?

Q. What was life like before the park?
A. Better. In Colonial times, Monkoto was founded in 1910. In 1935 they started building roads. Since the park was created this prevented us from doing anything. The period of the park existence has been worse than the Colonial Era. [Note: one of our non-indigenous translators

mentioned that the Colonial Era is often romanticized, and that local people tend to "forget" that the roads were built in 1935 from forced labor.]

Q. How was the Colonial Era and the road-building period of 1935?
A. Roads were built. Then, later, SNP was established, along with movement of people to outside the park. One village was moved in 1925 to outside as part of forced labor, not because they were in the way [in the park]. There are complaints that SNP is to blame, but that is not necessarily the case. In the early 1970s, other people were moved outside the park. But there was no displacement of people due to sickness. Three groupements were displaced from the park.

Q. What is your first knowledge of the creation of SNP?
A. I was once invited to Watchikango during the King Leopold era, as an invitation to traditional chiefs. Was informed there that the park would be created. This was before 1960.

The Belgians wanted to create the park but they didn't do it.

Then was Independence, then 5 years of anarchy, then Mobutu declared the park. It was not well drafted, for instance, how would people be compensated for losses of their plantations, etc.?

The ICCN buildings here belong to the Cooperative and were given because of nepotism. Now ICCN stayed and destroyed them; they should fix their buildings.

Also, I would like to see buildings constructed from durable materials. So ICCN should invest more in buildings. ICCN needs to build lodgings for visitors, but especially for ICCN staff. If they use durable materials for the buildings, this would be a good sign to the local people that they are here to stay. Also the local NGOs rent buildings; if they had their own buildings, that too would be a sign that they would stay for a long time. ICCN is not providing for socio-economic needs.

If there was no more park, however, life would get worse. No one is willing to see the park disappear.

[The ICCN Conservator then interjected:] ICCN exists to protect wildlife, not to build roads and buildings; that responsibility belongs to another department.

Q. Should there be an SNP management plan, and if so, what should be in it?
A. We need to see what is in the proposal, then we can criticize [critique] it. We can't [conceptualize] it otherwise.

[Other notables answered:] We want to see the plan address increased employment of local people.

A plan requires ICCN and partners, because ICCN knows their needs, but we want to review a draft.

<u>Interview with Department of Environment officials in Monkoto</u>

The following information was obtained from interviews with Department of Environment officials in Monkoto, including Eyoyo Augistini and others.

Q. What are the responsibilities for the Department of Environment, and how is it structured?

A. Hunting is regulated. It is closed for 2 periods for 4 months. Some species are fully protected, some not at all. Traditional hunting can proceed without a permit, using traditional methods, which usually results in the taking of 1 or 2 animals per outing, and is for subsistence purposes only.

Illegal hunting is done with automatic weapons, pit traps, and use of fire and wire snares.

A primary, general [hunting?] license is issued by the Ministry of Interior. Secondary hunting licenses are issued by the Department of Environment and are given out by the territorial administrator. For locally manufactured guns you can get a provisionary license, but for other guns you need a permit from Kinshasa.

The technical supervisor is in Mbwande, and his chief in turn is in Mbandaka. Recently, the chief paied a visit for the first time 3 years.

The Dept. of Environment has agents but they are not paid. The agents number ten and are allocated as two agents for each of five sectors.

Augistini trained his agents and they also visited Mbuwende for some training. Agents are first hired without training, and then they are trained on the job in flora and fauna identification and control of exploitation of logging.

One role of the Dept. of Environment is to train farmers and others (NGOs, other associations) in agricultural techniques and animal rearing. Augistini works with an NGO and from the CARPE small grants program. The protection of the forest and biodiversity is important, so it is important to also work with the Minister of Environment.

In 1975, the Ministry of Agriculture, Fish, and Animal Rearing was split from the Ministry of Environment, Nature Conservation, and Water Enforcement. Both of these ministries have responsibilities over fishing and regulation, but the Ministry of Agriculture, Fish, and Animal Rearing has additional responsibility for protection.

Q. What are the regulations on fishing?
A. Illegal are small mesh nets to catch fingerlings, use of poisons, and use of dynamite. Much illegal fishing was done during the war, and local people could not rebel, even with the local authorities.

Q. How do people obtain agricultural land here in the corridor?
A. There are two kinds of agricultural land: ancestral land (traditional land) and virgin forests. To use virgin forests, you need an agricultural permit through the government authorities who inspect the land. Payment is made to the government and to a local community who owns the agricultural land. You may not cut fruit trees on agricultural land, except under a permit from the Ministry of Environment.

It is illegal to cultivate someone else's recognized agricultural land. Infractions of incursions into the park are not treated the same.

A unit of areal measure used here is the "are." 1 are = a 10 m x 10 m plot, or 100 m^2, or 1/100 ha, or 0.01 ha. So 100 are = 1 ha.

Q. What are problems with wildlife?
A. There are administrative problems with control of elephants damaging agricultural fields. The Ministry of Agriculture accused the Ministry of Environment of such troubles, calling the Ministry of Environment the "father of the elephant." To force elephants to leave agricultural

fields, shots are fired into the air. No compensation is given if elephants damage crops. Too many elephants are killed; it is a sore subject.

There are two recognized kinds of elephant damage: damage to agricultural fields and crops, for which elephants may be chased off; and damage to houses, for which elephants may be shot.

Recently, a bonobo appeared in an agricultural field here in Monkoto and damaged sugar and fruit orchards. ICCN was called in but no compensation was paid.

Q. What is impacting agriculture here?
A. Two main problems are lack of transportation to markets, and lack of tools such as machetes.

Q. Is agroforestry being tried?
A. Yes, some new agricultural techniques using agroforestry are being tried, to introduce some nitrogen-fixers, and new techniques for maintaining or restoring soil fertility, increasing crop production, and using crop rotation.

The rotation period depends on the crop. Manioc has a rotation period of 10, 15, or 20 years.

The main problem with manioc is disease. New varieties of manioc that are resistant to mosaic disease have not been introduced, so those field with the disease are abandoned for "a period of time" to deal with this.

In Monkoto, people go 6-7 km for their fields. They also grow corn in burned sites.

Q. Are field delineated for use?
A. This is not possible, given traditional use and ownership patterns. So instead, fields used are scattered.

<u>Interview with five groupement chiefs in Salonga National Park</u>

We interviewed five groupement chiefs during our visit to the forest guard training camp in Salonga National Park. The chiefs included Chief Lokuli Bosami of Village Groupement Yangi, Chief Bokele Lomama of Village Groupement Isaka, Chief Bokongo Botuli of Village Groupement Mpongo, and Chief Mbeko Ingala of Village Groupement Entoo.

Q. What are some of the problems here?
A. There are problems of logistics, having to travel by pirogue, for the forest guards to do their job on patrols. Also problems with lack of field equipment and illegal human habitation in the park. There are only 17 guards and 2 officers to cover a huge area. Some 5,000 people are illegally squatting within along the border of the park; this was reported to the DR Congo government who said they should be removed.

The seizure of bushment is reported on official forms.

Q. Tell us about the forest patrols.
A. At the Anga station, there are 5 people per patrol and the patrols last 14 days and include porters. The patrols target specific sites for which there is prior information on poacher presence.

Other patrols are sent to get to know the area and to survey for keystone species such as elephant, bonobo, bongo, sitatunga, and Congo peafowl.

There are 6 sectors in the park among both the north and south blocks.

There are parts of the park sectors not patrolled. These include: the west side of Monkoto where there problems with poaching; the south part of Manjuku, as it is very remote and takes 3 days just to get there; and Watchikango, which is also very remote.

Q. Have the flora and fauna changed over your experience?
A. Since 2003 with the increase in patrols, key species have increased. Now there is evidence of elephant and bonobo.

In the Monkoto sector, elephant has increased since 2002.

In the Anga sector, bonobo has increased since 2003.

In the Monjuko sector, elephant and bonobo have both increased, including their presence in the bais, since 2003. In 2003 there were only 2 or 3 forest guards, but now there are 10.

In the Yokelelu sector, thing are starting to change but there was military presence there (along the northeast edge of the north block) who left only in 2005. They were soldiers from Buwende.

Q. What hunting is done?
A. Hunting (poaching) is done on pigs and monkeys. The military poaches elephants, with participation of local people.

There are two kinds of poachers: professional poachers and local poachers. Professional poachers are well armed, local, and use 12-gauge shotguns and snares. They stay in the park for a month or more, whereas local poachers go into the park for only 2-3 days.

It is very rare that live animals are taken. In the 1990s in Watchikango live grey parrots were taken, but not now.

(The chiefs then pointed out on maps current and historic elephant concentrations centers and travel paths, and current bonobo sites.

Q. What is done with wildlife sightings?
A. Wildlife information is recorded on patrol forms, including general information on date, species, type of observation, etc.

Q. What equipment is needed for the patrols?
A. Equipment most needed: armaments, communication gear (radios), medication, camping equipment (tents, uniforms, boots, etc.), transportation (boats, outboard motors, motos, bikes).

Q. What training is needed?
A. Nature conservation methods; paramilitary training; and technical training.

<u>Interview with four women forest-product gatherers in Monkoto</u>

Q. What is your daily schedule?

A. We wake, pray, then wash the children before school, then feed the children. Then the children go to school, and then we take the baskets to the field. We return in the evening and cook meals.

Q. What do you collect in the forest?
A. Cassava leaves, firewood. Also "macaroni," mushrooms, and fruits.

Q. What do you collect to eat?
A. We collect only fruits which we eat, and the rest is left. Some of what we collect is sold in the local market.

Q. Do you collect forest items close to your (agricultural) field, or do you go afar?
A. We go just around the fields. But some people come from afar, such as Mbandaka, to buy large quantities of caterpillars. Also a species of mushroom that is grown from trees is collected, dried, and sold to people from Mbandaka. These mushrooms are collected from November to March during the rainy season, and caterpillars are collected from July to September.

Q. Are the caterpillars collected from trees?
A. There are three types (species?) of caterpillars collected: a small one found on trees, such as banga (tree name); a bigger type found on large trees; and a third type that is black and bigger. Caterpillars are collected from thre trees bosenge and bonjolo.

We do not cut the trees even in agricultural fields. We just collect the caterpillars when they fall to the ground. We boil them to cook them.

Q. Are other insects collected?
A. We also collect palm grubs when the palms are cut. There are two types or sizes of palm grubs.

We eat large land snails but not the small snails.

Q. Are the non-timber forest products (NTFPs) collected only by women, or some by men?
A. There is no "discrimination" [NTFPs are collected by both women and men].

Q. Do you enter the park to collect NTFPs?
A. No, we do not need to enter the park to collect NTFPs; the buffer [corridor] zone provides enough. But some other women do enter the park to collect NTFPs.

Q. Why do they enter the park if the buffer provides enough?
A. They enter the park mainly to fish or other activities, and then collect NTFPs while they are in there.

Q. How is fishing done?
A. Women fish during the dry season in "ponds" or dammed pools of streams, by bailing out the water and then catching the fish by hand.

When we were young, NTFPs were far more plentiful than now, including game and fish.

Q. Can you plant or raise any of the NTFPs?

A. A liana that produces fruit is planted. Also, a tree ("bimbol"?) that produces very large fruit is planted. The fruit (looks like beans) of this tree is split, the seeds collected, the seeds are dried, crushed, and eaten like porridge.

Q. Are medicinal plants that are collected adequate for your health needs?
A. If there is not enough money for a clinic, the only recourse is to gather medicinal plants in the forest, to treat ourselves. Sometimes it works, sometimes it fails.

Q. How many different kinds of plants are collected for medicinal use?
A. It depends on the illness. [Another woman answered:] The name number as found in the marketplace or the pharmacy.

Q. Are some medicinal plants disappearing from the forest?
A. No.

Q. How did you learn about medicinal plants?
A. From our mothers and papas too.

Q. Where to housing materials come from?
A. The buffer zone. Outside the agricultural fields, there is no ownership of the trees.