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**ITTO PROJECT PD 4/00 Rev.1 (F)**

**BIODIVERSITY MANAGEMENT AND CONSERVATION IN A FOREST  
CONCESSION ADJACENT TO A TOTALLY PROTECTED AREA (NOUABALE-  
NDOKI NATIONAL PARK), NORTHERN CONGO (CONGO)**

**EX-POST EVALUATION REPORT**

**Executive Summary**

**Prepared for ITTO**

**By**

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**September 2007**

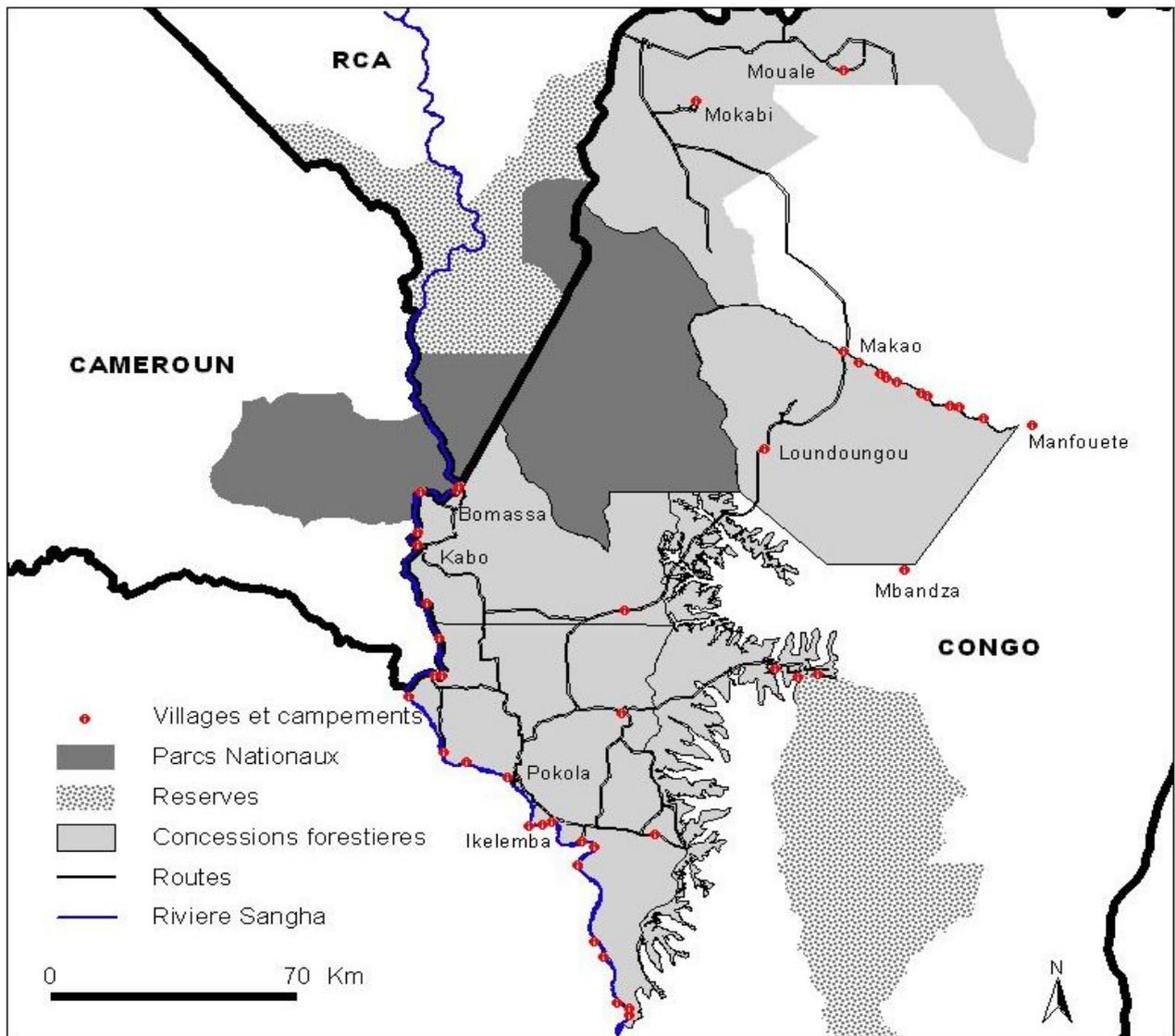


## **ACKNOWLEDGEMENT**

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## LOCATION MAP OF FOREST CONCESSION ADJACENT TO PNNN



Villages and Life Bases ; National Parks ; Conservation Areas ; Roads ; Sangha River

## ACRONYMS

APEDS	<i>Association pour la Protection des Ecosystèmes et de Développement de la Sangha / Association for Sangha River Ecosystem Protection and Development</i>
CIB	<i>Congolaise Industrielle des Bois</i>
CIRAD	<i>Centre International de Recherche Agronomique et de Développement / International Centre for Agronomic Research and the Development</i>
CNIAF	<i>Centre National d'Inventaire et d'Aménagement des Ressources Forestières et Faunistiques / National Centre for Forest and Wildlife Resources Inventory and Management</i>
COMIFAC	<i>Conférence des Ministres en charge des Forêts d'Afrique Centrale ou Commission des Forêts d'Afrique Centrale (Central African Forest Commission)</i>
EIE (EIS)	<i>Etude d'Impact Environnemental / Environmental Impact Study</i>
EFIR (RIL)	<i>Exploitation Forestière à Impact Réduit / Reduced Impact Logging</i>
FFEM	<i>Fonds Français pour l'Environnement Mondial (French GEF)</i>
FPP	Forest People Program
GPS	Global Positioning System
GTZ	Gesellschaft für Technische Zusammenarbeit
INCEF	International Conservation and Education Fund
MEFE	Ministère de l'Economie Forestière et de l' Environnement / Ministry of the Forest Economy and Environment
ITTO	International Tropical Timber Organization
PFNL (NTFP)	<i>Produits forestiers non ligneux / Non-Timber Forest Products</i>
PNNN	<i>Parc National de Nouabale Ndoki / Nouabale Ndoki National Park</i>
PROGEPP	<i>Projet de Gestion des Ecosystèmes Périphériques au Parc National Nouabale-Ndoki / PNNN Buffer Zone Ecosystem Management Project</i>
RI	<i>Règlement Intérieur de la CIB / CIB Internal Rules of Procedure</i>
SIG	Geographic Information System
SNAT	<i>Schéma national d'aménagement du territoire / National Land Management Scheme</i>
TFT	Tropical Forest Trust
TNS	<i>Tri-National de la Sangha</i>
UFA (FMU)	<i>Unité Forestière d'Aménagement / Forest Management Unit</i>
UPARA	<i>Unité Pilote d'Aménagement, Reboisement &amp; Agroforesterie / Pilot Forest Management, Reforestation and Agro-forestry Unit</i>
USLAB	<i>Unité de Surveillance et de Lutte Anti Braconnage / Anti-Poaching Surveillance and Control Unit</i>
WCS	Wildlife Conservation Society



## **EXECUTIVE SUMMARY**

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### **1. Information on Project Context**

In Tropical Africa, most forests have been earmarked for logging. Recognizing that logging activities do not exclude the management of other natural resources, the Project "Biodiversity management and conservation in a forest concession adjacent to a totally protected area (Nouabalé-Ndoki National Park) a.k.a PROGEPP, was started in 1999 in order to manage the wildlife in forest concessions. The model project was based on the Memorandum of Understanding agreed on 2 June 1999 between the GoC, Congolaise industrielle des bois (CIB, a logging company) and the Wildlife Conservation Society (WCS, an international NGO) and focuses its work on biodiversity conservation and wildlife resource management in the forest concessions of CIB. By managing the wildlife in the FMUs of Pokola, Kabo, Toukoulaka and Loundoungou – which make up the buffer zone around the Nouabalé-Ndoki national park, the efforts of PROGEPP are focused on protecting all ecosystems from the negative impacts of logging activities. A second agreement, for Project PD 4/00 Rev.1 (F) was signed in Yokohama in April 2001 between ITTO, the Government of Congo, WCS and CIB to finance and establish the Anti-Poaching Surveillance and Control Unit (USLAB). Phase I of the project was to be completed by June 2004. After an evaluation in July 2004 covering the duration of Project PD 4/00 Rev.1 (F), a no-cost extension was agreed until December 2004. A Phase II agreement (Project PD 310/04 Rev. 2(F) has just been signed in August 2007. These two project phases supported by ITTO are implemented as part of PROGEPP. The PROGEPP wildlife management system, formalised by the adoption of the Kabo FMU Management Plan in March 2006, is based on the ecosystem approach. It efficiently pursues its main objective : To mitigate the human pressure on wildlife, with the combined effort of the three PROGEPP Partners. By so doing, PROGEPP conserves endangered species as well as the species used as key animal protein sources for the adjacent communities.

The ex-post evaluation report submitted herein covers the Phase I [Project PD 4/00 Rev.1 (F)] in reference to the 2004 evaluation, but also the interim phase between January 2005 and June 2007.

The costs of Project PD 4/00 Rev.1 (F) (2001 to 2004) amounted to US\$ 2'289'384 \$US. Since January 2005, PROGEPP continue its activities with the support of 3 partners. Phase II was started in August 2007 with ITTO Funding.

### **2. Purpose of the Evaluation**

The purpose of the ex-post evaluation of Project PD 4/00 Rev.1 (F) is to submit an analysis of the efficiency and effectiveness of actions undertaken and strategies conducted under the Project, while taking into account the activities currently under way towards Phase II. It places the emphasis on local community participation to biodiversity management and conservation initiatives around the total protection area. It highlights the positive and negative results of the Project, as well as the success and failure factors. It underlines the contribution of this project to ITTO Objective 2000 and ITTO Yokohama Action Plan, it also identifies all lessons to be drawn and put to use in designing and implementing similar projects in future. In 2004, an assessment of the collaboration between CIB, WCS and MEF was carried out under PROGEPP. The Objectives and activities of the projects were analysed in detail (see the summary in Annex 5). Since this evaluation would take into consideration the results of Phase I of Project PD 4/00 Rev.1 (F) and our ToR required to also take the current status in consideration, we submit the developments of the project mostly for the period comprised between the completion of Phase I (2004) and June 2007.

### **3. Scope of the evaluation**

This ex-post evaluation Mission was implemented by two independent consultants between 04 June and 25 June 2007, and it included two field-level inspections conducted on 9 and 19 June

2007. The Mission held meetings with representatives of all three Project partners, local communities, CIB workers, one local NGO and the project staff.

#### Efficiency of Project Operations

The collaboration process involving the three partners, in spite of some hurdles, has been smooth. The communication between all partners has shown some weaknesses in terms of transparency. The PROGEPP has been managed by WCS. A steering committee, comprising representatives of WCS, CIB, MEF, ITTO and other donors is in charge supervising, providing guidance and monitoring the Project.

Each year, the project develops an annual work operational plan covering its various components. The monitoring and evaluation mechanisms enable the introduction of corrections and adjustments to afford any possible shift in direction. The Kabo FMU is the only Congo FMU whose management plan has been adopted. Its annual operational plan is being implemented with local community involvement. During the Phase I of project [PD 4/00 Rév.1 (F)], bi-annual financial reports were issued detailing the contributions of each financial partner and expenses per budget items and components. Since 2005, these financial reports for the entire project are missing. It is essential for strengthening both partnership and this joint-effort project that the preparation and submission of financial reports be resumed as they once were.

#### Relationship with ITTO

The project is in compliance with ITTA Objectives, the criteria of the ITTO Yokohama Actio Plan and Objective 2000 (for details, see Annex 4).

#### Project efficiency

Since the completion of Phase I [PD 4/00 Rev.1 (F)] in 2004, the implementation of the major five relevant PROGEPP components has continued, including : Ecosystem conservation activities as part of the reduced-impact logging component ; Education and Outreach ; Science / environmental and socio-economic monitoring and research ; Alternative activities ; and Collaborative community management.

#### Wildlife protection

Through the implementation of effective management, this component shows impressive impacts : the strict and stringent enforcement Congolese laws, supported by the CIB's Rules of Procedure and the Anti-Poaching Surveillance System (USLAB) have contributed to reducing illegal hunting and enhancing the protection of protected species and their habitats. A training and retraining center for park rangers (*écogardes*) has been established in Kabo with all required equipment, materials and arrangement to secure adequate quality standard of anti-poaching actions. A hunting zoning plan was developed through a participatory process and incorporated in the concessionnaire's management plan. Controls on hunting has limited the level of bushmeat trade, thereby reducing the pression on the wildlife. The GIS tools made available to PROGEPP have been used to establish the zoning plan and for planning monitoring procedures in covering the PROGEP area.

The weaknesses that could undermine these successes are as follows :

- the lack of adequate protection over the entire area due to the reduced number of Park Rangers;
- the potential sources of corruption where check points have been established along the roads, as ranchers could be exposed to corruption attempts by poachers;
- the criminals arrested are taken to custody in Ouessou but seldom convicted by the judiciary authorities;
- hunting activities exercised as a prerogative of CIB employees who are transported by cars to hunting grounds that indigenous populations cannot reach on foot – in other words an activity from which only a minority can benefit;
- the delays experienced in 2007 in the financing by the State of the USLAB counterpart director.

#### *Education and outreach*

This project component ensures a communication link between PROGEPP and the various village communities, transient human settlements and life bases established within the concession area. The outreach work conducted among the local communities regarding the rules and regulations applying to legal hunting activities and the rational use of natural resources takes place during participatory meetings. An average of 675 people each quarter has been attending 20 to 45 of such sessions (the number of these sessions has declined since 2006 due to a lack of funds). For children, courses are taught at school and in the "Nature Club" on the biology and ecology of large mammal species having protection status in the Congo. A guidebook introducing fully protected animal species has been published and disseminated.

The prime time broadcasting of the radio and television programme "POKOLA", organised by the CIB, contributes to education and outreach activities on the desirability of conservation.

Weakness: The lack of funds which prevented the conduct of these activities on a regular basis in all FMUs.

#### *Ecological and socio-economy monitoring*

The purpose of this project is the acquisition of basic data to conduct the sustainable management of large mammal species, the zoning and forest management of concessions. An ecological monitoring system put in place by PROGEPP enabled the establishment of a high quality data base covering large and smaller mammals, and the systematic collecting and identification of plant species has contributed to enhancing this database. The PROGEPP zone is also receiving support from a number of partner projects within CIB which are mainly concerned with forest dynamics, regeneration and agro-forestry development. All these data form the basis of resource and management practices and will be incorporated in forest management plans. The results will be used to assess the level of success or failure achieved by the project, and to adjust its direction accordingly. Training provided to Congolese researchers strengthen the very foundations of the project, and the studies conducted by researchers through independent financing contribute to provide the information required to manage the resources. The multi-resources inventory has enabled, inter alia, the identification of and development of knowledge on non-timber forest products essential for developing alternative economic activities supporting conservation. The results of the monitoring activity conducted on socio-economic aspects have contributed to putting into place joint-management processes for natural resources within forest concessions whose main goals are as follows:

- *Short-term prospect:* to provide guidance and support to the communities; to raise the communities' awareness of the impact caused by destructive practices; to establish a dialogue between PROGEPP and the village communities.
- *Long-term prospect:* to build indigenous management capacities; to transfer knowledge and expertise; to facilitate local empowerment.

#### *Alternative activities*

To fulfil its contractual obligation to provide adequate food supply to its staff, the CIB company imports live cattle, poultry and deep frozen fish. The animal proteins supply secured through these imports contributes to reducing the pressure on wildlife and to containing the bushmeat trade. During phase 1 [PD 4/00 Rév.1 (F)], a significant number of alternative activities were developed and tested. The support provided to individual fishermen after collective fishing expeditions shows promising results, especially in view of the fact that fish seems to be the preferred source of animal proteins.

Weaknesses:

- meat imports, while contributing to addressing basic food needs, is not sustainable. Once the CIB has left, these imports will be interrupted.
- subsidised animal protein imports is keeping local food prices artificially low for the surrounding rural communities, and this situation carries no incentive to develop these productions. Rather than promoting and propagating development, the company remains an island of prosperity attracting migrants.
- during 2005, alternative activities had to be scaled down, and in 2006, they were suspended due to a lack of funds, which could create a sense of disenchantment among target communities.

### *Collaborative community management*

The purpose of this project component is the management of natural resources by and for the benefit of indigenous communities. However there has been hardly any involvement by the latter – to the possible exception of Pygmies whose traditional lifestyle includes the sustainable management of local resources; there are but few instances where a local community would have the capacity to manage an area by itself.

A *participatory planning* exercise was undertaken to delineate hunting zones within publicised and widely accepted boundaries. The participatory identification and marking of trees regarded as significant by semi-nomadic populations, and their preservation from felling, have also been entered into the management plan.

*Sustainable uses:* Efforts by PROGEPP to develop a sustainable, more productive, community fishery system will involve a form of joint-management within fishermen communities.

A set of village community lands earmarked for community development projects supporting agro-forestry lots (forests, farm lands and fallow lands), and reserved for the exclusive use of local communities, has been demarcated and is being managed through a permanent consultation mechanism involving all stakeholders concerned ; this system is not part of PROGEPP but helps to reinforce collaborative community management.

*Participation to economic revenues:* A percentage of PNNN revenues from the collection of entrance fee (F CFA 5,000 per person) are being reverted to the village committees surrounding the Park, to enable them to implement community projects. CIB has just established in its management plan a local development fund receiving the amount of duty levied on marketable timber sales (FCFA 200.00/cu.m), for the benefit of the communities located within the FMUs concerned. PROGEPP facilitates the establishment and management of village committees to develop projects and manage these funds.

However, greater efforts towards the village communities in terms of outreach, support, training, guidance and supervision are required for them to become responsible for their own development and assume the stewardship of their own resources. This is a long-term process of vital importance.

### Impacts

#### *Impacts in terms of conservation*

##### - Habitats of significance

The Goualogo triangle (25,700 ha), initially an area included in of the Kabo FMU providing a very significant habitat to large mammals, was assigned to PNNN by CIB subsequent upon the conduct of a joint study. The Djeke area (10,000 ha) situated in the northern tip of the Kabo FMU – a site strategically located at the heart of the protected area network being part of the *Trinationale de la Sangha* (The Sangha Tri-national Conservation Area) – has been fully demarcated into conservation blocks by CIB. Conservation measures have been planned for *bais* and *éyangas* species occurring within production blocks.

##### - Endangered species:

Conservation and monitoring efforts undertaken by PROGEPP since 2001 show encouraging results in terms of relative abundances of large mammals in both hunting and non-hunting areas. Evidences of a human presence are also scarcer in the conservation areas, which confirms the efficiency of the surveillance measures put into place by PROGEPP.

The stricter law enforcement strategy implemented under CIB's Rules of Procedure and the implementation of a zoning plan have led to a reduction of poaching activities, the emergence of more rational hunting methods, improved and more widespread conservation practices for wildlife species under protection and the conservation of special habitats.

#### *Impact on the forest sector and timber industry*

All socio-economic and ecological results as well as management tools developed by the Project have been used as a basis for designing and developing forest management plans and for CIB to prepare its application to have its timber and logging operations certified by the FSC. Through the scientific support it has provided, the Project has contributed to the development and adoption of the Kabo FMU management plan.

The results of the research work conducted within CIB on the identification of lesser-known timber species contribute to their promotion and increased share of production, processing and marketing.

The Reduced Impact Logging methodology promotes natural regeneration and reduces the wastage of timber material.

The image of CIB has turned positive among international environmental actors.

#### *Social impacts*

PROGEPP has organised indigenous communities – both Bantu and semi-nomadic groups – into village committees and village-level associations as well as at FMU level to instil a community self-help spirit among them, educate them and train them in the joint-management of their own resources. While the project ensured that communities played a role in zoning and land-use planning operations, clearing the main roadstead of hunting camps within forest concession areas, and while it had them involved in education and outreach sessions, it still has to demonstrate any major social impact. Pending any effective emergence of an awareness by the communities as to how sustainable management practices can provide benefits and their getting more actively involved in these management practices, the activities of the Project are sometimes perceived by the communities as constraining – less hunting rights, more controls, etc..

A positive impact already visible is the protection of sacred and valuable socio-cultural sites and that of key species for the semi-nomadic groups. The hiring of park rangers from surrounding communities is a factor promoting the involvement of the communities in biodiversity management efforts. A consultation mechanism for the management of areas zoned for agro-forestry (development blocks) has enabled a dialogue between the various communities and other stakeholders.

#### *Impact as a model project*

PROGEPP can and should be used as a model project for other FMUs and neighbour countries in view of the efficiency of the management tools already developed. Other concessionaires have already expressed their commitment to emulate the model – they aim at achieving FSC Certification standards within the next few years and seek to collaborate with a NGO Partner to meet conservation requirements.

#### *National level impacts*

The partnership has enabled the development of inter-stakeholder relations. Forest Administration officers have received training in biodiversity management. The management instruments developed under PROGEPP will be used for adjusting the national legal and institutional framework of the Congo. The country already has a centre providing training to park rangers and conducting research on biodiversity conservation practices.

Congolese researchers are trained and some have acquired an extensive wildlife management experience. This should be regarded as a valuable asset for the Congolese State.

#### *Challenges and opportunities*

##### *The men-vs.-elephants conflict*

Although the men vs. elephants conflict is an indicator of the success of the measures taken for the protection of these pachyderms, the devastation of crop fields by wild animals, mostly elephants, is a complex problem. The PROGEPP compiled knowledge and experiences from other countries within the natural range of the elephant and has tested a number of options to frighten elephants away from human activities. Village communities do not yet have sufficient incentives to take actions to defend themselves and alert park rangers, who should know the methods to repulse encroaching elephants and have the capacity to act together accordingly. As part of a wider consultation with all conservation stakeholders concerned, there must be a discussion on the possibility to slaughter some individuals who have made it a habit to visit crop fields. This type of solution has been adopted and efficiently applied in some African countries – Cameroon and Tanzania in particular.

Under our Terms of References we were entrusted to issue recommendations regarding the *establishment of timber industry facilities in the vicinity of a protected area*:

The establishment of industrial facilities of this kind implies the installation of infrastructures, logistical facilities and required personnel, and would entail an influx of migrants. Therefore:

- Prior to establishing industrial facilities and their basic infrastructures near a protected area, environmental and social impact studies ought to be conducted, as well as a study on the economic viability of such establishments. If these studies do not conclude to the desirability of such installations, alternative sites ought to be selected where their impacts will be less harmful.
- Once the installation of industrial infrastructure has been decided, it has to be ensured that the basic local population figure should not grow beyond the number of workers required to operate the facilities, together with their families. An appropriate surveillance system (continuous patrols) ought to be established together with a stricter form of control (check points) along the access roads to the settlement. Park rangers should be trained and/or retrained for these duties. Corporate rules of procedures supporting the relevant national law enforcement policies should be implemented. An enhanced participatory outreach and education programme incorporating socio-cultural aspects relevant to the surrounding communities should be implemented alongside industrial developments.
- The decision to install a sawmill in Loundoungou has already been taken; the foundations were laid on 21 June 2007. Socio-economic and environmental studies have been implemented in 2006 and impact mitigation measures have been proposed. A schedule to evaluate their efficiency is still to be proposed, that should be started upon an initial period of operation of the installed mill.

#### *Tourism potentials*

Congo possesses highly specific natural assets with high tourism potentials. The development of tourism requires a political commitment and a tourism develop plan should be thoroughly prepared with the involvement of all stakeholders. In addition to “visual tourism” (wildlife watching activities), the opportunities offered by recreational hunting should be considered too. Appropriately organised and duly controlled hunting safaris could offer beneficial development prospects for conservation and the involvement of surrounding communities. Hunting concessions could be demarcated within FMUs that would thereby be obliged to sustainably manage and protect the wildlife within the concession. However, it is important to note that such hunting concessions should not be established in areas adjacent to protected areas. Members of indigenous communities could be hired as safari guides and the communities could have access to the bushmeat obtained from hunting expeditions together with a percentage of related revenues. The development of tourism can contribute to the cost of maintaining and protecting areas surrounding the PNNN.

Visual tourism and recreational hunting could generate employment and revenues for the surrounding communities and the State. This would make a fine case for revenues generated from natural resource conservation.

#### **4. Conclusions and Recommendations**

Since its creation in 1999, PROGEPP implemented most of its programmed activities which enabled it to reach its planned objectives. It is the first instance of an effective integration of wildlife conservation and management in forest concessions in Central Africa, and as such it has even attracted international attention (e.g. a story in NEWSWEEK of 06 August 2007). The ground-breaking partnership between the Government of Congo, CIB and WCS is a model for cooperation between a wide range of stakeholders. More concessionaires are already seeking to emulate this model. The State of Congo and the WCS would like to use this model as a standard to manage all FMUs and steer the Congo towards its sustainable management objective. The model would also be applicable to neighbour countries. However the duplicability of this model project would hang to a number of prerequisites, including the following:

- the political commitment to promote and advance sustainable management in the FMUs;
- the effective commitment by forest concessionaires to undertake biodiversity management and conservation.

The Government should on the one hand provide incentives to concessionaires who intend to conform to this model – in the form of tax exemptions and credits – and on the other hand apply sufficient pressure on those who are still hesitant to adopt the approach advocated by the model – e.g. by withdrawing their concession titles after a realistic period of notice has expired and in pursuance of relevant Congolese laws.

The Project has successfully reduced uncontrolled, illegal hunting activities to levels more or less commensurate with sustainability, and it has established an effective, operational control system. Relevant data indicate that the stocks of protected wildlife species have recovered. Yet this is still a very fragile balance as the communities, who have been the most affected by the new wildlife protection system, have not yet been actively involved in it. A lack of funds has led to the collapse of smaller sharecropping projects since 2005 and an industrial action by CIB employees has resulted in intensified poaching. The further development and building of communities' capacities is therefore of the essence. The zoning system has clarified the user's rights of semi-nomadic groups and indigenous village communities through the zoning of hunting areas and the establishment of community development lands (development blocks). Vocational training provided to young Congolese is an important output for the country's future and should be continued.

Early education and outreach activities targeting youngsters and adults have been greatly successful but should be further developed in order to empower present and future generations. The viability of this component should be ensured by establishing a ground-breaking and sustainable funding mechanism.

Scientific research and environmental and socio-economic monitoring contribute to a system which lies at the root of ecosystem management.

The importation of alternative proteins will never provide any lasting solution. While it is currently necessary to meet the needs of enlarged communities, especially in CIB settlements, food production should be sought and pursued outside concession areas. Any vision of development for infra-national regions should consider the development of the local capital – Ouesso. The State should invest revenues from forest concessions in the development of infrastructures, health centres and education, while ensuring that conservation objectives are not compromised and remained unbiased. The other partners could facilitate (through partner NGOs) the development of economic projects such as sharecropping and farming projects.

To make the positive effects of the project socially sustainable, a more active involvement of the communities is indispensable. The Government should play a key role through its support and empowerment policies, e.g. by providing specialist supervision and guidance in fishery and agricultural activities. There should be adequate mechanisms established for the management of local development funds created under CIB Management Plan, and selection and eligibility criteria should be established for relevant community projects.

The well-being of indigenous communities, their household incomes and the sustainable management of their natural resources are of fundamental significance to secure the very sustainability of ecosystem conservation practices. For these alternative economic activities to be more sustainable, they should bear a direct relationship with the sustainable use of forest resources and stimulate the take-up and ownership of conservation goals by local communities. It is necessary for PROGEPP to develop – jointly with its three partners – practical and operational strategies to make these communities more capable to manage their future lives in a sustainable way. The security of long-term financing to support this component is a key requirement.

Financial sustainability is a key condition for future viability and sustainability of PROGEPP, as well as for its duplicability. The past few years of project experience has shown an insufficient funding capability. An adequate self-financing regime for the buffer zones, with all key activities running to ensure sustainable management does not appear to be a realistic prospect. While seeking contributions from other donors, ground-breaking, sustainable forms of funding must be explored. In this perspective, tourism can be an option. The Government has a special fund partially provided from forestry taxes. The use of this fund to finance sustainable forest management is one proposal under ITTO Criteria 1.3. The creation in 2006 of a trust fund for TNS could finance some activities over time.

Several technical, policy and fiscal constraints have been identified, such as:

- the lack of adequate manpower training at all levels, which will make the widespread replication of the PROGEPP model more difficult, and will lead to serious manpower shortage, including within the Ministry itself.

The PROGEPP could be used as a training centre:

- To establish a protocol between the State and WCS in order to train managers and middle-management staff, enabling them to reach other FMUs, work there and supervise USLABs. Relevant training costs should be borne by the concessionaires of the FMUs concerned.
- Training and retraining of park rangers should be continued, for all future park rangers, at the Kabo training centre, which has all training infrastructures required to conduct these training programmes and all their required components.
- For middle- and top-management staff, the State should prepare a development plan and ensure adequate human resource planning in order to have the required medium- and long-term human resource capacities available to meet ITTO criteria and indicators.

*ATO/ITTO Criteria for the sustainable management of African natural tropical forests:*

*Criterion 1.3 Indicator 1.3.1: There is a forestry organizational structure responsible for the direct or delegated management of all forests that has adequate, well-trained, competent and efficient human resources for carrying out its mission.*

- Bureaucratic red tape: Important decisions are sometimes left pending, which discourages the efforts of those who strive to pursue the implementation of the project.

- The MEF should be proactive in supporting the implementation of conservation objectives and strategic decision making (technical decisions, power transfer and budgetary credits).

- The absence of a land-management plan which could be scaled up to land-management planning covering the infra-national region and integrating key forest resources of North Congo.

- To avoid future "large public work projects" damping the current drive for sustainable management initiated in the essentially forestry-oriented North Congo, impact studies on large public work projects should be initiated in economic, social, cultural and environmental terms to assess their negative impacts and propose mitigation procedures.

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