

## Case Study 3 - Forest Concession Land Use Planning : Lessons Learned from Congolaise Industrielle des Bois (CIB) – PROGEPP Project

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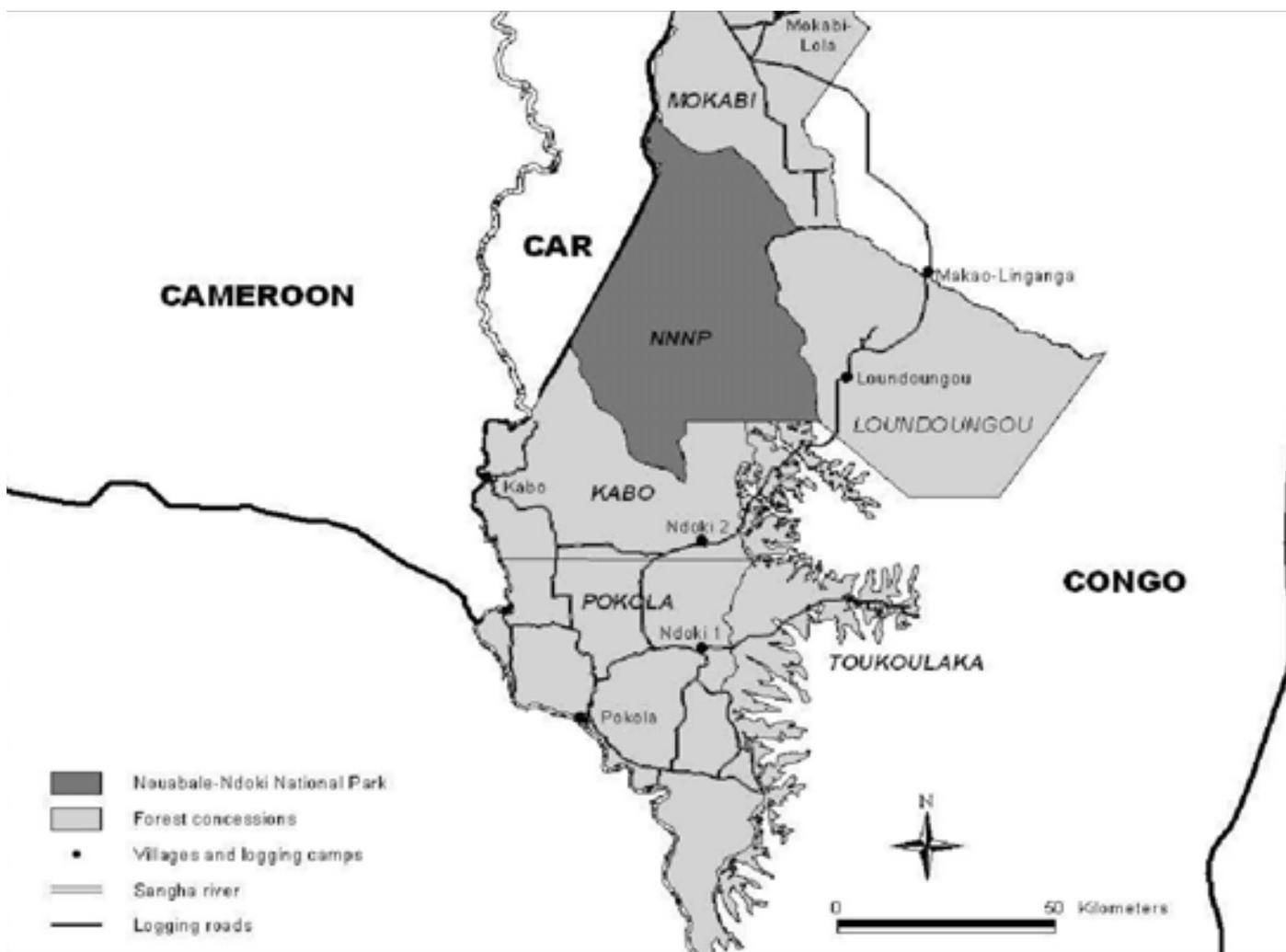


### Introduction to PROGEPP

In the Republic of Congo, the Project for the Management of Ecosystems in the Periphery of the Nouabalé-Ndoki National Park (PROGEPP in French) manages wildlife in four forestry concessions surrounding the Nouabalé-Ndoki National Park. PROGEPP, a partnership of the Congolese Ministry of Forestry Economy (MEF), the Wildlife Conservation Society (WCS) and the Congolaise Industrielle des Bois (CIB), was established in 1999 with two objectives: 1) to protect the Nouabalé-Ndoki National Park (NNNP) from hunting pressure coming from logging operations and increasing numbers of immigrants; and 2) to manage wildlife in the concessions for sustainability. Unlike conservation of most protected areas, PROGEPP's goal is not to reduce hunting to zero. Rather, the idea is to reduce hunting to sustainable levels, which likely means the elimination of commercial hunting, so that indigenous people and CIB workers have access to wild meat. The project seeks to evolve towards a locally-man-

ged solution where sufficient incentives exist to ensure that local people and local law enforcement work towards the sustainable management of wildlife.

Together the concessions (Kabo, Pokola, Loundougou and Toukoulaka) and NNNP form a landscape that covers approximately 20,000 km<sup>2</sup> and comprises a vast stretch of lowland forest rich in African mahoganies and home to some of the continent's most endangered species: Forest elephants, Western lowland gorillas, Chimpanzees and Bongo. The park largely protects the biodiversity of the region, but the survival of wide-ranging species such as elephant and Bongo also depends on their protection outside the park borders. The forests of the logging concessions also provide natural resources (food, construction materials, animal protein) critical to the livelihoods of indigenous forest peoples. To conserve these natural resources, PROGEPP created a wildlife management system based on four key principles: regulating access to wildlife resources through forest-use planning; promoting selective



**Figure 1. Map of the project area, including the Kabo, Pokola, Loundoungou, and Mokabi concessions and the Nouabalé-Ndoki National Park**

hunting through law enforcement; involving communities in wildlife management; and developing economic and protein alternatives to hunting and bushmeat.

First, we work with the MEF, CIB and local communities to establish formal hunting zones based on the traditional hunting territories of local people. Second, we collaborate with the MEF to enforce wildlife laws, with the goal of protecting biodiversity and endangered species and keeping hunting at sustainable levels. Third, we work with communities to help them manage their own wildlife resources and to arm them with information about ecology and conservation. Fourth, we experiment with alternative activities to hunting to provide protein and income to local people. Management activities are constantly adapted to the reality on the ground, which is assessed through the analysis of monitoring data on wildlife popu-

lations and human threats to them. PROGEPP uses a variety of research and monitoring methods to quantify hunting pressure, bushmeat availability and consumption, densities and distributions of wildlife populations, and ecological processes critical to forest regeneration. Monitoring results guide management decisions and aid in the formulation of regional and national policy.

## Land-use planning in the CIB concessions

Land-use planning within the CIB concessions has occurred at two different levels. The first level of planning defines where logging can take place, is driven by an interest in maximizing timber production and economic profit within the limits of sustainable forestry norms, and is defined by National Forestry Management Directives. These di-

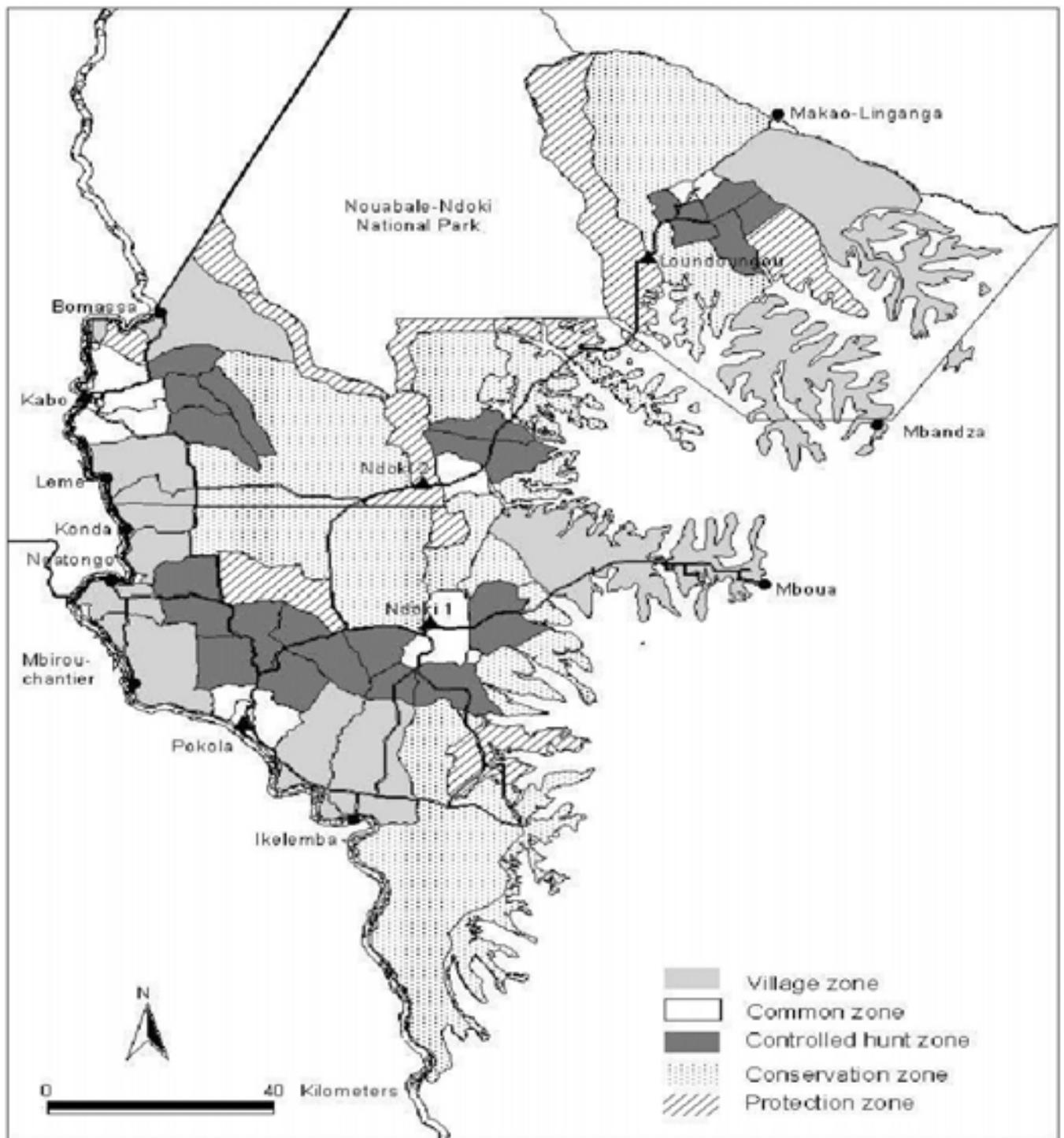
rectives define five types of “series”, or land-use categories: 1) the production series is set aside for logging operations and economic production; 2) the conservation series guarantees the existence of timber species and protects biodiversity, wildlife and landscapes; 3) the protection series safeguards fragile habitats, particularly watersheds, watercourses, swamps and soils that could be degraded by erosion; 4) the community development series is reserved for use by local populations to exploit natural resources for their livelihoods and community development; and 5) the research series delimits areas that can be used for ecological and forestry research. In the Kabo concession, 72.3 percent (2,140 km<sup>2</sup>) of the area is included in the production series, 20 percent (593 km<sup>2</sup>) in the protection series, 5.1 percent (151 km<sup>2</sup>) in the conservation series, and 2.6 percent (76 km<sup>2</sup>) in the community development series. The entire area is included in the research series.

The second level of land-use planning involves the creation of hunting zones within the production and community development series. Other non-timber forest products (NTFPs) can be exploited throughout the concessions, with the exception of the protection series which, by Congolese law, is off-limits to any form of exploitation. Through a series of meetings with local villages, PROGEPP created three types of wildlife-use zones: village hunting zones, conservation zones and protected zones. Village hunting zones reserve access to the forest for hunters from the adjacent village and are subdivided into zones for indigenous villagers, residents of logging sites and the controlled hunt (a monthly hunt organized for CIB Congolese employees). Based on traditional hunting territories, the demarcation of village hunting zones took place following months of discussions with local villages and after careful identification and description of traditional land-use patterns for both Mbenzélé (Pigmy) and Bantu inhabitants. Conservation zones prohibit hunting with firearms, but permit hunting and trapping with traditional weapons; fishing and gathering are allowed throughout the year. Protection zones conserve areas of particular importance for large mammals (e.g., the buffer around the park borders and large natural forest clearings) and all

hunting, either modern or traditional, is prohibited. The conservation and protection zones serve to protect populations of game and key habitat, and presumably serve as a source of wild animals to replenish wildlife stocks in neighbouring hunting zones. The Kabo concession, for example, is divided into village hunting zones (1,396 km<sup>2</sup>, 47 percent of the concession), conservation zones (1,154 km<sup>2</sup>, 39 percent of the concession), and protected zones (413 km<sup>2</sup>, 14 percent of the concession). It is important to emphasize that hunting by traditional techniques (spear, cross-bow, hand-woven nets, etc.) by Bantu or semi-nomadic pigmy communities (Mbenzélé) can occur year-round in both the village hunting zones and conservation zones (86 percent of the concession).

The adoption of the management plans by the government formalized both land-planning systems in the Kabo and Pokola concessions. Land-use planning within the Loundoungou concession (which has been merged with Toukoulaka to form a single concession) has already been accomplished, and in theory, should be legally established with the adoption of a management plan in the coming years.

PROGEPP conservation and wildlife management activities take place within and in consideration of these different access zones. Within the community hunting and NTFP zones, PROGEPP works with local communities to raise awareness of hunting laws and conservation principles like sustainable off-take, threatened and endangered species, and adaptive management. Awareness-raising efforts include teaching formal environmental education classes in local schools, village meetings, and the use of multi-media sources such as television, radio, posters and theatre. We also work with local communities to increase capacity and involvement in the management of their natural resources through the organization of resource management committees in local villages and semi-nomad camps. Resource management committees offer a conduit for information exchange with local communities and a structure for involving people in the development of hunting rules and zones. PROGEPP seeks to empower communities to make and implement wildlife management decisions (e.g., de-



**Figure 2. Map of project area with the hunting zones in the Kabo and Pokola concessions, and proposed zones in the Loundoungou concession**

veloping hunting rotations around villages, reducing harvest of rare species or developing systems to restrict the use of hunting zones by outsiders, if necessary). The forest lifestyle and semi-nomadic culture of the Mbenzélé have led to a relative lack of formal organization and representation compared with villagers. At present, policy decisions (e.g., determining which areas are to be set aside from logging or hunting, or

where and how CIB workers can hunt) are primarily made by the logging company, the government, the project, and elite members of villages. Resource management committees will hopefully ensure that the Mbenzélé, like villagers, will be involved in policy decisions.

Across the concessions, PROGEPP ecoguards enforce Congolese wildlife laws. CIB company

rules prohibit the transport of hunters and bushmeat in logging company vehicles; therefore, ecoguards stop and search all vehicles at roadside posts at intersections along the logging road network. Ecoguard forest patrols focus on areas within the concession where illegal hunting is thought to be taking place, or in areas with high densities of protected species like elephants, gorillas and Chimpanzees.

## Synthesis of lessons learned

Land-use planning within the CIB concessions surrounding the NNNP has been a multi-year process, involving many different actors from industry to government to international conservation organizations to local communities, including semi-nomadic peoples. Through this process, several important lessons have been learned.

### 1. Multiple actors should be involved in land-use planning

Logging concessions generally serve multiple purposes in addition to timber production. Most forestry concessions served as home to indigenous peoples and as habitat for wildlife long before concessionary rights were sold to logging companies. Before logging began in the CIB concessions, for example, nearly 12,000 people lived in permanent villages and temporary camps, making their living from the forest. Therefore, timber production should be perceived as an economically important activity introduced onto a previously existing landscape of ecological, livelihood, economic and cultural activities. As such, multiple stakeholders have interests in the forests within timber concessions and all must be incorporated in land-use planning process.

To incorporate all actors, there must be a platform by which they can express their interests, particularly local communities that tend to be less empowered than formal organizations like companies, NGOs and worker unions. By working directly and frequently with local communities, PROGEPP social teams helped promote indigenous people's rights (including conservation of their traditional territories) to the company and the government. In this way, their interests and needs in terms of natural resources were in-

corporated into the management plan. Later, once the formal plan was drafted, village leaders and local people were invited to open fora to express their opinions, opposition, interests and needs. In addition to making the land-use process as open as possible, there should also be a mechanism for conflict resolution for situations when stakeholders simply cannot come to agreement.

### 2. Land-use planning should be based on data and balanced by economic and social needs

In addition to listening to the voices of local actors, zoning should be based on rigorous biological and socio-economic data. First, inventories need to be conducted to determine the abundance and spatial distribution of animal species, timber species, and NTFPs across the concession. Just as logging companies base their annual exploitation on the location of their target timber species, hunting off-take, natural resource harvest and/or the designation of protected areas within concessions should be based on surveys of wildlife and other natural resources. Second, once the different types of land-use zones have been designated, it is important to determine procedures for harvesting the resources. For example, if natural forest clearings are protected as habitat for animals, then buffer zones around them where logging and/or hunting is prohibited must be based on an analysis of both animal behaviour and their habitat needs. In many cases, the optimal conditions for conservation (e.g., a buffer of 15 km around forest clearings used by elephants) are not achievable, and must be balanced by the economic and resource needs of the timber company and local people.

### 3. Land-use planning should be formalized

Land-use plans must be formalized and made public. Even if all stakeholders have participated, negotiated and agreed upon the zoning and rules for exploiting resources, the procedures and principles must be incorporated into a formal management plan. First, this ensures that the plan is in agreement with national (and sometimes inter-

national) laws and standards. Second, this ensures that outside actors respect the plan. For example, after the adoption of the Kabo concession management plan in 2006, a MEF official delivered a large game (buffalo, Sitatunga, etc.) hunting permit to a group of expatriate hunters. However, by consulting the Kabo management plan, which does not include provisions for safari hunting, the mistake was immediately recognized and the hunters were quickly directed to a different forestry concession where hunting is permitted.

#### **4. Roles of stakeholders should be clearly defined**

The roles of all the actors operating within the logging concession should be well defined by formal protocols describing rights and responsibilities. The definition of roles not only assigns responsibility for certain aspects of management to the appropriate stakeholder, it also prevents overlap or duplication of effort by different organizations. This is particularly important for wildlife management and enforcement of hunting laws. For example, if ecoguards are employed to enforce hunting laws, it must be clear who manages them and who is responsible for their actions and failure or success. This protects other actors who could be blamed for their failure to accomplish goals or follow laws and procedures. For natural resource management, other responsibilities that must be clearly assigned to a stakeholder include: 1) assuring food security of concession workers and local people; 2) collecting the biological and socio-economic data necessary to make decisions; 3) incorporating local peoples into resource management; 4) managing different forest resources: wildlife, timber, NTFPs, fisheries, etc.; and 5) resolving conflicts among institutions and other stakeholders.

A final note on the definition of roles and responsibilities, it should also include an explicit recognition of all the actors to be consulted during a management activity or decision. Even though the logging company may be responsible for the construction of roads, it must consult other stakeholders to guarantee that roads do not cross important habitat for gorillas or traverse a ceme-

tery sacred to the Mbenzélé people. The list of actors to be consulted should be defined and clear and should be based on criteria such as the proximity of people to an activity, their livelihood interests, etc.

## **Conclusions and recommendations**

The land-use planning process has largely succeeded in the CIB concessions because it incorporates multiple actors and is based on data collected over many years. Before management plans were written, WCS, CIB and MEF had completed studies on wildlife populations, bushmeat, NTFPs, and timber species in addition to socio-economic studies of the movements of semi-nomadic peoples, their traditional territories, and annual demographic censuses of the human populations within the concessions. The government-adopted management plans formalized the land-use planning and defined the roles of different actors through individual protocols of collaboration (e.g., the PROGEPP protocol defining roles of MEF, WCS and CIB in wildlife management within the CIB concessions). While land-use planning for the Kabo and Pokola concessions has been completed, planning for the remaining concession is advanced and will be completed in the coming couple of years.

Land-use planning in forestry concessions comes with its own set of challenges: the first and most difficult challenge is to find common ground and common goals. It is possible that a logging company adopts the attitude that its lease of the concession makes the company the only legitimate actor. But local communities and local or international NGOs should not be dissuaded from working with the company because 1) it may be the only option for mitigating environmental damage and resource loss; and 2) a strong partnership means that multiple organizations can share the responsibilities and cost of resource management. Moreover, logging companies have a great deal to gain by partnering with conservation organizations. By collaborating with NGOs that seek to manage natural resources, protect human rights, or improve food security, the company can benefit from an improved image and

have access to new sources of financial resources (e.g., loans from the World Bank). A greener image can attract new clients and open new markets, allowing the company to earn greater profits from its wood (see discussion of certification below). In addition, where public organizations work to improve living conditions, health care and food security, the company benefits from a healthier and more effective workforce.

There is a trend towards better land-use planning and forest management in central Africa. Central African governments have recognized the need for management plans for concessions, and at least in the case of the Republic of Congo, the existing forestry laws correspond to or even surpass internationally recognized standards. Moreover, the Congolese government is slowly starting to enforce its own legislation: nine management plans are advanced in their development, including the Kabo and Pokola concessions which have been adopted and received Forest Stewardship Council (FSC) certification. Of the 69 forest management units, 50 percent are committed to the process of sustainable forest management planning. As land-use planning evolves across central Africa and standards become more rigorous, management of forestry concessions will necessarily consider the livelihoods and interests of local people and the conservation of natural resources and wildlife.

The trend in land-use planning and forest management is also partially driven by the growing market for certified wood, particularly in European countries that are starting to require that imported wood comes from legal and sustainable sources. Three forestry concessions (including the Kabo and Pokola concessions) have now been certified by the FSC in central Africa, and several companies have committed to seeking certification in the coming years. Companies only receive certification if their logging procedures meet the standards of the organization that bestows the certificate which is assessed by independent audits of the company. Auditing is a systematic process of verification, usually conducted at the level of the forestry concession, to determine whether the operation meets a predefined set of criteria or performance standards.

If the operation meets the minimum standards, a certificate is granted. If not, corrective actions may be requested (CAR). The corrective actions must be completed in a specified time-frame for certification to be achieved. Subsequent spot checks and monitoring audits are then conducted to keep the certificate valid. For producers like CIB, certification brings more systematic management systems, potential market access and improved image. For conservation, certification provides a mechanism for influencing management practices; and for consumers, it provides information on the legality and the environmental and social impacts of the wood being purchased. To date, the only internationally recognized performance-based scheme issuing certificates for tropical forests is the Forest Stewardship Council (FSC).

Certain exemplary companies like CIB have made considerable investments in infrastructure and procedures to promote sustainable forest management, social development, and wildlife management. But to promote land management and conservation at a regional scale, forestry laws should be applied to all companies and all concessions without exception – central African countries need to enforce their own laws. Finally, beyond enforcement of hunting laws, forestry laws and certification schemes fall short when it comes to wildlife management and biodiversity conservation. Although most certification bodies address wildlife conservation to some extent, their principles and guidelines are typically focused on protection of endangered species and protection of critical sites and habitats. But protection of endangered species is not a sufficient goal for biodiversity conservation and resource management, particularly where local communities rely on bushmeat as a critical source of protein and income. In these situations, land-use planning and management should implement regulations that exceed the standards of certification schemes. The PROGEPP model of wildlife management in forestry concessions serves as an example of what can and should be done to achieve sustainable harvest of wild game and prevent local extirpation of non-endangered species. Certification standards and national laws should be strengthened by considering the following aspects of wildlife and natural resource ma-

agement :

1. Pre-logging inventories of wildlife (both protected and hunted species) should be conducted to identify the presence, approximate abundance and distributions of key wildlife species.
2. Pre-logging assessments of hunting practices and needs of local communities living in the area should also be conducted, including the evaluation of tenure and hunting rights.
3. Once the pre-logging assessments of wildlife have been conducted, the goal should be to maintain wildlife populations at or near pre-logging levels. To allow some off-take by local communities, and to take into account yearly variation in wildlife populations and error in measurement of wildlife densities, maintaining populations within 10–20 percent of their pre-logging levels may be practical.
4. Explicit access regulations and adaptive management protocols should be developed to prevent local depletion of important game species while simultaneously assuring monitored, legal hunting access to the local communities that most depend on wild meat.
5. Land-use planning in forest concessions should be viewed as part of a wider land-use planning process that integrates multiple concessions, or concessions and protected areas. A single forestry concession managed in isolation may be too small for the long-term conservation of wide-ranging species, not to mention that the effort and money invested in conserving species will be wasted once animals stray across borders into unmanaged lands.