

## Case Study 1 - Forest Concession Land Use Planning : Lessons Learned from the Cameroon Segment of the Sangha Tri-National Landscape

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### Overview of forest concessions

The Cameroon segment of the Sangha Tri-National (Tri-National de la Sangha – TNS) Landscape covers an area of 1,470,799 ha, divided into permanent forest estate (1,197,707 ha) and non-permanent forest estate (273,092 ha). The non-permanent forest estate (also called the agro-forestry zone) is intended, among other things, for the development of community forestry, community hunting and the agricultural activities of the local people. The permanent forest estate includes the Lobéké National Park (217,332 ha) and forest concessions (980,375 ha). Forest concessions devoted to logging of

hardwood include 14 forest management units, alongside seven hunting zones (ZIC)<sup>1</sup> and six community-based hunting zones<sup>2</sup> (ZICGC).

On the phytogeographical level, these logging concessions are situated in the transitional zone of the Dja evergreen forest, and the semi-deciduous forest containing specimens from the Sterculiaceae and Ulmaceae families. On the whole, the semi-deciduous forests are relatively greater in size. In all, 11 types of vegetation have been recorded.

This diversity of vegetation brings with it a relatively high level of biological diversity. In terms of flora, there are over 764 plant species including 440 tree and shrub species. In terms of wildlife,

<sup>1</sup> ZICs (Zones d'Intérêt Cynégétique) are hunting concessions that the State grants to business operators for safari hunting.

<sup>2</sup> ZICGCs (Zones d'Intérêt Cynégétique à Gestion Communautaire) are hunting areas that the State grants to local communities mainly to satisfy subsistence hunting needs and for safari hunting.

there are about 45 species of large and medium-sized mammals, over 300 bird species, 134 species of fish and 215 species of butterflies. Other taxonomic groups are also well represented. Amongst the mammals, the flagship (and highly threatened) species, such as elephants, gorillas, chimpanzees and duikers, occur in relatively high densities in some forest concessions.

The area is sparsely populated, with a total population of approximately 63,150 individuals, an average of 4.29 inhabitants/km<sup>2</sup>. This population includes the minority Baka people (17 percent), the Bantu divided into several indigenous ethnic groups (Bakwele, Bangando, Boman, Mbimo, Konambembe and Mvon-Mvon) and several other outside ethnic groups. The populations of the urban areas and semi-industrial timber-processing sites are relatively high (21 percent and 15 percent of the total population respectively).

## Process of gazettelement of forest concessions : methodology and main outcomes

### Initial background

Over the years up until 1995, the Cameroonian forest was gradually distributed amongst loggers through the allocation of exploitation licences. In the Cameroon segment of the TNS Landscape, 16 operators had licences, and only a small area remained unallocated, made up essentially of areas of swamp forest, and including Lake Lobéké (see Figure 1). During this period, various bio-ecological and socio-economic studies were carried out by the World Wildlife Fund (WWF) and the Wildlife Conservation Society (WCS).

The results of these studies, coupled with interpretations of aerial photographs and satellite images, led to the proposal by the Canadian Cooperation Office (for the Canadian International Development Agency – CIDA) for a preliminary land-use plan (LUP) for the southern part of Cameroon; a plan that was adopted in 1995 (Decree No. 95/678/PM of 18 December 1995 establishing the indicative framework for land use in the southern forest zone).

This preliminary plan divides the Cameroon segment of the TNS Landscape into permanent forest estate (1,186,120 ha), non-permanent forest estate (224,000 ha), and an extractive zone of 54,256 ha. The permanent forest estate is made up of the Lobéké National Park (208,559 ha) and 14 forest concessions (977,560 ha) (see Figure 1).

### Process of negotiating the boundaries of forest concessions

The process of gazetting forest concessions followed the steps laid down by Decision No. 135/D/MINEF/CAB of 26 November 1999 – “To lay down the procedures for the gazettelement of the forests of the permanent forest estate of the Republic of Cameroon”, which are :

- A preliminary technical report is prepared;
- The general public is notified;
- Local communities are made aware;
- The Gazettelement Commission examines all feedback from the various consultations;
- Final texts are presented to the Prime Minister.

### Preparation of the preliminary technical report

After the preliminary land-use plan, WWF, WCS and German Technical Cooperation (Deutsche Gesellschaft für Technische Zusammenarbeit – GTZ) carried out further studies including bio-ecological aspects, socio-economic aspects and participatory mapping. The main outcomes of these studies were :

- Identification of the critical area of conservation which is now the Lobéké National Park on the basis of high concentrations and high densities of large and medium-sized mammals and other taxonomic groups such as birds;
- Mapping of areas used by local communities;
- Better knowledge of the distribution of wildlife and certain non-timber forest products (NTFPs);
- Identification of the main threats and pressures on the biodiversity of the area, and their origins;
- Establishment of a database on the demo-

graphy of the local populations, areas of high concentrations (logging sites), the location of inhabited areas, and levels of development of different communities;

- Evaluation of the perceptions of the local populations about conservation and forestry, and the potential benefits;
- Development of consultation fora and of a network of local actors to promote consultation and knowledge sharing based on the social dynamics of the region.

The main findings obtained have helped to refine the boundaries of various allocation units and a technical report has been drafted for each of them, including the following items :

- The objectives of gazettelement;
- The boundaries of the forest to be gazetted;
- A brief description of the area (topography, hydrography, vegetation, population, human and industrial activities in the area, accessibility, and a programme of work for the future);
- The description of normal use rights;

### Public notice

Based on the technical report, a notice signed by the minister in charge of forestry was made public via the press and posters, together with a map (scale 1 : 200,000), and a deadline given for the receipt of any reservations or claims from local communities, to be addressed to the appropriate authorities (regional administrative headquarters and the Ministry of Environment and Forestry's regional officials).

### Raising the awareness of administrative authorities, interest groups and the local population

Meetings were held with the administrative authorities and other stakeholders (including representatives of logging companies and local NGOs already operating in the area) who have a role to play in the gazettelement of forests to explain the work to be done and what is expected of them. A meeting was scheduled in the two districts (Yokadouma and Moloundou) affected by the proposed gazettelement. Discussions at the meetings focused on the objectives of the proposed gazet-

tement, the principle of public participation in the management process of the forest stand, the next steps (including a tour to raise public awareness and a consultation meeting on the gazettelement) and the work plan of the Gazettelement Commission.

As regards raising the awareness of local people, all the villages peripheral to the forest concessions to be gazetted were visited. During the meetings, following the presentation of the gazettelement project and the role that the local people would have in the future management of these forest concessions, the various opinions, claims and grievances were collected and incorporated into the minutes. The negotiations focused *inter alia* on: (i) how to respect the use rights of the local population; (ii) compliance with the commitments of business operators, the forest administration and conservation NGOs vis à vis the local population; (iii) collaboration between local communities, logging companies and safari hunting; (iv) mechanisms for mitigating the repercussions from safari hunting and logging; (v) recruitment of local people as workers by the logging companies and safari hunting operators; (vi) the contribution of these companies to community development projects; and (vii) community access to the meat of animals killed by safari hunters.

During this consultation process with various interest groups and local communities, the local forestry administration, WWF and GTZ faced a number of obstacles, including (i) conflicts over land use; (ii) resistance on the part of local communities, logging companies and safari hunting guides to take part in discussions with conservation organizations; (iii) poor governance within the local administrations; (iv) weakness of traditional authority; (v) the level of poverty amongst the local people (average annual income below US\$ 850); (vi) the high rate of illiteracy within local communities making awareness raising rather difficult; and (vii) the breakdown of social structures.

### Work of the Gazettelement Commission

Article 19 of Decree No. 95/531/PM of 23 August 1995 lays down detailed rules for implementing

the forestry regulation, and a regional Gazettement Commission was created bringing together the representatives of all relevant administrations, local members of parliament, mayors and traditional authorities.

The meetings of this commission were held in the headquarters of the districts of Yokadouma and Moloundou. During these meetings, the minutes of various awareness-raising meetings, as well as the views of third parties (deposited with administrative authorities following the publication of the draft gazettelement), were examined. All relevant claims were dealt with, either by modifying the boundaries of the various forest concessions, or by revising the technical reports on them (especially by taking into consideration the role and interests of the population in the future development of the various concessions).

The minutes of the Gazettement Commission, together with their opinions and the entire gazettelement file for each forest concession, were forwarded to the minister in charge of forestry.

### Preparation of texts submitted to the Prime Minister

Based on the minutes of the Regional Gazettement Commission, the final texts of the draft gazettelement were prepared by the minister in charge of forestry and forwarded to the Prime Minister. This draft decree, outlining the objectives of gazettelement as well as the boundaries of the forest to be gazetted, was accompanied by the following items :

- A basic map showing the boundaries of each forest concession, together with a more detailed map to the scale 1 : 200,000;
- A technical report detailing the objectives of the gazettelement and outlining the use rights applicable to each of the concessions;
- The minutes of the meetings of the Regional Gazettement Commission;
- Reports taking into consideration the grievances aired by the local people.

### Main outcomes

This participatory gazettelement process, as compared to the initial project that was aimed at ga-

zetting national parks only, culminated in the following outcomes (see Figure 1) :

- The agro-forestry zone or non-permanent forest estate for the land-use needs of local people has been expanded, from 224,000 ha to 273,092 ha;
- The extractive zone of 54,266 ha has been redesignated, partly as a forest concession and partly as an agro-forestry zone;
- The number of forest concessions (14) remains the same, but their boundaries have been reviewed, and the total area has increased from 977,560 ha to 980,371 ha;
- The southern part of Lobéké National Park was expanded with the integration of a habitat complex, including the Bolo clearing, increasing its total area from 208,559 ha to 217,332 ha;
- The traditional use rights of the local populations were reinstated in each of the forest concessions;
- In the particular case of Lobéké National Park, an area has been created to take into consideration the wishes of the local population with regards to NTFPs (medicinal plants, wild yams, honey, wild fruits).

In general, this gazettelement process has resulted in :

- A reduction in tensions and disputes between parties related to land use;
- The signing of a cooperation agreement known as the “Mambele Convention” between local communities, safari hunters and the forestry administration – an agreement that clarifies the roles and responsibilities of each party towards the sustainable management of wildlife, and access in the different units allocated;
- The signing of an agreement to combat poaching called the “LAB Agreement” between the logging companies and safari hunters, local communities, the forestry administration and conservation NGOs. This agreement clarifies the roles and responsibilities of each player and puts in place mechanisms by which they can contribute to the fight against poaching;
- The establishment of consultation fora between the forestry administration, conservation NGOs and forest concessionaires to

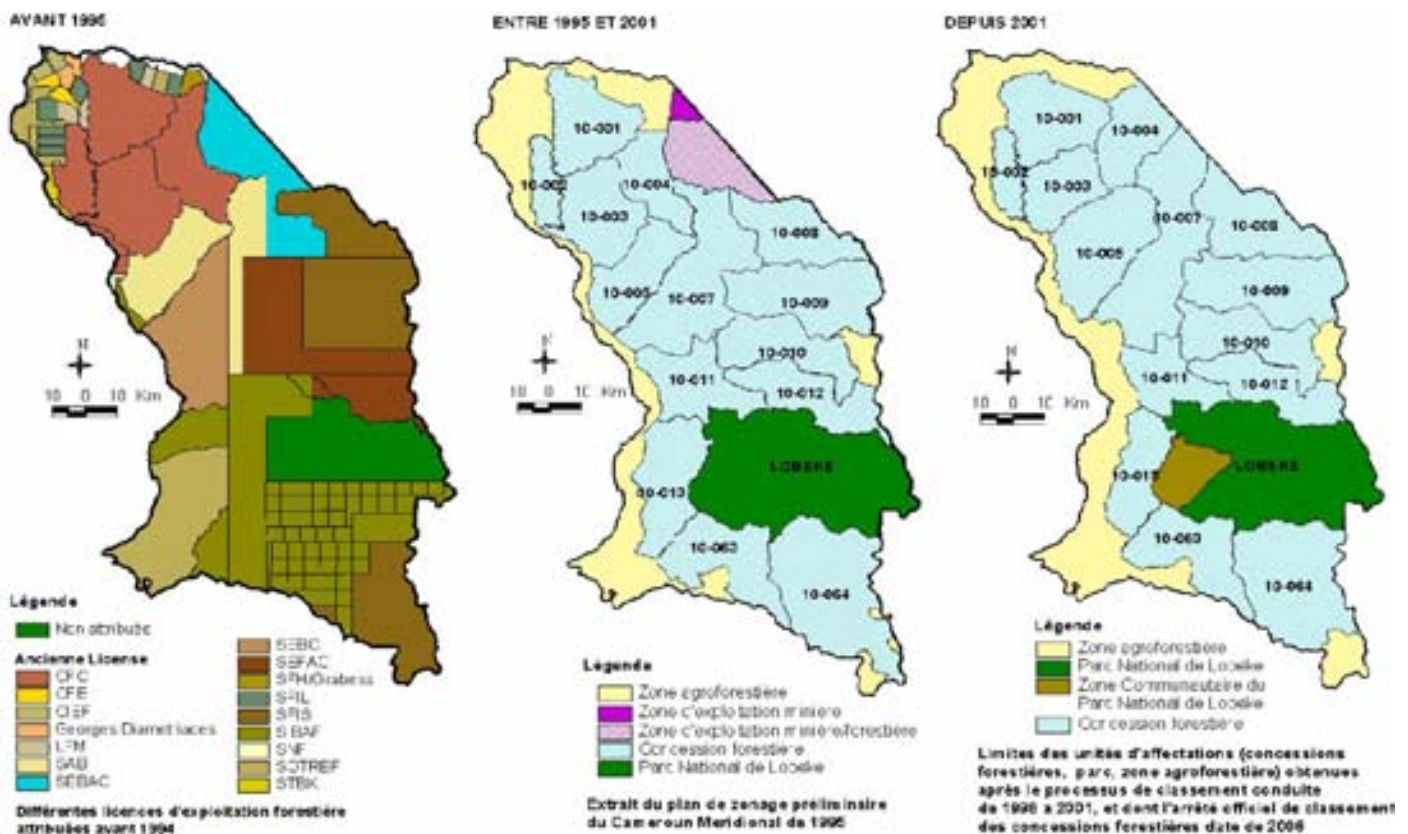


Figure 1. The evolution of land allocation in the Cameroon segment of the TNS Landscape

evaluate and channel efforts towards sustainable management of forest concessions. Within this framework, relations between WWF and the logging companies have greatly improved, and a partnership agreement has now been signed between WWF and the SEFAC Group to combine their efforts towards sustainable management and certification.

## Lessons learned

The forestry administration, WWF, GTZ and other partners have adopted a flexible approach in the gazettement of forest concessions in the Cameroon segment of the TNS Landscape, given the complex character of the zone. Feedback on the monitoring process highlights the following lessons to be learned :

### General observations

- A sincere and open collaboration between stakeholders can lead to a land-use plan (LUP) in which the boundaries of areas for

non-conflicting use may overlap;

- The process of land-use planning in the landscape is more likely to succeed if all stakeholders are able to discuss amongst themselves how the boundaries of non-conflicting allocations can overlap rather than focusing exclusively on the allocation.

### The vision and attitudes of conservation agencies

- The landscape approach to conservation is a science of compromise. No one player has enough power to impose rules that others can not understand or share and, indeed, the weaker players can become a serious threat to biodiversity if they believe that management rules are being made against them. The conclusion to be drawn from this participatory process of forest concession gazettement is that conservation is a social process;
- Developing and managing landscapes goes beyond the concept of protected areas. The security of protected areas within a landscape depends on the sustainable use and

dynamics of the peripheral zone as well as the management of relations between actors involved or affected;

- The process of negotiating the LUP is more likely to succeed if it is driven by the administrative authorities and facilitated by neutral resource persons. Conservation agencies should act as agents who provide technical advice, and should not be perceived as competitive agencies that advocate for conservation at the expense of the public interest.

### Lessons learned from the methodology of the LUP negotiation process

- The experience of gazetting forest concessions has shown that multi-stakeholder collaboration in the process has a role to play in the resolution/prevention of conflicts upstream, in the consolidation of each stakeholder's right to natural resources, and that it catalyzes action and establishes a climate of trust between actors. It may seem a long and costly process, but it offers a long-term guarantee that the LUP obtained will be consistently defended by the parties involved, who have clearly understood their interest in protecting and ensuring the availability of resources on which their survival depends, as well as that of future generations;
- The methodology used to develop the LUP must include mechanisms to resolve conflicts of use, secure the use rights and development needs of all stakeholders, and ensure the creation of a climate of trust. Through this methodology, the negotiated LUP offers a better chance for actors to be involved in the development and execution of management plans of the various use units in a complex context such as that of this Cameroon segment of the TNS Landscape;
- The commitment of public institutions at the micro, meso and macro levels is a prerequisite for a successful LUP development pro-

cess and for the management of the various use units;

- The multidisciplinary approach, based on better knowledge of the environment by the facilitator (s) offer (s) potentially a good performance and strong commitment of the actors in the process of drafting and negotiating the LUP.

## Process of drawing up development and management plans for forest concessions: methodology and main outcomes

The 14 forest concessions of the Cameroon segment of the TNS Landscape were awarded to nine logging companies. These companies are part of four major groups: (i) the THANRY/VICWOOD Group, made up of the CFC, SBEC and SAB companies, who were allocated 364,565 ha; (ii) the SEFAC Group (SEFAC, SEBAC, Filière Bois) – 406,815 ha; (iii) the ALPICAM -GRUMCAM Group (Alpicam, Habitat 2000) – 129,673 ha; and (iv) the STBK Group (STBK) – 89,322 ha (see Figure 2).

### Methodology

The process of developing a five-year management plan and annual operational plans for logging concessions follows the guidelines of the legislative and regulatory framework in force<sup>3</sup>. The process differs according to which type of plan is being developed.

### Management plans

Management plans for forest concessions, generally drawn up by approved consultancy firms, will usually include the following steps :

- Carrying out additional surveys as required (socio-economic, management inventory, etc.);

<sup>3</sup>Law No. 94/01 of 20 January 1994 on forestry, wildlife and fishery regulations; implementation Decree No. 95/531/PM of 23 August 1995 which lays down terms and conditions for implementing the forestry regulations; and subsequent sundry decrees and decisions.



**Figure 2. Distribution of forest concessions**

- Identifying management options based on the findings obtained from the surveys;
- Presenting a public summary of management options to the main stakeholders affected;
- Validation of the document by an inter-ministerial committee.

### a. Carrying out additional surveys

The process of gazetting various concessions has provided considerable data on the landscape. For each forest concession, the information available is analyzed, then additional socio-economic surveys and management inventories are carried out if needed, together with mapping of vegetation types. Within this frame-

work, WWF has a large database that helps in identifying the specificities of each concession and what additional information needs to be collected.

Socio-economic surveys include demographic data, and data on the use of landscapes and natural resources by the local population. Management inventories of tree and shrub species are made on the basis of a sampling plan approved by the administration in charge of forestry; the sampling rate ranges from 0.5–1 percent. All stems of trees and shrubs with diameter at breast height greater than 10 cm are identified and treated differently according to their diameter class. The vegetation maps are drawn from analysis of aerial photographs.

### b. Defining management options based on findings obtained

Based on the findings of the various surveys, the management plan document is developed, and is made up of the following parts:

- Biophysical features of the forest;
- Socio-economic environment;
- State of the forest (history, tree and shrub density, gross inventory volume and productivity of the forest);
- Development objectives for production forests that could either be exploited for commercial purposes or local communities allowed access for subsistence activities;
- Participation of the population in management (reminder of the rights and duties of the local population, peasant-forest committees);
- Duration and review of the management plan;
- Economic and financial balance sheet.

### c. Presenting a public summary of management options to the main stakeholders affected

A summary of management options is presented and made public a month later during a meeting of all stakeholders. The purpose of this meeting is to present the expectations and duties of each stakeholder in the validated implementation of the plan.

#### **d. Validation of the document by an inter-ministerial committee**

In keeping with the regulatory framework, the adoption of the draft management plan takes place during a session of the inter-ministerial committee, whose members are appointed by the Prime Minister. This committee's mission is to examine the contents of the document and give their opinion.

#### **Annual operational plans**

The five-year management plan summarizes the actions outlined in the management plan for each five-year block. It deals with the major operations to be carried out (main infrastructure to be put in place, boundary demarcation of series of protection<sup>4</sup>, etc.).

The annual operational plan describes all the interventions and the terms and conditions of their execution on an annual basis. Determining these interventions is done on the basis of exploitation inventories at 100 percent of the annual allowable cut. According to the regulatory framework, information collected should include the species exploited by the concessionaire, and having reached the minimum management diameter, followed by the quality of their trunk and topographic features of the environment (swamp, steep slope, running water). Counting is carried out using plots of 250 x 1000 m. The information is recorded on a grid, based on chaining after every 50 m. The gathering of these data results in distribution maps of tree stands, species to be logged and the road network; topographic and vegetation maps; and tables of stands and trees to be logged, with the volumes expected from each of them.

### **Main outcomes**

#### **General framework**

The management plans of 13 of the 14 forest

concessions of the Cameroon segment of the the TNS Landscape have been validated and are being executed. The annual operational plans for each of them are being developed in accordance with the regulations in force.

#### **Some gaps observed and measures taken**

From analysis of the management plans of the various concessions, it seems that wildlife management measures are not sufficiently taken into account. In the case of annual operational plans, the emphasis is on species to be exploited by the concessionaires; however, for sustained and integrated logging, other layers of information are essential. These are distribution maps of (i) seeds; (ii) saplings (for the next round of planting); (iii) areas of high concentrations of fragile animal species; (iv) areas of high ecological value such as clearings and bays; (v) NTFPs; and (vi) cultural and sacred sites for the local population.

To overcome these shortcomings WWF, with financial support from USAID/CARPE, has developed partnerships with two forest concessionaires interested in sustainable forest management and certification (SEFAC Group and CFE ceded to Habitat 2000 – ALPICAM). Within the framework of these partnerships, in order to enrich the management plans by better taking into consideration bio-ecological aspects and especially fauna, and the socio-economic aspects of sustainable logging, additional wildlife inventories and socio-economic surveys were carried out by WWF in six concessions with joint funding of two partners (40 percent for WWF and 60 percent for the concessionaire). The findings have led to the identification, in each concession, of areas of high concentrations of animal populations, corridors for migrating animals, sensitive habitats, areas containing resources essential to the Baka people which should be considered when planning logging operations. Based on these recommendations and those of the socio-economic surveys, the SEFAC Group has made the following structural, organizational and functional

<sup>4</sup> A protection series is a perimeter aimed at protecting a fragile ecosystem or an area of social and ecological interest (Law No 94/01 of 20 January 1994).



changes :

- Strengthening the technical management unit (which already has a forestry engineer as coordinator), with the recruitment of (i) a sociologist charged with the co-management and other social aspects of sustainable logging; (ii) a cartographer charged with the management of the GIS database, the drawing of various maps (micro land-use planning map, road network map, lumberyard map, ...); (iii) a forestry works engineer to guide logging technicians (fellers, haulers, drivers, ...) on complying with management rules; and (iv) an environmental engineer to guide and monitor compliance with environmental standards;
- Setting up an anti-poaching committee to combat illegal hunting in their concessions and trade of bushmeat in populated areas (e.g., Libongo and Bela). The activities of this committee will include the organization of awareness campaigns, internal staff control, reporting of instances of involvement in poaching, and providing information to the local services of the Ministry of Forestry and Wildlife (MINFOF) to enable better organization of patrols to combat poaching;
- Logistical and financial support increasingly significant to the local services of MINFOF to organize patrols to fight against poaching. These contributions are estimated at US\$ 20,000 to 30,000 per year;
- Better consideration of the specific needs of the indigenous Baka people in logging operations, including (i) developing a framework document for interventions for the Baka people; (ii) identifying and mapping their resources landscape within the concessions; (iii) the signing of co-management agreements for these areas; and (iv) increasing the number of Baka in the company's personnel;
- Facilitating, on the basis of socio-economic surveys, the creation of peasant-forest committees – fora for dialogue between the

concessionaire and local communities;

- Drawing up a micro land-use map for the whole concession, highlighting areas of high animal concentrations, sensitive habitats, migration corridors for elephants, and Baka resource landscapes. Rules have been set to minimize the impact of logging operations.

To address the shortcomings observed in the inventories of logging sites, WWF has developed a database of multi-resource inventories using the CyberTracker<sup>5</sup> programme, and trained technicians of the SEFAC group to use it. The unique feature of this programme is that prospecting is digital and not on cards as provided by the regulatory framework, and all information is geo-referenced. This information includes: all stems of tree species with a diameter of more than 50 cm, signs of the presence of species of large and medium-sized mammals, NTFPs, special ecological areas, sacred and cultural sites for local populations, elements of topography (swamps, running water, slopes) with their features, signs of human activities (hunting, fishing and gathering), and old logging infrastructure. According to the regulatory framework, only some of these data (stems of tree species with the minimum diameter, special ecological zones and elements of topography) are noted on the grid-scale cards.

The gathering of these layers of information collected with the CyberTracker allows for better planning of logging operations (for example, the road network map overlapping with areas of high concentrations of wildlife or the location of sensitive sites within the annual allowable cut area (see Figure 3)). Moreover, taking into account the number of future seedlings by diameter class allows the concessionaire to make projections for the next planting season, based on the estimated volume after 30 years with the combination of the diameter growth rate and mortality rates.

In the particular case of the SEFAC Group, the combined efforts of partners has led to the latter obtaining an FSC certificate for four of its conces-

<sup>5</sup> The CyberTracker is a programme that works on a set made up of a small pocket computer linked to a GPS, that facilitates note taking on the ground and their direct transfer to a computer upon return to base. It makes it possible to collect simultaneously several types of data that are difficult to collect using standard data collection sheets.

sions, covering an area of 314,655 ha. Within the framework of this partnership, WWF has focused on conducting additional surveys (on the basis of joint funding) and capacity building of technicians of the Group on various aspects of sustainable management. The SEFAC Group has committed itself to improving its logging operations by implementing the required standards following the recommendations of various studies, pre-audits and audits by approved firms.

## Lessons learned

- In the light of the various phases of the development and implementation of development and management plans for forest concessions, it is evident that sustainable forest management and certification are
- complex processes that require various kinds of expertise. The forest concessionaire alone cannot have all the specialties and implement all the requirements. It is therefore necessary to develop partnerships with organizations that can provide input into the process. In the case of FSC certification of the SEFAC Group, the partnership developed between WWF and the Group is a case in point. It follows in the footsteps of the partnership developed between WCS and the CIB which has resulted in the certification of the KABO Forest Management Unit, located in the Congolese segment of the TNS Landscape;
- The experience of partnership between WWF and SEFAC has shown, among other things, that if well managed and with a little determination, logging companies can

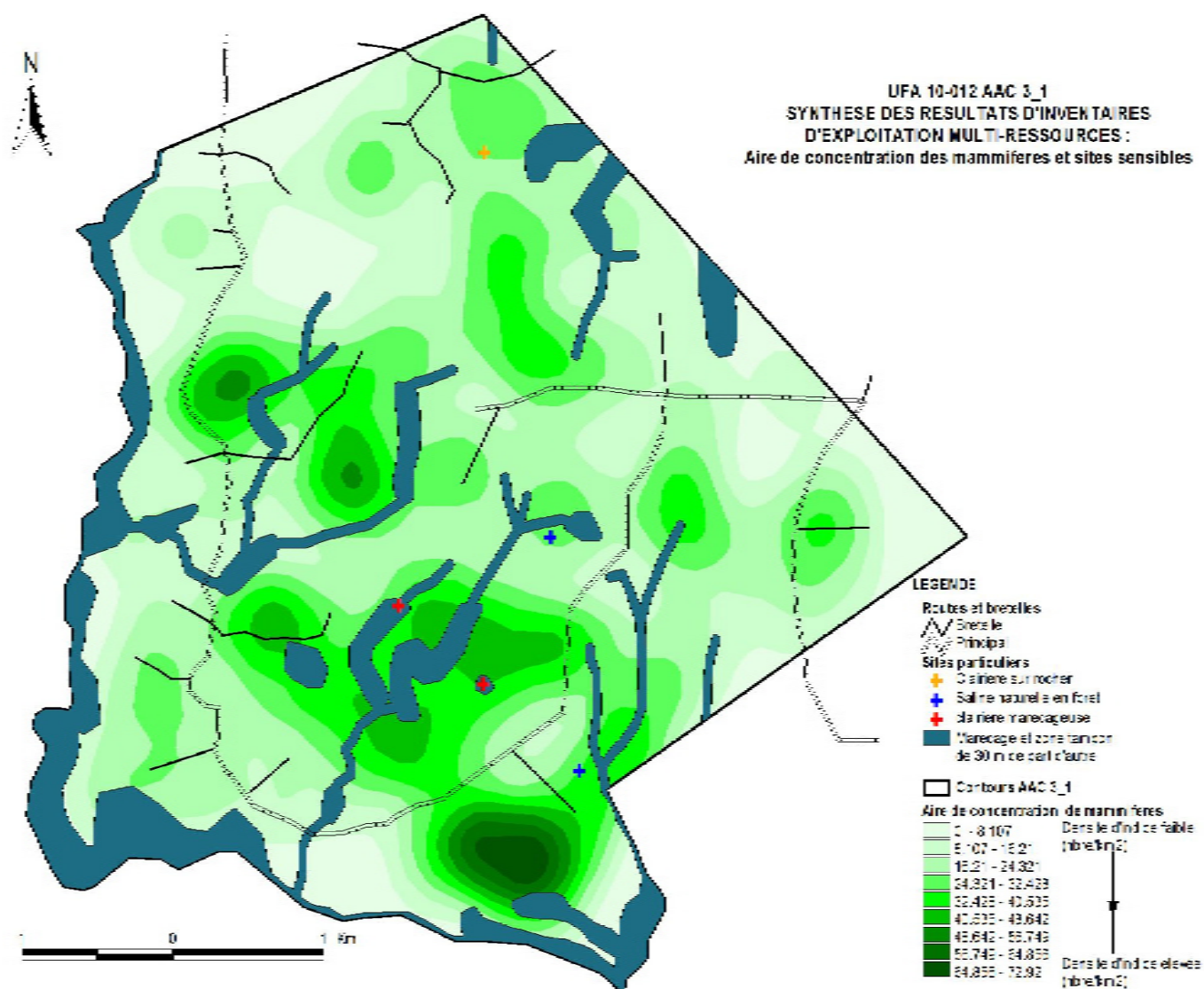


Figure 3. Map of the road network overlapping with areas of high concentrations of wildlife, and the location of sensitive sites within the annual allowable cut (AAC) area

make operational and technical changes to support the process of sustainable management;

- The innovative CyberTracker experience presented above is not inconsistent with the regulatory framework and makes it possible to improve on how to plan and carry out logging operations. The success observed can contribute in improving regulations;
- When forest management is almost all, or completely, done internally, by a service equipped with all the necessary skills (forestry engineers, a social science specialist, a GIS specialist ...), it has more chance of achieving satisfactory results in terms of sustainable management.