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# PILOT TOURIST SAFARI HUNTING PROGRAM

## IN NORTHERN CONGO

DRAFT

Report Prepared by

Ministere d'Agriculture, Elevage, Eaux, Forets, et Peches  
Congo Forest Conservation Project (WCS)

GTZ

SCI

Congo Safaris

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## TABLE OF CONTENTS

<b>EXECUTIVE SUMMARY</b> .....	<b>3</b>
<b>INTRODUCTION</b> .....	<b>4</b>
BACKGROUND.....	4
GAME MANAGEMENT IN CONGO.....	6
CONSERVATION IN CONGO.....	7
DEVELOPMENT OF TOURIST SAFARI HUNTING IN CONGO.....	7
MAJOR IMPEDIMENTS TO DEVELOPING A SUSTAINABLE SAFARI INDUSTRY IN CONGO.....	8
<b>TOURIST SAFARI HUNTING PROSPECTION, KABO UFA</b> .....	<b>9</b>
BOMASSA MEETING.....	10
<i>Results of Bomassa Meeting</i> .....	10
Congo and Tourist Safari Hunting.....	10
KABO SURVEY.....	12
<i>Kabo Field results</i> .....	15
Habitat.....	15
Large mammals.....	16
Human Settlement in the Kabo UFA west.....	21
RECOMMENDATIONS FOR TOURIST SAFARI HUNTING IN KABO.....	22
<b>NATIONAL TOURIST SAFARI HUNTING PROGRAM</b> .....	<b>23</b>
GOVERNMENT POLICY.....	23
<i>Requirements for Development of a Sustainable Tourist Safari Hunting Industry in Congo</i> .....	24
RECOMMENDATIONS.....	24
<i>Game Species and Quotas</i> .....	24
<i>Species approach to safari hunting</i> .....	29
<i>Hunting Seasons</i> .....	30
<i>Conservation measures</i> .....	31
<b>PILOT PROGRAM TO SERVE AS NATIONAL POLICY ON SAFARI HUNTING</b> .....	<b>34</b>
CONCESSIONS.....	35
SAFARI HUNTING COMMITTEE.....	36
PROFESSIONAL HUNTING ASSOCIATION OF CONGO (PHAC).....	37
CONCESSION TERMS.....	38
INTERNATIONAL RELATIONS.....	40
<b>CONCLUSION</b> .....	<b>42</b>

## EXECUTIVE SUMMARY

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The goal of this study was to develop guidelines to be used by the Government of Congo in developing the Tourist Safari Hunting (TSH) industry in Congo. In recent years only one TSH operation, Congo Safaris based south of Odzala National Park, has been active in Congo. By arrangement with the Government and the EU-funded ECOFAC project that is currently working on a management plan for Odzala, Congo Safaris has been operating in the *Domaine de Chasse de Mboko* and the *Reserve de Faune de Lekoli-Pandaka* immediately adjacent to the national park. The experiences of Congo Safaris and the ECOFAC project have shown that there a great need to organize THS in Congo, especially in view of the Government of Congo's desire to further develop the safari hunting industry.

Experience in neighboring countries has shown that tourist safari hunting rarely has a positive net effect on the conservation status of prey species in the hunting zones. In most cases the professional hunter merely adds to the hunting pressure without instilling any conservation activities or improving wildlife management in the hunting zone. The main reasons for this are poor safari hunting policies and an insufficient legal framework. The results are large profit margins for operators and continued degradation of the resource base. In Congo today, because THS is just beginning there is an opportunity to define clearly national policies on THS and to improve the legislation regulating the industry.

The results of the Kabo prospection mission showed that there are sufficient populations of target prey species to begin a pilot THS operation in the area. However it is believed that 25 years of forest exploitation in the Kabo UFA has had a dramatic negative effect on the structure of the forest and on wildlife populations. Initiation of forestry management policy which makes ecosystem management a priority is essential if Congo intends to exploit UFAs for logging and wildlife in the long term.

The conclusion of this consultative mission was a recommendation that two pilot safari operations could begin in 1995 and that discussions should be held with the Congolese Government leading towards preparation of a national wildlife management scheme of which THS would be a part.

## INTRODUCTION

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### Background

The Republic of Congo covers a surface area of 342,000 sq. km, bordered by the Central African Republic to the north, Cameroon and Gabon to the north and west, and Zaire to the east and south. Congo has a population of about 2.6 million inhabitants. Human population densities are among the lowest in Africa, averaging 5 inhabitants per sq. km. (This compares to 20/sq. km in Cameroon and 12/sq. km in Zaire.) Approximately 97% of the population is Bantu, made up of 74 ethnic groups. The non-Bantu in the northern, forested region of the country are the Baka and Aka Pygmy ethnic groups, estimated at 30,000 inhabitants. The majority of the population is urban, Congo being one of the most urbanized countries in Africa.

The economy of Congo is based almost solely on the exploitation of its natural resource base. The petroleum sector dominates the economy and also, because Congo has in the past had good borrowing power based on oil revenue as collateral, is responsible for the very large foreign debt of some \$US 6.25 billion.

Tropical forests cover ca. 65% of Congo's territory. These forest zones have been classified as those exploitable and those non-exploitable for timber production. In the south of the country the majority of the exploitable area has been cut over once. In the north of the country the forest area has been allocated into 21 UFAs (*Unités Forestières d'Aménagement*) covering 8,984,749 hectares. Thus far eight of these UFAs have been awarded to logging companies yet less than 10% of the total exploitable forest area has been exploited. Forestry is the second most important sector in the economy. However the value of wood exports in 1993 were only \$US 115 million due in particular to problems in the transportation sector. The devaluation of the CFA in 1994 and new overland transport routes through Cameroon may restore competitiveness in this sector in the next few years.

While forestry can lead to significant economic growth in areas with no history of forest exploitation, particularly since other indigenous economic activities are usually undervalued, the long-term ecological effects of this activity are not properly assessed.

Mechanized logging operations in northern Congo depend on high grading of virgin sapeli (*Entandrophragma cylindricum*) and sipo (*E. utile*) stands. Few data exist on sustainable rotation cycles for these species. In practice long-term exploitation is based on alternate, less valuable species as infrastructure develops, not on rotations of primary species. This may lead to economic growth but the costs to sustainable development have yet to be evaluated.

One way to reduce the risks of relying on economic growth based on single resource economies is to diversify. If other economic activities such as tourist safari hunting (TSH) are initiated, which also lead to growth but which depend on sustainable yields of forest resources, this may lead to more sound management of these forests.

There are doubts in some quarters about the compatibility of commercial forestry exploitation and TSH.

The positive aspects of forest exploitation vis à vis TSH is that it enhances the "edge effect" by increasing the openings between forests and logging roads. Certain game species, especially bongo, buffalo, giant forest hog and yellow-backed duiker appear to congregate along these edges, feeding on the lush vegetation that grows there.

This "edge effect" along logging roads actually simplifies the hunting method to be used and increases the success rate of the tourist safari hunter. Logging roads are used extensively by big game hunters to access and locate trophy individuals of many game species. Very often the game is taken within a few kilometers of these roads. The ease of this hunting, including the possibility of returning each day to a permanent base camp, is important since many of the clients able to pay for such activities are elderly and are likely incapable of enduring the rigors of the harsh forest environment.

The negative aspects of logging vis à vis TSH are as follow:

- logging communities are created that have little long-term interest in the conservation of the area.
- uncontrolled subsistence and commercial poaching associated with logging operations considerably reduces the faunistic potential of the areas.
- current logging practices often result in relatively impenetrable secondary forests, which many feel has low value as wildlife habitat.

In developing strategies for buffer zones located on the periphery of the Nouabale-Ndoki National Park, the Nouabalé-Ndoki Project seeks to diversify the economies of these areas through the development of activities based on the necessity to maintain intact ecosystems. Tourist safari hunting, is an extractive activity that, when done in the true spirit of sport hunting, depends on and may be able to contribute towards long-term sustainable production of forest resources.

In East and Southern Africa TSH revenues have reached \$US 300 million a year in recent years. Yet there has also been significant degradation of the resource base due to mismanagement and corruption. TSH is fast expanding into the forest regions of francophone Africa where exotic species such as elephant, leopard, bongo, western sitatunga, dwarf buffalo, giant forest hogs, red river hogs and yellow-backed duiker are major attractions (Cameroon and Central African Republic).

A well-managed TSH operation is a minimally extractive, high income-yielding industry. To a certain extent it is economically self-regulating based upon maintaining a conservative harvest level in order to maintain trophy quality of key game species. It has minimal impact on both the local ecology and local cultures, relying on very low numbers of high paying clients. Currently a bongo hunt has a gross economic value of ca. \$US 1,500/day. Other sectors which benefit from this activity include local and international air transport companies, hotels and restaurants. A poorly managed TSH operation is highly extractive, realizes high profits for the operator and almost no other stakeholder, often involves corruption and may contribute to the collapse of the resource base.

The major objective of this effort is to assure that if TSH is to expand in Congo that it be done in a coherent way which is sustainable and in a way which enhances wildlife management in currently unmanaged areas where there is a very high level of illegal hunting at the current time.

## **Game Management in Congo**

Until relatively recently the Republic of Congo held poorly known, but very significant wildlife resources. During French colonial rule wildlife reserves and one national park (Odzala) were established, but in general the Congo was never considered an important wildlife country in comparison to neighboring Chad, CAR and Cameroon where extensive systems of wildlife reserves were established and managed. Post independence has brought an influx of arms and modern infrastructure which has permitted the rapid depletion of many zones (e.g. Lefini Reserve) and considerably reduced populations elsewhere.

The Congo possesses game laws (48/83 du 21/04/1983 and 49/83 du 21/04/1983) which form the legal basis for regulation of hunting in Congo. Due to lack of a history of game management in the country, inappropriate legislation, lack of political will and the means to enforce game laws, game regulations are largely ignored in most parts of the country. This has had severe consequences on wildlife populations in most of Congo except in a few isolated places in the north.

The *Ministère de l'Agriculture, de l'Élevage, des Eaux et Forêts et de la Pêche* (MAEEFP) is currently revising the two laws regulating the exploitation of the fauna in Congo. A thorough review of the current laws and the realities of Congo should be made before any new legislation is passed. Specific regulations governing tourist safari hunting should be part of any new hunting regulations.

As part of the buffer zone component of the Nouabalé-Ndoki Project, the traffic in both bushmeat and ivory is being monitored at Kabo, Liouesso, Ouesso, Impfondo and Brazzaville. This will help to determine the degree of both subsistence and commercial harvests of wildlife. This information will serve as a basis of developing a game management plan for the area. Our initial impression is that offtake is high and probably not sustainable in many areas.

The peak of elephant poaching in Congo was in 1988/89. From 1980-1988 hundreds of tons of ivory were exported from the Congo as elephants were massacred. The CITES ban in 1989/90 resulted in a major decline in elephant poaching in the Congo, but from 1992-1995 there has been a steady rise in elephant poaching in the Congo. The price of ivory in the forests of the north has risen from 2,000 CFA to 7,000 CFA/kg on the average over the last two years. Demand is rising and certainly poaching has increased as the economic situation in Congo continues to deteriorate. Elephant meat is also in high demand and is sold quite openly in most northern marketplaces. A rice sack of elephant meat sells in the Congo for 30,000 CFA. Elephant and other bushmeat is transported to the capital Brazzaville via scheduled airline flights with little or no enforcement of game laws by MAEEFP agents. It is apparent that the short-term benefits of the CITES ban for the country's elephant population is beginning to wear off and that game laws are largely ignored because they do not address the realities of the current socio-economic environment in Congo. Unless viable long-term solutions can be found and implemented, deterioration of the natural faunistic base will continue.

## Conservation in Congo

Since the early 1980s, the MAEEFP has had a *Direction de Faune* (now called the *Direction de la Faune et de la Flore*) in charge of game management. During the period of communist rule in Congo funds were made available for an ambitious project called *Projet d'Inventaire et Aménagement de la Faune* which was funded under the second five year plan. While this plan was quite well-funded at the outset, implementation suffered from heavy administration and a lack of concrete action on the ground. The project ended largely in failure.

Democratic change starting in 1990 brought new life into conservation in Congo with the initiation of several international conservation projects. To date three major projects have begun operations in Congo: the Congo Forest Conservation Project (Nouabalé-Ndoki Project) funded by USAID, GEF and GTZ; the *Ecosystèmes Forestiers d'Afrique Centrale* (ECOFAC) project funded by the European Union; and the Protected Area Conservation and Management Project (PROGECAP) funded by the Global Environment Facility. These projects have begun a series of conservation activities at seven key sites throughout the Congo. Conservation activities have now begun in a number of domains and positive results have begun to accrue, e.g. the creation of the first post-independence national park, the Nouabalé-Ndoki National Park of 387,000 hectares.

A number of these projects are in the initial phases of establishment. Most have a buffer-zone component intended to create protected zones around the reserves. In these buffer zones, development projects are planned that will be based largely around activities which are deemed ecologically sustainable.

## **Development of tourist safari hunting in Congo**

Historically Congo has not been an important destination for tourist safari hunting. As a result Congo has never had an important safari industry and has never developed legislation to regulate it.

In the past several years TSH in the forests of central Africa has become of interest to the tourist safari hunting industry. This is primarily for two reasons:

- many savanna regions elsewhere in Africa have been considerably affected by overhunting, human occupation and a disorganized tourist safari industry that has resulted in a degradation of the quality of the industry in many countries.
- tourist safari hunters have become interested in forest-dwelling species such as forest elephants, forest buffalos, forest leopards, giant forest hogs, duikers, and of particular concern to Congo, bongo antelopes.

In 1992 one safari operator, Eric Stockenstroom, started a tourist safari hunting operation in Congo. Mr. Stockenstroom has hunted in a concession to the south of Odzala National Park with moderate success. He cites the major impediment to success as the fact that he can not offer clients elephant, leopard or bongo. He has also had significant problems in gaining permission for his clients to enter Congo with their own arms. He believes that if these problems were resolved, hunting safaris could be successful and profitable in Congo.

In neighboring Central African Republic commercial safari operations have been running successfully for the past several years based on bongo hunts. Ms. Martine Challiol, owner of Aouk-Sangha Safaris, has been hunting in the Dzanga-Sangha Dense Forest Reserve, adjacent to the Kabo UFA, for the past seven seasons, selling safaris on the strength of success in bongo. In the 1994 season Ms. Challiol had 10 clients all of whom wished to hunt bongo. She received a quota of seven bongo and achieved a 100% success ratio in 1994 and 1995. Previous years have seen similar success. In adjacent Cameroon several operators have been hunting in the Lac Lobeke region. They offer not only bongo but elephant and leopard as well. These operators too have been quite successful (particularly since lower permit fees and taxes d'abattage in Cameroon result in larger profit margins than in CAR).

## **Major impediments to developing a sustainable safari industry in Congo**

The major shortcomings from a game management point of view of the safari operations in neighboring Cameroon and CAR are:

- professional hunters/safari operators do not participate fully in conservation activities;

- many use methods which are illegal and destructive, such as jacklighting on roads and in clearings;
- sport hunters are not required to consider ecological peculiarities of individual species when choosing their prey;
- professional hunters/safari operators invest very little in infrastructure or personnel;
- revenue systems favor, almost exclusively, the private operator with little benefit to the local economy;
- there is a great deal of competition with little legislation controlling the trade leading to chaos in the industry and degradation of the resource base.

The two principal causes of the above problems are 1) that the safari hunting policies and legislation in place in both CAR and Cameroon are inadequate and 2) that both countries lack the resources and/or determination to enforce existing legislation. The result is large profit margins for operators and continued degradation of the resource base. If the number of safari operations in Congo increases, unless sport hunting policies are more clearly defined, legislation regulating the industry improved and a suitable management infrastructure put in place on the ground, the same result is to be expected.

In developing the *Projet Intégré de Conservation a Kabo*, the Nouabalé-Ndoki Project would collaborate with a tourist sport hunting operation which is beneficial to conservation, the government, local people and the operator and to the protection of the Nouabale-Ndoki National Park. If carefully implemented, the proposed operation in the Kabo UFA could serve as a model for development of the industry in other parts of the country and elsewhere in central-west Africa.

## **TOURIST SAFARI HUNTING PROSPECTION, KABO UFA**

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A study was undertaken in the Kabo UFA from March 15-24 to determine the economic, ecological, legal and social feasibility of setting up a sport hunting operation in the Kabo UFA (see terms of reference in Annex II). Team members, their affiliation and their specific area of expertise were as follow:

- Dr. Oko (Advisor to Minister of MAEEFP for Game Management, team leader)
  - integration of safari operation with current government policy and plans
  - zoning of sport hunting operation
  - integration of sport hunting with logging and concessionaires
- Mr. DeGeorge (Resource Ecologist, Safari Club International)
  - market potential
  - economic feasibility
  - revenue sharing
- Mr. Stockenstrom (Professional Hunter, Congo Safaris)
  - economic feasibility by species
  - cost estimates of setting up operation (infrastructure and personnel)
  - revenue sharing

- Mr. Blake (Forest Ecologist, Nouabale-Ndoki Project, Wildlife Conservation Society)
  - sport-hunting operations
  - ecological feasibility
  - integration of the local population
  - infrastructure development
- Ms. Adouki (Environmental Lawyer, Marien Ngouabi University)
  - legal feasibility
  - legislative imperatives and recommendations
- Mr. Fay (Director, Nouabale-Ndoki Project, Wildlife Conservation Society)
  - integration of sport hunting operation with conservation activities
  - ecological feasibility by hunted species
- Mr. Hoffman (Principal technical advisor, Nouabale-Ndoki Project, GTZ)
  - possibilities for integration with potential PICK program
  - infrastructure
- Dr. Hecketsweiler (Technical advisor for science, Nouabale-Ndoki Project, GTZ)
  - integration with the village backdrop of the concession.

## PLANNING MEETING

The entire team met in the Sangha Region on the 8th and 9th of March. Discussions were held on the general approach to be taken in the tourist safari hunting industry in Congo, objectives of the mission, logistics and specific terms of reference for each of the consultants.

### *Results of Planning Meeting*

#### **Congo and Tourist Safari Hunting**

All consultants were in agreement that there are many tasks that must be faced by the Ministère de l'Agriculture, de l'Élevage, des Eaux et Forêts et de la Pêche (MAEEFP) before it can hope to make tourist safari hunting a viable industry in Congo. All parties were in agreement that the following systems should be put in place in order to establish a viable, sustainable tourist safari hunting industry in the Congo:

- **Ecological feasibility.** A feasibility study should determine which species can be hunted in a sustainable manner in each hunting zone to be established. This would not involve exhaustive population studies, but instead population evaluations by individuals who work in the safari industry--hunting the same set of species in the same environment, forest ecologists, local guides and Ministry representatives. Because initial exploitation plans would be carried out in a conservative manner, a qualified team will be able to evaluate in a short amount of time, using key reconnaissance surveys throughout the area, which species could be hunted and at what initial levels.

A thorough study should be undertaken to assess the number of bongo and other target species which are harvested in the tri-national area and what the booking rates in the past have been. The potential market should be further explored at the annual Safari Club International conferences. It is believed that a professionally-managed hunting concession, which can consistently produce quality trophies with high success rates, will be able to charge a considerable premium. Experience in neighboring Cameroon and CAR has shown that the market demand for bongo safaris in forest zones is sufficient to sustain several operators. It remains to be assessed just how large the potential market is, and how much clients are willing to pay for various hunts, taking into account past results in Cameroon and CAR. There is no doubt that several operators are currently considering the Congo to establish operations. Every effort should be made to assure that growth is not too quick such that supply outstrips demand and to avoid confusion.

- **Economic feasibility.** Many questions need to be answered in this domain. All interested parties wish to make the industry profitable to their particular interest. A balance must be found between reasonable profit in relation to the resource available, reinvestment in the activity (infrastructure, game management, training), and equitable distribution of profits between operators, local populations, national, regional and local authorities, and others (e.g. nearby protected areas).
- **Research.** A thorough review is necessary of what is currently known about the ecology of each potential prey species. These data should be assembled in a data base for each species. Recommendations, financing and implementation of long term ecological studies should be made. These studies should focus on the breeding ecology and population density of target species which will permit the establishment of norms to be used in hunting each species. These norms should be written into TSH regulations. Funding for such studies should be sought through the international community, the safari industry and through existing conservation projects.
- **Monitoring System.** A monitoring system should be set up throughout the tri-national area (Central African Republic, Cameroon, Congo), and in Gabon if tourist safari hunting begins there. This program will permit an objective evaluation of the state of the hunting areas, the quality of the hunting operators, the economic and conservation benefits of the operation, the demand for hunting safaris in central Africa and a more general approach to management of the tourist safari hunting industry in the region.
- **Safari hunting committee.** A committee should be established to oversee the management of the hunting industry in Congo. This body would be responsible for screening potential operators as to their technical, professional and financial capacity, for carrying out feasibility studies, the establishment of hunting zones and quotas, contracts, recommendations for amendments to the laws regulating

the industry, and monitoring and control of operators. See below (page 35) for further details.

- **Professional Hunting Association of Congo (PHAC).** A professional hunting association should be established, a wider forum than the safari hunting committee, which would permit professional hunters, the conservation community, private individuals and government employees to voice their views on the tourist safari hunting industry. See page 35 for further details.
- **Legislation.** Currently Congo does not possess coherent legislation governing the tourist safari industry. Reviews are needed of current Congolese legislation regarding sport hunting including: species legally hunted, hunting season, company fees, license fees, trophy fees, requirements of professional hunters, impact of international agreements and restrictions on the industry (e.g. CITES, USFWS, EEC). The legal rights and obligations of interested parties must be determined. The legal procedure used to set up a safari operation in Congo needs to be described including: establishment of a concession system, geographical and time limits of concessions, how concessions are to be attributed, contracts (i.e. "*cahier des charges*") documenting the existing infrastructure and required further developments in relation to the size of the operation envisaged and the size of the area to be exploited. This should include roads, access to hunting zones, camps, vehicles, and other equipment. The possibilities for joint use of logging, conservation and tourist infrastructure located within UFAs needs to be evaluated, as well as responsibilities vis à vis employment, training, local people), ownership of infrastructure, concession fees, hunting etiquette including hunting methods and arms which are permitted and importation of firearms and ammunition. A thorough review of existing legislation in neighboring central African countries (Cameroon, CAR, Gabon and Zaire) would be of great help in this regard.

The overall conclusion of the meeting was that it is absolutely imperative that the Congo approach tourist safari hunting in a very conservative, transparent and concerted way. Everyone agreed that they have seen gross abuses on all sides in most countries where tourist safari hunting has operated in the past and have seen both the industry and the wildlife destroyed in a relatively short amount of time. Recurrent examples were CAR, Cameroon, Tanzania, and Zambia. Everyone agreed that at all costs this abuse should not be permitted to occur in Congo where the **industry is** in its infancy.

## KABO SURVEY

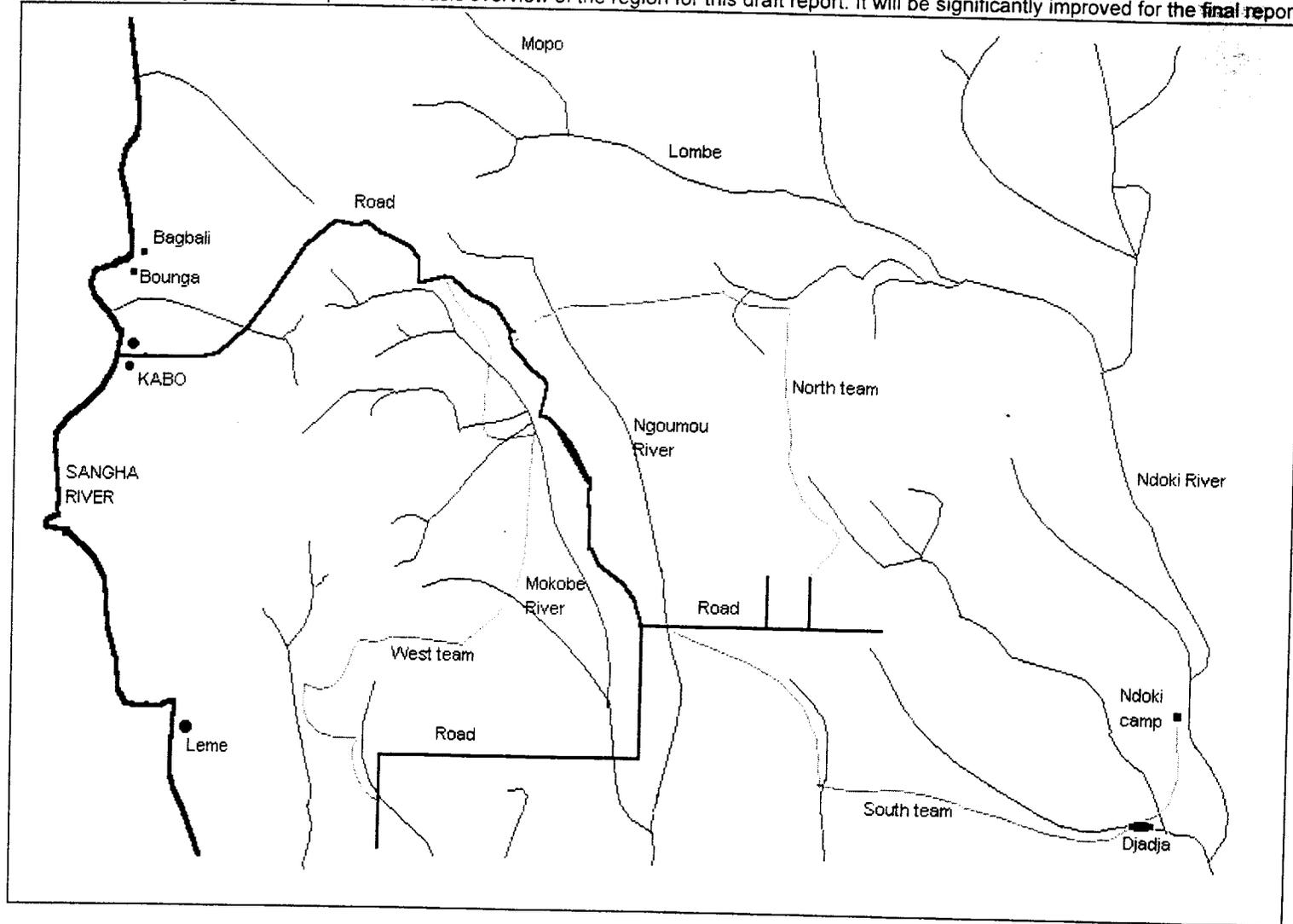
Road and foot surveys were conducted in three areas in the southeast of the Kabo UFA. Survey routes generally followed the path of least resistance following a general itinerary determined before the survey began. Each team covered a specific area with the aim to cover as much territory as possible in the short time allotted for the survey. Semi-quantitative data were collected. The location and quantity of all fresh spoor of large mammals was recorded, in particular those of interest to tourist

safari hunters. In addition the general condition of the forest especially as it relates for logging, wildlife features (clearings, salines, mud holes), and sign of human disturbance were also recorded.

On March 10, 1995 the team proceeded to Kabo to begin the prospection mission. The team met with local authorities, the village chief of Kabo and with local guides to be used on the prospection mission to explain the objectives of the mission. The group was split into three prospection teams which covered three different zones on the west side of the Ndoki River. This strategy provided coverage of a wide area in a short amount of time. Teams were deposited in three different locations with rendezvous points four days later. Deposition of teams provided a preliminary road survey of the main active logging roads in the concession. For ease of data presentation these zones have been called: west, north, south and road. Figure 1 shows a map of the Kabo concession and locations of the zones surveyed. Results are presented by habitat type first and second by species from each of the four zones.

**Figure 1. Kabo UFA showing Kabo west and survey routes**

This map is a very rough draft to provide a basic overview of the region for this draft report. It will be significantly improved for the final report



## ***Kabo Field results***

### **Habitat**

In general eight broad habitat types are encountered in the Kabo UFA on the west side of the Ndoki River: permanent roads, fresh exploitation roads, recently abandoned roads, long abandoned roads, secondary forest, *Gilbertiodendron dewevrei* forest, swamp, "yanga".

The dense road network within the Kabo UFA west permits easy access to the entire area. While this fact makes the area easily huntable by a tourist safari hunter it also makes the area very easy to hunt by all, especially when the concession is actively being exploited, as it is currently. The general impression of all three field teams was that all classes of roads were an attraction to large mammals of interest to safari hunters (hereafter "game"). While sign is significantly easier to view on roads and therefore easier to hunt, the conclusion remains that game densities along all roads, even those in use for many years have higher densities of game along them than any other habitat type within the concession. The most heavily used seem to be secondary roads which are used for a single season and then abandoned. Abandonment closes roads to easy access by vehicle and they are thus much less traveled than main roads. At the same time these roads provide open, easy avenues of travel and there is considerable secondary growth providing abundant food, both of which are attractive for most game species. Old abandoned roads attract elephants in relatively high numbers. Bongo and buffalo still travel on them. This depends on the length of time the road is abandoned. As regrowth becomes more important fewer and fewer animal trails and tracks are noted.

Secondary forest makes up the bulk of the vegetation in the Kabo UFA west. This vegetation varies based on the original forest cover. In general it has a high density of young and often spiny lianas, such as *Acacia pennata* and *Haumannia danckelmaniana*, with a very open and sparse canopy. The vegetation is punctuated only by old tree cut gaps, skidder trails and secondary roads. The overall impression that one gets is a vegetation that has been highly secondarized. There is a distinct lack of elephant trails throughout most of the area which adds to the impression of ecosystem degradation. There is little sign of game in this vegetation type. In general travel in this vegetation type is extremely difficult due to the very dense understory, and travel sometimes takes over 1 hour/km in a straight line. This presents many challenges for the tourist safari hunter.

*Gilbertiodendron dewevrei* (Malapa) forest is common along major watercourses as it is in most of the Ndoki Basin. Naturally this forest type is used by most game more as a place to travel rather than to feed because there is water associated with it and the understory is open. In the Kabo UFA west, these forests are largely intact because they are not of interest to the logging industry, but at the same time animal trails are much less common than in unexploited primary forests. Game species are relatively rare in this forest type.

Swamp forest is common along watercourses as it is in other parts of the Ndoki Basin. Little of this vegetation type was traversed during the survey but it is probable that relatively high populations of sitatunga and bushpigs are found there. Typically they are areas where game species congregate in the dry season because food is usually more abundant in this forest type.

Yangas and bais (waterholes). Yangas are located in the dense forest and have no watercourse going through them. Bais are located in swamp forest and along creek beds where there is flowing water. Bais vary from being very swampy to those that are rather dry. In the Kabo UFA west there are at least 100 yangas and several bais. They are typically areas where large numbers of game species congregate because of the abundance of herbaceous monocotyledons with semi-permanent supplies of water. The high density of yangas and bais in the Kabo UFA west provides a network of highly productive habitat for large terrestrial herbivores in the concession. Unfortunately the ancient trail network that once connected most of these yangas has given way to the dense network of logging roads. Many of the yangas that were observed during the survey have been more or less abandoned by wildlife due to disturbance and overhunting. Some near the roads, such as the one near the border with the CIB concession, are still heavily frequented by wildlife. This is very surprising considering that this road has been open for more than a decade. Our impression is that the mammals have become mostly nocturnal in their visits to yangas but hunters also hunt frequently at night so this behavior affords only partial protection from hunting.

## Large mammals

**Elephants (*Loxodonta africana cyclotis*).** While the general impression was that elephant densities are low in the Kabo UFA west, in all three surveys and in the road survey sign was always present and in certain places abundant. It is quite evident that logging has completely altered the behavior of the elephants in the UFA. Most elephant "trails" now follow old roads. Few large permanent trails still exist that follow traditional routes. Elephants were encountered three times during the survey, once in the west area and twice in the north area. In all three areas there were isolated spots where elephant feeding sign was heavy. There was evidence that there is a migration through most of the Kabo UFA west early in the dry season going to the north. The greatest concentration of elephants in the area is probably in January. To the north of the concession along the Mopo River there are seasonally large numbers of elephants which pass in February also traveling to the north. There is some evidence that the same population passes through the Dzanga-Sangha Park going all the way to Dzanga Clearing in the north. There is one clearing in the southeast of the Kabo UFA west, Djadja, which is frequented by elephants. On April 9, 16 elephants were observed in the clearing.

It was the group's impression that elephants were probably abundant in the Kabo UFA west before the start of logging. This has been confirmed by Mr. Courtois and Mr. Saclié, both of whom hunted elephant in the concession in the 1970s and 1980s. Interesting evidence of this has been found in the main town of Kabo: at the site

where the expatriate houses are located there is a large laterite rock which has been worn by the passage of probably thousands of elephants. This rock is only 75 m from the Sangha River. Today there is nowhere along the Sangha River which contains large numbers of elephants.

The group concluded that the Kabo UFA west did not contain sufficient elephant numbers to justify tourist safari hunting. It was agreed that this would not only be unwise because of the low number of elephants but also because it would tend to send the wrong message to the local people who must be convinced to stop shooting elephants in the short term if the population is to ever be exploited rationally in the future. It must be the safari operator who instills this conservation message to the population. If hunting is opened just for the safari hunter with only a small return to each stakeholder (potential hunter of elephants) it is doubtful that tourist safari hunting of elephants would have a positive effect on the overall situation. See the section on elephants in discussion section below.

A study of the Kabo elephant population should be undertaken to determine the density, age structure, sex ratio and movement patterns of elephants in the concession. Before this time the consultative group does not recommend opening elephants for tourist safari hunting in the zone.

**Buffalo (*Syncerus caffer nanus*).** Dung of this species was found in all sectors. It was most common on the road south to the Pokola UFA but was present on all roads. It is thought that this species has moderate densities throughout the Kabo UFA west. Buffalo are grazers and in the Ndoki Basin their populations are highest in areas where their major food plants, grasses and sedges and to a certain extent *Zingiberaceae* and *Marantaceae*, are abundant. In the Kabo UFA west there are no savannahs thus naturally buffalo concentrate in two habitat types: swamp and clearings (yangas and bais). The now dense network of roads throughout the Kabo UFA west provides additional habitat for buffalo. If these populations were not hunted this may affect a positive influence on buffalo populations, but because hunting pressure is high the population of this species is probably decreasing. Observations over long periods at various bais have shown that single buffalo herds of 10-25 individuals frequent the same clearing. This has been documented in the Dzanga, Mbeli, Mambele, Libowe and Wali clearings. Thus while buffalo are frequently seen at these clearings, it is always the same herd. This is probably true of roadsides as well. Because these areas are also visited frequently by hunters there is a false impression of large numbers of buffalo.

Before buffalo hunting begins in the Kabo UFA west a period of monitoring should address the problem of population density. In the meantime, buffalo hunting should not be permitted in the Kabo area. In any case hunting of this species should be restricted to solitary males. It is probable that these individuals do not contribute to reproduction. Removal from the population would not have a negative impact on populations. If it is deemed that populations are high enough to warrant hunting in herds, it is recommended that under no circumstances alpha males in herds be hunted. From a population point of view the taking of a limited number of females would probably have a less destructive effect than killing of alpha males.

**Bongo** (*Tragelaphus euryceros*). All three survey teams were impressed by the high number of fresh adult male bongo tracks seen along most roadsides during the survey. It is difficult to assess the numbers off roads because of the nature of the substrate in most of the concession. Bongo dung was seen only rarely on most of the off road surveys. Bongo were observed four times on the road at night in ca. 150 km of drive. Tracks of at least 20 different individuals were seen along roadsides. Few signs of herds were seen but the tracks of at least 4 herds was seen during the survey. On previous surveys in other areas in the Kabo UFA west bongo have been determined to be abundant, even very close to the Sangha River. On the road leading to the Ndoki River at Bomassa fresh bongo tracks are usually seen at several localities on each road trip. The Wali and Mombongo clearings, where more regular observations have been made, appear to have large numbers of bongo visiting them.

Traditionally bongo are not hunted by the indigenous people in this area. They are said to cause illness in children. This is a advantage for safari hunting and probably explains to a certain extent the high densities noted in the concession. It is recommended that bongo meat from hunts not be distributed to the local people for consumption. It could be consumed by the safari operators themselves and distributed to Europeans working in the area. Snares do injure, but rarely capture, a large number of bongo each year in the concession. Discouraging people to hunt using snares will relieve pressure on the bongo population.

The conclusion of the survey team was that bongo are common in the Kabo UFA west and that they certainly occur in huntable numbers. It is recommended that a special permit be issued which would allow a quota of three bongo for the 1995 trial safari season. In the first year of hunting a collaborative effort between the Nouabale-Ndoki Project and the safari operator in the Kabo UFA west should be agreed which would establish a long-term monitoring study of bongo populations. This would include both monitoring of trophy quality, road counts, radio-collaring and population studies at selected clearings.

Hunting of bongo in the Central African Republic is done using dogs. Some consider this unethical. This was discussed by the team and it was agreed that while dogs make the hunt considerably easier their use also renders hunting of bongo too easy. Some suggest that hunting from vehicles at night from the road may be acceptable. Others suggest that this would be highly unethical and illegal. The consensus was that both the use of dogs and hunting from vehicles is not only unethical but too easy and should not be allowed in Congo.

**Yellow-backed duiker** (*Cephalophus sylvicultor*). Populations of this species were found to be generally high throughout the Kabo UFA west. Frequent evidence of adult individuals was seen along roads, in clearings and on previous prospection missions elsewhere in the concession. It is believed that tourist safari hunters could compliment bongo safari with equal numbers of yellow-backed duikers and have no detectable effect on the population.

**Water chevrotain** (Hyemoschus aquaticus). Although no sign of this species was observed during the survey, they undoubtedly occur in the Kabo concession.

**Giant forest hogs** (Hylochoerus meinertzhageni). Only rare evidence of this species was noted in the Kabo UFA west. Previous surveys in the area suggest that there are certain areas with significant numbers of this species, however, e.g. in the SE of the western sector of the Kabo concession. This species is primarily a grazer and thus populations tend to be higher around yangas and bais.

Caution should be taken initially in hunting this species. Because it is likely that only one or maximum two hunters may kill a giant forest hog during the initial season it is recommended that a quota of two individuals be set. This will allow the safari operator to be able to offer this species to clients. Data should be collected on the abundance of this species before realistic quotas can be set. The giant forest hog generally travels in small family groups and hunting should take this into account. It should be determined if there are old solitary males in the population. If there are, these individuals should be targeted. If not, quota limits should remain relatively low in order to assure reproduction of the species. It is unlikely that most clients will choose to spend the time that it will take to bag a giant forest hog and thus safari hunting is seen as a very minor threat to the overall population.

**Red river hogs** (Potamochoerus porcus). This species seems to be fairly common throughout the Kabo UFA west. The species occurs in large herds of some 20-40 individuals, with several males. The population ecology of this species is not known but given the numbers and the intensity of predation by man in the concession in the past, since this is a preferred target species for most African hunters it is unlikely that a safari operation that targets a few red river hogs would have a detectable effect on the population. The number of clients that bag a red river hog would always be less than those that shoot a bongo. It is recommended that a quota equal to bongo be issued within the UFA.

**Sitatunga** (Tragelaphus spekei). Again only scant evidence of this species was noted in the surveys. This is primarily because the species inhabits mostly inaccessible swamp areas. In other areas, in particular along the Ndoki River in the Nouabale-Ndoki National Park, sitatunga occur in high numbers. It is believed that similar numbers are also found in this habitat in the Kabo UFA west. This species is not a main target of local hunters except along the Sangha River where the species is hunted with dogs quite frequently. Only extensive survey within the swamps of the concession would reveal if this species is common in the concession. According to local hunters it is indeed high. It is recommended that two permits be issued for this species in the initial season again just to allow the safari operator to list this species in the hunt. It is quite unlikely that even two of these animals would be shot in the initial season because of the difficulty of the habitat in which they live. Data should be collected on the populations of this species within the concession.

**Other ungulates.** While duiker calls only produced limited success and tracks were noticeably lacking on roads it was obvious that the number of Peter's (Cephalophus callipygus), Bay (C. dorsalis), Blue (C. monticola), black-fronted (C. nigrifrons), and

Gabon (C. leucogaster) duikers present in the Kabo UFA west could support limited sport hunting. These species have been the major prey of subsistence and market hunters in the UFA for the past twenty years and catches are still substantial, even in areas that are close to the roads. In the more isolated places, where leopard density is also rather low trophy duiker hunting will have an insignificant impact on the populations. It is recommended that the safari operator be allowed to bag twice as many of each of the six duiker species present in the UFA as bongo permits are issued. Duiker populations should be monitored via the production coming into Kabo on logging trucks. This could be done in collaboration with the Nouabale-Ndoki Project and the SNBS logging company.

**Leopards** (Panthera pardus). Fresh leopard tracks were noted several times along the roads during the survey. In general this species does quite well in forest of the type found in the Kabo UFA west. It is our general impression that this species occurs in fairly high densities in the concession. While the leopard is not generally sought after by local people, it is caught quite frequently in snares. Mr. Courtois has indicated that several leopards have been caught using snares surrounding his camp in the past year. Biologically speaking, taking a small number of leopards (2-3) in the Kabo UFA west would pose little problem. Despite the recent downlisting of the leopard to Appendix II of CITES, it is our recommendation that this species not be hunted in the initial year or two of safari operation. If tangible progress can be shown in the reduction of the number of cables in the forest which account for most leopard mortality, including those killed in the Courtois camp, and if population data are collected on the species, a recommendation may be made to establish an experimental quota of two or three leopards for the Kabo concession per year.

**Primates.** While not targeted by the big game hunter, this survey showed that although gorillas (Gorilla gorilla gorilla) are targeted regularly by local hunters, their numbers are still fairly high. There was less evidence for chimpanzees (Pan troglodytes) but they too occur quite commonly. Monkey densities are also high in many areas. Safari operators should work vigorously to discourage the hunting of gorillas and chimpanzees. It is thought that this could be one of the very positive aspects of tourist safari hunting in the Kabo UFA west.

**Human Sign.** Surprising little evidence of human activity within the Kabo UFA west was encountered during the surveys. The most significant sign of humans was a large trail built by a visiting film crew (Discovery/Silverback) whose workers were apparently engaged in hunting activities. Many meat drying racks and empty shotgun shells were found in this camp which must have accommodated ca. 50 people. Other than this the only real sign of humans using the concession was close to the roads. In general most of the hunting in the concession occurs within a relatively small radius of Kabo and along the roadsides. It is believed that most of the meat in the concession when logging is active is consumed fresh. This requires hunters to be relatively close to the roads. The most significant factor in hunting in the concession is the SNBS trucks that circulate about the concession regularly. The dump truck which is used to bring workers to the work place is also routinely used to carry hunters to hunting grounds. Every two weeks on Sunday a special trip is made by the dump truck to allow workers to hunt. The company transports anyone who's

interested out to the forest with shotguns to hunt. There is evidence that the number of large mammals being taken in the Kabo concession is in the hundreds per month. While this pressure is mainly along the roadsides it undoubtedly has a severe negative impact on game populations. Elephant hunting is also practiced with impunity in the concession. In the months of January-March well over ten elephants were killed in the concession. The guns for this activity come from a variety of sources. Previously European employees of the logging concession also frequently hunted elephants but this practice has stopped in recent years. Because the price of ivory has more than doubled in the area in the past year there is renewed interest in elephant hunting not only for the meat but for the ivory as well. In Sept. of 1994 Mr. Michel Courtois arrested a poacher who had just killed an elephant in the Djadja Bai with tusks weighing 40 kg each. These tusks were rendered to the Water and Forest officials in Ouesso. During the field survey a poacher named Gilbert Ouesso was encountered near the Ngoumou River (see field notes, south group). This individual was arrested by the Kabo Police Commissioner in February, in collaboration with the Nouabale-Ndoki Project, for poaching elephants in the Mombongo Bai south of Bomassa. This individual returned almost immediately to hunting elephants with the same gun in the same area with the knowledge of the same police commissioner. It is obvious that sanctions must be brought to bear in these cases if a viable hunting regime is ever to be established within the Kabo UFA west. One of the major priorities of the tourist safari operation should be to increase protection both through education, substitution and sanctions for hardened repeat offenders.

### **Human Settlement in the Kabo UFA west**

The majority of humans living in the Kabo concession are located in the village of Kabo. It is estimated that there are about 1500 people living in the village. Because of recent financial problems SNBS has made all its employees redundant and is currently operating with temporary workers. Because employees of logging companies are those that have the major demographic effect on the population the population of Kabo has decreased significantly in the past year. In addition to Kabo there are several villages along the Sangha between Bomassa and Kabo with a total population of 400-600 people. The largest villages are Bomassa, Bon Coin, Bounda, Bounga, Bagbali and Lémé. Most of these villages are inhabited by Bomassa, Pomo and Babenzélé people who engage in hunting, fishing, gathering and agriculture, except for Bomassa and Bon Coin which have an economy based heavily on the presence of the Nouabale-Ndoki conservation project. There is a limited amount of commercial hunting which takes place in the villages. In Kabo when the logging company is active a lot of commercial hunting takes place. There is also a fair amount of hunting which goes on for ivory. This activity is ostensibly controlled by the logging company on its trucks but enforcement is lax. A detailed report was written on this subject by Steve Blake of the Nouabale-Ndoki Project in 1994 which reviews the human settlement pattern and hunting situation in the Kabo concession which should be referred to for a review of this subject (Blake 1994).

One of the principal reasons for the installation of tourist safari hunting in the Kabo UFA should be to set up a system of wildlife conservation which would allow the fauna to be exploited, but in a managed and sustainable way. This can be accomplished through the diversification of the economy in the UFA with activities that depend on long-term survival of wildlife such as tourist safari hunting, education and participation of the local population in the tourist safari hunting operation through management programs, revenue-sharing and anti-poaching measures agreed upon in advance with local populations. This program should include working closely with the logging operators to try to reduce the amount of commercial hunting that occurs in the concession without provoking rebellion among villagers and workers. General recommendations for the participation of the safari operators participation in conservation programs are discussed below.

## RECOMMENDATIONS FOR TOURIST SAFARI HUNTING IN KABO

The consultative team recommends that a pilot safari operation be authorized in the Kabo UFA for the 1995 season. The term should be set for one year during which time a long-term agreement between a private operator tourist safari operator and the government of Congo must be established in association with the Nouabalé-Ndoki Conservation Project. Any such activity must have the approval in advance of the UFA operator which at present is the Syndic of SNBS.

An initial quota should be issued by the Ministry (MAEEFP) along the following lines:

Bongo	3
Buffalo	2
Sitatunga	3
Giant forest hog	3
Red river hog	4
Yellow-backed duiker	4
Peter's duiker	8
Bay duiker	8
Blue duiker	8
Gabon duiker	4
Black fronted duiker	4

The conditions for each species to be harvested, reviewed below, should be adhered to during this initial season. At present the bongo is listed as a protected species in the Congo. **A special permit will be required which should be made under the auspices of a pilot program. The area to be hunted should be limited to the Kabo UFA west of the Ndoki River, east of the Ngoumou River and south of the Lombe River. The pilot operator must clear all activity with the Ministry (MAEEFP), regional government, UFA operator and local people before starting up operations.** The following requirements should be satisfied by the tourist safari operator in the pilot year of operation:

- Full-time management presence in the UFA for one year starting from the time of arrival.
- Establishment of a development plan for tourist safari hunting in the Kabo UFA which could be used by the government for preparation of a contract to be signed with a long-term operator. Such a plan would include details on capital, investment plan, staffing levels, infrastructure development, community development and participation, revenue sharing, expected quotas, desired concession limits and duration, and conservation program to be established. Provisions of the plan could be based largely on this present report.
- Execution of a research program which will include monitoring of key target species along roads, in clearings and in the forest, using head, dung and track counts in an effort to localize areas of large mammal concentration and to determine large mammal densities in a general way. This research program should also focus on the question of human use of the concession. Detailed measurements of animals killed should also be recorded including standard body measurements, including horns. Skin samples should be collected and preserved in alcohol for subsequent genetic analysis. The final result of this program should be a detailed report which suggests hunting areas, possible quotas for individual species and to suggest conservation measures which could be carried out which would enhance the status of all large mammals in the UFA.

Mr. Eric Stockenstrom has indicated a desire to set up a long-term tourist safari operation in the Kabo concession. It should be understood that accomplishment of the requirements for the pilot year does not confer any rights to the candidate in final choice of the tourist safari operator to sign a long-term agreement with the government. Obviously successful completion of the pilot year will add a great deal of credibility to the application should the pilot operator wish to submit a proposal.

## **NATIONAL TOURIST SAFARI HUNTING PROGRAM**

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### **GOVERNMENT POLICY**

A number of tourist safari hunting operators have expressed a desire to set up operations in the Republic of Congo. The Ministry (MAEEFP) has also expressed interest in developing the industry. Thus far two operators have a physical presence in Congo, both of whom wish to set up long-term operations here. What is currently lacking is a coherent government plan of action in developing this industry. This includes several deficiencies in the current legislation which would hinder development of a clear program. In the following, suggestions are made which may lead to a coherent approach to the development of safari operation in the Congo.

## ***Requirements for Development of a Sustainable Tourist Safari Hunting Industry in Congo***

Legislation: Currently Congo does not possess coherent legislation governing the tourist safari industry. Revision is needed of current Congolese legislation regarding sport hunting including: species legally hunted, hunting season, company fees, license fees, trophy fees, requirements of professional hunters, impact of international agreements and restrictions on the industry (e.g. CITES, USFWS, EEC). The legal rights and obligations of interested parties must be determined. The legal procedure used to set up a safari operation in Congo needs to be described including: establishment of a concession system, geographical and time limits of concessions, how concessions are to be attributed, contracts (i.e. "*cahier des charges*" documenting the existing infrastructure and required further developments in relation to the size of the operation envisaged and the size of the area to be exploited).

## **RECOMMENDATIONS**

### ***Game Species and Quotas***

**Bongo.** This species will be the primary target species of the safari industry in the Congo, especially in the Nouabale-Ndoki Complex. The Kabo UFA, the only site to be prospected for bongo so far, shows very high densities of the species. No other area has been found with this kind of density.

The bongo is, to a large degree, naturally protected in many places in Congo and Cameroon, CAR and Zaire. Many local ethnic groups have taboos against eating bongo. This is the case in the Kabo UFA.

The bongo is officially protected in the Congo. No form of hunting is allowed. Legislation currently under consideration should open bongo for tourist safari hunting only. Strictly controlled quotas should be issued by zone after a study has taken place of populations in the area, as was done in Kabo. The herd structure of bongo is at present unknown, but there is evidence that males previously thought to be non-reproductive and solitary regularly join female herds and probably breed. Finding conclusive evidence on this point will be extremely important in determining quota levels for bongo hunting. Until that study is done, quota levels should remain low in the first years and increase over time if monitoring shows that yield is sustained.

**Elephant and Leopard.** If opened, these species would diversify and expand the market for tourist safari hunting in the Congo. However, existing Congolese legislation puts both species on list A which disallows hunting of any kind. Currently Congo has no CITES quotas for the elephant, an Appendix I species that cannot be exported without a quota. The leopard was recently downlisted to Appendix II and

could theoretically be hunted, but restrictions remain in force within Congo and should do so until evidence is collected demonstrates that the population is high enough to sustain a limited offtake by tourist safari hunters. Each species is discussed below.

The population status of elephants in Congo is unknown. The only systematic study ever to be carried out in 1989-1990 was done at a very low cover with inconclusive results. One thing is clear: there are very few areas in Congo with high elephant populations today. The two national parks, Nouabale-Ndoki and Odzala, and their surrounding areas contain the highest densities. Given this and the fact that there is no suitable management plan for elephants in Congo, that there is little management capacity on the ground, and that elephant poaching goes on uncontrolled in most of the country, it is highly unlikely that CITES would issue a quota or that the USFWS would permit entry of tusks into the USA.

It is our recommendation that a study of elephant populations be undertaken in key areas where hunting may take place in the future: Kabo and north of Odzala. If populations are found to be sufficient, with normal age structures, a management scheme for these populations should be established which might include tourist safari hunting. The management scheme should put a heavy accent on enhancement of the species in the zones to be hunted. If this procedure is followed it is likely that the Congo would receive a CITES quota and approval from USFWS for the importation of trophies. SCI has suggested that they may be able to find the funds to carry out such research. In the meantime, until hard evidence is provided that elephant populations can sustain limited trophy hunting, and until a fully-regulated tourist safari hunting program is designed and implemented that includes measures to ensure that the current ban on elephant hunting outside a TSH program is observed, there should be no change in the government's present policy of banning elephant hunting altogether.

The population status of leopards in Congo is unknown. There has never been a systematic study carried out. In many areas of the north, however, leopard densities appear to be high. As for elephants, there is no management plan for leopards in Congo, little management capacity on the ground, and leopard poaching goes on uncontrolled in most of the country.

It is our recommendation that a study of leopard populations be undertaken in key areas where hunting may take place in the future: Kabo and north of Odzala. If populations are found to be sufficient a management scheme for these populations should be established that might include tourist safari hunting. The management scheme should put a heavy accent on enhancement of the species in the zones to be hunted. If this procedure is followed it is likely that the Congo would receive approval from USFWS for the importation of trophies. SCI has suggested that they may be able to find the funds to carry out such research.

Following the suggested procedures, management of these two species through consumptive sport hunting would solve most problems at the level of CITES and USFWS. It is suggested that this is probably a better solution than seeking quotas

since it is one which will assure enhancement of the species and will serve to build collaborative relationships between member countries and CITES as well as between the professional hunting industry (e.g. SCI), CITES and USFWS. The downlisting of the leopard to Appendix II might make it easier to export leopard skins in future, but it remains a contentious issue that must be handled cautiously at all levels.

**Forest Buffalo.** The population status of buffalo in Congo is unknown. No systematic study has ever been carried out. There may be two subspecies of buffalo in Congo but most people recognize only the *nanus* form. Several areas in the country are known to have important populations of buffalo, notably Odzala south, the Ndoki, Motaba and Likoulala aux Herbes river basins. There are probably other areas of population concentration but these remain unknown to the conservation authorities. Herd structure is variable: in the Nouabale-Ndoki complex herds are small, with a single bull. These herds normally frequent the same areas. The number of solitary males is unknown. In the savannahs south of Odzala, buffalo have a herd structure more similar to a savannah buffalo with large herd size and many males.

There are no CITES restrictions on buffalo and it is unlikely that this species would elicit rejection or confiscation when exported. Congo does have an interest in proper management of the species. In each potential TSH zone a study should be carried out on the herd structure and population levels. If there are savannah-type herds, quotas can be more liberal. In those areas where forest buffalo are confined to visiting forest clearings quotas should be low and judiciously issued. There should be a restriction which limits hunters from shooting males from herds and also from hunting within 3 km of forest clearings.

**Western Forest Sitatunga.** The population status of sitatunga in Congo is unknown. There has never been a systematic study carried out. Many areas in the country are known to have important populations of sitatunga such as the Ndoki, Motaba and Likoulala aux Herbes river basins. Most major rivers with a system of associated swamps or flooded forests hold considerable sitatunga populations. Because their preferred habitat is swamp they are relatively hard to exterminate even in areas where hunting pressure is high, such as the Lefini Reserve. In general herd size in this species is small. Often two adult males may be seen together and often mothers with young are associated.

There are no CITES restrictions on sitatunga and it is unlikely that this species would elicit rejection or confiscation when exported. Congo does have an interest in proper management of the species. In each potential zone a study should be carried out to assess population status. In those areas where sitatunga frequent forest clearings, there should be a restriction which limits hunters from shooting within 3 km of the clearings because these are areas of concentration which may be important for breeding. It is too easy to disturb these environments through hunting pressure.

The trophy size of the western forest sitatunga is considerably larger than the common sitatunga of East Africa. If properly managed this species could be

harvested in large numbers from the Congo. Quota levels for individual hunting areas would vary considerably but it is thought that they could be very high in areas such as in the Likouala swamps.

**Giant Forest Hog.** The population status of giant forest hog in Congo is unknown. No systematic study has ever been carried out. Several areas in the country are known to have healthy populations of giant forest hogs. Herd structure is small with what seem to be family units, one dominant male, one to several reproductive females and offspring. The largest group size seen to date has been approximately nine individuals. Small groups of males have also been observed. In the Nouabale-Ndoki complex, herds are small and the species seems to be uncommon. The herds normally frequent the same areas. This species is an herbivore and thus its populations are restricted by the number of forest clearings and roadsides for the most part.

There are no CITES restrictions on giant forest hogs and it is unlikely that this species would illicit rejection or confiscation when exported. Congo does have an interest in proper management of the species. In each potential hunting zone, a study should be carried out on the herd structure and population levels. There should be a restriction which limits hunters from shooting males from herds with females and young and also from hunting with 3 km of forest clearings. Quotas should be quite low in most areas. If there are populations the species should be listed as available and a small quota given in the event that a client would want to shoot one. In most cases clients are not interested in giant forest hogs.

**Red River Hog.** The population status of the red river hog in Congo is unknown. There has never been a systematic study carried out. Most of northern Congo contains red river hogs. In general the further one proceeds from a human population center the higher the populations. This species is very adaptable and is present in most habitat types, including savannahs near gallery forest and in many areas it is abundant. Group sizes can be quite large, up to 30+ individuals. These groups seem to have an alpha male but there usually several large males in a herd. Solitary males are not known.

There are no CITES restrictions on red river hogs and it is unlikely that this species would illicit rejection or confiscation when exported. Congo does have an interest in proper management of the species. In each potential hunting zone, a study should be carried out to assess population status. If populations are adequate a fairly liberal quota should be issued for each zone, at roughly twice the level of primary target species such as bongo. One problem to be studied is the herd structure of the species. If there is one dominant male, this may be the individual usually hunted by tourist safari hunters. This may have a negative impact on the herds. However, given the high level of pressure on this species exerted by local hunters in many areas, it is unlikely that the added pressure brought to bear by TSH would have any negative impact, especially if conservation measures are introduced at the same time.

**Yellow-backed Duiker.** The population status of yellow-backed duiker in Congo is unknown. There has never been a systematic study carried out. Most of northern Congo contains yellow-backed duiker. In general the further one proceeds from a human population center the higher the populations become. This species occurs in the dense forest areas and in savannah forest ecotone areas. Like most duikers, it seems to occur in pairs or as solitary individuals.

There are no CITES restrictions on yellow-backed duiker and it is unlikely that this species would illicit rejection or confiscation when exported. Congo does have an interest in proper management of the species. In each potential hunting zone, a study should be carried out to assess population status. A fairly liberal quota should be issued for each zone, at roughly twice the level of primary target species.

**Other duikers (Peter's, Bay, Blue, Gabon, Black-fronted).** All five additional species of duikers that occur in the country seem to exist in high populations over wide areas. The Gabon duiker is a habitat specialist in *Gilbertiodendron dewevrei* forest and the black-fronted duiker is a swamp forest specialist. It is believed that where these habitats occur population densities will be found to be high. A fairly liberal quota should be issued for each zone, at roughly twice the level of primary target species.

**Harnessed Bushbuck.** The population status of the harnessed bushbuck in Congo is unknown. No systematic study has ever been carried out. This species occurs only in savannah-forest ecotone areas. The species is absent from much of northern Congo. It is not known in the Ndoki basin.

There are no CITES restrictions on this species and it is unlikely that this species would illicit rejection or confiscation when exported. Congo does have an interest in proper management of the species. In each potential hunting zone, a study should be carried out to assess population status. In general this species is resistant to hunting pressure. If local populations are high a relatively liberal quota should be established, at roughly twice the level of primary target species.

**Bate's Pygmy Antelope.** The population status of the Bate's pygmy antelope in Congo is unknown. There has never been a systematic study carried out. The species is known to be absent to the east of the Sangha River. On the west of the Sangha River it is common in many areas, even in areas of cultivation.

There are no CITES restrictions on this species and it is unlikely that this species would illicit rejection or confiscation when exported. Congo does have an interest in proper management of the species. In each potential hunting zone, a study should be carried out to assess population status. In general this species is resistant to hunting pressure. If local populations are high a relatively liberal quota should be established, at roughly twice the level of primary target species.

### ***Species approach to safari hunting***

In view of the specific characteristics of the various species to be hunted, it is suggested that a manual be produced that provides basic information on each species' natural history and biology and acceptable (both from biological and ethical points of view) hunting techniques. This information would be provided to all professional hunters and guides, who would be required to abide by the acceptable hunting techniques and to debrief all clients on acceptable hunting procedures. Several approaches to hunting technique and their suitability are discussed below.

**Hunting Solitary Males.** For certain key species in particular bongo, forest buffalo and giant forest hogs, only solitary males should be hunted and never herd males or bachelor herds who breed or have yet to breed. (Note, however, that sometimes there are small herds of old buffalo and giant forest hogs that might be harvestable as non-breeders. Further research is needed on this subject before concrete recommendations can be made.) Solitary males that no longer breed are generally larger, have more desirable trophies, and have no positive influence on the population. They are good candidates for the hunt. As indicated above, however, more data are required on bongo in particular because we have little idea as yet of herd structure for the species. If it is found that most solitary males breed, then quota limits will have to be quite conservative.

- **Bazinji Hunting Dog.** The bazinji dog is an indigenous race which has been bred for hunting. It is used extensively throughout central Africa by both Bantu and Pygmy alike for various aspects of hunting. Tourist safari hunting using dogs does bring about a certain amount of debate because there are those that consider it unethical. It is also well known to increase hunter success which may lead to degradation of the resource base. It was therefore recommended that the use of Bazinji dogs for TSH be outlawed in Congo.

**Hunting Game Near Forest Clearings (Bai's and Yangas).** A bai is a forest clearing in or along a watercourse. A yanga is a natural clearing which occurs as a pot hole in the forest, not along a watercourse. Wildlife concentrates around these areas for minerals, food and water.

These forest clearings are extremely important areas for breeding, group cohesion, feeding, and salt. They should be safe havens for wildlife, reserved for photographic safaris even within hunting concessions. Hunting should take place at a minimum of 2 km from minor bays, 3 km from major bays and 1 km from yangas. These areas should be identified within a concession. Their numbers are finite. Application of this rule would considerably enhance the possibilities for long-term, sustainable exploitation of a concession.

**Hunting By Pirogue.** Hunting species such as sitatunga and water chevrotain in swampy areas along rivers that are inaccessible except by boat is considered by some as unethical. As long as this activity takes place during the day, using paddle pirogues, it is suggested that this practice be allowed.

**Hunting By Light at Night.** This is considered unethical sport hunting practice. It has been suggested that the only way to successfully hunt Bates' pygmy antelope is

at night around cultivated fields. To make an exception for this species would be unwise because it would be too easy to abuse. The practice should be disallowed altogether.

**Shooting from vehicles and roads.** This is considered unethical sport hunting practice. The practice should be disallowed altogether.

## ***Hunting Seasons***

Traditionally, hunting seasons have been established in order to exclude either breeding or calving seasons and to limit the overall catch. In most forest areas, hunters kill a large range of large mammals which have quite different biology. The current seasons that exist do not correspond to any particular biological parameters and the knowledge base currently available for most species would not permit a species-by-species approach. Professional hunters working in a hunting concession will be limited by quotas, even for small species such as duikers. These quotas should be established based on sustainable offtake.

If professional hunters are to adequately manage their concessions it is imperative that they have a permanent presence on the ground. Currently most organizations hunt for 2-3 months and then leave the concession completely unmanaged for the rest of the year. The end result is that most concessions are in fact not managed. On the other hand, if they can hunt for only a short period, professional hunting organizations find it difficult to survive if they must occupy a zone for the entire year. Three suggestions are made which should help to improve this situation:

- Hunting organizations should be required to have a presence on the ground 12 months out of the year;
- They should be allowed to hunt a limited number of species for 12 months, provided they do not exceed their quotas; and
- They should be encouraged to develop high-end photo-safaris in order to supplement their revenue.

## ***Conservation measures***

The Congo possesses game laws (48/83 du 21/04/1983 and 49/83 du 21/04/1983) which form the legal basis for regulation of hunting in Congo. Due to the fact that effective game management has never been developed in the country, to unrealistic restrictions on hunting in current legislation, to the lack of political will and means to enforce game laws, game regulations are largely ignored in most parts of the country. This has had severe consequences on wildlife populations in most of the country except for a few isolated places in the north.

The Ministry of Water, Forests and Fisheries is currently revising the two laws which regulate the exploitation of the fauna in Congo. A thorough review of the current laws and the realities of Congo should be made before any new legislation is passed

into law. Specific regulations governing tourist safari hunting should be part of any new hunting regulations. One aspect of the law should give tourist safari hunting operators some responsibility for game management in their concessions (see below). The responsibilities and limits of power of the safari operator should be clearly defined in order to minimize the inevitable conflict of interest between local hunters, logging companies, professional hunting operators and conservation authorities.

The following measures are suggested:

- The holder of a hunting concession is given the task of wildlife management. This should be in association with the MAEEFP. As far as protection is concerned, the manager would be responsible for four broad categories of action:
  - ◆ education (public relations),
  - ◆ revenue sharing,
  - ◆ wildlife population monitoring and management, and
  - ◆ anti-poaching.

It should be made clear that game management in any area must come from a consensus with the majority of a local population. If the local population is not consulted and brought into the fold in advance of TSH operations or any other type of development or conservation activity beginning, it is usually very difficult to reach consensus once conflict exists.

- Development of a land-use plan agreed upon by all stakeholders (logging concessionaire, logging community inhabitants, other communities, conservation authorities and the tourist safari/tourist concessionaires). This would clearly delimit tourist safari hunting zones, village hunting zones and protected areas.
- Dialogue with stakeholders. This will include sensitizing the community to the arrival of the conservation and development project, and determining needs as perceived by the community (e.g. health, education, bushmeat consumption, etc.). In most cases this dialogue should lead to the following results which are in the best interest of conservation:
  - ◆ elimination of the use of cable snares;
  - ◆ no export of bushmeat (i.e. no non-subsistence hunting);
  - ◆ no shooting of protected species (bongo, gorilla, elephant, chimpanzee, etc.);
  - ◆ no poaching of species of primary interest to safari operators, including bongo, buffalo, yellow-backed duiker, giant forest hog and sitatunga;
  - ◆ no night hunting
  - ◆ no hunters, game, or firearms to travel with forestry vehicles.

Experience has shown that implementation of these measures will not be easy in any area that does not derive significant advantages from giving up the activity in question. In most cases, the safari operator will have to designate areas where

these activities are allowed to occur, at least initially. The professional hunter should obtain agreement to set up an exclusive hunting zone where all of these activities would be banned; this should be an isolated area where the likelihood of conflict is low. It would then be of interest to leave it up to the local community to solicit the professional hunter to collaborate with villages in management of wildlife through a process of dialogue. Each village should have its own management zone and would receive a trophy fee (agreed upon in advance) for each animal killed. If individual villages can see the financial benefits of game management, they will probably ask to be included in a scheme of management. Separate quotas could then be set up in these zones. If the village does a good job of management there will be game to shoot. If not, they lose out on the opportunity to benefit. The professional should be ready to instill the necessary restrictions on hunting before entering into a village. As long as the subsistence needs of the village can be met using shot guns and there are adequate benefits then there will be many villages wishing to participate. It is imperative that this approach be taken from the outset. In logging towns it is unlikely to work because of the large number of people that must be satisfied. In logging towns the collaboration of the logging company itself must be solicited and used. Again this will take time and is likely to cause some conflict. It must be done through the logging company. If the company is not at all interested they will find a way to circumvent collaboration and could make life impossible for the tourist safari operator. The best way to deal with this situation is through personal contact and frank collaboration. Over time the management of logging concessions can be improved considerably using these methods.

As in any system there are those that will abuse it. In the case of these individuals it will be necessary to use repression (i.e. conventional law enforcement). The tourist safari operator should be empowered to take repressive action. While this is a good idea in theory it is one which can cause a great deal of conflict and one which may be abused by overzealous safari operators. There should be agreement on exactly what kind of repression can take place. The solution is to do repression in collaboration with the local legal authority, perhaps the police, gendarmerie, military, Eaux et Forêts agents, or other local authorities. Repression that involves arrests should be done in association with local authorities. Confiscation of snares, firearms, meat and other wildlife products, and camp items should be allowed. These items should be referred to the local authority. Meat and other wildlife products confiscated in isolated areas should be burned. Articles of value should be confiscated and handed in to local authorities.

In areas where repressive action is warranted the professional hunter should have an Eaux et Forêts agent detached to the operation. This would take any responsibility for direct repressive measures out of the hands of an expatriate. Hunters should also be encouraged to hire local people as guides and trackers who could become auxiliaries of Eaux et Forêts. It may even be possible to hire private individuals as auxiliary guards who would be given power of arrest. If a team of such individuals operated in an area they could carry out the following operations:

**Mobile barriers.** These should be set up to check logging trucks and pirogues for the transport of hunters and game products. Those found with an excessive amount

of meat or illegal hunters would have their products seized and would be arrested. This will require cooperation from the Government of the Congo, the logging company and local communities. A good compromise for the trucks as far as quantity is concerned would be one or two small mammals (duikers, monkeys, bush pigs) per truck. Anything exceeding the set limit would be confiscated, including arms and ammunition. Presence of protected species would bring stronger measures.

**Identification and targeting of key ivory/commercial poachers.** A clear distinction must be made between subsistence hunters and commercial poachers, whether it be for meat or other wildlife products. Subsistence hunting is just that and is easy to distinguish from commercial poaching if individuals are known. It is important to identify individuals who abuse the system and to target them. This can only be done once a thorough knowledge has been developed of the individuals living in a locality. Subsistence hunters should be tolerated, even if they use what are technically illegal hunting methods. It is important that any new restrictions are well-advertised and publicized in advance before implementation.

Any poachers should be assessed on an individual basis. Some may be usable by the program as auxiliary game guards, guides, or in a number of other capacities since they are usually individuals who have forest skills.

Those poachers who are incorrigible must be dealt with through the legal system. There must be demonstrated determination on the part of the Congolese authorities to deal with this issue. Currently, most poachers are back in the bush carrying out their trade within days of being apprehended. Other operations which should be considered by antipoaching teams should be:

- Undercover operations, using former poachers to provide information on poachers and middlemen. The Government of Congo must demonstrate the will to prosecute these individuals. It is believed that considerable progress can be made with the local people in convincing them to defend their interests. If bongo hunting is opened to tourist safari hunters, for example, the approach should be that local people know that they will get significant benefit from the legal kill of bongo. If local people are empowered through the tourist hunting operation this can be a very effective way to operate. This depends largely on the human population density that one is dealing with and the benefits that are left in the region by poachers.
- Confiscating the bolt from all unregistered rifles apprehended in the poaching of elephant or other game. This has a tendency to bring quick results in revealing who is responsible because they desire to recuperate the bolt. This method has proven effective in Cameroon and in Congo.
- Snaring by local communities for subsistence hunting should be strongly discouraged. This method is indiscriminate and often takes highly valuable species such as bongo, or ecologically important species such as gorilla and chimpanzee. Hunting with selective arms such as shotguns should be

encouraged. This method has proven quite effective in Bomassa to the southwest of the Nouabale-Ndoki National Park. If shotguns are encouraged, this tends to significantly reduce discontent at the village level because local people realize that the objective is not to eliminate hunting but to manage wildlife effectively.

All of the above recommendations should become part of the legal framework of tourist safari operations in Congo. Great care should be taken however to assure that professional hunters know exactly how far they can go in anti-poaching activity. They should receive instruction in this regard.

## **PILOT PROGRAM TO SERVE AS NATIONAL POLICY ON SAFARI HUNTING**

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Because Congo currently does not have a safari industry, it is imperative that the MAEEFP possess a clear plan of action that will lead to an industry which is productive, sustainable and in the interests of all stakeholders. A simple approach is to consider two pilot programs which will serve as an experimental model to develop and refine a national tourist safari hunting program. These two pilot operations would be subject to a program which the government would establish with the notion of making it the national tourist safari hunting policy. All preceding comments are valid in this regard. In the following the details of how this pilot program might be initiated are presented:

### **Concessions**

If a company does not have a long term permit, then it has little incentive to manage an area effectively. Given the government's limited ability to manage and operate concessions themselves, it is logical that private operators be attributed long-term rights to hunt in a certain area.

Renewable leases of 10-15 years should be given to private operators. These leases should be negotiated based on a fixed procedure. The operator would be subject to review by the government. If the terms of the concession agreement are not met then the permit would be annulled. The decision to annul a permit would be made by the Minister in consultation with the national safari committee.

Initially the government will have to designate hunting zones. Logically the national government could create hunting concessions along the lines of *Unités Forestiere d'Amanagement (UFA)*. Using the UFA as the basic management unit would greatly facilitate the task of those overseeing the safari industry and would also allow close collaboration between the safari operator and the logging concessionaire. If this were taken as national policy, the hunting concessionaire could work with the

MAEEFP and the logging concessionaire to improve wildlife conservation in the UFA. Initially the concessions that are attributed to tourist safari hunters should be associated with existing conservation projects. This has three advantages:

- the conservation project can keep a close watch on the progress within the concession vis à vis wildlife conservation;
- it is in these areas that tourist safari hunting has the greatest chance of success because of high wildlife populations; and
- the tourist safari hunting operation can aid in assuring wildlife protection in the buffer zones around the reserves.

Two areas are suggested as pilot safari zones:

**Odzala National Park periphery zone.** This zone, which is thought to have great potential as a tourist safari hunting area, was hunted for the past three seasons by Eric Stockenstrom at a rate of ca. eight clients per year. The EC-funded conservation and development program, ECOFAC, has embraced TSH as an activity that should form part of long-term management plans for the area.

Professional hunters Rolf Rohwer and Alberto Feu Hereu are currently developing a proposal with the Government of Congo to turn this area into another conservation and development program linked to tourist safari hunting. Both men are part of Arthur Anderson and Company/Barcelona who earlier developed a detailed plan for Cameroon which did not come to fruition because the Cameroon government was not in a position to offer an exclusive hunting zone to the organization.

**Kabo UFA.** Details for this zone are found above.

The pilot programs in both the Odzala and Kabo areas should be preceded by a prospection mission to determine the potential of the area and establish initial, very conservative quotas for the area. As detailed above, this has already been done for Kabo. A similar mission should be undertaken for the Odzala region by the Arthur Anderson group in association with the MAEEFP and the ECOFAC project.

At both the Kabo and Odzala sites, pilot hunting programs should be undertaken in the first year which would not commit either the government or the safari operator to a long-term presence. This should be a period in which the operators evaluate details of operations on the ground and during which the government and conservation projects evaluate the professionalism of the operators.

During this time the operators should develop long-term investment plans, community management and exploitation programs, recommended initial quotas, adaptive management monitoring programs as a basis for adjusting quotas, and community based anti-poaching programs.

This should be presented to the government as a proposal for development of the hunting zone. At this time the government should initiate an "appel d'offre" for the

zone. The pilot operator should be given preference over other candidates for the zone but should not be conferred any particular rights to the concession.

Beyond Kabo and Odzala, the Government of the Congo should consider holding off on providing additional hunting concessions until the above two areas are properly developed and an operational process exists, such as the proposed National Safari Committee. This will bring transparency and visibility to the safari industry, set industrial standards and control the number and quality of safari operators, as well as their conservation/development program components.

During this year the government should take the forestry code as a model to develop the necessary regulations to form the basis for safari operation in the country. The following major steps should be taken before the governments signs any long term agreements with safari operators.

### **Safari Hunting Committee.**

A committee should be established to oversee the management of the hunting industry in Congo. This body would be responsible for screening potential operators as to their technical, professional and financial capacity, for carrying out feasibility studies, establishing hunting zones and quotas, negotiating contracts, recommending amendments to the laws regulating the industry, and monitoring and control of operators. The committee should be headed by the Minister of MAEEFP and include members from the international conservation community (e.g. ECOFAC, GEF, GTZ, IUCN, SCI, WCS), tourist safari operators, professional hunters, regional governments, logging companies and local communities. This committee, which should be limited in size (7 members?), should meet twice a year and be empowered to pass motions. Final decisions would be taken by the Minister of MAEEFP. The committee would serve as a watchdog organization. Any complaints concerning an individual operator should be brought before it. Offending parties would be asked to rectify the situation or be subject to stronger sanctions.

### **Professional Hunting Association of Congo (PHAC).**

A professional hunting association should be established, creating a wider forum than the safari hunting committee, which would permit professional hunters, the conservation community, private individuals and government employees to voice their views on the tourist safari hunting industry. Within this association several different membership types would be established. These would include professional hunters, and apprentices. Guidelines for membership would help build a body that would promote professionalism within the industry. Acceptance as a professional hunter or apprentice would require passing established written and practical tests and confirmation by the safari hunting committee. PHAC should hold bi-annual meetings, have elected officers and be financed through membership. It should

work to uphold high standards of professionalism within the industry, to promote the industry and to promote an atmosphere of collaboration and integrity.

The creation of such a body would help to avoid disarray and competition within the industry. The lack of such a body in many countries has usually ended in a decline in trophy quality and a short-term profit vision rather than a long-term management vision. Some of the activities the PHAC could undertake are as follow:

- represent the interests of professional hunters on the Safari Hunting Committee in lobbying for policy reforms that will increase the sustainability of the safari industry in the Congo.
- set standards and ethics for the industry and bring any accused violator of these standards before the Safari Hunting Committee for review and possible sanctioning.
- establish guidelines, standards and testing procedures for a professional hunters apprenticeship program.
- recommend to the Safari Hunting Committee whether prospective safari operators or professional hunters should receive licenses based upon a strong background check.
- recommend to the Committee where new hunting concessions might be opened.

## Concession terms

The government should develop a coherent policy on the *cahiers de charges* that it will develop with operators. Some things that must be considered are as follow:

- Currently the government receives the following hunting related revenue: professional hunter license fee, sporthunter license fee, *permis de port d'armes* fee (firearms permit), *taxe d'abattage* (trophy fee) and export fee. It must be determined whether this fixed fee structure is sufficient, whether it should be simplified, and whether *taxes d'abattage* are acceptable.
- The government must determine what the capital and operational costs for a concession proposal are. It must determine that the investments are adequate, and that there is an equitable distribution of revenues.

The following are suggested:

- Maintain current proposed trophy fees for the revisions of game laws and other fixed fees to the government. This provides adequate revenue to the State at the present time.

- Exclude concession fees.
- The concessionaire should be awarded a core hunting area which is excluded from community hunting zones where possible. This zone is where the operator would be expected to participate directly in conservation activities and to invest in a substantial infrastructure. The investment plan should be agreed upon after the first year of operation and the concessionaire would be held to a development plan that would include agreed-upon staffing levels, infrastructure, and conservation and community activities to be undertaken.
- Supplemental trophy fees to the community on the periphery of core hunting zone. Communities that wish to participate actively in the safari business would manage a certain zone for hunting around their village. They would be able to propose a certain quota to the government. This quota would be agreed by the government and the hunting organization would pay a fixed fee directly to the village for each animal harvested. It should be agreed in advance by the village how the revenue should be used.
- The distribution of core zones and community hunting zones would depend on human density, ethnic groups present, whether a logging company is present or not, and whether it is possible to set up a core area that will not introduce excessive conflict with local people.
- Definitive concessions should be attributed for a period of 10 years. The concessionaire should be issued a small plot of ground on which to build their infrastructure. These structures should be privately owned by the concession company. Should the company wish to sell the concession infrastructure, the terms would have to be worked out with MAEEFP.
- Research. A thorough review of what is currently known about the ecology of each potential prey species. These data should be assembled in a data base for each species. Recommendations, financing and implementation of long term ecological studies should be made. These studies should focus on the breeding ecology and population density of target species with a view to establishing guidelines to be followed in hunting each species. These norms should be written into TSH regulations. Funding for such studies should be sought through the international community, the safari industry and through existing conservation projects.
- Monitoring System. A monitoring system should be set up throughout the tri-national area (Central African Republic, Cameroon, Congo), as well as in Gabon if tourist safari hunting begins there. This program will permit an objective evaluation of the state of the hunting areas, the quality of the hunting operators, the economic and conservation benefits of the operation, the demand for hunts in Central Africa, and a more general approach to management of the tourist safari hunting industry in the region. In Congo this monitoring program should be obligatory and carried out by the professional hunters are part of *their cahier de*

*charge*. Information to be collected by the safari operator and his staff should include indices and trend data:

- ◆ Trophy Quality. SCI should consider developing Master Measurers in the Congo. A control point should exist through which all trophies pass for official measurement, prior to being given the appropriate paper work necessary for exportation (*Certificat d'Origine, Certificat d'Exportation, Certificat Vétérinaire*)
- ◆ Catch Per Unit of Effort. Number of hunting days actually taken to collect a particular species
- ◆ Field Reconnaissance Data. This is data collected by the professional hunter and his client when in the field, as well as information obtained by anti-poaching teams or monitoring teams on the location and abundance of wildlife in the hunting concession. This can include information on actual numbers of animals observed, tracks, droppings or feeding signs. The freshness of these signs should be indicated, and where possible it should be indicated whether the game observed was a solitary male, females and young, or bachelor herds.
- ◆ Indications of Other Human Activity. This may include poaching, itinerant agriculture, gathering of wild foods, medicines and handicraft materials.

This monitoring program will serve as a basis for setting and adjusting tourist safari game quotas in order to maintain trophy quality and thus the economic viability of key game species. The objective is to decentralize much of the management of the hunting concession down to the level of the safari operator and the local community with whom he/she is collaborating.

The proposed National Safari Committee should review with each safari operator's annual management plan for the hunting block with recommended quota for the next season. The plan should be submitted once a year and should outline what the safari operator plans for the next year, from trophy quotas to community development and anti-poaching. Progress in achieving the previous season's objectives should also be discussed.

Annexes to the annual management plan should provide raw data in the form of the Daily and Summary Safari Forms. At a minimum, there should be a Daily and Summary Safari Form prepared for each client. Additional monitoring data collected by reconnaissance missions of the safari operator's staff should also be included. The main body of the report will summarize this raw data and serve as the basis for justifying recommended quotas for the upcoming season in the annual management plan.

## International Relations

At present, Congo is considerably handicapped in its ability to participate as a full and active member of the international community. It is very important that Congo become more active in this domain. As concerns tourist safari hunting, if Congo wants to become a model country it must make this clear to the outside world. The easiest way to achieve this would be through close collaboration with the international conservation NGO community. If members of the National Safari Committee could be present at all Safari Club International conferences, for example, along with representatives from the hunting organizations (most of whom will be there anyway), MAEEFP, and the conservation community, the increased visibility and participation of Congo at this international forum would help pave the way to its becoming a model in terms of its TSH program. It is very important that this idea be promoted strongly within the hunting community. There is no better way to do this than through Safari Club International.

Before any actions are taken by SCI in Congo, however, it is vital that a comprehensive and reasoned program be drawn up that will provide the argument and framework for all and any SCI activities relating to TSH in Congo. SCI's program in Congo should also be conducted within the terms of an *Accord de Coopération* to be negotiated with the government and a detailed *Protocole d'Accord* to be signed with MAEEFP.

Some ways in which the National Safari Committee could interface with SCI are:

- Promote tourist safari hunting in the Congo through articles in Safari Magazine and Safari Times. Promote the idea of doing it right for once, citing problems that have occurred in other countries.
- Meet with the US Fish and Wildlife Service over WCS/GTZ/SCI/GOC conservation and development program tied to tourist safari hunting in Congo
- Participate in a National Safari Committee consisting of the Government of Congo, a representative from a national professional hunters' association, WCS/GTZ, Safari Club International, the logging industry and representatives from local communities. As previously outlined, an NSC would serve to promote visibility and accountability in Congo's fledgling safari hunting industry and to address policy reform issues to assure its economic and ecological sustainability.
- Find funding to facilitate south/south relations and work with WCS/GOC and professional hunters to develop an adaptive management monitoring program.
- Find funding to train selected individuals as SCI Official Trophy Measurers as a contribution to the development of monitoring under the proposed Adaptive Management Program.
- Find funding to gather and synthesize existing population data on leopard and elephant in the Congo as a basis for evaluating the possibility of hunting these two species and of requesting a CITES quota for elephants.

- Find funding for an elephant and leopard survey in the Mambili area north of Odzala National Park and in the Kabo UFA, as a means of establishing a conservation program for these species that could include tourist safari hunting.
- Need for SCI to fund study on different races of bongo. There is a unique opportunity, through the SCI Record Book, to finance a genetic study to create a new category of bongo. This study can serve as a means of promoting tourist safari hunters, who already have bongos from other regions of Africa, to collect the race of bongo from the Congo/Cameroon/Southwestern RCA/Gabon region. Four races of bongo should probably be recognized:
  - ◆ Race I, the East African Race in the mountains of Kenya.
  - ◆ Race II, from Sudan, Eastern Zaire to a line running north/south through Bangui, RCA or east of Bangassou, RCA. This is a very large trophy bongo averaging 37-38 inches around the curve.
  - ◆ Race III from Congo, Cameroon, Gabon and Southwestern RCA, 30-32 inches being a large trophy.
  - ◆ Race IV, West African bongo.

Each professional hunter or sporthunter would be requested to collect a portion of the skin from the harvested bongo and preserve it in ethanol or a saline solution. Basic statistics such as trophy size, location of harvest, etc. would also be provided. The skin would undergo genetic analysis to test the hypothesis that these races exist. The East African bongo data could be collected from farmed bongo in Kenya, or from pedigreed bongo in the United States that come from Kenya. A minimum of 20 samples from each area believed to have a specific race should be collected in order to have statistically valid data.

## CONCLUSION

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If safari hunting is to be sustainable in Congo there are two extremely important things to be considered. Firstly, it is essential to proceed cautiously in a concerted and judicious manner that will permit a rational tourist safari industry to develop. Secondly, it is absolutely critical that the industry be developed in Congo with a conservation objective in mind. Wildlife conservation should be the objective; extractive hunting should be the means used to achieve the objective. If this approach can be taken by all parties involved there is a chance that safari hunting can be a very positive thing both from a conservation and an economic point of view. If this approach is not taken it is almost inevitable that the industry will go the way of that in surrounding countries and many others in Africa. In virtually every other country where TSH is practiced, it is driven by profit and greed, which certainly does not have conservation as its primary objective and leads to the degradation and, in the end, the disappearance of the resource base. All parties must agree that this cannot be allowed to happen in Congo.