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**BUSH MEAT INDUSTRY IN CAMEROON**

## **1.1 INTRODUCTION**

Wildlife has been hunted for food ever since humans first evolved, it's still viewed as a resource "free" for taking in many areas of Africa and Cameroon in particular.

In Cameroon, as in other African countries, the forest and shrub land is often referred to as "the bush", thus wildlife and meat derived from it is locally called "bush meat". The term applies to all wildlife species including: guinea fowl, monitor lizard, forest antelope (duikers), chimpanzee, gorilla, elephant, monkey and other primates. When bush meat is eaten, ungulates and primates have been replaced by rodents as the most eaten wild animals.

As the population of Cameroon increased during the past years, the demand for meat or this so called traditional item was made by commercial hunters and traders. The trade in bush meat, much of it is illegal and has become a business in which opportunists can make large profits. This has resulted in widespread local extinctions in certain parts of the country's forest.

Non-domestic animals have always been an important source, but traditional, subsistence use of fauna has been changing as commercial factors have affected the socio-economics of communities that are dependent on the forest for protein. This is the case whether they are composed of recent immigration or indigenous people. Many of these pressures come from urbanisation and associated market economies in ever-increasing quantities. Meat is no exception and with improved infrastructure it can be transported further for sale.

## **1.2 ORIGIN AND CAUSES OF BUSH MEAT TRADE**

The conversion from subsistence to commercial hunting has been occurring for sometime. Hart (1978) observed this change among the Pygmies in Cameroon.

In the 1950s, the pigmies started to make contact with meat traders, who went to their forest camps with them and promoted intensification of traditional methods such as commercial net drives. At this stage there was no significant exploitation on either side, meat was exchanged for iron tools, tobacco or agriculturally produced food. However, there was a detectable decrease in duiker/forest antelope (*Cephalophus* Spp.) densities as a direct consequence of the change in hunting focus and methods.

Strmayers and Ekobo (1991) working in South-east Cameroon (Moloundou subdivision) summarised the main categories of place from where bush meat originates. In this area, resident and non resident immigrants were united by dependence on bush meat as their principal protein source. This demand was augmented by the presence of five logging towns near the areas.

Blake (1994) describes Djembe on the Cameroon/ Congo boarder as an important place for the bush meat trade between the two countries, due to the logging road. He also mentions gorilla meat bought from Cameroon by a Pygmy hunter hired by the police chief in Kabo who later sold it, along with elephant meat and also tusks hunted from Cameroon and being taken for sale in Congo.

Within the context of Cameroon, it is safe to know that all major urban cities are foci for the growing trade in the wild animal meat. The supply links between rural areas to larger towns and cities follow predictable patterns and it is the infrastructure in a given region that determines the availability of meat. The demand is constant, and when transport, of any form, becomes available it is inevitably used by the bush meat trade.

### **1.3 METHODS USED FOR HUNTING**

There appears to be little, if any specialist hunting for given species of animals, apart from the elephant (Eves, 1996). This is often carried out by Pygmies with guns given to

them by outside patrons. However, from evidence available this does not appear to be because elephant meat is particularly in demand but because elephants yield more meat per kill than other animals and have the additional bonus of possessing ivory. Benett Hannessy (1995) concluded that, although meat in such large quantities was probably more profitably than ivory, the key factor governing killing elephants for meat was access to transportation.

There is an understandable preference for hunting larger animals with short guns because of the knockdown capabilities of these firearms. Although gun ownership is low in Cameroon, some government personnel provide guns to hunters for a share of the meat. It was also noted that 80% of shooting was carried out by day and only 20% use headlamps at night. Night shooting is indiscriminate because hunters cannot identify species by eye shine, and hence shoot first and look later (Brown, 1996).

There are equally different ways of hunting apart from the use of guns. Muchaal and Ngandjui (1995) found that snare hunting was the most common method used, with 56% of 39 households using these while 29% made use of firearms or dogs.

Two major factors make uncontrolled use of snares a potentially greater problem for the conservation of terrestrial fauna than guns. The first is their indiscriminate nature and the second is that they are cheap and easy to make from readily available source. Today, this is most commonly wire, but in the past, vines were used as snare material. Usongo and Curran (1996) found that hunters using snares may deploy 50-300 per year and that 10% of the animals captured rotted before they were discovered. However, Muchaal and Ngandjui (1995), found an even higher level of wastage in the dry season. Snares are visited less frequently in the dry season because of the lower capture rates caused by water scarcity limiting animal movements. Dethier (1995a), observed that in the dry season animals may be found 3 days after they were trapped, compared with 1 day in the wet season.

Muchaal and Ngandjui (1995) found that the percentage of rotten carcasses increased with distance from the hunters' base until it reached 97% in the furthest zone. Although the off-take of the more commonly caught species was assessed and determined to be within the limits of sustainability, this indiscriminate technique has the potential to threaten the resource base of the country if it is not rationalised.

Gadsby and Jenkins (1992) found out that the ratio of hunters using guns only, to those trapping and shooting, to those trapping only was, 1:3:2. Thus trappers were five times more numerous than those who used only short guns. This is explained by the high costs of shooting. Traps are cheap and in this case are made of a 1-2 meter wire loop and a sapling under tension, in two possible configurations. It was realised that trappers spent 3 to 6 days in the forest checking their snares and smoking the meat of captured animals before going to market to meet the traders.

The propensity for snaring is common, with Infield (1988) finding out that more hunters in the Korup region of Cameroon were involved in this than active hunting. Traps vary depending on the animal being targeted. Infield (1988) identified three main kinds of trap:

- 1.) Neck traps: Set for animals such as cane rats (*Thyonomys swinderianus*) around farms.
- 2.) Waist traps: they are perpendicular to the ground and set on animal tracks, or walkways across streams, etc.
- 3.) Foot traps: They are placed on the ground over shallow pits, set almost only in the forest and of the size capable of catching buffalo (*Syncerus caffer*).

These traps, together with smaller versions set for bushbuck or duikers, are also dangerous for apes particularly young ones. Thus the time for hunting is not constant and the specific method of setting snares may vary within the country.

The level of hunting, whether shooting or snaring, is not necessarily constant throughout the year, even in the absence of effective legal control. Infield (1998) reported that snaring in the Korup area of Cameroon is primarily a wet season activity because it is possible to identify where to get the snares in the thicker undergrowth that confines

animals to defined paths. This pattern of trapping was also found by Muchaal and Ngandjui (1995) but they and other authors have observed hunting with short guns occurring all year round, day and night. The effectiveness of active shooting varies and is reported to be higher in the rainy season (as a result of wet leaf litter muffling both the sound of the hunters approach (Gadsby,1990) and reducing his odour, occurring to Vanwijnsberghe (1996), who noted the same seasonal discrepancy in Equatorial Guinea. Jenkins (1992) found that trapping around Mount Cameroon increased in the dry season to compensate for the lower number of animals. However, they pointed out that elsewhere in Cameroon, it stayed at a constant rate and that this difference could be due to lower availability of guns at the local level.

#### **1.4 PEOPLE INVOLVED IN HUNTING**

The active hunting communities could be divided into three categories:

- 1.) Villagers on the highway
- 2.) People in defunct logging towns on the South-east boarder with Congo.

Generally, hunting is done by virtually all ages and groups and in certain places females are involved in it. In the Korup area of Cameroon, hunting is practised by local people from surrounding villages (Infield, 1988) men from an early age into their fifties were involved in hunting. The age/sex make-up of this group is typical of West Africa where hunting is regarded as a male activity. Men believe that they will hunt until they are old, when it will become too energy –demanding for them and their children will then continue.

The predominance of local inhabitants is not always the case. After a census in the Lobeke region of Cameroon, Usongo and Curran (1996) found that 85% were Cameroonians from other parts of the country and that 75% of them were ex-logging employees, who moved to the region to see what financial opportunities were available. However, according to interviews from Mount Cameroon area, most people regard hunting as a degrading way to make a living and, if given the opportunity, they would do something else (Gadsby and Jenkins 1992). It should be noted that Mount Cameroon is in

Buea, the provincial city of the South west province and most of the inhabitants are educated and thus will not like hunting as a way of live.

From the same interviews, it was ascertained that all methods of hunting were indiscriminate because a hunter shoots anything that moves, and sells what he cannot eat.

### **1.5 THE ECONOMIC VALUE OF THE TRADE**

Bush meat has long been a staple part of forest people's diet, and until recently, the hunting of wild animals for food was a sustainable practice. The trade in bush meat has now become a profitable business for forest dwellers that often lack alternative option for income generation. Bush meat is consumed because it is the cheapest and most readily available source of protein. Animal husbandry is not customary in Cameroon and although wealthy people will pay high prices for gorilla, snake, and porcupine in the capital cities, most bush meat is eaten by families who cannot afford the more costly meat, chicken and pork.

Today, bush meat continues to be economically important food and trade items for many people especially of poor rural and urban families, and it is a status symbol for urban elites trying to retain links to "the village"-often commanding extremely high prices in the restaurants.

Virtually, uncontrolled access to forest wildlife (i.e., almost any one can go hunting anywhere), rising demand for bush meat, lack of economic options for rural and urban communities, the absence of affordable substitutes, the opening up of "frontier" forests by logging and mining companies, and the complicity of government law makers and law enforcers are the most important factors driving commercial hunting and militating against wildlife conservation.

In Cameroon, domestic animals such as cattle, goats, pigs, chickens and ducks are raised by rural and urban households, but they are primarily viewed as savings and insurance

rather than a source of protein. This traditional value of livestock remains important to households in the country today because inflation is high and access to banks and formal credit is limited or absent. Furthermore, tsetse flies and trypanosomiasis severely limit cattle raising in the forested and scrubby savannah landscapes typical of greater parts of Cameroon. As a result, the meat of domestic livestock tends only to appear in rural or urban markets that are located relatively close to savannahs and ethnic groups with a tradition of pastoralism.

In Cameroon, collapsing road systems and declining global prices for traditional cash crops such as coffee and cocoa have left rural families with fewer and fewer ways to make money sufficient to meet basic needs for food, shelter, clothing, schooling and health especially at this time when government spending on social services is not in existence.

Bush meat with its relatively high value to transportation cost ratio offers poor rural families a lucrative package though short term, source of money. Moreover, hunting and trading bush meat can be scheduled so as not to compete with other household activities such as farming or fishing, so the opportunity cost of participating in the bush meat trade are often not sufficient. In Cameroon, although wildlife is less abundant, the price of bush meat, and the low opportunity cost to hunting ensures that the bush meat trade remains profitable. Consequently there remain strong economic incentives for families in the country to participate in the commercial trade in bush meat.

In other cases, hunting is carried out by immigrants with the prospect of making money by poaching and hunting. However, the common denominator is that, increasingly, animals are hunted not for local consumption but for the urban population centres, where demand keeps prices high and inspires others in the forest to hunt.

In The Korup National Park, Cameroon, Infield (1988) found that approximately 60% of hunters' income was generated from duikers and red colobus (*Procolobus bandius preussi*), and drill accounted for a further 7%. He further stated that the main reason for hunting in

the Korup area was for cash income rather than protein, the average hunter earning up to CFA 350,000 or (538.00 Euros) per annum. This represents 33% of the village income. Even where the predominant source of income in a forested area is from agriculture, hunting has become economically important. Muchaal and Ngandjui (1995) found out that cocoa was sited as the primary income for households in Dja, Cameroon and that hunting was second, supplementing income from the crop. In this area in November 1994, 731 animals were killed and average income was calculated as CFA 308,433 or (about 475.00 Euros) per hunting household. Although these households retain only 25-30% of the meat for consumption, it is the main protein source in the dry season, and fishing is purely subsistence activity.

In the northern region of Korup National park, on the boarder with Nigeria, 80% of meat obtained is destined for the commercial markets. This same area is the last place in the region with gorillas present and 25% of local incomes from bush meat (Prescott *et al.* 1994)

Eves (1996) found that where there is increased income per household, meat purchase increased and the conditions for these are often coupled with opportunities for long term employment. Therefore, game meat consumption will be high in areas where hunting laws are not enforced and industries are developed. Bunnett Hannessy (1995) documented the path of a Cameroon duiker's retail value as follows:

- Hunter to buyer at CFA 3000 (5.00 Euros)
- Buyer to pirogue at CFA 4000 (6.00 Euros)
- Pirogue to traveller to Brazzaville at CFA 6000 (9.00 Euros)
- And sold in Brazzaville for CFA 15000 (23.00 Euros).

Within the trade, there are two main categories of sellers dealing with bush meat. Unlike the hunting side of the business, women dominate this are of the commercial bush meat trade.

1. 'Pepe' soup sellers use much of the bush meat. They are supplied by hunters who come into town at night in order to avoid the law enforcement officers. Pepe soup sellers are an important component of most markets and may control the

whole market. The soup is a non-specific meat broth and is common on highways in the country.

2. The market women, who own stalls of meat in towns buy the majority of meat coming into the area, then cut it up and sell it to the public (Bennett and Hennessy, 1995).

All of the above illustrate the economic importance of the trade at the national level and thus expected to be a significant contribution to the economy.

## **1.6 PART PLAYED BY LOGGING IN THE TRADE**

Cameroon's valuable tree species are scattered in low density throughout the forest. To find and harvest these trees, loggers construct numerous survey trails and roads, heavily fragmenting the forest and opening up to hunters. The large numbers of workers employed by the logging company eat more meat than poorer unemployed families. They have the money to purchase weapons, have ready access to the forest to hunt, and to logging trucks to transport meat. Consequently, logging companies not only directly increase demand for meat by hiring a large workforce; they also greatly facilitate entry into the commercial trade to supply bush meat to urban markets.

Whatever the damage done by logging, it is the infrastructure that is required by such operations that facilitates the commercial trade in bush meat. There has been obvious links between logging and the supply of bush meat. To a large extent, loggers not only increase access to regions for hunters but also facilitate the transport of meat to market centres with their trucks.

In South east Cameroon, the link was clear, where 75% and 85% of the meat taken out by poachers on logging trucks to fuel the commercial trade (Canopee). Also in Cameroon, trucks have been collecting up to 200kg of meat at one go of various species (Pearce and Amman 1995).

In April, 1996 the Cameroon Ministry of Environment and forests (MINEF) held a conference on “ The Impact of Forests Exploitation on Wildlife” (MINEF 1996) The conference confirmed that the bush meat trade was linked directly to the timber industry and (Amman, 1996) concluded that continued bush meat hunting in general great ape slaughter in particular is unsustainable at present levels, and would become an irreversible wildlife disaster if permitted to continue uncontrolled.

It is the logging companies that provide the physical and social infrastructure for the exploitation of bush meat. They put in the roads, lorries, and build the logging camps, bring in the workers, their families, transport the hunters, and sometimes even provide guns and bullets.

### **1.7 THREATS ASSOCIATED WITH THE TRADE**

The commercial market threatens the survival of many species including several unique ones to the dense forest of Cameroon. While deforestation is an obvious menace to wildlife dependence on these habitats, hunting contributes a comparable threat to the ecosystem itself. Even where the cover is relatively intact, forest with no more large animals do exist and this is known as the “empty forest syndrome”.

Absence of animals because they were over hunted for bush meat will result is loss of predators such as leopards, golden cats, large snakes and birds of prey that depend on them for food. Loss of wildlife from hunting means lost of seed dispersing animals that play a key role in determining tree composition and distribution, causing over the long term loss of many plant species, altering both the structure and function of the forest and potentially causing irreversible ecological effects with global consequences. This means that the short term economic benefits derived from the commercial bush meat trade, though expedient for poor families today, may jeopardise long term economic opportunities for future generations. In addition, increasing levels of contacts with wildlife populations may place people in increased jeopardy of contacting and transmitting animal derived diseases such as Ebola.

If only one species of animal existed in the forest, hunters will continue to hunt that species until it becomes scarce from over hunting. However, for rare and endangered species, the forest of Cameroon is home to numerous wildlife species that are hunted for food. In this case, when people go hunting they are not targeting single species but are roaming the forest in search of any animal worth (in economic terms) killing.

A bush meat hunter with a gun is inclined to shoot the largest animal because this will generate the most profit per cartridge. So although an animal may become scarce, even to the point of local extinction, a hunter will shoot it if he encounters it and it is large enough to warrant using up an expensive cartridge. Given this fact, rare and endangered species are likely to be driven to extinction by hunters when other more abundant animals continue to make hunting profitable. Some of these species have higher tolerance of hunting pressure than others because of the habits and their reproductive potential. Others may be subjected to less hunting pressure because of the taste of their meat or their ease of preparation. However, with a rapidly increasing human population and the tendency towards urbanization, with the resultant commercialization of markets including those centred on food production, fewer areas of the country are left as pure wildlife reserves. Even the animals that could be hunted sustainably are often being exploited at probably unsustainable levels and controls need to be introduced in order to make sure that they are not added to the vulnerable category.

Some of the species listed below are generally thought to be at risk from the bush meat trade or are currently rare or vulnerable as a result of restricted distribution. This means that they could easily succumb to the traditional pressures of hunting, exacerbating their decline. These species have been selected by Kingdon (1997):

- Leopard (*Panthera pardus*)
- Golden cat (*Profelis aurata*)

- Forest elephant (*Loxodonta Africana*)
- Black colobus (*Colobus santanas*)
- Owl faced monkey (*Cercopithecus preussi*)
- Giant pangolin (*Smutsia (Manis) gigantean*)
- Zebra duiker (*Cephalophus zebra*)

In addition, golden cat (*Profelis aurata*) and leopard (*Panthera pardus*) have become locally extinct as a result of snaring and hunting. These two are considered to be the indicator species because they are among the first animals to become locally extinct due to hunting pressure a situation also confirmed by Wilie and Finn (1990)

## **1.7 DIFFICULTIES REGULATING THE TRADE**

A major factor enabling the uncontrolled advance of the commercial bush meat trade is the lack of capacity to enforce existing national or international legislation. Much of the hunting taking place in the country is illegal. There are limited personnel and infrastructure to effectively address the needs for effective control of hunting and the bush meat trade in the country. It is a fact and reality that policies and laws that are intended to regulate the hunting of wildlife are seldom perceived by local communities as legitimate, desirable, or enforceable and are therefore widely ignored.

Bush meat hunting is one of the few currently available income generating options for many rural families. Poverty coupled with economic and civil instability within the country makes efforts to curb such hunting politically difficult. More so, convincing hunters to change their behaviour because forest wildlife are globally scarce is easier said than done, as they view the same wildlife as a being locally abundant and free for taking.

Given present and projected demand for bush meat, policies to conserve wildlife are likely to improve resource use restrictions that will directly impact the household economies of families involved in the trade – be they producers, traders, or consumers. Conservation by its very nature imposes short- term costs for long-term

benefits, and often results in short-term sacrifices to meet long-term local, national or international needs.

### **1.8 SUGGESTED SOLUTIONS TO MODERATE THE TRADE**

Cameroonians as well as other Africans have always eaten meat from forest animals. The current magnitude of the demand for bush meat is such that action needs to be taken in order to save ecosystems with complete assemblages of its animals. With the threats increasing because of hunting pressure, the preservation of both habitat and fauna in some of the remaining large areas of forest that can support viable populations of animals must be considered. The problem, therefore, is not merely one of preserving habitat but also limiting access for hunters. Access can be through river or roads.

With care and discussion between all parties concerned in a participatory framework at all stages, a balance can be struck to meet dietary , conservation and economic needs of the populace. This will facilitate the long-term survival of protected and endangered species. Conservation should be based on economic and ecological arguments rather than ethics, which vary according to cultural and religious influences (Redmond, 1995, 1996). It is within this framework that solutions to the bush meat problem that now threatens many species of animals, if not whole ecosystems, can be found.

In Cameroon, awareness and support for control of the bush meat trade was virtually non-existent until the late 1990s. Non governmental organizations, government, and the private sector are awakening to the challenge, and currently seeking ways to understand and address the bush meat crisis.

Poor families are often most dependent on natural resources such as bush meat, and suffer most from the implementations of restrictions on their use. Consequently, they should be considered as one of the most important stakeholders in bush meat

management, policy making, and should be compensated for any economic losses associated conserving wildlife.

In general, a shift in cooperate action involving logging companies, communities and government agencies towards sound forest and wildlife management in logging concessions needs to occur. Developing wildlife management activities with logging companies, at least initially may provide the most effective intervention because they play a key facilitation role in the commercial bush meat trade and have management responsibilities across large areas of forests in the country. Some activities to facilitate this process might include:

- Providing alternate sources of protein to employees.
- Linking employee bonuses to compliance with wildlife regulation.
- Encouraging the preferential employment of local residents
- Negotiating areas to be set aside and remain unlogged.
- Prohibiting the use of logging vehicles to transport bush meat
- Removal of bridges along roads in already logged areas.

Government research and education centres should develop programs including:

- Immediate developments of programs to provide training to personnel in basic wildlife management.
- They should also develop additional mechanism to assure availability of acceptable protein substitute.
- To also adapt school and university curricula to highlight social, ecological and economic importance of viable wildlife populations within forest ecosystems and for human communities.
- Public awareness and campaigns are essential as well as to educate international consumers about forest products that are harvested without irreversible impacting the forest. For the best results towards managing the trade in bush meat, the following should be fully involved in the decision-making: grass root people, donors, government, NGOs and industries concerned with wildlife.

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