

Bushmeat Hunters and Secondary Traders: making the distinction for livelihood improvement

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The sale of bushmeat has been referred to as both a 'safety net' and 'stepping stone to greater prosperity' for households at the lowest end of the income scale. This paper proposes a closer look at the local bushmeat economy in order to understand how livelihood strategies vary between those involved. Integrated Conservation and Development Projects (ICDPs) tend to focus on the suppression of commercial bushmeat hunting whilst encouraging alternative incomes for hunters. Based on anthropological research undertaken in the Dja Reserve, Cameroon, the paper looks at the economic behaviour of different local 'hunter types' as well as the role played by the local non-hunter bushmeat traders, proposing a more targeted approach to conservation and development activities relating to the bushmeat economy.

Policy Conclusions

- The village based bushmeat economy should be seen as part of an overall livelihood system, made up of both hunters and non-hunter bushmeat traders. Bushmeat policy needs to take account of both these categories.
- The majority of hunters in the Dja Reserve hunt close to the village. Local village hunters provide protection from pest damage to fields and plantations. There is a strong case for local hunters to be allowed to hunt close to village fields and plantations.
- Choices made about the way income is earned and spent are influenced by socio-cultural as well as economic factors. This combination of factors needs to be incorporated into development policy, particularly when considering bushmeat income and its alternatives.
- The contribution to the local economy made by local non-hunter bushmeat traders, a significant proportion of whom are women, should be recognised. Given the importance of women's income for family welfare, it is important that public policy seeks to protect and promote the interests of this category.

The bushmeat problem for conservation and development

This article is based on research undertaken in the Dja Reserve, Cameroon between November 1996 and December 1998. The Dja Reserve is located in the tropical forest region of southern Cameroon. It covers a territory of 5260 km², with the Dja River providing a natural boundary. The Reserve was created in 1950 when people were already living on its border, with their hunting, fishing and agricultural activities taking place within its boundaries. Official Cameroon legislation permits no hunting in the Reserve, with other human activities regulated or forbidden. This is despite its current status as Biosphere Reserve (established in 1981), acknowledging the role of the local population in managing the

Reserves resources. Since 1992 part of the Dja Reserve has been managed jointly by a European Commission funded ICDP called ECOFAC (Conservation et Utilisation Rationnelle des Ecosystemes Forestiers en Afrique Centrale) and the Cameroon government's Ministry of Environment and Forests (MINEF). The aim of the project is to combine biodiversity conservation with social and economic development for those populations dependent on the Reserve's resources.

There are three ethnic groups living on the border of the section of the Reserve managed by the project: Bulu, Badjoué and Baka 'pygmy'. This article predominantly concerns the Bulu population. The main concern of the project is the commercial bushmeat hunting undertaken by both the local population and those coming from outside the Reserve, which they believe to be unsustainable (Delvingt, 1997). The Bulu live in 18 villages located on the western edge of the Reserve along a 37km stretch of track running from north to south. There are neighbouring Baka camps linked to some, but not all of the villages. The villages vary in size with between 20 and 250 inhabitants. A road bridge crosses the Dja River at the north. To the south the river must be crossed by canoe.

The ECOFAC ICDP approach

The ECOFAC project has taken measures to reduce local commercial bushmeat hunting with a combination of suppression, compensation and substitution activities typical of many ICDPs. Suppression activities have included the employment of military style 'ecogardes' who undertake surveillance patrols, the confiscation of illegal arms and the seizure of meat being taken out of the Reserve to be sold. It has been argued that the coercive methods of suppression are counterproductive as they lead to increased tension with the local community. The construction of schools and dispensaries in the villages located on the Reserve's borders, as well as track and bridge improvements on the boundary road encompasses the project's compensation

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approach. It should be noted that although compensation may establish some goodwill between the project and the local population, the approach has been criticised for its tenuous link with both biodiversity conservation and the bushmeat economy. The search for alternative sources of income to that gained from bushmeat has been the focus of the projects substitution undertakings. Ideas have included the diversification and commercialisation of Non-Timber Forest Products (NTFP) and agricultural produce, the regeneration of existing cash crops, and salaried manual labour provided by the project. ECOFAC has focused its substitution efforts on local male hunters, who it sees as key players in the bushmeat trade and therefore the main target group for alternative income provision. It is the topic of substitution that has most relevance to the discussion in this paper.

Hunting and bushmeat research in a Bulu village

Research was undertaken in Mekas, one of the largest villages on the western border of the Reserve, with a Bulu population of 208 and a Baka population of 72. The village is located 23km from the road bridge in the north and 14km from the southern river point.

The activities of the fifty-three regular hunters in the village were followed during a one year period running between November 1997 and October 1998 (Two hunters refused to participate). These hunters were aged between 15 and 65 with the majority being between 31 and 35 years old. The study focused on the bushmeat the hunters brought back to the village, as well as what they did with this meat. The period of time they spent hunting, species caught, what was done with the meat and how much was earned with each sale was also recorded. Each hunter was categorised according to which type of hunting he predominantly undertook: village gun hunting, village trap hunting or forest hunting.

The research revealed that the majority of hunters were village hunters (68%). They made the most hunting trips, but their trips were short and regular. Village hunters were generally married men with a farm and one or more cocoa plantations. However, young unmarried men would also undertake trap hunting during the school holidays. Village hunters would hunt as part of their daily chores, undertaking work in their fields and plantations at the same time as checking their snares. They earned 26.5% of the total earned by hunters. However, their average earnings per hunter were low (28,244 CFA per year). They also killed the largest number of animals (36.5%) but among the animals killed were those damaging their field crops, such as the African brush-tailed porcupine (*Atherurus africanus*) and Giant Rat (*Cricetomys* sp.). They sold just over half of the game that they trapped (56%), the majority of which (90%) was sold in the village.

There were only 10 regular gun hunters, making the profile of the typical village gun hunter difficult to define. One characteristic is evidently either the ownership of a gun or friendship/kinship with a gun owner. They generally had a strong commercial motivation to hunt. This was probably due to the cost of this type of hunting, requiring the purchase of cartridges at 500 CFA each. They made the smallest number of hunting trips and spent the least time away hunting. They were efficient at maximising profits and had the highest earnings per hunter of all hunter types (102,792 CFA per year), even though they only took 22% of the total game killed. They achieved this by selling the majority of their catch (60%) outside the Reserve where greater profit could be made.

There were 17 regular forest hunters who can be divided into four sub-groups. The first sub-group comprises young males who

have no family commitments. This type of hunter did not need to clear a field for the year or create or maintain a cocoa plantation and was therefore free to leave on long hunting trips. The second category comprises professional hunters, originating from outside the Reserve. These men come to the area solely to hunt. A third category is married men with a family, farm and cocoa plantation but who also undertook forest hunting. The fourth category is Baka hunters from the camp located next to the village.

These forest hunters spent long periods away (a total of 23,719 hours and 66% of all time spent hunting). Their total earnings were more than any other hunter type (making up 44.5% of all money earned hunting) and they sold more of their catch than any other hunter type (74%). However, their average earnings were less than gun hunters (an average of 72,432 CFA per year) as they sold the majority of their game (83%) in the village, where less profit could be made.

Box One: Hunting Types in the Dja Reserve

Village hunting takes place within a day's walking distance from the village (between 5 and 10 kms). It can be further subdivided into '**village trap hunting**' largely undertaken around the hunter's own fields and plantations and '**village gun hunting**', which mainly occurs at night, with the hunter using a head torch to illuminate and startle the game before killing it. Village gun hunters generally leave around dusk and return by dawn.

Forest hunting involves spending at least one night away from the village in order to reach and return from the hunting location. Forest hunters travel up to 40km from the village and can remain away for more than 15 days. These hunters have camps located in the forest with cabins where they smoke and store the game before returning with it to the village.

These hunting definitions have also been used by Dethier (1995) in his research on the hunting activity of the Badjoué on the northern border of the Dja Reserve.

Movement of bushmeat

Of the bushmeat sold by all hunters in Mekas, the vast majority (84%) was sold in the village, of which 81% was to local people. Data collected on goods being taken out of the Reserve strongly suggests that a significant proportion of the game purchased in the village by local people is destined for the urban market outside the Reserve.

Between November 1997 and October 1998 data was collected on all goods and people arriving in and leaving the Reserve at its southern river point. Every person, family or group who crossed the river with the ferryman was asked the motive for their journey and what goods they were carrying with them. If they had goods, they were asked what they intended to do with them. A total of 2928 journeys were recorded, with 2257 people travelling out of the Reserve and 2054 people entering/returning.

Of the 2928 journeys made, 1511 were exits from the Reserve. The major destination stated was the town of Sangmelima 40km away. The two principal reasons given for why the trip was being made were to sell bushmeat (20%) and buy goods (20%). Of those trips made out of the Reserve almost half (42%) involved the transportation of bushmeat. Of those carrying meat out of the Reserve 63% were men, 32% women and 5% couples. An estimated 1471.25 animals were transported out of the Reserve during this period. Of the meat carried out, 72% was to sell,

18% was for consumption and 10% was a gift. Bushmeat was by far the most significant product leaving the Reserve. Other items included agricultural produce but were of far less quantity and economic value.

The majority of people entering the Reserve were wishing to visit or return to the villages located along the southern section of the track. The principle reason for entry was to return home (73% or entries), meaning that the majority of those entering the Reserve were returning from a trip made out. Of the 1417 trips made into the Reserve 58% involved the transport of goods purchased in town. The most valuable commercial product was odontol, an alcohol made from distilled palm wine, 100% of which was for sale. Cigarettes followed this, again of which 100% were destined for sale. Other products sold for commercial purposes were rice, sugar, kerosene, soap and salt. The total purchase value of all these products was 2,317,629 CFA and the total sales value in the villages, 3,490,570 CFA.

Of those who left the Reserve with bushmeat and whose return was registered in the study (386 people in total, the majority of whom lived in the Reserve), 64% came back with goods that they had bought in town, a significant proportion of which was for sale. The two main reasons given for why these people were leaving the Reserve were to sell bushmeat (66%) and to buy goods (16%). 61% of the group were male, 31% female and 8% couples traveling together. The most popular commercial products purchased by this group were also cigarettes and odontol. This was followed by sugar, rice, kerosine, soap and salt. The total purchase value of these products was 625,715 CFA and the total sales value, 967,930 CFA.

Those who left the Reserve with bushmeat were returning with goods worth nearly 28% of the total sales value of goods brought into the Reserve during this period. With goods such as rice and sugar this increased to nearly 40% of the total sales value. The percentage of goods to be sold for commercial purposes was consistently higher for those who had carried bushmeat out of the Reserve. This is with the exception of odontol and cigarettes, 100% of which were sold by all traders.

These figures reveal the importance that income from bushmeat sales outside the Reserve plays in the local economy. It is clear that both men and women who live in the Reserve purchase meat from hunters in the village in order to sell at a profit in town, returning with goods both for personal consumption and sale.

Bushmeat income and livelihood strategies

Economic data collected on the Bulu population's livelihood strategies in Mekas revealed very different approaches to earning and expenditure between Bulu men and women. Data was collected over a year on all economically active members of the population. Each week ten individuals were randomly selected and asked about their income and expenditure during the week. The results provide a general overview of relative income and expenditure between men and women rather than a cumulative total value. Data on bushmeat and cocoa income, the two major forms of income for Bulu men in the Dja Reserve, was collected separately.

The product most commonly sold by both men and women was odontol, followed by bushmeat. After this came unspecified commercial goods and cigarettes. Men sold slightly more goods than women (86,820 CFA for men and 74,310 CFA for women). Both made the most money from selling odontol (23% of total sales for women and 28% for men).

Women were the only ones to sell bushmeat outside the Reserve in the study (19%). Women also sold prepared foodstuffs such as flour and manioc doughnuts, cassava sticks, cassava 'tapioca' and auvianga (pieces of cooked meat). Combined, these 'transformed' food products made up 21% of their sales. Other products sold by women were cigarettes (9%), ngon (egussi melon seeds, 7%), and palm wine (6%). In general women obtain small amounts of income through the transformation of crops, generally with very low profit margins. However, by reinvesting their income through the purchase and sale of increasingly profitable goods, or by membership of a tontine (rotating savings and credit associations) they are able to slowly build up their capital. Selling bushmeat outside the Reserve provides women with the opportunity to obtain a far greater profit margin, enabling them to start trading in town goods, which also possess higher profit margins.

For men, the second highest sale after odontol was unspecified commercial goods (27% of their total sales). These were sales by men in the village who owned shops and sold a variety of goods. This was followed by bushmeat (14%), cigarettes (10%) and palm wine (8%). Men's bushmeat sales were game sold by hunters to people from the village.

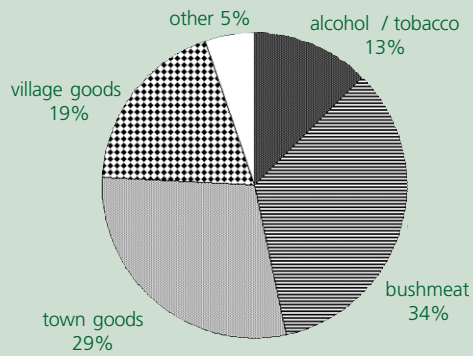
Box Two: Cocoa and Bushmeat income for 1997/8

	Cocoa	Bushmeat
No. of participants	39 farmers	49 hunters
Total sales 1997/8	3.7 million CFA	2.6 million CFA
Highest earner (per annum)	377,450 CFA	271,800 CFA
Average income (per annum)	95,000 CFA	53,000 CFA

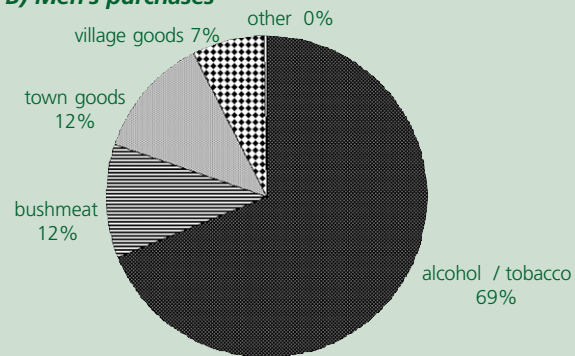
Separate studies on bushmeat and cocoa income revealed how during 1998 men earned more from cocoa than bushmeat (see **Box Two**). However, the attraction of income earned from bushmeat remains high. Cocoa farming involves long term investment of time, energy and cash. A hunter need only purchase enough cable to lay a line of traps and take the time to place and check them. In addition, rather than earning a once yearly lump sum from cocoa, hunters are able to earn smaller amounts of money throughout the year. Part of the appeal of commercial bushmeat hunting is that the income gained is 'quick, easy money', involving low investment with rapid returns. This type of earning technique is particularly attractive to young unmarried men who have few responsibilities and the freedom to do as they like with the money they earn. Interestingly, the Dja Bulu generally perceive the income earned from hunting as money that you can do little with and it has a reputation for being frittered away. This is in contrast to cocoa income, which is largely seen as being put to good use. Bulu culture lays great importance on giving and sharing, whilst discouraging the accumulation of individual wealth. Men particularly are under great pressure to both demonstrate generosity and confirm social relations. This makes the one-off income from cocoa sales at the end of each year quite a stressful period. Despite this, most farmers try and do something long term with the money they earn, such as making purchases for the household, paying school fees, and buying clothes, petrol and soap. In contrast, the smaller amounts of cash earned from hunting are more easily spent on social activities such as the purchase of alcohol and cigarettes for the hunter and his peers (Solly, 2004).

Figure One: Gender Differences in Expenditure

A) Women's purchases



B) Men's purchases



The results on expenditure in the study of Bulu livelihood practices reveal interesting gender differences and confirm the social nature of male spending. Men spent twice as much as women, with most of their money going on alcohol and cigarettes. Women's expenditure, on the other hand, was predominantly focused on the family and household, spending the majority of their income on food and household goods (see **Figure One**).

Conclusion

This article highlights the complex nature of the bushmeat economy for the Bulu in the Dja Reserve, Cameroon. It comments on the social, cultural and economic aspects of the economy, as well as the variation between hunter types and the role played by non-hunters. It encourages a vision of the bushmeat economy as part of a livelihood system rather than an isolated economic activity. By doing so it aims to broaden what is often a quite limited perspective adopted by ICDPs *vis à vis* the issues and actions required to tackle the local bushmeat economy in protected areas.

The bushmeat economy currently plays a very important role for the Bulu living in the Dja Reserve. Consideration should therefore be given to permitting some level of both subsistence and commercial hunting. However, the fact that behaviour varies considerably between different hunter types opens up possibilities for an ICDP. The majority of hunters (68%) hunt within 10km of the village. Only 32% of hunters undertake forest hunting. Village trap hunting contributes to a diversified economy that has been part of Bulu culture for many generations. Village trap and gun hunters, by hunting around their fields and plantations, are able to provide some protection from crop pests. Village gun hunters are efficient in gaining maximum profits by selling the majority of their commercially motivated catch outside the Reserve. Village trap hunters sell just over half of their game, the rest is given to family, usually for consumption. Of the game that is sold, the vast majority is sold in the village to local people, who as bushmeat traders, use it as part of an important livelihood strategy. For these reasons, there is a strong argument in favour of allowing village trap and gun hunting, whilst placing greater restrictions on forest hunting. This would affect a smaller proportion of hunters, and would penalise professional hunters originating from outside the Reserve.

Women make up 32% of those leaving the Reserve to sell bushmeat and 31% of those who then return with town goods to sell. The significance of women needs emphasising due to both the fact that they have been largely ignored by the ICDP working in the Reserve and because of the part played by women in livelihood improvement. By not recognising the role performed by women in the bushmeat trade the project is missing a significant development opportunity. Because of women's focus on the household and the priority they give to livelihood improvement,

they are key players in the relationship between bushmeat and local economic development. In several villages in Cameroon women who trade in bushmeat have formed unions to regulate who participates in market activities, setting quotas and enforcing the laws on which animals may be hunted (Bailey, 2000). In the Dja Reserve there is also the potential of integrating savings associations and tontines into the system of bushmeat and town trade, thereby reducing reliance on bushmeat income for raising capital to buy town goods. Instead of buying bushmeat to raise funds traders could use the tontine system, which is predominantly but not exclusively female run. However, care should be taken not to exclude men as this could lead to tensions and conflict both within the community and with the project.

This case study focuses on the Bulu population and the activities of the ICDP project working in the Dja Reserve, Cameroon. However, the study has wider resonance, particularly in Central Africa amongst Bantu forest dwellers who share a similar culture with the Bulu. It also has relevance to a broad range of conservation projects confronted with the challenge of combining hunting control with human development.

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