

# City Dwellers and the Central African Tropical Forest: resource use and perceptions

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Brussels June 1994

Submitted to European Commission DG XI, contract no B-8110-93-000284

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## **1. SUMMARY OF PRINCIPAL RESULTS**

From the time the contract for this feasibility study was signed until the drafting of the present Final Report, a number of initial and intermediary steps have been taken toward the creation of a forest-city research unit, comprised of both human and material resources. Our ultimate objective here is the constitution and management of a relevant data bank and the establishment of a social science task force/monitoring network capable of participating actively in forest conservation as well as evaluating ongoing programmes. Meanwhile, a considerable amount of research per se has been carried out. The concrete steps taken thus far are delineated below.

### *1.1 Contacts with African and European Researchers*

Contact was made with African and European researchers (from ECOFAC, universities, research centres, civil services, NGOs, etc.) working in areas related to the forest-city interface. Numerous letters were sent all over central Africa and Europe - many of which were responded to enthusiastically.

### *1.2 Bibliography*

Relevant documentation available in Brussels was accumulated and analysed. Sources were the increasingly specialised forest conservation collection at the Centre of Cultural Anthropology at ULB; European Union services; the African Studies Centre of the Belgian Ministry of Foreign Affairs; the CEDAF/Institut Africain; and the Gembloux Agronomy Institute.

### *1.3 Mission*

A fact finding mission to central Africa (Yaoundé, Cameroon; Kinshasa, Zaire; and Libreville, Gabon) was undertaken between 22 February 1994 and 29 March 1994.

During this mission documentation was collected from university facilities, research organisms, international organisations, local administrations and NGOs.

Specific data was gathered (through observation, interviews and informal conversations) on:

- urban consumption of bush meat;
- urban consumption of fuelwood;
- the socio-economic chain of exchange between producer/provider of forest products and the urban consumer;
- anthropological perceptions of the forest space; wildlife; trees, timber and the environment; forest peoples.

An evaluation of local research capacity was made:

- by monitoring interest in the forest-city interface;
- by analysing locally produced studies;
- by investigating infrastructural support systems (i.e. material such as fax, word processors, photo-copying equipment, etc.).

Local actions aimed at forest conservation such as legislation, application of legislation, public awareness campaigns, school-oriented and youth activities, etc. were investigated.

People working for ECOFAC in Yaoundé and Libreville (activities are temporarily suspended in Zaire) were contacted and interviewed. Special emphasis was placed on identifying how ECOFAC objectives can integrate research on the forest-city interface.

#### *1.4 Creation of a Research Network in Central Africa*

In depth conversations and interviews were conducted with African social scientists working in areas relating to forest conservation and management, the urbanisation process, the current central African socio-economic environment, anthropological factors. These social science researchers have carried out six pilot studies (two per country). Their summaries appear in the Intermediary Report, Appendix 4.

Efforts have been maintained at making contact with and stimulating interest in the forest-city interface among researchers from Congo-Brazzaville and the Central African Republic.

#### *1.5 Recommendations*

Recommendations have been formulated (see Section 2) suggesting how research can be made operational in the forest-city dimension of the much larger forest conservation area.

## **2. RECOMMENDATIONS**

This feasibility study reveals the first steps taken along a complicated and complex research path which has only recently been identified. As very little work has been done in this area, and whatever work has been done is generally unpublished or not easily accessible, many aspects need research attention and monitoring. It is strongly urged therefore, that the European Union

continue its support of social science research in the area of forest conservation by emphasising the forest-city optic and by participating in the constitution of a research support structure. Our preliminary research and mission to central Africa has enabled us to establish the methodological approaches and contacts with local researchers necessary to carry out the following recommendations.

2.1 Much more detailed data is needed on the pilot studies already carried out on bush meat, charcoal and other forest products, as well as on anthropological perceptions. Concerning the socio-economic aspects of forest products in the urban context, actions to be taken include:

- inventorying volume at formal market areas and along informal commercial networks;
- establishing their real costs compared with alternative products;
- elaborating an ethno-linguistic nomenclature of forest products consumed in cities;
- identifying and making contact with the social actors participating in the chain of exchange. This is important because forest-city relations are strongly influenced by these actors who know how to decode the economic messages relating to supply and demand;
- establishing the ethnicity of these social actors;
- establishing the ethnicity and socio-economic level of consumers of forest products;
- investigating gender roles.

2.2 With respect to perceptions, more detailed anthropological analysis is needed concerning:

- the forest space;
- conservation;
- ecology;
- the environment;
- wildlife;
- hinterland land tenure systems;
- forest peoples (hunters-gatherers, shifting cultivators, river people);
- professionals or semi-professionals whose livelihoods are linked to forest exploitation (hunters, poachers, bush meat traders, those working in the timber sector, etc.);
- human relationships between city dwellers and their forest-based family;
- how city dwellers identify themselves vis-a-vis their forest origins;
- how they perceive the question of land use in surrounding forest areas.

2.3 The geographical scope of research should be extended:

- to capitals or major cities in other countries where ECOFAC is active, i.e. Bangui, Brazzaville, Bata;
- to provincial urban areas which lie deep in the tropical forest such as Mbandaka, Bukavu or Kisangani (Zaire); Ouessou (Congo Brazzaville); Makokou or Oyem (Gabon); Ebolowa (Cameroon); Nola (Central African Republic).

2.4 Milieu focus should also be extended. As rivers and river peoples are intimately associated with the forest biome, use and perceptions of central Africa's great rivers e.g. the Ogooué, Sanaga, Sangha, Ubangui, Zaire, should be examined.

2.5 Investigations should be made into how small-scale forest-based industrial, agricultural or craft products can be commercialised in cities. Forest peoples are increasingly involved in the process of monetarisation so commercialisation of such products can stabilise these populations in their forest villages. This can contribute to the valorisation of the forest in the eyes of those who live there while diminishing migration into urban areas.<sup>1</sup>

2.6 Further study should be conducted concerning local acceptance of fuel efficient grills in those cities where charcoal is used extensively. They can be manufactured and distributed locally at relatively low prices. Use of such grills could diminish deforestation around cities and tree removal within the cities themselves. (Similar projects have been carried out in the drought-beset Sahel region.)

2.7 Alternatives to bush meat consumption in urban areas should be developed and attitudes tested. Avenues to explore include adapting conventional livestock breeding techniques to local conditions; game ranching, game cropping, game farming; or offering urban consumers raised meat which has been smoked according to local custom (see Section 7.1.2).

2.8 Public awareness and public relations structures should be put in place, in central African cities, enabling local authorities to stimulate interest and concern for the forest. Public awareness is a large part of conservation yet school curriculum, or more importantly the media has so far devoted insufficient attention to the debate.

2.9 Greater attention should be given to the elaboration of systems models in the area of forest conservation. If forest conservation is considered as a "system", then the various social science research factors described below are "sub-systems" which interact and influence the functioning of the "system". The forest-city interface is likewise a system with dependent sub-systems which could be understood more clearly through modelling techniques.

2.10 Before research on the forest-city interface can be meaningful it must be centralised. It is consequently recommended that an operational research support structure be formally constituted. It could be located at the Centre of Cultural Anthropology at the Université Libre de Bruxelles; a Centre which has already developed expertise in the area of forest conservation research and the forest-city interface, as well as having accumulated a specialised library on related matters. One full-time researcher and one half-time documentalist will be needed in Brussels. Either four half-time or two full-time researchers / co-ordinators should be recruited in Yaoundé, Kinshasa and Gabon (in a first phase). The research support structure in general and these persons in particular (who have already been identified) will work jointly to:

- collect, inventory, classify and house related documentation and cartographic resources;
- co-ordinate pilot studies and research projects in central Africa;
- provide badly needed infrastructure to African partners in local universities and research centres;
- maintain a data bank housing and sharing documentation and live information on projects, researchers, NGOs and contracts (this data bank should be connected to on-line physical information networks which will facilitate communication between researchers in Europe and the US and between Europe and Africa);

-work with local leaders in central Africa by making recommendations; by participating in environmental public awareness and education campaigns; by sharing information on conservation legislation and trends; by supplying information on international funding possibilities for forest conservation; by performing public relations and lobbying functions on the international level. The public relations dimension is of primary importance because while there is interest in forest conservation on the local and international levels, more harmonisation and concerted action is needed;

-work with the European Union by orchestrating or carrying out feasibility studies and short- or long-term projects; by making recommendations; by supporting other European Union forest-related projects such as ECOFAC; by monitoring and evaluating conservation activities being undertaken by national governments and other environmental groups.

**3. INTRODUCTION** In September of 1993 the DG XI of the European Union contracted the Centre of Cultural Anthropology at the Université Libre de Bruxelles to carry out a feasibility study on "City Dwellers and the Central African Tropical Forest: Resource Use and Perceptions". This Final Report, is based on a country-comparative, inter-disciplinary, social scientific approach which includes most notably: research findings; steps taken with respect to accumulating relevant documentation, data gathering and the creation of a research network; and recommendations for further concrete actions and study. The long-term objective behind this study is the identification of problem areas in the forest conservation field and addressing them by stimulating public concern and new ways of thinking as well as offering alternatives to certain forest products consumed in cities.

There is compelling urgency to devote research funds and efforts to this subject because there is unanimity among experts from all disciplines that the forest crisis is escalating and that if deforestation and species depletion continues at the present rate, the future of our environment as we know it will be compromised. Efforts must be taken to understand in more precise terms the socio-economic articulations and interstices between the forest-city interface. This will contribute to the effort in slowing down this escalation which so powerfully influences contemporary African history.

### **3.1 RESEARCH IMPERATIVES**

Numerous actions have been initiated aimed at halting the ecological and human disaster threatening the tropical forest in central Africa and its indigenous peoples. A crucial factor, however, has yet to be adequately developed: the forest-city interface. This term, repeated frequently throughout this study, is defined loosely as being:

-how forest resources are used by city dwellers and,

-how the forest, its peoples, products, related activities and symbolism are perceived by urban populations.

Understanding the socio-economic factors accounting for why, and for what specific purposes, forest products are consumed in cities needs to be supported by socio-anthropological research. It is crucial to identify how city dwellers perceive the forest in anthropological terms because

perceptions are intricately linked with use, which in turn can lead to non-sustainable development and eventual resource depletion. Grasping local perceptions and sensibilities, moreover, will improve working relations with African administrations, organisations and NGOs involved in addressing conservation issues.

Anthropologists, economists, political scientists and other social scientific researchers are called upon to play active roles in interpreting the crux of the forest-city interface. African and European social scientists from these disciplines must work toward conservation by integrating local leaders into the conservation struggle, by stimulating public awareness and by organising educational efforts. It is absolutely necessary to emphasise the cultural, political and economic aspects of urban pressure on the forest environment.

Despite certain common denominators, the nature of the forest-city interface varies from one country to another depending on political systems, economic structures, geographical and historical influences, cultural attachments, demography, etc. A study of this interface must therefore be country-comparative before being able to assert research findings. Hence the selection of three very different countries in central Africa for initial research, i. e. Cameroon, Gabon and Zaire. (Reasons for this selection stated below in section 5.2.)

### **3.2 WORKING HYPOTHESES**

The future of the forest depends to a very large extent on city dwellers. This applies to the elite because political decision-makers, representatives of multinationals or foreign companies, local businessmen, among others, determine through legislation, political accommodation and commercial criteria, the ways in which forest resources are exploited.

It also applies to the masses: millions of people in the swelling cities of central Africa use and rely on, discover and re-discover forest resources to help cope with the exigencies of daily survival which is exacerbated by the current economic crisis: weak economies and recession in general, CFA franc devaluation in Cameroon and Gabon, political and economic deterioration in Zaire.

In times of economic hardship, urban populations exert increasing pressure on forest resources, generally in ways which ignore "sustainable development". Deforestation takes place to provide fuel wood and for the establishment of plantations. Likewise, urban unemployed take to commercial hunting as a means of earning a livelihood. This dramatically reduces wildlife. It also disrupts traditional living habits in the forest environment, changing attitudes and behaviours.

Forest conservation or management (this latter being a difficult and polemic term to define) must take a wide array of social science factors into account to be realistic. The world economy, demographic questions, urbanisation, ethnicity, the psychological lure of the city, etc. are among the subjects which influence the ways and degree forest resources are exploited.

Deforestation and resource depletion by city dwellers goes far beyond the commonly stated reasons of "poverty and ignorance": cultural and traditional attachment to forest products is deep-rooted and enduring.

The forest is perceived by city dwellers in a multiplicity of ways which merits in-depth research attention. Some consider the forest to be a vast reservoir of resources to be consumed and not managed; others are apprehensive, given real and imagined dangers; others feel a deep spiritual attachment to it. The vast majority of city dwellers are indifferent to the forest as defined and defended by Europeans.

Notwithstanding the physical departure from the forest habitat, the forest remains important to urbanites for a variety of reasons. They range from spirituality, ritual, legends and nostalgia to commerce, traditional healthcare and food and fuelwood purveyance.

The fragile nature of African political systems has induced local leaders to address priorities which serve incumbency above all else. These priorities are generally linked to perceived economic requirements or commercial activities which provide revenues at minimal investment costs. With respect to the forest this translates, on the international level, into massive lumbering; sale of live animals for research, zoos or pets; and hunting parties or eco-tourism for the well-to-do. Likewise, policy concerning non-sustainable use of forest products by urban populations, also for reasons of expediency, is characterised by attitudes ranging from indifference to leniency. Short-term political and economic imperatives, in sum, clash with forest conservation which is a long-term enterprise.

A better understanding of the forest-city interface could have an impact on development issues themselves. Transportation networks; urban planning; cultivation, gathering and commercialisation of agricultural and forest products; the vast timber sector; animal husbandry; hunting and fishing; etc. are all development issues but they are also issues intricately linked to the development process.

The way forest conservation evolves in the near future will have a direct impact on the availability of certain resources in urban areas. Deterioration of living standards in African cities to even worse poverty levels will exacerbate the flow of "genuine" and "economic" refugees from Africa into Europe.

#### **4. TRENDS IN CONSERVATION STRATEGIES**

In the past decades, natural science researchers have demonstrated the most perseverance in the effort to design and implement viable conservation actions. Agronomists, botanists, biologists, dendrologists, environmentalists, veterinarians, etc. have produced an impressive and voluminous corpus of literature but deforestation and species depletion continues at an unbridled pace. This work has been largely forest-based and introspective, without giving sufficient attention to the social environment, be it inside or a fortiori outside of the forest.<sup>2</sup>

Environmental protection has also been approached from the perspective of national legislation but the gap between law and application is too wide for this approach to be meaningful.<sup>3</sup> Such



legislation moreover does not always take the human factor into consideration and does so rarely when it comes to rural populations. This can be accounted for in local political terms because African leaders are generally willing to minimise ecological concern for reasons of political accommodation or when short-term economic or commercial incentives are strong enough. They are consequently disinclined to seriously address environmental issues perceived as luxuries defended by ecologists in post-industrial societies. African political ideology is nonetheless, gradually starting to accept the concept of "development with conservation".<sup>4</sup> In this spirit, Organization of African Unity (OAU) leaders forcefully verbalised the need to address the deforestation crisis during the fifty-first Council of Ministers session (February 1990):<sup>5</sup> a trend encouraged by "aid for nature swoops".<sup>6</sup> Increased interest in "eco-tourism" is another incentive. A closely related hypothesis which merits being tested is whether or not positive environmental action on the part of African leaders is linked to internal and external pressure for democracy.

The 1980s saw a shift in attitudes and gradually mention was made in publications and international forums of the forest peoples themselves. Likewise, the long-standing fences-and-fines approach to forest conservation was re-evaluated. In 1983 a pair of authors "struggled to consider man as being an integral part of eco-systems."<sup>7</sup> Denslow and Padoch buttressed this position.<sup>8</sup> The Declaration of La Lopé (Gabon 1988) concerning rational use and conservation of central Africa's eco-systems referred to participation, responsibility and awareness of local peoples with respect to conservation policy.<sup>9</sup> Similarly, Globe International in its proposition for a model convention aimed at rational use and conservation of forests included an article firmly supporting the rights of forest peoples.<sup>10</sup> The European Union continued moving in this direction, supporting a major work on the conditions of forest peoples in Asia, South America and central Africa. *Situation des Populations Indigènes des Forêts Denses Humides*,<sup>11</sup> like the other seminal works on forest peoples, however, remains essentially forest-based.<sup>12</sup>

Other international organisations endorsed this school of thought by sponsoring a multiplicity of conferences, summits and symposiums. In 1990, for example, the World Conservation Union and The World Bank organised a conference hosted by The African Development Bank on "Conservation of West and Central African Rainforests" where issues relating to "the nexus of population, agriculture and environment" were addressed.<sup>13</sup> The 1992 Conference on Environment and Development, commonly known as the Rio Conference associated the needs and cultures of local populations with sustainable development. The following passage captures the spirit of its basis for action:

"Indigenous people and their communities have an historical relationship with their lands and are generally descendants of the original inhabitants of such lands... Indigenous people and their communities represent a significant percentage of the global population. They have developed over many generations a holistic traditional scientific knowledge of their lands, natural resources and environment... In view of the interrelationship between the natural environment and its sustainable development and the cultural, social, economic and physical well-being of indigenous people, national and international efforts to implement environmentally sound and sustainable development<sup>14\*</sup> should recognise, accommodate, promote and strengthen the role of indigenous people and their communities."<sup>15</sup>

These works and initiatives provide a foundation for the new research demands which must go further in developing social scientific modes of analysis so crucial to forest conservation. Investigating how city dwellers use and perceive forest resources constitutes an original approach in this line of thinking because it takes forest research outside of the forest for the first time.

Some works however have looked at aspects of the forest-city interface which are useful for our research. Ariel Lugo (1991) has analysed socio-ecology, ecological engineering and economics with respect to cities and the tropical landscape. In a concise but convincing article he argues that:

"there is room for the city in the tropical forest biome, and that cities may be a required component of any sound conservation scheme for such regions. However, we need to rethink how we locate, design, and maintain cities so that they become assets, rather than liabilities, for the sustainable development of the tropics".<sup>16</sup>

He continues by suggesting that before sustainable development policies can be applied in tropical lands, particular attention must be paid to interface economies and ecosystems. While Lugo emphasises different variables in the forest-city equation, the significant point is that he is working on the role of cities in forest conservation.

In related research, but again considering different variables, the Zairian Lubana Ngiyene Amena (1990), has studied the relationship between rural associations and urban consumer groups.<sup>17</sup> This work is of particular importance because it proposes a concrete methodology in analysing the roles of specific social actors involved in the commercialisation of hinterland products in Kinshasa.

Hardoy, Mitlin and Satterthwaite (1992) have analysed how poverty in Third World cities affects the surrounding ecosystems, health and global cycles. They offer guidelines on how responsible local governments can improve the standards of living of city dwellers.<sup>18</sup>

## **5. RESEARCH VENUE**

### **5.1 CENTRAL AFRICA**

Central Africa has been identified as a priority research venue for natural scientific, social scientific and organisational reasons. Outlined in the terms of reference, these reasons are expanded below.

1. The magnitude of its surface area still covered by tropical forest. According to recent estimates, central Africa's "approximate original extent of closed tropical moist forests" was 3,132,360 sq. km. Yet, only between 1,645,073 and 1,704,670 sq. km. remain. This equals between 59% and 54.4%.<sup>19</sup> These figures, however, are subject to some debate because given the evolution in very long-term climatic conditions, the meaning of "approximate original extent of closed tropical moist forest" is variable.

2. The proximity between cities and forest regions. Depending on the city, distances vary considerably. The forest is at the threshold of Libreville, for example, but hundreds of kilometres

from Kinshasa. Distance, however, cannot be considered without taking into account transportation networks or the time factor. Forest products converge in urban areas via an extremely dense web of road, rail and river arteries. Throughout central Africa, every imaginable means of transportation from canoe to helicopter is used in this commerce. When it comes to bush meat, for example, the point is capital. The very different repercussions of how the time and space factors converge give added support to the importance of studying the forest-city interface through a country-comparative approach.

3. The creation of the far-reaching ECOFAC programme financed by the European Development Fund (FED), aimed at the conservation and rational use of central Africa's forest eco-systems.<sup>20</sup> While primarily involved in the management of central Africa's protected areas, people associated with ECOFAC have communicated firm support for the need to understand urban influences on conservation to members of our research team. Their interest in the forest-city interface results in part from the illegal killing of protected area wildlife which ends up in urban markets.

4. The fact that unlike in North America or Asia, attitudes concerning forest management are still relatively flexible. It is not too late to work with local leaders: sharing information, sponsoring and organising public awareness and educational campaigns while emphasising the economic and cultural importance which city dwellers attach to their relationship with the forest.

## 5.2 CONTRASTS AND COMPARISONS: CAMEROON, GABON AND ZAIRE

The selection of these specific countries for initial focus was influenced by both research and pragmatic organisational factors. With respect to the former, they present a series of interesting contrasts. Standards of living, for example, are very different. In per capita terms, Zaire is one of the poorest countries in the world, Gabon the richest in sub-Saharan African, Cameroon between the two. Populations vary just as significantly: Zaire has an estimated population of approximately 40 million inhabitants; Cameroon, 11.1 million; and Gabon, 1.2 million. Natural and economic resources are also quite different. These factors as well as incomparable colonial experiences and legacies are directly linked to the political systems in place and they consequently influence the way local governments approach forest conservation.

On the organisational level, contacts were made with researchers throughout central Africa in the very early stages of project definition. Responses and feedback were especially positive and timely from Yaoundé, Kinshasa and Libreville, where, moreover, the Centre of Cultural Anthropology has a long-standing tradition of research collaboration. Co-operation agreements already exist with the University of Yaoundé, the Omar Bongo University in Libreville and the University of Kinshasa. The interest expressed by local academics (many of whom are affiliated with these institutions) for this area of study is witnessed by recent developments in research efforts. In the past, they have either taken it for granted or minimised its importance as a priority research subject. Serious social scientific work, however, has now commenced. (The crucial role which these researchers can play in forest conservation is expanded below in section 7.2.)

Another very encouraging factor is support coming from Cameroon. The ECOFAC co-ordinator based in Cameroon has recognised the need to take the human factor of forest conservation into

account, as well the urban dimension of reserve management. ECOFAC Cameroon now has a base in Yaoundé, which was not foreseen at the programme's creation. Specific attention has been given to the role of young urban "unemployed" who are active in the bush meat trade. In the Dja Reserve concrete efforts are being taken to maintain local populations on their traditional lands while introducing possibilities for alternative means of earning cash. The all-too-frequent policy of exacting repressive measures against poachers, applied in other ECOFAC areas, has thus been abandoned.

## 6. URBANISATION

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### YAOUNDE

In 1888 when German explorers penetrated for the first time into the area which is now Yaoundé, they found nothing but dense forest, populated by the Owondo whose culture was closely linked to the forest environment. Today, Yaoundé has "razed"<sup>[22](#)</sup> the surrounding areas and has approximately one million inhabitants of varying origins. Peuls of the plains and sedentary agriculturists from the Logone and Chari valleys and the Madara mountains migrated from the north; forest peoples including the Beti, Boulou, Maka, Bassa etc. came from the south; and the Bamileke and Bakossi left the western parts of Cameroon to seek their fortunes in the capital. For these peoples and their urban counterparts throughout Africa, integration into city life corresponded with a transition from subsistence economic systems to a market economy.

### KINSHASA

When in 1882 Henry Morton Stanley planted the flag of the Comité d'Etudes du Haut-Congo in what was to become Leopoldville, the spot (located between the Mayombe Hills, the forest and Congo Basin) was referred to administratively as *une station*. By 1910, Kinshasa was already a village of 30,000 inhabitants. It is now a megalopolis of five million inhabitants living in extremely precarious socio-economic conditions.<sup>[23](#)</sup>

### LIBREVILLE

At the turn of the century Libreville was also a village. By 1997 it is estimated that its population will exceed half a million, which will place more than one Gabonese out of two in the capital. Seven eighths of the preceding generation lived in Gabon's forest, today three quarters of the population live in urban areas.<sup>[24](#)</sup>

While the phenomenon of urbanisation is relatively recent in African history, much of the continent's population lives in cities today. Urban: rural population ratios are 46:54, 40:60, 40:60 for Gabon, Cameroon and Zaire respectively.<sup>[25](#)</sup> The continent's cities can be considered as artificial entities, foreign to traditional political and economic organisational systems. They were developed to serve colonial administrations and to accommodate colonial commercial interests in the late 19th and early 20th centuries.

While the European powers were able to control the size of urban populations to suit their employment needs and to guarantee political control, (they did so by enforcing strict administrative policies) independence brought a dramatic influx of peoples into the cities from the hinterland. In search of jobs, health and education services as well as excitement, or fleeing from taxing physical labour and the perceived drudgery and boredom of rural existence, they have continued to swell into these "modern enclaves" or "places of hope" ever since.<sup>26</sup> As a result of this migration, African cities have become melting pots of widely heterogeneous ethnic groups.

A corollary of this human traffic is the ongoing movement of merchandise from the hinterland toward the city. Be it for local consumption or re-shipping, the nature and volume of this merchandise has also influenced the way urban areas develop.

## **7. FINDINGS**

### **7.1 USE OF FOREST PRODUCTS**

The forest is perceived as, and is in reality, a vast reservoir of all kinds of vital foodstuffs and raw materials as well as other socially and culturally important substances. It is also perceived as "a profane inanimate entity, to be plundered so as to satisfy gross economic demands."<sup>27</sup> Fuel wood and bush meat are the forest products most extensively used by city dwellers throughout central Africa on a regular basis for both economic and cultural reasons. While both are renewable resources in theory, insufficient effort is made to conserve them and even less to renew them: they are accordingly disappearing at an alarming rate. These reasons, combined with the desire to formulate recommendations on how to help diminish their depletion, have consequently motivated the specific focus of our research. The other forest products which are also used daily, again for economic and cultural purposes, were not investigated in significant detail because their use does not seriously threaten the forest - at least in the immediate future. (The cities which are the greatest consumers of fuelwood and bush meat head the next two sections.)

#### **7.1.1 FUELWOOD**

The major urban use of wood is for cooking. Economic conditions directly influence the degree to which fuelwood is used. The transition from the traditional "three stone, wood and pot" system of cooking to preparation with bottled gas, electricity and small kerosene burners necessitates a cash investment in appliances and utensils. Inversely, the decision to use traditional cooking methods necessitates architectural planning with respect to ventilation and storage of wood or charcoal.

#### **KINSHASA**

In Kinshasa's poor districts where most of the capital's five million inhabitants live in severe poverty, traditional methods of cooking with charcoal are the norm. Electricity lines do not extend there and bottled gas or even kerosene is prohibitively expensive. In 1980 it was estimated that 70% of urban households (compared with the near totality of rural families) relied

on fuelwood for cooking but also for a bit of warmth and light.<sup>28</sup> In 1986, despite the country's vast hydroelectric capacities, wood accounted for 87.7% of total energy needs.<sup>29</sup> As there is no economic alternative to charcoal use, deforestation around Kinshasa, into Bas-Zaire and Bandundu continues. Charcoal, referred to as *makala* in Zaire, is available in Kinshasa's markets or can be purchased by roadside vendors along roads linking city and forest. *Makala's* importance to Kinshasa can be deduced by the fact that a large district of the capital bears the same name. That erstwhile wooded area provided charcoal for the city. Traditional fuelwood gathering, while being a social institution, is a serious source of tree removal around Kinshasa. The forest has already receded by hundreds of kilometres from Kinshasa.<sup>30</sup>

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## YAOUNDE

Yaoundé is located between Kinshasa and Libreville on the economic spectrum and despite serious economic problems, not least related to the January 1994 devaluation by 50% of the CFA franc, there is relatively little domestic recourse to charcoal cooking. There is however a specialised charcoal market in the Briqueterie district and a large surface area of the Mokolo market in central Yaoundé is occupied by charcoal vendors who supply semi-permanent roadside restaurants. These small restaurant stands are nutritionally and environmentally important because food preparation in large quantities is more fuel efficient than preparation for single individuals. These latter thus find access to warm meals which are becoming rare for many of the urban poor throughout Africa.<sup>31</sup>

Bottled gas and electricity can be found in most households largely because the government has invested heavily in hydroelectric power and the energy sector in general. By the year 2010 Cameroon is scheduled to be an electricity exporting country.<sup>32</sup> It will be environmentally important to monitor whether or not domestic charcoal consumption increases as Cameroon plunges deeper into recession.

## LIBREVILLE

In Libreville, the wealthiest city in Africa south of the Sahara, electricity and gas are available in even poor neighbourhoods. The use of charcoal for domestic cooking is consequently rare. It is limited in large part to semi-permanent roadside restaurants (often run by Cameroonian women) or to middle class households which grill meat or fish for culinary or cultural reasons. Charcoal was not observed in any of Libreville's principal markets.

## OTHER USES

Wood is also used throughout central Africa as a raw material for furniture-making or as building material. The urban poor generally construct their shanty towns with lumber sold in local specialised markets, such as Yaoundé's Mokolo market. Demographic shifts toward urban areas and population growth will increase needs for lumber.

### 7.1.2 BUSH MEAT

As revealed in the two contrasting quotes below, hunting and eating bush meat can be accounted for in both economic and cultural terms.

"...en ville, le problème alimentaire est avant tout un problème de revenu: Il y a ceux qui peuvent se nourrir convenablement, il y a ceux qui ne le peuvent pas, et il y a ceux qui se débrouillent..."<sup>33</sup>

"In Africa an amazing variety of wildlife species are eaten: including all wild ungulates, primates, hyraxes, rodents, all cats, and many species of birds, reptiles, amphibians, insects and mollusks."<sup>34</sup>

Habitat loss and intensive (opposed to subsistence) hunting by man have both been blamed as being the major sources of decline in fauna populations. These two threats are associated with the forest-city interface because:

-habitat loss occurs as urban areas spread, due to population increase and demographic shifts or as city dwellers penetrate into surrounding areas to cultivate crops (for auto-consumption or commerce);

-intensive commercial hunting has become a common means of earning a living: profits are immediate and investment limited.

While hunting today is an activity reserved to men, women play a pivotal role in the commercialisation of game<sup>35</sup>. Acting as market vendors or intermediaries, it is often these women who provide for their families, especially in the urban environment. Game is sold either whole, in parts, or cooked parts, depending on the size, cost and rarity of the species. In traditional hunting and gathering societies, while big game hunting was the monopoly of men, women could go after less noble species such as rats, monkeys or birds.

The economic crisis has had a significant impact on wildlife depletion. This is especially so in Cameroon and Gabon because large numbers of the urban un- or under-employed have taken up hunting as a means of earning a livelihood or have become involved in the commercialisation of game.<sup>36</sup> The proximity between forest and city; the existence of access roads and train services linking these zones<sup>37</sup>; the possibility of acquiring (through purchase or barter) either industrial or home-made rifles; the possibility of acquiring steel wire for traps (wire loop leg hold snares); and ostensible official inability or reluctance to squelch poaching and other forms of hunting are factors which contribute to bush meat being available in the market place.

In addition to these socio-economic factors, just as important cultural factors influence bush meat consumption. It has been observed that with respect to forest dwellers "the quantity of meat eaten during a meal is relatively small compared to starches... but the taste of meat is essential if the meal is to be a success". The same author notes that in the Baka language, "scarce game" signifies "famine".<sup>38</sup> This attachment is maintained by city dwellers and is so strong that in some cases householders are willing to devote valuable financial resources for specific types or parts of bush meat in preference to less expensive sources of protein.



The desire to partake of game - despite its cost, the dubious sanitation conditions it is sold in (off the ground or street), the use of hazardous chemical preservatives such as formaldehyde - can be accounted for by taste, diet, curiosity, conviviality, tradition, status, ritual, defiance of taboos and nostalgia. It transcends social levels and ethnic origins, but not all religious divides as Muslims must respect precise injunctions before being able to eat game.

While some consumers prefer to purchase freshly-killed game because they intend to stew it according to a particular recipe or because they feel that they can control more carefully the quality of the meat, others have a clear predilection for the cured taste. Africans use varied techniques to cure meat: smoking in specially designed huts with dried wood, sun-drying, grilling with dry wood or charcoal, roasting over an open fire, etc. Depending on the animal's species and the user's ethnic tradition, game can be preserved with or without fur or skin. In some cases the latter are seared off before being preserved, in others, such as the smoked monkey available in Kinshasa, the animal is smoked with both skin and fur, a method which permeates the meat with a very pronounced taste. The effect produced through these techniques is of capital research interest because it raises questions on the desire to eat bush meat per se or the desire to feel the smoked taste on the palate. The question should be addressed because if desire for the smoked taste comes first, then it may be possible to raise and process livestock for smoking: a step which could relieve the existing pressure on central Africa's wildlife.

## LIBREVILLE

Of the three capitals visited during our mission, fresh bush meat is most abundantly available in Libreville. This abundance is especially interesting and somewhat paradoxical because eating habits have been justly described as being "very Western".<sup>39</sup> A report for the World Wildlife Fund estimates that four thousand tons of bush meat enter the city monthly.<sup>40</sup> It comes from the Wonga Wongué plain, from between the cities of Mitzic and Ndjole, around the Mokokou area and to a lesser extent from the Mondah Reserve just north of Libreville. In Gabon, there is a direct influence on hunting intensity from the logging sector. Areas previously difficult to penetrate are opened up by loggers which enables hunters to exploit rich game reserves. Much of this game is in fact consumed by the loggers themselves or the hunters' villages but some of it ends up on urban market places.

Species observed in Libreville were numerous types of monkey, mandrill, bush pig, porcupine, civet cat, antelope, water antelope, gazelle, pangolin, squirrel, various rodents, turtles, etc. This abundance can be explained by low population density; rich hunting areas; the relatively high standard of living in the Gabonese capital (people can actually afford to eat meat on a fairly regular basis unlike in so many other African cities); low government priority attached to animal husbandry (30,000 head of livestock was forecast for 1992)<sup>41</sup>; the scarcity of grazing land; trypanosomiasis; and rising costs of imported meat due to the recession and devaluation of the CFA franc.

The principal venues in Libreville where bush meat is sold include the central markets at N'Kembo, Mont Bouet, the port-side market of Oloumi and to a lesser extent along the road stretching between the city and the Mondah reserve. Other smaller markets were visited but no significant amounts of bush meat were seen in them.



The recent increase of commercial hunters who have no special affinity for the forest, or precise knowledge of urban requirements, results in overkill. Waste and discount prices entail. The distinction between commercial (modern techniques) and subsistence (traditional techniques) hunting is an issue which local governments must address not only in the definition of forest-related legislation but in its application as well.

Culinary preference is expressed for fresh meat prepared in local sauces and then for smoked and salted meat prepared in the same sauces. Bush meat consumption is clearly deep-rooted and is part of daily eating habits in Libreville. It is however clear that fish is the principal source of protein for the Gabonese in general and the Librevillois in particular. Our research has nonetheless focused on bush meat because it is the archetype of a forest product unlike fish which in *senso stricto* comes from the ocean or river.

## YAOUNDE<sup>42</sup>

Consumption of game in Yaoundé is considerably less conspicuous than in Libreville<sup>43</sup> which is somewhat of an historical irony because the then very rich and seemingly "inexhaustible" supply of wild animals in the Owendo region was one reason why its German founders selected Yaoundé for their post: it offered game from savannah and forest.<sup>44</sup>

For most Yaoundé residents, game is consumed on special occasions, meaning for example, holidays, pay day, or welcoming a family elder or special guest. Consumption is thus rather limited, evidence confirmed in a report on global eating habits in Yaoundé. J.L. Dongmo (1990) estimated that game was present at only 2.4% of noontime or evening meals, categorising it essentially as "a special treat".<sup>45</sup>

Consumption of game is relatively infrequent, or at least not easily visible in Yaoundé's markets, for the following reasons:

-Lower cost meat alternatives are available. Goat, sheep and pig comes from the west and sheep and cattle from the north. Beef, the most commonly consumed meat emanates from the Adamaoua Plateau.<sup>46</sup> The Cameroonian government has invested heavily in animal husbandry as revealed by the VI Five Year Development Plan. In 1986, national production targets for 1991 set per capita consumption of animal and animal derivative protein at 17.4 kilograms.<sup>47</sup> The same report estimates game consumption between 1986 and 1991 to be 2.48 kilos annually - a figure which needs to be viewed with reserve.<sup>48</sup> The FAO estimated game consumption to be 5 kilograms in 1988.<sup>49</sup>

-As mentioned above, a part of the Yaoundé population traces its origins to the savannah regions in the north of the country: these northerners are not game eaters by tradition. Moreover, many of them are Muslims who are proscribed from eating meat which is not slaughtered according to specific religious injunctions.

-The Yaoundé hinterland has been hunted out and distances between the forest areas rich in game remain relatively isolated. Despite improved road and rail links between the forest areas

and Yaoundé commercialisation of game continues to pose certain logistical, official, investment and organisational difficulties.

-A good part of the bush meat that does enter Yaoundé never transits through a market. The more affluent families arrange for supplies to be delivered directly at home either by "buy'em sell'em" or by the hunters (or poachers) themselves. Many part-time hunters use weapons owned by these families who consequently pay less for meat. The hunters, in exchange, can kill for themselves or for other clients.

The Mvog Mbi and Elig-Edzoa markets and central rail terminus are the main theatres for buying and selling game in Yaoundé. Fresh and smoked meat is available in the three of them.<sup>50</sup> Game is also found in the Mokolo, Essos, Mbankolo, Ekounou and Central Markets and around the centrally located bus depot.

Species available include, various types of primates and ungulates (antelope, bush-buck, buffalo, gazelle), boar, tiger-cat, porcupine and other rodents, pangolin, etc. Principal buyers and consumers are individual householders, hotels and small restaurants referred to locally as "chantiers" or "circuits".

Highly seasonal, game is available in greatest abundance between May and August, although some species can still be found during the other months. It is hunted and trapped in the north near Tibati and Yoko; in the south near Oveng; and the north-east near Bétaré Oya. These are names of towns along fairly well-maintained macadamised roads. Nganga-Eboko and other stations between Belaboa and Obala, on the northern rail line are also sources of and relays for game. Truck, pick-up truck, rail, bus or car, and boat or motorcycle to a lesser extent, are the means of transportation. The hunters themselves carry their prey out of the forest to transportation networks.

Hunters, sellers and re-sellers form a dynamic link between forest and Yaoundé: ethnically, they are generally Eton, Bassa, Bamileke, Bafia, Yambassa, Sanaga or Mbo. In Yaoundé, it is people with forest origins themselves who are among the principal consumers of game because of their traditional eating habits.

In addition to bush meat, other forest (and river) creatures eaten in Yaoundé are snakes, varanian and crocodile. Derivatives of all these products are a wide variety of skins, small animal tails, monkey skulls, trophies, etc. which reveal ritual, symbolic and decorative practices and attachments.

## KINSHASA

In Zaire, hunting game is a widespread traditional activity providing a reported 75% of animal protein intake of the total population.<sup>51</sup> This percentage, however, is misleading with respect to Kinshasa where residents are confronted by the compounded problem of scarcity and high cost of meat in general<sup>52</sup> and bush meat in particular. Indeed many of the Kinshasa poor are seriously under-nourished, even threatened by famine.

Bush meat found in Kinshasa's markets (Marché Centrale de la Gombe, Simba Zikida, Lemba, N'Djili, etc.) emanates essentially from the dense forest areas of Haut Zaire and Equateur. Fresh bush meat is flown in but in small quantities given the restricted number of well-to-do Zairians or expatriates able to pay for such a luxury. Smoked meat is shipped down the river by barge, but throughout the journey small boats and canoes approach the barge which is transformed into a vast floating market. The journey from Kisangani can take up to three weeks and from Mbandaka from between seven and ten days. Some bush meat also comes from the savannah and forest areas of Bandundu and Bas-Zaire from where it is transported mainly by road. It has also been reported that bush meat is flown in from Angola.<sup>53</sup> a seemingly trivial detail but in fact an important point because it raises the question about the internationalisation of bush meat commerce. Despite very serious pressure from poachers and habitat loss some game can still be found in the Kinshasa region: around the Bateke Plateau, Maluku, N'sele and Mont Ngafula.<sup>54</sup>

The type of bush meat observed almost exclusively in Kinshasa's markets was smoked monkey. It comes from the north by barge and is discharged either at Maluku and subsequently dispatched to Kinshasa by road or is discharged at the increasingly dilapidated ONATRA port facility or along the "beaches" (informal ports) of Kingabwa, Ndolo, Baramoto, Marsavco, etc.

An initial transaction takes place between the person transporting the primates (most individuals coming from the north have between one and twenty pieces for sale<sup>55</sup>) and an intermediary buyer/seller. The subsequent transaction, generally in pieces because few householders can afford to pay for a whole smoked monkey, constitutes an interesting matrix of sociological phenomena and increased pressure on the species. In recent years more and more women, often former *ndumba* have been observed selling smoked monkey. *Ndumba* is the local appellation of semi-professional prostitutes, who given increased awareness of AIDS have changed trades either through loss of clientele or concern for their own health. The economic advantage of this newly adopted trade is threefold: cash is earned; some parts of the animal are consumed by the family providing much needed protein; and purchase of even a single monkey is a hedge against inflation as it is sold over a period of approximately one week. When inflation reaches the zenith of between 4,651% and 8,027% (1993), depending on the estimates, this hedge is not insignificant.<sup>56</sup>

{{Page X}}  
KISANGANI

Two Zairian researchers have carried out studies and written reports relating to bush meat in and around Kisangani.<sup>57</sup> Working with a research programme co-ordinated by the Belgian *l'Institut Africain/CEDAF*, Kamandji Lossi has attempted to quantify the amounts of bush meat, fuel wood and other forest products brought into the city by "muscular power", meaning most notably bicycle and canoe. Malekani Mbukulirahi (1991) has produced a fairly detailed work on how game is hunted and sold in both Kinshasa and Kisangani, suggests ways of domesticating game and presents social and economic arguments why this domestication is necessary.

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**7.1.3 OTHER FOREST PRODUCTS**

In addition to bush meat, city dwellers use, rely on, discover and re-discover a wide range of other forest products. The economic situation, tradition and culture influence recourse to them.

### *Medicinal Plants*

Vegetal medicinal substances (roots, leaves, bark) from the forest are used for a plethora of real and imagined ailments, maladies and deficiencies. Their application constitutes a time-tested approach to care, healing and prevention which Western science (especially in the pharmaceutical field) has gradually come to recognise. Due to the high costs of imported pharmaceuticals (which are often sold under the scorching sun or after dates for recommended use have expired) these plants are viable alternatives. The prescription of these plants, like certain other substances necessitates knowing how to administer them. Traditional healers (*nganga* in many Bantu languages) form a link between city and forest: they practice in the urban environment but go into the forest to find or buy their substances. Identification and use of these substances remains shrouded in a great deal of mystery which increases the prestige of the *nganga*, who use them to cure "natural" and "supernatural" maladies. A similar interaction between forest and city occurs when city dwellers return to their forest villages to consult *nganga* who remain forest-based. This is especially common in cases of fertility problems.

### *Insects*<sup>58</sup>

Caterpillars and other insect larvae are valued for their protein content and for taste. Easily transported, insects are eaten roasted, dried, fried or boiled with leaves. Numerous vendors had large quantities of live caterpillars for sale in the markets of Kinshasa.

### *Forest Fruits*

Some fruits gathered in the forest and consumed by city dwellers are eaten for their meat, others for their seeds or kernels from which fatty oils can be extracted. Derivatives of fruits can command relatively high prices in town. Oily paste extracted from different types of wild mango is specially treated and used in preparation of sauces for example.

### *Leaves*

Leaves have varying amounts of protein and many species are edible after having been cooked. Africans also use leaves for wrapping prepared or uncooked food or for packaging spices and herbs in the market place. Some foods are cooked in leave wrappings. Leaves are removed from both wild and cultivated plants. Manioc leaves are especially appreciated throughout central Africa. Fidèle Mialoundama (1993) has analysed the "Nutritional and Socio-Economic Value of *Gnetum* leaves in Central African Rain Forest" remarking that:

*Gnetum* leaves have been eaten for many years by the populations of central Africa. They are a source of proteins and mineral elements in appreciable quantities. The leaves are sold all year round by women in central Africa and even in some European cities... Its cultivation would integrate harmoniously into a coherent development policy of local cultivation of indigenous

food plants, one of the effective methods of fighting hunger.<sup>59</sup>  
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### *Mushrooms*

Highly seasonal, mushrooms are appreciated by city dwellers for their mineral and protein content, as well as for their taste. Mushrooms are not abundantly available in urban areas due to their short life span.

### *Oil Palm Products*

-palm wine

Drinking palm wine is a deep-rooted social institution with important cultural implications. Unadulterated by preservatives, palm wine remains fresh for no more than a few days which means that it is not easily found far from the forest. None was observed in Kinshasa but in Yaoundé and Libreville it was common to see groups of red-eyed men in market areas or near transportation meeting points drinking it from cups made from cut off water bottles. From forest producer to urban consumer there is usually only one or two intermediaries so the socio-economic link between forest and city remains strong. The wine can be enhanced by soaking tree bark in it.

-palm oil

Palm oil is a staple in the African diet: city dwellers and peoples in the hinterland alike use it daily. It is also used in cosmetics and ointments. Commerce of palm oil is an important component of central African economies as it is a cash generating export commodity.

### *Trophies*

The non-comestible parts of forest animals and reptiles such as skins, antlers, tusks, hands or skulls (gorilla), feet and hair (elephant) are largely exported or purchased by tourists. City dwellers, however, possess these kinds of trophies for decoration, for ritual purposes, or as status symbols.

### *Honey*

Wild and produced honey is appreciated by city dwellers for its nutrition and taste; as a fermentation agent in home-made wine and beer; honeycomb has some petty domestic uses such as glue.

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## **7.2 ANTHROPOLOGICAL PERCEPTIONS<sup>60</sup>**

*Forests are Gold. They are our riches to be cared for for our children.* <sup>61</sup>

An integral part of any forest conservation scheme is understanding how city dwellers perceive the forest, its people and resources and related activities. This is just as important as evaluating the socio-economic use of forest resources because perceptions influence use and use in turn leads to depletion. Analysis of perceptions thus constitutes a necessary step in the process of conceptualising action plans aimed at conservation.

Anthropologists have studied the interaction of forest people with their environment extensively but study of urban perceptions of the forest is only nascent. It is already clear however that the forest remains important to a large percentage of them even though they hold views far different from those of Europeans.<sup>62</sup> Aside from socio-economic and spiritual/symbolic dimensions, songs, expressions, proverbs, fables, literature, etc. are vehicles which contribute to central Africans' continued attachment to the forest.

Identifying perceptions poses certain research difficulties because individuals are somewhat reluctant to express themselves on the subject and because relations with the forest can be contradictory. While urban masses may verbalise, and in fact feel deep respect for the forest, they proceed (perhaps unwittingly) towards its destruction. This occurs for subsistence purposes or out of ignorance. Public awareness campaigns can thus benefit from an understanding of perceptions.

Elite relations with the forest are also contradictory. Political leaders can draft legislation with ecological overtones or create reserves (often paid for by international organisations) but they continue to condone, also for economic reasons or political accommodation, non-sustainable forest exploitation. Some of these same leaders are known to be among the most destructive hunters of big game, often hunting from helicopters.

A representative idea of how city dwellers perceive the forest can be formulated by looking at a few selective themes. Attitudes surrounding these themes include respect or even veneration, fear, nostalgia, spiritual attachment, subsistence or commercial interest and in some instances indifference.

*{{Page X}}*  
*The Forest Space*

Traditionally, the forest space is perceived in a deeply spiritual way. It is a place where the visible and the invisible are in harmony, where man, ancestors and spirits communicate amongst themselves. There is evidence that these traditional perceptions are maintained by city dwellers.

It is perceived with fear: a dreadful environment where one can come into contact with the unknown; a place hardly hospitable, full of wild and dangerous beasts. It is also the realm of the dead.<sup>63</sup> People living on the outskirts of town, at the border of forest areas, remove large trees from fear of lightning and brush from fear of attracting serpents and other dangerous creatures. Other creatures which in fact pose no threats at all are also perceived in a frightful way. Owls and bats are apprehended because of their nocturnal habits. Another dimension of fear is that of encountering forest wardens in restricted areas.

The forest is considered with nostalgia. The rate of rural migration in general and forest migration in particular has led to a situation whereby the city is densely populated with individuals who spent their childhood in forest villages, or offspring of these individuals. Many city dwellers thus have warm childhood memories of hunting, fishing, making and setting traps to catch birds, gathering fruits and nuts, etc. Return visits to the forest however remain pragmatic: few urbanites are interested in going to the forest merely to walk, swim, meditate or commune with nature (which are Western uses of the forest): they go there generally to remove something.

There are however some exceptions to this last remark because city dwellers frequently return to the forest to visit family. Visits also take place in ceremonial contexts, e.g. wedding celebrations, initiation or mourning.

The forest is perceived as having therapeutic values. Despite frequent instances of drowning, swimming in its rivers purifies, keeps evil spirits at bay, cures sleep-related and psychic disturbances.

The forest is perceived as being a vast food reserve, probably the most vivid perception in the urban mind. Fish from the rivers and bush meat can be found there: there are fruits, vegetables, spices and herbs, tubers, etc. as well.

Depending on the proximity between forest and city, urban dwellers themselves have taken to weekend or afternoon cultivating in the suburban or forest areas. This is frequent around Libreville, comparatively less frequent around Yaoundé because of longer distances (but a factor facilitated now by the one shift work day) and uncommon around Kinshasa except in the not too distant savannah ecotones. Family members sometimes stay behind in these areas to tend to or protect plantations. There is a perverse logic here because city dwellers perceive the forest as offering the possibility of food purveyance, but the accuracy of this perception results in increased deforestation in the urban halo as land is swidden to make way for cultivation. (Traditional slash and burning techniques, however, do not destroy the forest in the same way.) A similar scenario applies to perceptions of the hunt. The land use subject is vast because it raises pertinent questions of ownership, usufruct and customary land rights in general.

The forest bestows social recognition. The outward signs of class and status in the forest as compared to in the city are completely different. A *nganga*, for example, who may be a lowly clerk in town during the week "becomes a king" in the forest thanks to his knowledge and manipulation of medicinal or ritual substances. Likewise a skilful hunter who has another job in town can be widely acclaimed in the forest if he returns to the village after a successful day of hunting.

The forest represents physical security. Increasing violence in cities due to poverty and disrupted social systems has created a generalised atmosphere of concern for self and belongings. The forest is thus perceived as a safe haven against criminality and violence. It is also, somewhat inversely, perceived as a refuge against police, the military and the administration.<sup>64</sup> For others it is a fortress. President Mobutu, for example, now spends most of his time deep in the forest at



Gabdolite, isolated from the strife reigning in Kinshasa. It also represents material security because it offers the possibility to earn a living or at least feed one's family.

The forest is associated with boredom. Life in forest villages means hard work, drudgery and limited entertainment possibilities. (These aspects were developed in Section 6.)

### *Wildlife*

As explained above, hunting and eating game is deep-rooted in central Africa. City dwellers accordingly perceive wildlife as a resource to be exploited commercially or for subsistence. While there is awareness that species are being depleted, the strong desire to eat game (for nutritional, economic or cultural reasons) supersedes such concern.

Wild animals are perceived in spiritual and ritual contexts.

-In Beti tradition (Cameroon), wild animals are considered to belong to spirits of the dead. Hunting these animals thus necessitates following a series of rituals in order to stay on good terms with their masters: phantoms of ancestors. A type of quantitative control entails because hunters must not take excessive game if they are to avoid the wrath of the spirits.<sup>65</sup> The unfastening of ritual attachment thus contributes to increased slaying which is a phenomenon exacerbated by urban influences. To the detriment of the animal kingdom, the time has long since passed when:

"Partout, considérant les animaux sauvages comme des 'partenaires', les chasseurs aménagent avec ces derniers des relations de réciprocité calquées sur le modèle des relations sociales."<sup>66</sup>

-The Owendo of Yaoundé believe that eating monkey will give strength and ward off injuries.

-In Kinshasa, eating monkey is also perceived as giving strength, but intelligence and agility as well.

-Some Bwiti (Libreville) claim to possess totems from cats, boar, elephant, antelope and parrots. The owner of such a totem is proscribed from killing or eating meat of the same animal. Other city dwellers trace their lineage to zoomorphic ancestors: the same proscriptions apply here as well. This point is important because it reveals the endurance of spiritual links between forest and city.

Not all city dwellers respect traditional values relating to bush meat. Anonymity, modern attitudes, inter-ethnic unions, distance from paternal or clan censure incite the breaking of bush meat-related taboos. The more well-to-do can afford to purchase and eat choice cuts or parts once reserved for village elders; others give vent to their curiosity to consume meat which they were not allowed to eat in the village; and women may transgress long-standing culinary taboos out of disdain, emancipation or indifference.<sup>67</sup>

*Trees, Timber and the Environment*<sup>68</sup>



## Yaoundé

There is considerable political and emotional debate surrounding forest exploitation throughout central Africa but it varies significantly from one country to another. It is most widely discussed in Cameroon where there is increasing concern about the environment. Locally produced reports in both French and English have been published (one dealing specifically with urban perceptions)<sup>69</sup>; a *Parti Ecologique* is increasingly active in environmental public awareness campaigns as a political organisation; and a number of NGOs working in the area have been constituted. These include *Eviron Projet*, the urban-based *Société des Coopératives de Développement Rural* or the *Service d'Appui aux Initiatives Locales de Développement*. In 1985 environmental programmes were launched by UNESCO's Man and the Biosphere Programme (MAB).

With specific reference to timber, the sector is the focus of strong government support. Indeed, "logging has now expanded to cover about half of the country's closed forest estate..."<sup>70</sup> The government is actively engaged in the direction of forest exploitation, trying to make logging the economy's primary activity in the next 20 years - ahead of petroleum production. Cameroon's forests cover 37.6% of the country<sup>71</sup>, a percentage surpassed only by Zaire and Gabon. There are 2.0 hectares of forest per inhabitant.<sup>72</sup> As described by the Cameroonian government, the status of forest resources is as follows:

"It is estimated that deforestation activities in Cameroon now cover an area of about 80,000 to 150,000 ha per year, mainly through shifting cultivation, overgrazing, fuelwood collection, commercial and small-scale logging, road construction and increasing urbanisation. This phenomenon has disturbing ecological and economic repercussions on present and future generations. Ultimately, such deforestation helps considerably to reduce the quality of life of the people."<sup>73</sup>

The report adds that "laws regarding the management and development of forest resources are still ill-suited to the country's reality".<sup>74</sup>

While the Cameroonian government is thus conscious of the dangers of over exploitation, it is also confronted by the need to increase short-term cash earnings. Timber is perceived as being a solution, especially at time when prices of traditional sources of income such as coffee and cocoa are weak on world markets: villagers are in fact neglecting their plantations because it is more profitable for them to concentrate their efforts on food production than on export-oriented crops. The hazards of the petroleum exporting sector are not more reassuring to Cameroonian leaders which explains their desire to relegate oil to second place on the revenue earning list after timber.

This situation explains why the government passed a new law pertaining to forests, game and fishing which grants significant advantages to timber exploitation companies, many of which are foreign owned. These advantages include duration and surface area of land concessions.<sup>75</sup>

Timber plays a special role in Yaoundé with respect to city dwellers' perceptions of the environment. As lumbering takes place in the south-east of the country, Yaoundé residents are daily spectators of flat-bed lorries, heavily laden with timber, going through the city en route to

Douala for export. Other lorries deliver timber directly to the Société Anonyme de Bois, located near a rail depot in Yaoundé itself where it is semi-processed. Most is sent to Douala but scraps are sold locally for fuel wood.

Residents are consequently made more aware than in other cities that if logging continues at the present rate, Cameroon's forests will soon be decimated. Being aware of this risk however does not necessarily translate into concern. Attitudes here vary. With respect to the foreign-owned timber companies, for example, many residents perceive them as agents of neo-colonialism and exploitation, condemning them more for their profits than for the destruction they cause on the environment. With respect to commercial exploitation of the forestry sector, some claimed that everyone should be concerned, others that it was the responsibility of the government, still others believe that forest conservation is incumbent on those who live in the forest and use its products. These types of responses are largely influenced by socio-economic and educational criteria.

### Libreville

The timber sector in Libreville is not so intensely felt as in Yaoundé. Libreville residents, a large percentage of whom are in fact non-Gabonese (a point to emphasise because conservation and nationalism may well be linked in central Africa), are not confronted by the daily observation of natural wealth being trucked through the centre of town. There is however a large timber transiting facility outside of Libreville in the direction of the Owendo port and logs are constantly floating along the capital's beaches.

Forest exploitation is not yet a major preoccupation because more than 85% of the country is covered by forest and because the ratio between forest and population is the densest in Africa: 19.3 hectares per inhabitant.<sup>76</sup> In 1992, timber exports amounted to \$84.2 million, 4% of total exports<sup>77</sup> - well behind petroleum and mineral exports. While the Trans-Gabonese railway opened up parts of the country to logging, the possibility of increasing exports was offset by competition from Far Eastern suppliers, recession in Europe (slow growth in the building sector) and internal problems created by the Gabonese national timber company: the *Société Nationale du Bois du Gabon*.<sup>78</sup>

For these geographic and economic reasons, perceptions of the timber sector are characterised by a general indifference by Librevillois.

Two precise examples of environmental concern can however be identified in the Gabonese capital. Libreville possesses a *Musée de la Forêt* created and run by a Gabonese national which is home to a few live birds, monkeys and turtles as well as a small sampling of inanimate forest-related objects and products. The museum is nonetheless closed to the public for lack of operating funds: paying visitors are rare and government subsidies inexistent.

The other, more successful example, is an association, *Les Amis du Pangolin*, which is very active in waging a public awareness campaign on environmental issues. Specific actions include publication of a newsletter, organising school conferences, participating in radio broadcasts and organising eco-tourism in Gabon's reserves. The association is supported by ECOFAC, the French Cultural Centre and the local *Institut National de Pédagogie*. It will be interesting to

monitor the evolution of environmental perceptions and attitudes in Libreville because the association is essentially a Western initiative and because the group targeted by the association is essentially quite young. This association could serve as an example to be followed in other cities as it appears to be the only one operating in central Africa.

## Kinshasa

45.1% of Zaire is covered by tropical forest<sup>79</sup> and the ratio of forest space to population is 3.4 hectares per inhabitant.<sup>80</sup> Zaire's forests are protected from logging by their inaccessibility. Even during the colonial period transporting timber down the river from the distant forest regions to Kinshasa and then re-shipping it by truck or rail to Matadi was a time-consuming and expensive operation. Decaying infrastructure and political stalemate have aggravated this difficulty. Recent statistics, which need to be viewed with scepticism like all official statistics coming from Zaire, reveal that 124,032 cubic metres of wood were exported in 1993 compared with 418,646 cubic metres in 1989.<sup>81</sup>

Dire poverty in Kinshasa has erased environmental concerns from the minds of the masses, except when they are related to what the environment can offer. Politics and the economy, in other words, have a direct influence on how the environment is perceived in Kinshasa. Open criticism of President Mobutu revealed laments how he continues to exploit the country's wealth as if it were his own, and although mineral wealth was most often emphasised, timber exploitation contributed to this bitterness.

Ignorant of official statistics, Kinshasa's poor are well aware that the timber which is visible on the ONATRA and surrounding private docks is sold for the strict benefit of the presidential entourage: the real economy of Zaire being the parallel economy.<sup>82</sup>

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## *Forest Peoples*

Three million forest people of central Africa depend directly on the forest eco-system for their daily survival.<sup>83</sup> Be they hunter-gatherers, shifting cultivators or river people<sup>84</sup>, all have been downtrodden to varying extents. This condition is most often associated with Pygmies (specialised hunter-gathers) and the stereotype which continues to fascinate the Western mind goes as far back as Homer's *Iliad*.<sup>85</sup> Attitudes have not changed significantly, however, as Cameroon's constitution still considers Pygmies to be "populations marginal to the national community".<sup>86</sup> This curiosity about the Pygmies (be it anthropological or simply stereotypical) tends to overshadow the situation of other forest peoples. Shifting cultivators in fact constitute approximately 80% of the forest population<sup>87</sup> so research into perceptions consequently needs to take them into account.

Post-colonial indigenous leaders having assimilated (or having been mesmerised by) French values and culture perpetuated European disdain for forest peoples. This psychological dimension of the acculturation of African elites has been cleverly developed by Basil Davidson (1992).<sup>88</sup> A related factor is that of monetarisation: as social status is largely perceived by elites

and other city dwellers in European terms and thus in monetary terms, those forest peoples who remain outside of the cash economy are ostracised.<sup>89</sup>

This extreme negative perception of forest peoples, adhered to by most non-forest peoples and especially by city dwellers, is curiously juxtaposed with another, positive perception: that of respect - or at least recognition of forest-related talents. These include hunting<sup>90</sup> and fishing techniques, capacity to identify and use endemic flora, knowledge of traditional and herbal medicine, magic and a general sense of survival capacity in a hostile environment. They are also respected for their affinities with forest spirits.

The more widespread attitude city dwellers feel concerning forest peoples is haughty indifference. Coming from the forest, or having parents or grand-parents who were born in the forest or elsewhere in the hinterland, most central African city dwellers consider themselves either superior to, or at least more lucky than those who stayed back in the village. As the urban poor and middle class alike remain preoccupied by the trials and tribulations of material survival in these times of severe economic hardship, concern for forest peoples appears to be a non-issue. While in the West it was fairly widely known that 1993 was declared Year of Indigenous Peoples by the United Nations, this fact was completely ignored by our informants in central Africa.<sup>91</sup>

Outside of the inter-ethnic debate, attitudes of economic frustration exist as well. Employed city dwellers are confronted with the dubious honour of having jobs and salaries, but quite frequently, in respect of Bantu tradition, they are forced to support extended family members who stayed back home in the forest (or in the hinterland in general). Sharing scarce financial resources is an increased burden on city dwellers already preoccupied by the high cost of living.

## **8. RESEARCH SUPPORT STRUCTURE**

Carrying out the research described above was part of a wider objective in the area of the forest-city interface. As a research support structure is being set up at the Centre of Cultural Anthropology, efforts were also engaged towards:

- gathering data in view of constituting a forest-city data bank and;
- contacting, meeting and integrating African social scientists into an emerging Euro-African forest-city research task force/monitoring unit.

### **8.1 DATA ACCUMULATION AND DOCUMENTATION**

A first phase entailed collecting and analysing relevant documentation available in Brussels. Services at the DG VIII of the European Union, the Université Libre de Bruxelles, the African Studies Library of the Belgian Foreign Affairs Ministry, the Gembloux Agronomy Institute and the CEDAF/Institut Africain have supplied some studies and reference materials. Few works, however, deal explicitly with the forest-city interface. The relative paucity of published material on this subject testifies to its originality and to the timeliness of creating a relevant data bank.

Of these various entities, the Centre of Cultural Anthropology at U.L.B. possesses the most centralised share of relevant data. Much of it was accumulated and organised in the context of another European Union DG XI financed project, *Situation des Populations Indigènes des Forêts*

*Denses Humides*, referred to above. This report produced a specialised bibliography of more than 200 entries for central Africa. Researchers at the Centre of Cultural Anthropology work closely with the Paris-based LACITO and have created a specialised association, *Groupe d'Etudes des Populations Forestières Equatoriales* .

During our mission to central Africa various services were visited and some provided material.

*Yaoundé*: ECOFAC; ORSTOM (a well-furnished documentation centre); the Department of Geography at Yaoundé University; Enviro-Project (a small but specialised service on local environmental issues); United States Agency For International Development; World Wildlife Fund.

*Libreville*: *Institut de Recherche en Sciences Humaines de l'Université Omar Bongo* ; *l'Association des Amis du Pangolin* (identified above); French Cultural Centre; French *Mission de la Coopération*; Commercial Service, U.S. Embassy.

*Kinshasa*: Research conditions are difficult in Kinshasa for the time being. The few local research services which have remained open are operating without funds. Expatriate services are functioning with greatly reduced staffs. The official record-keeping that has not been interrupted is not published. More specialised documentation about the forest-city interface in Zaire was available in Brussels than in Kinshasa. UNIKIN library facilities are officially open but it is difficult to have access to them: moreover, they are quite poorly stocked and only sporadically updated.

## **8.2 THE CREATION OF A RESEARCH TASK FORCE**

Initial efforts at constituting a network of African social scientists interested in, and capable of analysing the forest-city interface have been overwhelmingly positive. Local researchers (as well as civil servants and NGO staff-members) expressed support for integrating social scientific research in general, and the socio-economic and anthropological urban optics in particular, into the wider, compellingly urgent area of forest conservation.

Throughout the duration of our mission, researchers echoed the unanimous sentiment of *enclavement*. Located in the geographic epicentre of the central African forest-city interface, they remain far removed from the Western conservation research mainstream. Lack of research funds, low or unpaid salaries, poor infrastructures (paucity of material such as photocopy machines, phone and fax, computers or word processors), material difficulties in publishing research findings, different research traditions and objectives, insufficient contact with European and American colleagues are some of the factors which culminate in this all too exact sentiment of *enclavement* .

Notwithstanding these very real research and organisational handicaps, certain positive aspects are discernible. First and foremost is the intellectual integrity, training and research capacity of local academics. Next is the attention which some researchers have devoted to questions relating to the forest-city interface but with a dispersed, non-continuous and non-comparative approach. The clearly-expressed enthusiasm to participate in such a network is a further positive sign which

is worthy of encouragement. Working with these local researchers is absolutely crucial because the use and perceptions of forest resources by city dwellers is a politically and culturally sensitive subject. Local experts alone have the finesse and experience needed to gather and analyse certain data. Their input, moreover, will be helpful in the elaboration of systems models aimed at apprehending the relationships between social scientific sub-systems within the larger forest conservation system.

The time when Western governments and international organisations are increasingly reluctant to operate in central Africa given a very wide series of real (but sometimes exaggerated) obstacles and handicaps is precisely the moment when African researchers most badly need research support. If their *enclavement* continues, if no research funding is channelled to their centres, if Western researchers opt out of Africa then an intellectual crisis (which could take decades to redress) will present itself along with the already dramatic social and economic crises. High calibre African research talent exists but it needs encouragement in these hard times.

## 9. EVALUATION OF RESULTS

While the initial objectives of this feasibility study were circumscribed in scope, the results presented in this Final Report are based on findings of a more far-reaching study. The evaluation of these initial objectives compared to results is delineated below.

-Data accumulation and analysis concerning the socio-economic consumption of bush meat in Yaoundé, Kinshasa, Kisangani, Bukavu and Bangui. Sections 7.1.2 and 8.1 detail work carried out in two of these cities. Methodology and contacts have been established for continued work in the others.

-Creation of a data bank housing information on the forest-city interface, researchers working in the same area, ongoing conservation projects. A considerable amount of literature has been accumulated by the Centre of Cultural Anthropology. See Section 8.1 and 8.2 as well as the Bibliography in Appendix 1.

-Co-ordination of pilot studies concerning use of forest products in urban areas. Studies on bush meat were carried out (Section 7.1.2) and investigations were made into fuelwood consumption (Section 7.1.1).

-Investigation of anthropological perceptions, e.g. how the forest is perceived by city dwellers. These are developed in Section 7.2.

While initial objectives and results are in fact largely harmonious, it should be added that working on the forest-city interface is not always an easy task: problems of varying severity present themselves all along the research process.

-Vital statistics and other types of data on population, economic performance, ethnic complexion in urban areas, urban anthropological perceptions, etc. is often lacking or of dubious reliability.

-Communication between network members is also a problem. As African researchers are working in difficult material conditions, they have difficulties in diffusing their findings, meeting colleagues elsewhere in Africa or Europe, having access to information, etc. These network difficulties were discussed in Section 8.2.

-The generally low purchasing power and economic tension in much of central Africa has made inquiries at markets rather difficult. Vendors are more preoccupied with plying their trades than in responding to questions. Buyers likewise, often disgruntled by high prices, are reluctant to devote their time to helping even local and experienced social science researchers. With specific reference to bush meat, vendors often refuse to share information because hunting and trade is not always legal: in Yaoundé most notably, police "crack-downs" are not infrequent. With respect to anthropological inquiries, addressing the subtle and often culturally sensitive nature of perceptions and attachments requires in-depth knowledge of the subjects under investigation and a great deal of research finesse.

## Appendix 1

### BIBLIOGRAPHY

#### BOOKS

- Barnes, James. *Gabon Beyond the Colonial Legacy* , Boulder, 1992.
- Becker, Charles M., Hamer, H., and Morrisson, Andrew R. *Beyond Urban Bias: African Urbanisation in an Era of Structural Adjustment*, Heinemann, 1994.
- Bongo, El Hadj Omar, *Le Gabon*, Libreville, 1984.
- Bonte, Pierre et Izard, Michel, *Dictionnaire de l'ethnologie et de l'anthropologie* , Paris, 1991.
- Cassagne, B. *Enquête sur la Consommation de Combustible Ligneux dans l'Agglomération de Bangui (R.C.A.)*, 1981.
- Conroy, C., and Litvinoff, M. *The Greening of Aid* , London, 1988.
- Davidson, Basil. *The Black Man's Burden: Africa and the Curse of the Nation-State* , New York, 1992.
- Denslow, J., and Padoch, C. (eds.). *People of the Tropical Rain Forest* , Berkeley, 1988.
- Duley, Margot I. and Edwards, Mary I. (eds.), *The Cross-Cultural Study of Women* , New York, 1986.
- Fournier, F., and Sasson, A. *Ecosystèmes forestiers tropicaux d'Afrique* , Paris, 1983.
- Franqueville, André. *Yaoundé : Construire une Capitale* , Paris, 1984.
- Ghai, Dharam, and Vivian, Jessica. (eds.), *Grassroots Environment Action: People's Participation in Sustainable Development* , London, 1992.
- Harmattan. *Nourrir les Villes en Afrique Sub-Saharienne* , Paris 1985.
- Hardoy, Jorge E., Mitlan, Diana, and Satterthwaite, David. *The Environmental Problems in The Third World* , London, 1992.
- Harms, Robert. *Games Against Nature: An Eco-Cultural History of the Nunu of Equatorial Africa* , Cambridge, 1987.
- Hladik, C. M., Hladik, A., Linares, O.F., Pagezy, H., Semple, A., and Hadley, M. *Tropical Forest, People and Food, Biocultural Interactions and Applications to Development* , Volume 13, Paris, 1993.

Laburthe-Tolra, Philippe. *Les Seigneurs de la Forêt* , Paris, 1981.

Leimdorfer, François, et Vidal, Laurent. *Les Thèses Françaises sur les villes des pays en développement (1980-1990)* , Paris, 1992.

MacGaffy, Janet. *The Real Economy of Zaire* , London and Philadelphia, 1991.

Pratt, Brian., Boyden, Jo. (eds), *The Field Directors' Handbook* , Oxford, 1985.

Pearce, David., Barbier, Edward, and Markandya, Anil. *Sustainable Development: Economics and Environment in the Third World* , London, 1990.

Rotberg, Robert, and Mazrui, Ali. (eds.), *Protest and Power in Black Africa* , Oxford, 1970.

Sayer, Jeffrey, et. al ., (eds.), *Africa: the Conservation Atlas of Tropical Forests* , U.K., 1992.

Schatzberg, Michael. *The Dialectics of Oppression in Zaire* , Bloomington, 1988.

Vennetier, Pierre. *Les Villes d'Afrique Tropicale* , Paris, 1976.

World Resources Institute, et. al. , *The 1993 Directory of Country Environmental Studies* , New York, 1992.

## PERIODICALS

Amena, Lubana Ngiyene. "l'Organisation de la Société Paysanne et la Situation du Mouvement Cooperatif dans le Bas-Zaire, in *Les Cahiers du CEDAF* , vol. 3-4, Bruxelles, 1990.

Bahuchet, Serge. "L'invention des Pygmées" in *Cahier d'Etudes Africaines* , 129, XXXIII-1, Paris, 1993.

Blang, R. "Saison Cynégétique 93/94: La Chasse Sportive est Ouverte." in *L'action* , Yaoundé, 1994.

Colchester, Marcus, and Lohmann, Larry. "The Tropical Forestry Action Plan: What Progress?". *The Ecologist* .

European Union. *Le Courrier ACP-CE* ; Janvier-Février, 1986.

Frenay, Patrick, "le Réseau Urbain Camerounais: Caractéristiques Principales, Dynamique Actuelle, Alternatives Futures" in *Revue Belge de Géographie* , Fas: 3-4, 1987.

Gigi. "Comment obtient-on un permis de chasse au Cameroun?" in *Contact Magazine* , 1994.

Joiris, Daou V. "Protection de la forêt et Développement", in *Vivant Univers* , n° 396, Namur, 1991.

Lugo, Ariel. "Cities in the sustainable development of tropical landscapes" in *Nature & Resources* , UNESCO, vol. 27, N°. 2. Paris, 1991.

Mamba Ziwa Mpasi, "Quelques facteurs qui amplifient le déboisement dans l'auréole d'influence de Kinshasa". *La Géographie Humaines* , ULB, N°1 Janvier-Juin 1992.

*Notes de Conjoncture* , Kinshasa, Février, 1994.

Organization of African Unity, *Nouvelles de l'O.U.A.* , Bruxelles, Mars-Avril 1990.

## REPORTS AND DOCUMENTS

American Embassy Libreville, *Foreign Economic Trends and Their Implications for the United States* , Gabon, 1993.

Atem, H. *Urban Residents and their Environment, a Study of Environmental Perceptions* , Yaoundé, 1985.

Aubé, Jean. *Cameroon Forestry Sector Overview* , Cameroon, 1993.

Bahuchet, Serge, and de Maret, Pierre, (eds). *Situation des Populations Indigènes des Forêts Denses Humides*, UE, DG XI, Bruxelles, June, 1993.



Bailey, Robert. Bahuchet, Serge, and Hewlett, Barry. *Development in Central African Rain Forest: Concerns for Forest Peoples* , September, 1990.

Befame-Nseme, Joseph, *et. al.*, *La Représentation Mentale de la Forêt par les Citadins du Gabon* , unpublished, Libreville, 1994.

Centre de Coopération Cameroun Canada, *L'environnement au Cameroun: Perception de l'environnement au Cameroun* , 1991.

Colchester, Marcus. "Slave and Enclave", *Never Drink from the Same Cup: Proceedings of the Conference on Indigenous Peoples in Africa* , Tune, Denmark, 1993.

De Boeck, F. *On Trees and Kings: Politics and Metaphor Among the Aluund of South-Western Zaire* , unpublished, n. p., n. d.

Dongmo, J. L. *L'Approvisionnement Alimentaire de Yaoundé* , Yaoundé, 1990.

Doumenge, Charles. *La Conservation des Eco-Systèmes Forestiers du Zaire* , Gland, 1990.

European Union, *Annual Report for Gabon* , 1992.

F.A.O., *Plan d'Action Forestier Tropical: Mission Conjointe Interagence et de Revue pour le Secteur Forestier: Cameroun* , Rome, 1988.

Globe International, *Proposition de convention-type en vue de la conservation et de l'utilisation rationnelle des forêts* , Bruxelles, 1992.

Harza Engineering Company. *Zaire; Country Environmental Profile* , Washington D.C.,1980.

Hladik, C. M., Bahuchet, Serge, and de Garine, I. (eds), *Food and Nutrition in the African Rain Forest* , Paris, 1990.

Indjieley, Marius. *et. al.*, *La Consommation de la Viande de Brousse à Libreville* , unpublished, Libreville, 1994.

International Resources Group, Ltd. *West and Central Regional Environmental Law Study* , Washington, D.C.1992.

Kamandji Lossi, Guy-Marin. *Impact des pyroguiers et cyclistes dans l'approvisionnement de la ville de Kisangani* ; working title, unpublished, n.p., n.d.

Lapika, Dimomfu, *et. al.*, *Enquête sur l'Arboriculture dans la Zone de Lemba à Kinshasa* , unpublished, Kinshasa,1994.

Lapika, Dimonfu, Kika Mavunda, *et. al.*, *Enquête sur la Consommation de la Viande de Singe à Kinshasa* , unpublished, Kinshasa,1994.

Macshane, T.O., and Macshane-Caluzi, E. *Conservation Before the Crisis: A Study for Conservation in Gabon* , Libreville, 1990.

Ministère de la Coopération, *Les Etats d'Afrique, de l'Océan Indien et des Caraïbes* , Paris, 1993.

Mbukulirahi, Malekani. *Quelques aspets de l'utilisation de la faune au Zaïre* , unpublished, 1991.

Ndobegang, Michael. *Yaoundé City Dwellers and Their Perceptions of the Forest* , unpublished, Yaoundé, 1994.

Nwel, T. *Introduction à une Pédagogie d'Education en Environnement au Cameroun* , Yaoundé, 1983.

Papa, Christina. *Noi Siamo Come Un Albero..* , Rome, 1993.

Republic of Cameroon, *Environment and Sustainable Development for Cameroon*, Yaoundé, 1992.

République du Cameroun, Loi n° 94/01 du 20 Janvier 1994.

République du Cameroun, *VIème Plan Quinquenal de Développement Economique Social et Culturel, 1986-1991*, Yaoundé, 1986.

République Gabonaise, *Recensement Général de la Population et de l'Habitat*, July, 1993.

Sebalinda, Gaspard. "The Relationship between the Batwa and the State of Rwanda", in *Never Drink from the Same Cup* , Tune, Denmark, 1993.

The Economist Intelligence Unit, *Country Profile; Cameroon, Central African Republic, Chad*, London, 1992.

Union Internationale pour la Conservation de la Nature et de ses Ressources, *Plan d'action régional pour l'Afrique Centrale*, Bruxelles, 1988.

United Nations, *Report of the United Nations Conference on Environment and Development* . (Rio de Janeiro, 3-14 June, 1992).

Urban, Atem. *Residents and their Environment a Study of Environmental Perceptions* , Yaoundé, 1985.

Wilkie, David. *Human Settlement and Forest Composition Within the Proposed Okapi Rain Forest Reserve in Northeastern Zaire* , unpublished, n. p. 1989.

Wilks, Chris. *La Conservation des Eco-Systèmes Forestiers du Gabon* , Gland, 1990.

World Bank publication in cooperation with the World Conservation Union, *Conservation of West and Central African Rainforests*, 1992.

## THESES

Debroux, Laurent, and Dethier, Marc. *Valorisation des Produits Secondaires de la Forêt Dense Humide Tropicale*, unpublished Masters thesis, Gembloux, 1993.

Pain, Marc. *Ecologie et Organisation Urbaines* , Doctoral thesis defended at Université de Toulouse, Le Mirail, 1979.

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## Appendix 2

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Appendix 3

**Images et Usages de la Forêt chez les Citadins d'Afrique  
Centrale**

**City Dwellers and the Central African Tropical Forest: Resource Use and  
Perceptions**

INTERMEDIARY REPORT

Submitted to the European Commission, DG XI

by Université Libre de Bruxelles, Centre of Cultural Anthropology

contract No° B-8110-93-000284

Report prepared by Theodore Trefon, Ph.D.

Under the direction of Professor Pierre de Maret

Since October 1993 researchers from the Centre of Cultural Anthropology at ULB have been actively pursuing the twofold study of (1) how forest resources are used by central African city dwellers and (2) how the forest, its peoples, products and symbolism are perceived by these populations. Our study is country comparative and inter-disciplinary in focus.

The project's **first** phase involved:

1. Sharpening the hypotheses delineated in the initial proposal (préparation d'une enquête systématique). These hypotheses are:

-The future of the forest lies to a very large extent in the hands of city dwellers. This applies to the elite because political decision-makers, representatives of multinationals or foreign companies, local businessmen, among others, determine through legislation, political accommodation and commercial criteria, the ways in which forest resources are exploited. It also applies to the masses: millions of people in the swelling cities of central Africa use and rely on, discover and re-discover forest resources to help cope with the exigencies of daily survival which is exacerbated by the current economic crisis.

-In times of economic hardship, urban populations exert increasing pressure on forest resources. Deforestation takes place to provide fuel wood and for the establishment of plantations. Likewise, urban unemployed take to commercial hunting as a means of earning a livelihood. This dramatically reduces wildlife communities.

-Forest conservation or management must take a wide array of social science factors into account to be realistic. The world economy, demographic questions, urbanisation, ethnicity, the psychological lure of the city, etc. are among the subjects which influence the ways and degree forest resources are exploited.

-Deforestation and resource depletion by city dwellers goes far beyond the commonly stated reasons of 'poverty and ignorance': cultural and traditional attachment to forest products is deep-rooted and enduring. This depends on the product. In Kinshasa charcoal is widely used for cooking because there are no alternatives whereas in Libreville for example use of electricity and gas is common. In Libreville, however, bush meat is consumed not for economic reasons but because of culture and taste.

-The forest is perceived by city dwellers in a multiplicity of ways which is not very clear. Some consider the forest to be a vast reservoir of resources to be consumed and not managed; others are apprehensive, given real and imagined dangers; others feel a deep spiritual attachment to it. The vast majority of city dwellers are indifferent to the forest as defined and defended by Europeans.

- Political authorities are concerned primarily with their own political survival and addressing short-term economic problems. As forest conservation is a long-term enterprise, there is a divergence of interests.

2. Collecting and analysing relevant documentation available in Brussels. Services at the DG VIII, ULB and the CEDAF have supplied some studies and reference materials but very few works deal explicitly with the forest-city interface. The clear paucity of published material on this subject testifies to its originality and to the timeliness of creating a relevant data bank.

3. Identifying and contacting individuals from academia, civil services and NGOs (in Europe and central Africa) interested in the project's focus.

A **second** phase entailed a fact finding mission to central Africa. Between 22 February 1994 and 29 March 1994, research was carried out in Yaoundé, Cameroon; Kinshasa, Zaire and Libreville, Gabon.

Specific activities upon arrival in these cities included (1) observation, (2) interviews and discussions, (3) bibliographical research and (4) orchestrating and partially financing pilot studies undertaken by local academics who will be integrated into a network of researchers focusing on the forest-city interface.

### **Observation**

We were able to make precise investigations and gather data concerning:

- the principal venues where specific forest products are exchanged (central markets, roadside markets, ports, etc.).
- those forest products most widely consumed in urban centres. We focused our attention on both bush meat consumption which is responsible for the varying but significant disappearance of wildlife and also on wood products (principally fuel wood but also wood for construction). This choice was influenced by the assumption that urban populations have been directly responsible for the depletion of these resources in the areas surrounding their cities and they are now extending deforestation and hunting activities far into the intermediary zones between city and rural areas. Other forest products such as medicinal plants, tree bark, forest fruits, skins, insects, trophies etc., were identified but we chose not to devote research time and resources to their study because use of these products does not seriously threaten the forest environment - at least in the immediate future.
- the social actors participating in the chain of exchange (farmers, fishing communities, hunters, transporters, market vendors, buyers, consumers, etc.).
- the relationship between trade and transportation networks (road, railroad and river) and the frequency at which trucks, pick-ups, barges and trains) enter urban areas.
- who consumes forest products (social class, ethnicity, length of time spent in cities), for what reasons (traditional attachment, cost, availability), in what contexts (daily habits, special occasions, ritual).

- how the confrontation between "modernity" and "tradition" influences recourse to, or the abandoning of, the use of forest products.

## **Interviews**

African academics, expatriate aid workers, local civil servants and NGO employees were interviewed. Discussions provided specific data on the forest-city interface: they were also useful in up-dating our objectives given the prevailing economic situation in central Africa. Meetings also helped renew inter-university co-operation agreements. (See attached list of persons contacted.)

## **Documentation and bibliographical research**

Local universities and research centres suffer from a lack of financial resources and are consequently quite unable to purchase new acquisitions. Some works are donated but donations remain infrequent. Likewise, government services are hamstrung and have consequently stopped collecting or publishing data. Those few documents made available to us emanated from international organisms. In recent years, studies published by local NGOs or civil services have become exceptional.

Along these same lines, local researchers- especially in Zaire and to a lesser extent in Cameroon - are forced to work under difficult infrastructural conditions. While individuals seemed keenly interested by social scientific aspects of forest conservation and the city-forest interface, they admitted that their own research initiatives remain foiled by budgetary restraints.

## **Organising pilot studies undertaken by a network of local researchers**

The major accomplishment of this mission was setting up a network of Cameroonian, Zairian and Gabonese researchers who are now actively participating in the project. Two pilot studies per country are currently being carried out. One study per country deals with some social economic aspect of bush meat consumption; the other with how, through an anthropological optic, city dwellers perceive the forest.

In Yaoundé one pilot study focuses on aspects of the bush meat trade at the Efoundi market. This includes identifying species, evaluating volume, establishing costs, identifying buyers and consumers. The social scientific aspects of demand for bush meat are emphasised. Research co-ordinator: Mr. Anthanase Bopda, Institut Nationale de Cartographie.

The second Yaoundé study is being carried out by Professor Michael Ndobegang (Ecole Normale Supérieure) who is using his students as a sample group. He is investigating how these students perceive the forest and its resources, what the forest symbolises to them, how they perceive conservation issues, etc.

In Kinshasa, Unikin General Secretary for Academic Affairs, Lapika Dimomfu is supervising a study on the consumption of smoked monkey - by far the type of bush meat most widely available in the Zairian capital. Smoked monkey was selected as a research topic because other kinds of bush meat are scarce in Kinshasa and are consequently less relevant in a social

economic context. Kinshasa's 5 million inhabitants have put such tremendous pressure on wildlife that game has been depleted in a radius of hundreds of kilometres around the city. Whatever fresh bush meat is found in Kinshasa is reserved for elite Zairians or expatriates. Most of the bush meat available in Kinshasa emanates from the distant forest in the Equateur Province. Questions raised in this study include volume, entry points, distribution network, modes of payment, consumption taboos, etc.

The second study attempts to ascertain how city dwellers reconstitute the forest environment around their homes. Research findings here will be helpful in establishing the scope and intensity of urban dwellers' anthropological attachment to the forest milieu.

In Libreville participants are associated with Omar Bongo University's Institut de Recherche en Sciences Humaines (IRSH). Other organisms have commenced studying some aspects of bush meat consumption in Libreville ( e. g. the World Wildlife Fund and ECOFAC) driven by the large amounts of such meat clearly visible in the local markets. It is estimated that four tons of bush meat enter Libreville monthly. These organisms, however, are focusing on ways of diminishing hunting and trapping without taking into account social science aspects of consumption. Our pilot study will consequently try to ascertain the degree of cultural attachment to bush meat by analysing related consumer attitudes and behaviours.

With respect to the perception Librevillois have of the forest and its resources, researchers at IRSH are developing a country specific questionnaire. Points included address the sustainability of the forest; the forest as a friendly or hostile environment; attitudes concerning poaching; visits to family living in the forest; how the disappearance of the Mondah forest is felt; etc.

### **Contract completion and follow-up**

Priliminary findings of these six pilot studies will be incorporated into our final report to be submitted to the European Commission. They will help formulate recommendations how to combine social science research on the forest-city interface with forest conservation. These recommendations constitute one element of ongoing research being carried out by the Centre of Cultural Anthropology at ULB pertaining to the future of the forest and its peoples. Continued efforts are being made to introduce researchers from other African countries into our network, e. g. from the Central African Republic and Congo Brazzaville.

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### **List of Persons Encountered in central Africa**

#### **CAMEROON**

Jean-Marc Froment  
ECOFAC, EEC

Dr. Jacques Bonvallot  
ORSTOM

Dr. Steve Gartland  
World Wildlife Fund

Athanase Bopda  
Institut National de Cartographie

Dr. Michael Ndobegang  
Ecole Normale Supérieure

Felicité Tankoua  
Service d'Appui aux Initiatives Locales de Développement

Alzadia Washington  
USAID

John Macmahon  
USAID

Dr. Emmanuel Achu Gwan  
Chairman  
Department of Geography  
Yaoundé University

Professor Ngwa Nebasina  
Department of Geography  
Yaoundé University

Dr. Jacob Ngeve  
IRA Nkolbisson

Augustin Youmbi  
Enviro Project

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**ZAIRE**

Professor Jerome Makwala  
Unikin



Professor Mumpasi Lututala  
Unikin

Professor Lapika Dimomfu  
Secrétaire Général Académique  
Unikin

Professor Kika  
Unikin

Wayne King  
USAID

Christian Beninger  
Cultural Attaché, Ambassade de France

Philippe Nayer  
Délégué de la Communauté française de Belgique

Peter Van de Velde  
Ambassade du Royaume de Belgique

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**GABON**

Bernard Clist  
CICIBA

Lisa Steel  
WWF

Serge Akagah  
Les Amis du Pangolin

Professor Marius Indjieley  
Institut de Recherche en Sciences Humaines  
Omar Bongo University

Professor Joseph Befame-Nseme  
Director, IRSH  
Omar Bongo University

Professor Mouity Nzamba  
Director Cenarest  
Omar Bongo University

Rosalie Ngoua  
Curator  
Musée de la Forêt

Michel Fernandez-Puente  
ECOFACT, EEC

Mr Sapor  
Mission de la Coopération Française

Gilles Rebattet  
Delegate  
European Commission