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Small-Scale Logging in Community Forests in Cameroon: Towards Ecologically more Sustainable and Socially more Acceptable Compromises

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Attempts to Establish Community Forests in Lomié, Cameroon

Martha Klein, Brice Salla and Jaap Kok

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SMALL-SCALE LOGGING IN COMMUNITY FORESTS IN CAMEROON: TOWARDS ECOLOGICALLY MORE SUSTAINABLE AND SOCIALLY MORE ACCEPTABLE COMPROMISES

Ph. Auzel, G.M. Nguenang, R. Feteké and W. Delvingt

SUMMARY

Community forestry has now been tested for five years in Cameroon. Against all expectations, it is becoming established in forest zones, in spite of the difficulties which village communities face in the long process towards the allocation of a community forest.

With access to forest resources decreasing, the smallest forest plot is now a major issue for a whole range of players. The forest economy has to meet many different challenges, the main one being to carry out logging without irremediably destroying the whole resource. Reconciling the social, economic and ecological factors is at the core of the current debate on the sustainable management of forest resources. It seems, increasingly, that the small-scale logging of community forests, along with logging under State management, could represent a serious alternative to the rather conservative solutions found so far (Sales of Standing Volume, salvage logging, etc.), which have been shown to have limitations. The comparative benefits clearly favour the small-scale logging of community forests. This situation has not escaped the attention

of a good number of entrepreneurs in the informal sector, who have built up *le sciage de long* (artisanal sawing with a chain saw) to an almost industrial level.

The scarcity of wood resources and the uncontrolled actions that this can provoke, together with the development of illegal logging, is a serious threat to the future of community forestry. Small-scale logging does, however, offer unprecedented possibilities for development, as demonstrated by the enthusiasm of so many of those involved for *le sciage de long*. Small-scale logging is thus a serious option which must be supported, as must the initiatives of forest communities.

THE EMERGENCE OF COMMUNITY FORESTRY IN CAMEROON

Integrated resource management is one of the approaches currently proposed as a means of associating the idea of sustainable management with that of development. The resulting concept of community forestry has been tested in Cameroon as a pilot project since 1995, with a decree detailing the relevant provisions of the 1994 forestry law, and the Manual of

Procedures for the Attribution, and Norms for the Management of, Community Forests (MINEF/CFU, 1998). The latter provides very few solutions, but does give general guidelines on finding one's way through the mysteries of the administration.

In East Cameroon, several communities have already acquired, or are in the process of acquiring, community forests, with the combined support of development projects and the increasingly numerous NGOs involved in the field (Auzel and Nchoji Nkwi, 1999). These initiatives are also being talked about in neighbouring villages, and requests for assistance and applications are beginning to flow into the Community Forestry Unit of the Ministry for Environment and Forests (MINEF).

There is, however, much uncertainty concerning the different forms of logging of the timber resources in community forests, including with respect to the provisions of the Law. Because of the scarcity of the resource concerned, community forests are receiving some very particular attention which does not necessarily contribute to a better definition of or more information on the various possibilities available to village communities.

In this article, after a brief presentation of the forestry context in Cameroon, and the challenges facing sustainable management, we go on to look at logging in community forests, considering the different possibilities currently available. We analyse the potential income from the different scenarios. We then show that small-scale logging has not waited for the establishment of community forests to develop into a flourishing informal sector; and finally

we assess the progress made in establishing community forests, by means of the decisive stage of opening them up to logging, within the context described.

THE EXPLOITATION OF FOREST RESOURCES

Logging in Cameroon is both selective and extensive. It concentrates on twenty species and occurs in vast areas (Debroux, 1998). National production is around 3.3 million m³ of timber annually. Five species made up 75% of total production in 1998-1999: ayous (*Triplochytton scleroxylon*), sapelli (*Entandrophragma cylindricum*), fraké (*Terminalia superba*), azobé (*Lophira alata*) and iroko (*Milicia excelsa*) (MINEF 1999).

Licences and Sales of Standing Volume were the main permits issued before the 1994 forestry reforms in Cameroon. Neither of these were subject to a previously agreed management plan. Under the new forestry policy, which attempts to encourage the sustainable management of the forests, a national forestry zoning plan has been established, with the following categories:

- The non-permanent forest estate, liable to be allocated to different types of activity: agricultural, pastoral, forestry and others;
- The permanent forest estate, which belongs to the State and is permanently allocated to conservation (protected zones) or production (forest management units).

The non-permanent estate, which, to a great extent, consists of “agro-forestry zones” (mixed areas of farming and forestry) may be logged under sales of standing volume, logging licences, or within community

forests. With the exception of community forests, these licences are not subject to management plans.

THE CHALLENGE OF THE FOREST ECONOMY: TO LOG WITHOUT DESTROYING

The dense humid tropical forest of the Congo basin is the object of very diverse interests, the most important of which, from the point of view of governments, is certainly the economic interest of the logging sector – despite the fact that the direct and indirect effects of the damage this causes, are acknowledged.

Since logging is an important and fundamental part of the national economies of many forested countries, they all have a particular interest in “ensuring that the forests remain a renewable economic resource, as well as a reservoir of biological diversity”¹. This, indeed, was the challenge which the Heads of State of Central Africa announced their intention of taking up at the Yaoundé summit (MINEF, 2000), provided that they could also establish ecologically sustainable logging in their forests.

However, how to combine protection of the environment with economic development, thus to achieve more sustainable exploitation of the forests, remains the great challenge which we all have to meet. Much is at stake, and it requires an in-depth analysis of the conditions in which forest resources are exploited (Vermeulen,

¹ Excerpt from the Declaration of the Summit of Heads of State of Central Africa (Yaoundé, March 1999) (*unofficial translation*).

2000), of the income they generate, and of the economic alternatives which could support their more rational exploitation.

In social terms

With the combined effect of population growth, the development of trade, and changes in the relations between town and forest, and in economic policy, there has been a significant evolution in the relationship between people and their environment (Auzel, 1999).

Major disturbances, such as the establishment of industrial forestry units (sawmills) in forest zones, lead to a large concentration of population around these sites. In order to survive, unemployed youngsters will do anything to make the most money they can with the least investment: hunting is often the preferred choice, as they can find buyers with money who need the food, but whose involvement in logging leaves them no time to get it themselves.

In ecological terms

Any human activity has an impact, whether direct or indirect, on the balance of nature. It is found that “following disturbances which may be of diverse origin, new arrangements of species are established through the intervention of various mechanisms for dispersion and recruitment. These arrangements can be identified from observations of inequalities in structure or in the spatial distribution of diameters. Although these inequalities may be linked to specific behaviour, or may be the result of past ecological changes (climate change, or catastrophes such as fires)” (Riéra, 1995), it is accepted that “logging leads to profound changes in the

forest environment. These changes are structural, ecological, specific and progressive.” (Petrucci, 1994).

The more fundamental dichotomy lies in distinguishing between the direct and generally striking impacts, and the indirect, which are more difficult to perceive and comprehend.

In economic terms

Logging tracks which have been used to bring the various industrial products harvested out to market, can also subsequently provide access for new towns and villages set up as a result of the logging. This situation raises numerous problems which are also factors in the forest economy (FAO, 1999). It requires the development of logging techniques which have less impact than mechanised logging, and of economic alternatives to the non-sustainable use of many natural resources.

Hence, this opening up of tracks should primarily be seen as something artificial, an “illusion of development” (Vermeulen, 1999), which will disappear just a few years after the logging activities end.

SMALL-SCALE LOGGING: AN OPTION FOR COMMUNITY FORESTS?

Whilst the exploitation of non-timber forest products is traditional for these populations, logging is a new activity, which is gradually becoming more feasible in the context of the establishment and management of community forests. The pilot schemes along the northern boundary of the Dja Reserve give an idea of the economic interest of logging in the development of community forests

(Dethier, 1998). However, there is still much headway to be made because of, amongst other things, the immense power of the industrial logging lobby, whose interests lie in holding on to every last bit of the resource.

Small-scale logging, as developed in the Amazon forest, is characterised notably by small-scale methods and fairly simple techniques intended to limit its impact on the forest cover. This type of logging aims at the optimum use of the resource, based on a number of fundamental rules and techniques:

- The careful selection of trees to be felled, avoiding immature trees;
- Directional felling to reduce the impact on remaining trees;
- Sawing of logs into planks *in situ* in the forest;
- The manual transportation of planks to a central area, so as to avoid opening up secondary tracks and using heavy machinery;
- Small-scale logging (one plot per year, according to a rotation);
- A sustainable rate of extraction.

This is a low-impact logging strategy for the forest, which is extensive in time and space; it follows a rotation, which allows resources to regenerate and local economies to develop. This approach to the use of resources should encourage the participation of a large number of individuals from the community, and follows the logic behind the creation of community forests, which is to procure both work and income for local communities. It thus promotes local community development.

Industrial logging, on the other hand, obeys the logic of maximum profits from the exploitation of the timber in the forest, which is in direct contrast to participatory management and especially the more equitable distribution of income.

The exploitation of wood products: timber

Under Article 54 of the Law, the commercial exploitation of a community forest must be conducted according to its Simple Management Plan, duly approved by the administration in charge of forests, under State management, by sale of standing volume, by individual felling authorisation, or by logging permit. According to article 35 (1), any physical or moral person wishing to conduct forestry activities for profit must be registered. This means that the communities would have to establish contracts with registered exploiters.

Depending on the logging licence requested by the community, there may be several constraints on the sustainable management of a community forest.

Logging under Sales of Standing Volume
Sales of Standing Volume allow the logging of an area of 2500 ha and/or a fixed volume of wood over a one-year period, renewable twice, that is, a maximum of three years (Law, Article 55 (2)).

There are several incompatibilities between this licence and the sustainable management of community forests: firstly, the fact that the logging takes place over just a few months, which excludes any development or sustainable management of the community forest, and probably still less the management of any

resultant income. There is thus no possibility of finding any economic alternative to the non-sustainable commercial exploitation of natural resources, such as wildlife.

Management in general, but particularly that of the income from decentralised taxation, presupposes the organisation of village society, and the existence of mechanisms for discussion and conflict management, generally involving a lengthy learning period; very few communities have this experience.

Individual felling authorisation

This licence allows for the non-profit-making felling of a maximum volume of 30 m³ of timber. It is valid for a period of 3 months (Law, Article 57 (2)).

This licence may be requested to meet domestic needs, and cannot be used for commercial purposes. Its appropriateness may be questioned, since it does not produce any income for the communities concerned. These licences are no longer issued.

Logging by logging permit

The logging permit allows the logging of a maximum of 500 m³ of timber for a one-year, non-renewable period (Law, Article 56 (2)). This volume would provide, primarily, for the small-scale logging of community forests, in accordance with the Simple Management Plan. These permits are not currently being issued.

Logging under State management

Logging under State management by village communities is yet to be defined. An analysis of the law conducted a few months ago concluded that it was a possibility, although no

Table 1 Potential income from small-scale logging of community forests

Community forests				
Total surface area	1500 to 2500 ha		3000 ha to 5000 ha	
Exploitable surface area	2125 ha		2550 ha to 4250 ha	
Total number of m ³	500 m ³ per year	1000 m ³ per year	1500 m ³ per year	2000 m ³ per year
Sawing (60% yield)	300 m ³	600 m ³	900 m ³	1200 m ³
Income basis	CFA 30 000 per m ³ of sawing			
Annual income	CFA 9 M	CFA 18 M	CFA 27 M	CFA 36 M
Period of rotation	30 years			
Total income (estimate over 30 years)	CFA 270 M	CFA 360 M	CFA 710 M	CFA 1 080 M

previous developments would seem to indicate that it will be retained (Nguiffo, 2000).

At a recent meeting, the Minister for the Environment and Forests gave his interpretation of the relevant legal paragraphs, Article 54 of the Forestry Law, and Article 95 of the implementing instrument. A text is being drawn up to recognise logging under State management for logging by village communities, as provided for in their Simple Management Plan. Accreditation to the forestry profession will not be a requirement.

The comparative benefits: Sales of Standing Volume or community forests

Table 1 gives the estimated possible income from different cases of community forests, with variations in the surface area and the annual extraction rate, from 500 m³ to 2000 m³, under small-scale logging.

On the basis of trials conducted by the project PFC-FUSAGx, we estimate a sawing yield of 60%, not taking account of any fuller use of the wood than in industrial logging, which, as we know, is extremely selective. This situation leads to huge amounts of felled timber being wasted.

We estimate the average value of sawn wood to be slightly above FCFA 40,000 to FCFA 50,000, with production costs a little more than FCFA 10,000; this leaves a profit margin which we would estimate to be FCFA 30,000 per m³ of sawn timber.

Based on these figures for logging, processing and marketing, an income of FCFA 270 million and FCFA 1.08 billion could be expected for a community forest with an area of between 1,500 ha and 5,000 ha. With a thirty-year rotation, this would mean an annual income of between FCFA 9 million and FCFA 36 million.

By way of comparison, Table 2 shows the possible income from Sales of Standing Volume over an area of 2,500 ha.

Sales of Standing Volume are still subject to the payment of a para-tax of FCFA 1000 per cubic metre of timber felled, although it is generally the quantity of wood actually removed which is taken as the basis for calculations. Since Sales of Standing Volume are granted in the agro-forestry (mixed farming and forest) zone, the quantities removed are often small. For the purposes of calculation, we shall take them as ranging

Table 2 Potential income from Sales of Standing Volume for the communities

Sale of Standing Volume				
2500 hectares				
2125 exploitable hectares				
	Current system of remuneration		System in the community forests	
Amount of timber in m ³ per ha	2.5 m ³	5 m ³	2.5 m ³	5 m ³
Timber logged in m ³	5,300 m ³	10,600 m ³	5,300 m ³	10,600 m ³
Price paid to communities per m ³	CFA 1000	CFA 1000	CFA 12,500	CFA 12,500
Total income	CFA 5.3 million	CFA 10.6 million	CFA 66.25 million	CFA 132.5 million
Duration of logging: 3 to 6 months				

between 2.5 m³ per ha and 5 m³ per ha. The village community would thus receive between FCFA 5.3 million and FCFA 10.6 million, as can be seen from Table 2. This is what has been done in the forestry sector to date.

The announcement of the signing of management agreements for five community forests in the Lomié region did, however, show what commercial loggers are prepared to pay to log these areas. The most recent offers by the loggers in the case of the Lomié community forests go up to FCFA 12,500 per m³ logged (or rather removed), depending on the agreement reached. It is probable that this price will rise still further, but then the problem arises of whether the contract would be respected by the logger.

In this case, the communities could hope to receive between FCFA 66.25 million, on the basis of 2.5 m³ per ha, and FCFA 132.5 million, for the removal of around 5 m³ per ha.

Whilst the sums received by communities in the past were derisory, with the para-

tax of FCFA 1000 per m³, the situation now seems to be changing with the increasing scarcity of the resource, and particularly the development of community forestry. This new concept is quite often considered by commercial loggers to be a possible replacement for the Sales of Standing Volume, which are becoming increasingly rare, despite the fact that the companies' needs remain the same.

Community forestry would, in this case, give the local populations more power, allowing them to gain greater benefit from the forest resources around them.

Artisanal sawing: unauthorised, but thriving

The importance of timber as a resource in the country's economy has led to the development of logging at many different levels.

There is an increase in activities in the formal sector, supported particularly by the multitude of legal provisions which favour the access of small and medium-sized

operators to the forest. The introduction of small logging licences, such as Sales of Standing Volume, salvage logging and logging permits, etc., and the decentralised system of allocation are some of these provisions, although their application is unfortunately somewhat anarchic. This situation seems to have opened the door to all sorts of possible abuse. The most frequently observed infractions range from logging outside the boundaries of the Sales of Standing Volume, facilitated by the fact that the exploiters distribute the para-taxes from timber logged to the local populations (CIRAD-Forêt, 2000), to the anarchic logging of forest management units, whether these have been allocated or not.

On the informal side, there has been a proliferation in local markets for the sale of small-scale timber (particularly in the main urban centres), the origin of which is often unclear. This sector produces local income (employment of labourers), but, despite its importance, is more or less completely beyond the control of the forestry administration.

The importance of these products in supplying local markets is significant. Annual production (1998-99) in the artisanal sector, using chain saws, is estimated at between 150,000 m³ and 200,000 m³, or nearly 700,000 m³ of logs, which represents the equivalent of 27% to 36% of the amount produced by the modern sawmills.

These estimates suggest that artisanal sawing is important, both in terms of the exploitation of the resource, and of the

consumption of sawn timber at national level for construction or carpentry.

IN CONCLUSION, A LOOK AT PROSPECTS AND CURRENT LIMITATIONS

Developments in the forestry sector

With the scarcity of the resource, and the new terms for its allocation, the stakes are reaching levels which few would have imagined just a short while ago. However, beyond the theoretical increase in tax revenue, there are many unresolved problems in the forests, where illegal logging is still very much present, in all its forms.

To mention only those aspects linked to community forestry, it can be seen that the encroachments by industrial companies (Panagiotis in the Lomié region), or the complete logging of a Community Forest (MMG in Kribi), have so far attracted neither sanctions nor penalties. There is also the well-known case of Abong Mbang, widely denounced in the Cameroonian press, where all the agro-forestry zones, as well as the neighbouring forest management units and council forests, are being exploited by a local entrepreneur who has set up a mini-sawmill. This is run without a licence, and so far without any intervention.

The quasi-blocking of the on-going procedure to define the *droit de pré-emption* (right of first refusal) can be interpreted as a last-ditch attempt to prevent the agro-forestry zones escaping from industrial logging. This *droit de pré-emption* would give local populations a right to self-determination, although still a fairly limited one, since only the two

options of community forestry and Sales of Standing Volume are mentioned. The recent attempt to validate a draft ministerial decision which, rather than clarifying the various logging options, would, to almost general surprise, have introduced a proposal for a commission for the allocation of licences (Sales of Standing Volume) in the community forests, is fairly characteristic of the mentality of those who want to maintain the *status quo* in forestry.

Choosing how to log community forests

Given the current state of the law regarding the various licences and the different means of logging community forests, it seems that the most appropriate scenario for the exploitation of a community forest would be the logging under State management of the timber resources, by, and to the benefit of, the village communities, as provided for and approved in the Simple Management Plan. The small-scale logging of construction timber in community forests, subject to the prior approval of a management plan, would mean that agro-forestry (mixed farming and forest) zones could be managed (Dethier, 2000), which is not the case with Sales of Standing Volume or other licences granted to an industrial entrepreneur, which are not subject to management constraints.

Logging under State management also has the advantage of providing work, and hence income, which is essential in the fight against the non-sustainable exploitation of natural resources, as practised at present. This means that local development, based on the sustainable exploitation of the resource, can take place,

helping multiply many times over the initial investment in community forestry and management.

Moreover, the possibility of exploiting secondary species under this type of logging expands the range of species used, whilst also providing wood at prices accessible to carpenters and craftspeople, two groups whose importance is still undervalued and not taken into consideration at national level.

Different qualities of wood can be exploited at prices linked to the local markets, or to export via existing specialised operators. Indeed, this solution is in no way detrimental to the companies, which can then buy up the off-cuts, as some have told us. It may even be one of the great innovations of the informal sector, with factories being supplied with rough planks by the sawyers with their chain saws. The latter have rapidly adapted the dimensions of their products to the requirements of local companies.

The informal artisanal sector still as prosperous as ever

Artisanal sawing, which was initially confined to the forest zones around the large towns, is now expanding into the more remote areas of the forest. This production is primarily aimed at the local market for construction wood, whereas the industrial logging of timber species is aimed at the export market. Artisanal sawing is generally conducted under customary rights or a pseudo-customary right enjoyed by populations living alongside forests.

The activity of these artisanal sawyers with their chainsaws produces a significant part of the construction wood bought by the domestic market. No reliable data are yet available and the figures quoted are estimates; a detailed study would be desirable.

The small-scale logging of community forests could represent an alternative to logging by artisanal sawyers, which is completely illegal and forms part of the informal economy. It could bring this activity into the formal sector and hence make it subject to better controls, or oblige it to conform to management and development standards. It could also play an important role in bringing Cameroonians into the forestry professions, a point made strongly in the national forestry policy.

Community forestry – progress against all odds

Despite the ecological and socio-economic advantages of small-scale logging for rural communities, there is still much to be done to make it a sustainable reality. There are pre-conditions:

- The lack of expertise in the complex procedures, and of financial means within the communities, requires support from the State, projects and NGOs (local and international);
- The many administrative blockages, on top of the technical and financial constraints facing the communities, do nothing to ease the establishment and management of community forests. A more encouraging framework should be developed;
- Since this approach to small-scale management is innovative, it could be

incorrectly perceived by the local communities, who are used to waiting passively for the financial results of industrial logging.

Despite all the constraints mentioned above, the small-scale logging of community forests would seem to be a serious option for local communities, which need to be encouraged, supported, guided and especially better informed of the various possibilities which exist.

Community forestry is making progress, despite the many difficulties it is encountering. Its main advantage is that the pressure being brought to bear is coming from the communities themselves, and no longer from just a few projects, NGOs or local elites.

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ACRONYMS

FCFA	Currency in French-speaking West and Central Africa. Exchange rate: 100 CFCA = 1 FRF 750 CFCA = 1 USD
MINEF	Ministry of Environment and Forests
NGO	Non-governmental organisation
PFC-FUSAGx	“Establishment of community forests around the Dja Wildlife Reserve” EU DGVIIIproject

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