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The Markets of Non-timber Forest Products in the Humid Forest Zone of Cameroon

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Abstract

Many rural dwellers in tropical regions depend on non-timber forest products (NTFPs) for their livelihood and their income needs. Local markets play an important role in enabling forest-dependent households to realise a significant part of their cash income through sale of NTFPs. Increased urbanisation (as a result of rural to urban migration) is a significant factor that expands the size of local NTFP markets.

This paper focuses on local markets and on market intermediaries who facilitate the co-ordination (or the matching) of supply and demand of NTFPs by providing market outlets to farmers and guaranteeing a source of domestic supply of NTFPs for consumers. It presents the results of a study which analysed the four main NTFPs sold in the Humid Forest Zone of Cameroon (*Dacryodes edulis*, *Irvingia* spp., *Cola acuminata* and *Ricinodendron heudelotii*). The study found that the quantity of NTFPs marketed is significant, amounting to at least US\$ 1.75 million in the first half of 1995. More than 1,100 traders, mainly women, are engaged in the distribution of NTFPs. Furthermore, the marketing margins obtained by traders vary between 16 % (for *Dacryodes edulis*) and 30 % (for *Irvingia* spp.) of the value of sales. Thus the study confirms the role of NTFPs as a source of employment and income not only for gatherers but also for traders, and suggests the need and potential for developing these markets.

Introduction

Many rural dwellers in tropical regions use non-timber forest products (NTFPs) for subsistence and as a source of income. Numerous local, national and world-level

estimates exist of the number of people in different areas who are more or less dependent on NTFPs. It is estimated, for instance, that 1.5 million people in the Brazilian Amazon derive part of their income from extractive products (*Non-Wood News* 1994). According to Zhong *et al.* (1995) 700,000 people work in the bamboo sector in China, while a frequently quoted figure for India refers to 50 million tribal people living mainly from NTFPs (see for instance Poffenberger 1996). In the forest zone of Southern Ghana, Townson (1995) estimated that 258,000 people, or 20 % of the economically active population, earn part of their income from NTFPs (see also Falconer 1992). According to Mcleod (1987), cited by Falconer (1990), one-third of people in the Oku mountain region of Cameroon supplement their income with the sale of *Prunus africana* bark and artisan activities. Aggregated figures may be more open to debate. For example, Pimentel *et al.* (1997) estimate that over 300 million people in the world derive part or all of their livelihood and food from forests.

Rather than pointing to the huge disparity between estimates and the difficulties of deriving reasonably accurate figures, we would like to stress the importance of NTFPs in local economies near forest areas of tropical regions. While acknowledging the key importance of gathered NTFPs in the subsistence economy, this paper focuses on the role of NTFPs in the cash, commodity-oriented production system.

In connection with this commodity-oriented production, local markets play an important role for forest-related households who sell NTFPs. The size of NTFP markets can be substantial. In Nigeria, it is estimated that 78,880 tons of *Irvingia* spp. are marketed per year (Department of Forest Resource Management of Nigeria 1986, cited by Falconer 1990). In Cameroon, Nkongmeneck (1985) estimated the size of the market for kola nut (*Cola acuminata*) at 20,400 tons. Falconer and Arnold (1991) cite Moby-Etia (1982) as estimating the market of palm wine in the Bas-Wouri region of Cameroon to be 6,000 tons per month. In rural Sierra-Leone, more than 50 % of the fuelwood collected is marketed (Kamara 1986, cited by Falconer and Arnold 1991).

Increased urbanisation (as a result of rural to urban migration) is an important factor that expands the size of local NTFP markets because it creates a new type of consumer who, unlike rural inhabitants, has to buy rather than gather for subsistence use. Peri-urban markets not only supply consumers but are also an

important source of employment for the traders concerned. In the Iquitos region of the Peruvian Amazon, for example, Padoch (1992) estimated that more than 5,000 people were involved in NTFP trade.

NTFP markets are also significant at the regional and international levels, providing revenues for the actors directly involved and for the government. At the international level, it is estimated that the annual trade of NTFPs amounts to US\$ 11 billion. The European Union, the United States and Japan account for approximately 60 % of world imports of NTFPs, and the general direction of the trade is from developing to developed countries (Iqbal 1995). Trade of *Prunus africana* bark amounts to US\$ 150 million per year (Cunningham and Mbenkum 1993). The recorded exports of Kola nut from Cameroon to Nigeria and the Central African Republic in 1992 was estimated at 448 tons, whereas the exports of *Gnetum africanum* (a leafy vegetable gathered from the forest) from Cameroon to Nigeria amounted to 428 tons (AEERD 1993).

The present paper focuses on local markets and on market intermediaries (traders). Market intermediaries facilitate the co-ordination (or the matching) of supply and demand of NTFPs by providing market outlets to farmers and guaranteeing a source of domestic supply of NTFPs. The behaviour, constraints and standard operating procedures of market intermediaries are not always known, especially in the wake of the economic crisis that hit Cameroon since 1986. NTFP traders do not always deal with a single product. This strategy allows them to diversify and, if necessary, to cross-subsidise among different NTFPs. The margin obtained by selling a particular NTFP can be used to support other NTFPs (purchases, storage, processing) in order to cope with seasonality and other fluctuations.

The overall objective of the study reported in this paper was to characterise NTFP markets as a first step in determining the importance of NTFPs in the Humid Forest Zone of Cameroon. This was done by estimating the quantity of NTFPs marketed in a selection of key markets and by comparing traders' marketing margins for various NTFPs.

Methodology of the Study

The study covered 28 markets in the Humid Forest Zone of Cameroon (Ndoye 1995), which covers 270,162 km² representing 58 % of the national territory. Markets (see Figure 1) were selected based on the role they play in the assembly and distribution of NTFPs, their accessibility, their links with other markets in the same province or in other provinces, and with neighbouring countries (Central African Republic, Gabon, Equatorial Guinea and Nigeria).

The sales of nine NTFPs were recorded, not including medicinal plants as these are normally sold in specialised places and would have accounted for many more products. This paper focuses on the four products which represented 86 % of the total NTFP sales recorded during the survey. It reports on the marketed quantities of *Irvingia gabonensis* (mangue sauvage), *Cola acuminata* (noix de cola) and *Ricinodendron heudelotii* (njansang) during 29 weeks of activity from January to July 1995, and *Dacryodes edulis* (safoutier) during 16 weeks of activity from April to July 1995.



Figure 1: Markets surveyed in the humid forest of Cameroon.

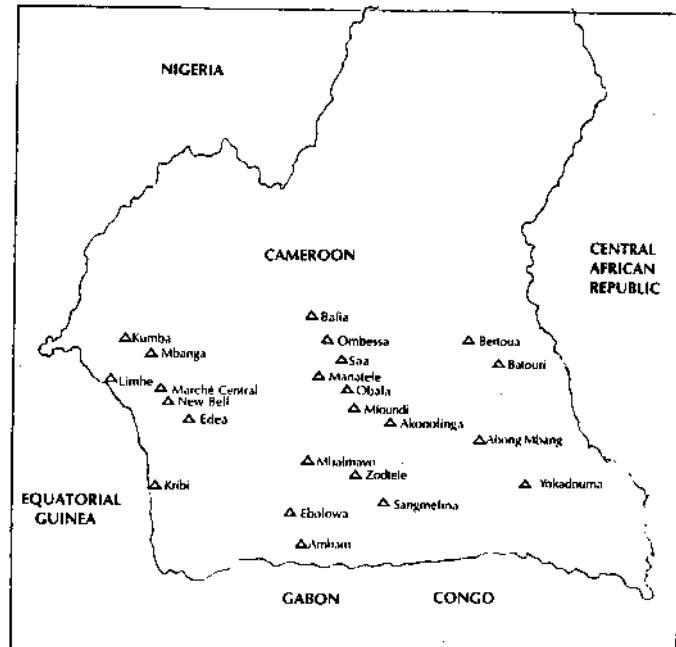


Figure 1: Markets surveyed in the humid forest of Cameroon.

A census of traders was not carried out prior to selecting the sample because the seasonal production of NTFPs creates many entries and exits, making a single census inappropriate. Furthermore, there was a danger that a census at the time of the survey might have made traders suspicious that this was intended for tax purposes. (In fact there were rumours that the informal sector was going to be taxed by the government and this did in fact happen in 1996 in the form of an '*impôt libérateur*', see below). Therefore, the census of traders for each market was based on the estimate, offered by each respondent, of the number of sellers operating in a given market. The estimate for all 28 markets was 1,120 traders, with a +/- 8 % error. This relatively small error is an indication of the traders' good level of knowledge about their peers operating in the marketplace.

Traders were selected based on the number of NTFPs they handled, their knowledge of NTFP markets and their willingness to respond to the questionnaires after an explanation of the purpose of the study. The 267 traders interviewed represent 24 % of the estimated total number of traders operating in the study area.

The markets were visited between one and six times during the study period, depending on their relative importance and accessibility from Yaoundé. For the markets visited only once we tried to retrieve seasonal variations in prices and quantities based on a 'memory recall' questionnaire. This information was checked against the markets that were visited several times in order to assess its validity.

Special Features of NTFP Markets

NTFP markets in the Humid Forest Zone of Cameroon are dynamic, meaning that the role of the markets in assembly and distribution of NTFPs may change throughout the year and from one year to the next. This is compounded by the fact that some markets may have more than one peak supply period for a particular NTFP in a given year, which affects the behaviour of markets and the strategies of market participants in the surrounding areas.

The reason for these fluctuations is twofold. Some products like the fruit of *Dacryodes edulis* are widely cultivated in the country, with production starting in the Littoral and Southwest provinces during the period April to early May, then shifting to the West province in June-July, and finally to the Centre and South

provinces during the period August-September. Local markets reflect this seasonality with respect to the quantities sold, prices charged, and the distances the product is transported. Other products like the seed of the wild mango, used as a condiment, actually represent different species of the same genus. The main supply of wild mango seeds is from *Irvingia gabonensis* (which fruits from June to August) and *Irvingia wombolu* (fruiting from January to March) (Harris 1993). While their pulp has different properties, the kernels have very similar characteristics and are not differentiated in the market.¹ This results in a two-season product with at least two market peaks each year.

Price Setting for NTFPs

As with other markets, prices of NTFPs depend mainly on supply and demand conditions. Supply of NTFPs is determined by the amount of product gathered or harvested as well as the quantity stored. Due to the seasonal nature of NTFP production, storage of the product becomes important in guaranteeing availability throughout the year. During the period of production, there is an abundant quantity available at the market and prices are lower than between harvests when NTFPs are scarce.

The demand for NTFPs by traders is determined by the quantities they are willing and able to purchase. This, in turn, depends on the amount of working capital traders have at their disposal and the signals of scarcity in urban markets within the Humid Forest Zone, as well as the demand by foreign traders and consumers from border markets with Gabon, Equatorial Guinea, Nigeria and Central African Republic.

The process of price setting for NTFPs between the farmer (the seller) and the trader (the buyer) involves bargaining to reach an equilibrium price somewhere between the lowest price the seller is willing to accept and the highest price the buyer is willing to pay. The bargaining power of the sellers and buyers is influenced by different factors depending on whether the sellers have brought the NTFPs to the

¹ Harris (1993) found higher prices for *I. wombolu* than for *I. gabonensis* seeds. In our survey such differences in the price of the kernel were small and inconsistent, although there were differences in the price of the fruit, higher for *I. gabonensis* due to its greater palatability.

market or whether the buyers have gone to the villages to purchase the NTFPs at source.

For NTFPs sold at the market, the bargaining power of farmers depends on the type of NTFPs they are selling (perishable or not), the quantity of NTFPs available at the markets, their own financial needs (based on their actual disposable incomes), the number of traders present at the market, prices that prevailed during previous market days, the number of farmers selling NTFPs, and the overall transparency of the market. The bargaining power of traders depends to a large extent on the prevailing prices of NTFPs in urban and border markets (i.e. expected prices), the quantity of NTFPs available at the market, the number of traders present at the market, and the actual marketing costs and expected margins. NTFP traders can collude and agree on a single price at which they will buy from farmers. Such collusion may break down, however, if traders come from different zones where the demand for NTFPs differs. Another factor that may prevent collusion from working is ethnic differences among traders.

For NTFPs sold in the village, the bargaining power of farmers depends on the number of traders coming to the village to buy, the accessibility of the village, the supply of NTFPs, the degree of perishability of NTFPs, and the level of market information available to farmers. The presence of a large number of traders in the village can, for example, give a signal to farmers about the relative scarcity of NTFPs in urban areas. During the period of peak production, many traders prefer to purchase NTFPs at the market rather than going to villages.

Following a classical economic geography approach, large markets would be expected to emerge at: a) large consumer centres; b) large supply centres; c) junctions of major trade routes; d) borders/ports. In fact, all these situations can be found in the Humid Forest Zone markets for NTFPs, displaying a high degree of variation. Thus, markets surveyed had different levels of specialisation in NTFPs. In some cases like Mbalmayo, Mfoundi or Ebolowa, all traders interviewed were selling one or more NTFP, whereas in the case of Ambam only 20 % of traders sold any NTFPs.² The actual size of the markets also showed considerable variability and a high degree of concentration, with the largest seven markets (25

² Ambam is, however, a special case. As it is close to the frontier markets of Abang Minko (Gabon border) and Kye-Ossi (Equatorial Guinea border), it does not offer advantages for the trade of NTFPs, having a very marginal role in this respect.

% of the total surveyed) representing 75 % of all NTFP sales. This reflects the size of the town in which they are established (as in the case of the large urban markets of Douala and Yaoundé) but also the geographical location in towns that serve as trans-frontier markets with neighbouring countries (as in the case of Abang Minko with Gabon).

Characteristics of NTFP Traders

Traders (or market intermediaries) involved in the marketing of NTFPs in the Humid Forest Zone of Cameroon are called 'buyam/sellams'. As the name implies, buyam/sellams both buy and sell NTFPs for profit. Buyam/sellams can be categorised as:

- assemblers who go to villages to buy NTFPs and transfer them to urban markets. These assemblers buy NTFPs at village markets or by going around from door-to-door;
- wholesalers who conduct their transactions in bags or units of a bag (e.g. half, quarter);
- retailers who conduct their transactions in piles, glasses or cups.

A buyam/sellam can simultaneously act as an NTFP assembler/wholesaler or a wholesaler/retailer, depending on the strategies pursued. It is also possible that the buyam/sellam behaves only as an assembler, wholesaler, or retailer at different times (or seasons) of the year. Buyam/sellams can be further categorised as to whether or not they transfer NTFPs between markets (Ndoye, 1995).

Traders interviewed appear to be of similar average age (38 years) across all the markets with the exception of those from Southwest province who are slightly younger. On average traders in the five provinces have 7.5 years of experience in dealing with NTFPs.

Overall, the vast majority (94 %) of traders of NTFPs are women. This may be attributed to a number of factors: the gathering of NTFPs (with the exception of those which require climbing) is done exclusively by women; NTFP trade is traditionally considered a marginal activity reserved for women and children and not attractive to men; and the traditional division of labour within the household

leads women to specialise in the sale of NTFPs and food crops, while men specialise in the marketing of cocoa and coffee. The highest level of male involvement (17 %) occurs in the Littoral province where men are more involved in the marketing of *Dacryodes edulis*. The involvement of women is remarkably high when compared with other estimates of male/female ratios in trading NTFPs in the region. Nsangou (undated) found that 57 % of the market salespeople were women. In Ghana, Townson (1995) estimated that an equal number of men and women were involved in NTFP activities. It seems that NTFP trade in the Humid Forest Zone of Cameroon offers an especially conducive environment for the involvement of women. According to our field observations, this also holds true for most agricultural commodities, and coincides with results obtained by Koopman (1991) and Guyer (1987, cited by Koopman 1991).

Most NTFP traders (84 %) know how to read and write. This pattern is consistent throughout all the provinces studied except in Southwest province where the percentage of uneducated traders is highest. In all cases the literacy rate is far higher than the 46.5 % average literacy rate for women in Cameroon (Direction Nationale du Deuxième Recensement Général de la Population, undated). This seems to indicate a functional relationship by which being literate facilitates keeping records and running a business, even if very small. In fact, some of the traders interviewed kept multiyear records of their business, which they consulted to provide information related to past transactions.

Volume and Value of Marketed NTFPs

NTFP traders play a very important role both in providing market outlets for gatherers and in distributing the products to consumers. The quantities and values of NTFPs sold in the markets surveyed in 1995 are substantial. For the four main products studied, *Dacryodes edulis* is the most prominent NTFP both in terms of quantity and value. Its trade is also the most concentrated, with only 35 (or 13 %) of the 267 traders interviewed being involved in its sale. These traders sold 263.8 tons of *Dacryodes* with a value of 54.5 million CFA francs. When projected to the total number of traders estimated to be operating in the 28 markets, this indicates sales would amount to 1,447 tons at a value of 301,550,000 CFA francs during the 16 weeks of recorded sales.

Dacryodes edulis is followed in importance by *Cola acuminata*, *Ricinodendron heudelotii* and *Irvingia* spp. This is also the order of specialisation of trade, with *Irvingia* being the product in which the highest percentage of traders was involved (around 45 %). The trade of *Dacryodes edulis* is more specialized than the trade of *Irvingia* because the former has a more concentrated harvest (both in time and space). Moreover, *Dacryodes* is more perishable and has an international market which has set a differentiation of quality (grades), thus requiring faster capital turnover and better handling skills.

The actual sale recorded in the sample for the four main products amounted to 417.1 tons with a value of 175,742,300 CFA francs. This suggests that total sales at the 28 markets amounted to about 2,223 tons with a market value of 837,920,000 CFA francs, equivalent to US\$ 1,745,700 (at an average conversion rate of 480 CFA francs per dollar in 1995).

Traders' Marketing Margins

Table 1 shows the average marketing margins of the traders who actually sold *Dacryodes edulis*, *Irvingia* spp., *Cola acuminata* or *Ricinodendron heudelotii*. Their net margin over the whole selling season for each product is equivalent to 16% of the sale value for *Dacryodes edulis*, 18 % for *Cola acuminata*, 23 % for *Ricinodendron heudelotii*, and 30 % for *Irvingia* spp. The traders' average weekly margins (for the duration of the season) range from 15,800 CFA francs for *Dacryodes edulis* to only 3,800 CFA francs for *Irvingia* spp. The difference in marketing margins between the four products is explained by differences in size of traders dealing with the product (especially for *Dacryodes*), supply and demand conditions, product perishability, and rate of stock turnover, as is discussed in more detail below.

The trade of *Dacryodes edulis* is concentrated in the large urban markets of Douala and Yaoundé. In cash terms traders' weekly marketing margins are highest in New-Bell (Douala) and Mfoundi (Yaoundé) (54,000 CFA and 26,000 CFA respectively), reflecting the larger average size of the business in these markets. The New-Bell market in Douala is the main export market of *Dacryodes* to Gabon, Equatorial Guinea, Congo and Europe. Traders involved in the export market specialise in *Dacryodes* during its production season and they operate in partnerships. The

money saved from the marketing of *Dacryodes* enables traders to invest in the marketing of other NTFPs and fruit.

Table 1: Sales value and net margins (in CFA) for the marketing of the four main NTFPs in selected markets of the Humid Forest Zone of Cameroon in 1995.

Product	Total net margin for all traders and markets combined	Total value of sales	Average weekly net margin per trader*	Net margin as % of total value of sales
<i>Dacryodes edulis</i>	8,824,700	54,982,300	15,800	16 %
<i>Irvingia</i> spp.	12,987,900	34,633,100	3,800	30 %
<i>Cola acuminata</i>	6,361,800	43,432,200	4,400	18 %
<i>Ricinodendron heudelotii</i>	10,193,800	42,694,700	4,200	23 %
TOTAL	38,368,200	175,742,300		

* During the survey period of 29 weeks for *Irvingia*, *Cola acuminata* and *Ricinodendron*; and 16 weeks for *Dacryodes*.

A logical reflection of the lower supply of *Dacryodes* in the smaller markets is that their traders have much higher percentage net margins (up to 51 %) than those in the markets in which large volumes of the product are sold (with margins ranging from 10-18 % in the five largest markets).

Cola acuminata has the most geographically concentrated market. Its trade is dominated by the markets of the Centre province, in particular Bafia and Ombessa, that together represent 84 % of the sales of *Cola* in the survey period. The average weekly margins per trader are 8,000 CFA francs in Ombessa and 14,000 CFA francs in Bafia. High volume and quick turnover of *Cola* in these two markets allow traders to earn a good income even if the percentage net margin on total sales is lower (7-9 %) than in other markets (24-49 %). An additional factor to explain the relatively low percentage net margin on total sales in the two largest markets is the

fact that large volumes and many traders imply higher competition amongst them, thus reducing the net margin.

Markets for *Ricinodendron heudelotii*, a widely consumed product, are concentrated in the vicinity of the large urban centres. The highest average weekly marketing margins per trader occur in the Littoral province at New-Bell market in Douala (10,400 CFA) and in Edea (13,500 CFA francs). Several Centre province markets are also substantial. There is a clear difference, however, in the percentage net marketing margin between the largest markets of *Ricinodendron*, with the value in markets in the Littoral province (35-40 %) being about double that in the Centre province. This reflects the source of supply of the product, which is readily available in the Centre-South provinces but relatively scarce in the Littoral province. *Ricinodendron* is an important condiment used with fish, which is plentiful in the Littoral province, increasing the demand for this product there.

For *Irvingia* spp., Abang Minko, the international market on the border between Cameroon and Gabon, shows noticeably higher weekly marketing margins (around 13,700 CFA francs per trader) than the other markets (ranging between 1,300 CFA and 6,300 CFA). Among the five largest markets for *Irvingia*, Abang Minko also has the highest net marketing margin (38 %) as a percentage of total sales. This is a clear reflection of its proximity to Gabon and the importance of the international market for this product, which allows for greater marketing margins to be realised.

The above discussion shows that, both in cash and percentage terms, the marketing margins for NTFPs in the Humid Forest Zone of Cameroon vary enormously. It appears that the average weekly marketing margins received from *Dacryodes edulis* are significantly higher than those received from the other products. This is due to the larger average business size of *Dacryodes* traders rather than an indication of higher profitability *per se*, since, as has been shown in Table 1, this product has the lowest net margin as a percentage of sales value. Being the most perishable of all products recorded in the survey, *Dacryodes* also has the fastest turnover, which also helps to explain the high weekly profits. The other three main products show similar average weekly margins per trader, although they differ significantly in terms of the percentage net margin. This is due to differences in turnover of the product (faster turnover corresponds to lower percentage net margins), a reflection itself of the perishability of each of the products studied.

Table 2: Average weekly net margin per trader in the main markets for all nine products combined.

Market *	Province	Average weekly net margin	Net margin as % of all sales
New Bell	Littoral	78.300	24
Bafia	Centre	20.100	31
Mfoundi (yd)	Centre	42.100	22
Ombessa	Centre	8.000	35
Marché Central (dl)	Littoral	19.600	21
Mokolo (yd)	Centre	28.800	29
Ebolowa	South	12.600	14
Edea	Littoral	29.900	38
Abang Minko (fr.GB)	South	22.700	29
Saa	Centre	8.700	48

* Markets ranked according to total projected size of sales for the nine products.

dl=Douala; yd=Yaoundé; fr.GB= frontier with Gabon

In reality, the total marketing margins generated by each trader would be higher than those reported here as traders may handle more than one NTFP at a time. Table 2 compares traders' marketing margins in the main markets for all nine NTFPs combined.³ The average weekly marketing margins per trader for the combined sale of the nine main products surpasses the minimum salary established of 26,000 CFA francs/month (or 6,500 CFA francs/week) in all the markets surveyed. This result needs to be qualified, however, since it conceals the large disparity in the size of the NTFP traders and their margins (see Figure 2). Thus, 50 % of the total net margin is captured by only 13.5 % of traders, with 19.8 % of the total net margin actually being accounted for by only seven traders, each of whom had net margins of above one million CFA francs. Only 32 % of traders in fact have net margins above the minimum salary, while the large majority (the remaining 68 %) are below that minimum income. This could be an over-estimation

³ These NTFPs are: *Dacryodes edulis*, *Cola acuminata*, *Ricinodendron heudelotii*, *Irvingia* spp., *Elaeis guineensis*, *Garcinia lucida* (bark), *Garcinia kola* (fruit), *Garcinia kola* (bark), *Gnetum africanum*.

since some NTFP traders also sell conventional agricultural products.⁴ The important point, however, is that many traders are part of the poor rural population that strives for cash income, thus challenging a classical line of reasoning which suggests that all traders unfairly exploit NTFP gatherers.

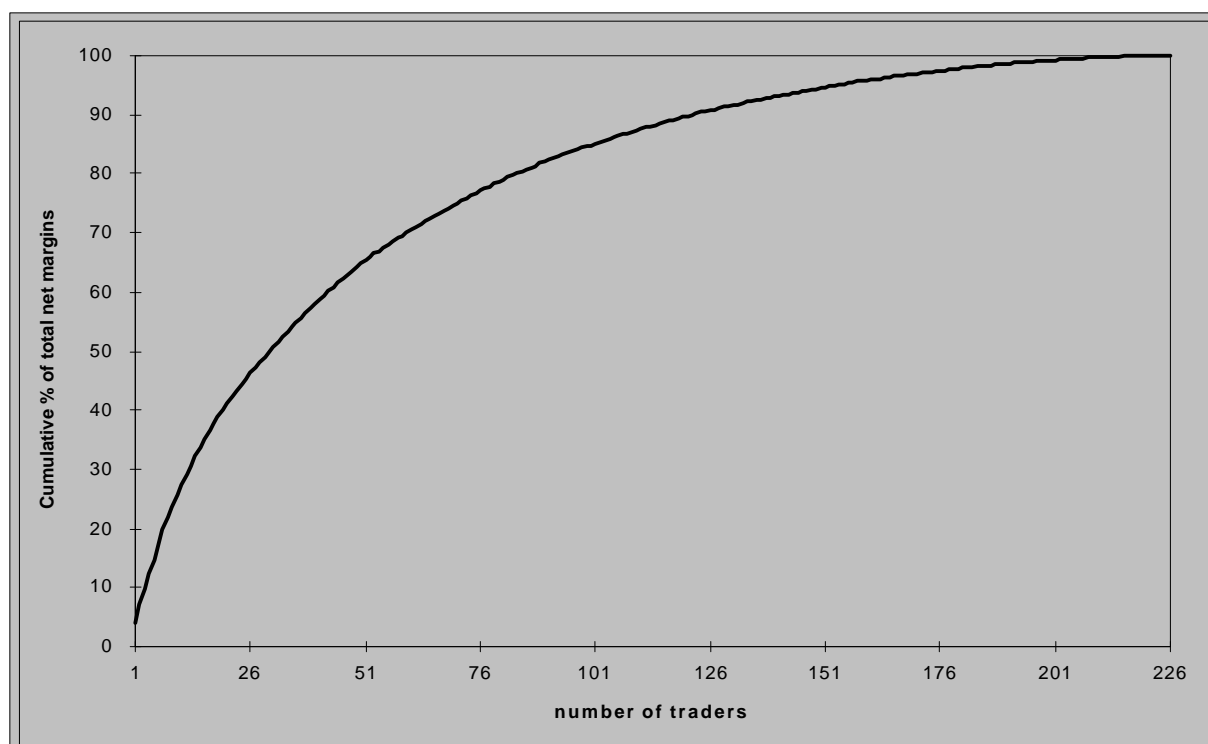


Figure 2: Curve showing the cumulative net margins earned by NTFP traders in the Humid Forest Zone of Cameroon

In this context, it is worth mentioning the regressive effect of the flat business tax or '*impôt libérateur*' of 12,000 CFA francs per year per trader that was introduced in January 1996, in addition to market taxes already imposed by municipal authorities.⁵ Whereas for the largest traders the '*impôt libérateur*' has a negligible

⁴ The surveys of 1996 and 1997 incorporate all products sold by traders in order to provide a more accurate estimate of total sales, costs and margins.

⁵ Farmers selling NTFPs in the markets are also required to pay the '*impôt libérateur*'.

effect, for one-third of the mainly women traders selling NTFPs in the market, the new tax represents at least 10 % of their net income. In its present form this new tax may create a disincentive for both farmers and traders and may have a negative effect on the future functioning of the markets and farmers' livelihoods by changing the location of the markets, increasing transaction costs, lowering the price received by farmers and discouraging the trade of NTFPs.

Conclusions and Implications

This study analyses some features of NTFP markets and marketing in the Humid Forest Zone of Cameroon. As has been shown, NTFP markets are mainly run by women, offering them an employment opportunity. At least 1,100 buyam/sellams or traders are engaged in trading NTFPs in the main markets. The estimated value of transactions of NTFPs in the markets surveyed during the first half of 1995 amounted to US\$ 1.75 million. The study has shown that traders play a pivotal role that enables farmers/gatherers to realise the value of the NTFPs in their environment, thereby increasing the incentive for forest conservation. Traders are often accused of exploiting farmers/gatherers. There is, however, a need to recognise that traders carry out many useful marketing functions and that they are the ones who have to bear most of the risk of difficult markets and costly transport. As the study has shown, the majority of NTFP traders earn less than the minimum wage from their NTFP transactions, which challenges the conventional belief that portrays all traders as wealthy elites who appropriate an unfair share of benefits from farmers/gatherers.

A number of markets specialise in certain products intended for the international markets of neighbouring countries and Europe. In general terms, these markets are more profitable than local ones. The largest traders and weekly profits are based in the two main urban centres of Douala and Yaoundé, although some frontier markets like Abang Minko, serving the border with Gabon, also represent very important business centres for NTFPs.

The degree of market concentration seems to follow a similar pattern to that of conventional agricultural products in the region. Ndoye (1994) has postulated that the devaluation of the CFA franc that took place in January 1994 offered increased commercial value and opportunities for certain NTFPs like palm wine. This

increased commercial value may attract more farmers and traders in the short term, but may also have long-term negative effects. Two of them seem to be particularly obvious, although further appropriately designed research is needed to study them: the increased environmental pressure on those products like *Gnetum*, *Garcinia kola* fruits and bark, etc., that are exclusively gathered from the forest, and the trend of more men becoming involved in the trade at the expense of women.

A possible solution to the increased environmental pressure is more research and extension on NTFP tree improvement aimed at facilitating their incorporation by farmers into their farming systems, as has already happened with some of the products studied (Leakey and Newton 1994; Shiemo *et al.* 1996). An equally important option is to examine in more detail the economic incentives for farmers/forest dwellers to manage NTFP resources sustainably in the long run, which requires an understanding of tenure, institutional and market incentive factors (e.g. market organisation, storage possibilities, credit availability) among others. However, any moves either to improve management of the natural resource or to promote domestication need to involve the traders to ensure that market demands (in terms of volume, timing and quality of products) are met.

A better understanding of market organisation and the role of certain traditional institutions, like the informal ‘*tontine*’ credit system, run by women in the case of NTFP markets to finance the buying of products, may help mitigate the displacement of women.

Finally, the recently introduced ‘*impôt libérateur*’, which is strongly regressive since it is not linked to volume of sales or size of profits but to mere presence in the market, may have a negative effect on the poorer segment of the farming and trading communities engaged in NTFP-related activities. Although the tax is directed at traders, policy-makers also need to take into account its potential impact on the livelihoods of primary gatherers of NTFPs, and the fact that any interest they may have in forest conservation might decline if they could no longer derive part or all of their livelihoods from forest products.

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