LOCAL FOREST ACCESS CONTROL IN SENEGAL:
TOWARD PARTICIPATORY FORESTRY POLICIES

A Forestry Sector Policy Report
January, 1995

Dr. Jesse Ribot
Center for Population and Development Studies, Harvard University

Directed by
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Supported by
Directorate General for International Cooperation
The Netherlands
RPTES Coordination Team

Boris Utria, Program Manager
Max Wilton, Senior Adviser
Mathieu-C. Koumoin, Energy Economist
Koffi Ekouevi, Economist
Suzanne Roddis, Operations Analyst

For additional information on the RPTES program or the Discussion Paper series, please contact:

RPTES Program
Energy
Africa Region
The World Bank
1818 H Street, NW
Washington, DC 20433

tel: (202) 473-4488 / 473-0719
fax: (202) 473-8249
e-mail: RPTES@worldbank.org
REVIEW OF POLICIES IN THE TRADITIONAL ENERGY SECTOR

RPTES

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</tbody>
</table>
List of Acronyms

CONAFAS  Le Comité National des Foyers Améliorés (National Committee for Improved Cookstoves)
CR  Communauté Rurale (Rural Community)
CTS  Companie Tourbiere du Senegal (Peat Company of Senegal)
DA  Direction de l’Artisanat (Crafts Bureau)
DE  Direction de l’Energie (Energy Office of MEMI)
DEF  Direction des Eaux et Forêts (Office of Water and Forests)
DEFCCS  Direction des Eaux et Forêts, Chasse et de la Conservation des Sols (Office of Water, Forests, Hunting and Soil Conservation--Referred to in this report as the Forest Service)
FNCS  Federation Nationale des Cooperatives du Senegal (National Federation of Cooperatives of Senegal)
GIE  Groupement d’Interet Economique (Economic Interest Groups)
IREF  Inspection Régionale des Eaux et Forêts (Regional Inspection Bureau of DEFCCS)
LC  Local Collective (Collectivités Locales)
MC  Ministère du Commerce (Ministry of Commerce)
MEF  Ministère de l’Economie et des Finances (Ministry of Economics and Finance)
MEPN  Ministère de l’Environnement et de la Protection de la Nature (Ministry of the Environment and the Protection of Nature)
MFEF  Ministère de la Femme, de l’Enfant et de la Famille (Ministry of Women, Children and the Family)
MTG  Ministère des Transports et la Gendarmerie (Ministry of Transport and of State Police)
PAF  Plan d’Action Forestier (Forestry Action Plan)
PDDF  Plan Directeur de Développement Forestier (Master Plan for Forest Development)
RDS  République du Sénégal (Republic of Senegal)
RC  Rural Community (Communauté Ruraux)
UNCEF  Union Nationale des Coopératives d’Exploitants Forestier (National Union of Forest Producer Cooperatives)
Glossary

Competence
The domain over which an individual or institution has legal decision making powers. Jurisdiction.

Codes
The Francophone countries call their forestry laws forestry codes, reflecting the history Napoleonic code law in these countries.

Corvée
Obligatory or forced labor. Tax in Labor.

Coxeur
Urban Woodfuel Wholesaler.

Decentralization
The process of devolving decision making powers to smaller and more deconcentrated administrative and representative bodies. This may include transferring the power to manage natural resources from the Forestry Service to a local Territorial Collective.

Deconcentration
The process of moving government agencies and services closer to the constituent and recipient populations. This may include such measures as having representatives of the Central Government or its Ministries at the level of the Arrondissement or Circle.

Filière
This French term (meaning string) refers to the entire chain of production from the rural origins of woodfuels to their final consumption. It is analogous to the term sector, but more specifically focuses on the set of market relations that hold a sector together.

Groupements
Economic or social interest groups or organizations.

Kontrapalaas
Intermediary between charcoal patrons and charcoal surga.

Legal Personality
Having legal status and legal administrative powers. A body that is given the power by the state to make decisions has Legal Personality.

Local Collective
The smallest elected administrative unit in Senegal. In rural areas they are called Rural Communities and in urban areas they are called Communes.
Moral Personality
Having the legal status of a person, as in a corporation.

Patron
Woodfuel merchant.

Préfet
Prefect in English. The préfet is the administrative appointee of the central government (ministry of the interior) at the level of the region, province or arrondissement.

Quittance
Receipt given when confiscated forest products are sold at auction by the Forest Service. These receipts serve also as transport permits.

Responsibilization
The giving of responsibilities often including the giving of authority. It usually refers to the teaching of rural populations to manage forests accompanied by the devolution to them of forest management tasks.

Rural Community
The smallest elected rural administrative unit. This is a rural Local Collective.

Sous-Préfet
The administrative appointee at the next lower level of administrative organization below the préfet.

Surga
Woodcutter/charcoal maker.

Territorial Collective
These are territorial divisions recognized by the central state such as Regions, Provinces, Arrondissements, Circles, Rural Communes, Rural Communities, etc.

Terroir
The usage area of a village or other social group. The area in which a group has usufruct claims or exercises usufruct rights. The village commons.
SECTION I: INTRODUCTION

In Senegal rural household energy consumption is almost 99 percent woodfuels while in urban areas woodfuels make up over 88 percent of household energy (ESMAP 1989). Urban dwellers tend to consume charcoal while rural dwellers consume firewood directly. Most firewood collection and use is non-commercial gathering of deadwood that is relatively diffuse and has few social or ecological effects. Charcoal production, however, is a commercial endeavor that takes place on a large scale and in a concentrated manner, often cutting the forests out from under forest village populations. Wood is cut, carbonized and trucked to the urban centers by urban merchants and their hired migrant woodcutters. Based on a long history of centralized forestry policies these merchants have access to the forests, while villagers have little control over this resource on which they depend for subsistence and commercial fruits, leaves, barks, wood, roots, tubers, dies, herbs, medicines and game. In addition, the benefits that flow from the commercial use of forests in Senegal accrue to merchants and transporters, rather than to the forest-village populations who bare the costs of forest vegetation changes.

But, there is change afoot. There is a movement toward decentralizing and deconcentrating rural resource management. Senegal's Forestry Action Plan (PAF) calls for increased popular participation or "responsibilization" of local populations (RdS 1993a). The PAF also calls for creating financial incentives for villagers to enter forest production (RdS 1993a:89). As part of the effort to realize these goals, a new forestry code has been written. A new forestry code passed through the national assembly in February of 1993. The new code will restructure the distribution of responsibilities and benefits from commercial use of the forest resource.

It is unclear, however, whether the changes foreseen in the new code will constitute decentralization or result in equitable and accountably representative inclusion of village populations in the management of their forest resources, or inclusion of villagers in the benefits of forest resource production. The new code decentralizes some limited control over forest resources by incorporating local governance structures, called Local Collectives (LCs), into forest management. While the new code specifies that LCs will, under certain circumstances, have the rights to commercial production in their forests, the administrative structures and specifications do not guarantee local control of the resource or accountable representation in decision making over the disposition of forest resources. Most problematic, the new code does not explicitly dismantle the policies that support highly concentrated merchant control over forest product markets, where the benefits that flow from Senegal's forests are now locked up.

---

1Over 60 percent of all primary energy is derived from woodfuels, 36 percent from charcoal and 25 percent directly from firewood. The remaining 40 percent of Senegal's energy comes from imported petroleum, almost all used for transport and industry. (RPTES 1994:17.)

2Local Collectives or Collectivités Locales are the smallest unit of elected representation with legal standing. Rural Local Collectives are called Rural Communities or Communauté Rurales (RC). LCs and RCs are discussed in greater detail under "Legal and Institutional Issues."
The new code moves toward inclusion of rural populations in forest management. This report evaluates just how far that inclusion goes and proposes some alternatives for enabling greater peasant participation in control over forests and the benefits that flow from them.

This report is divided into four Sections: "Introduction," "Actors and Income Distribution," "Policy Analysis," and "Strategies and Options." The second section of this report provides an evaluation of income distribution and its underpinnings in Senegal's woodfuel markets. It introduces the actors within the market and briefly describes the organization of production. It then evaluates the highly skewed distribution of income among these actors. The section ends with an outline of the structures and mechanisms by which the currently unequal distribution is maintained within this sector.

Section three examines how old and new policies applied to Senegal's woodfuel sector shape opportunities for involving rural populations in the management and benefits of forest-based production in Senegal. This section evaluates how the skewed distribution developed through the historical evolution of forestry policy toward a highly concentrated form of control over forest products and forest product markets. Section three then examines new policies aimed at better integration of rural populations into forest management. It evaluates: 1) how the new code (both its legislative and its regulatory portions) departs from and reinforces historical trends—in tenure, access to resources, access to markets, management, etc.; 2) how other policies including: policies, pricing and taxation, production quotas, professional cards, etc., effect the sector; and 3) how the new code articulates with existing rural institutions in structuring rural rights and control over forests and forest management.

Section four of the report proposes a strategy for using the existing inequalities in the charcoal market as the motor for reform. Some recommendations developed in the analyses are also summarized. More detailed recommendations, however, are presented in the text at the end of the discussion in each sub-section.

This report focuses on charcoal production and marketing, since charcoal dominates the market and commercial firewood production and consumption is marginal. Nevertheless, the firewood trade is conducted by the same actors trading in charcoal, hence, by examining charcoal markets, the firewood trade is effectively covered.
SECTION II:
ACTORS AND INCOME DISTRIBUTION IN THE CHARCOAL MARKET

I. Woodfuel Sector Actors and the Organization of Production and Marketing:

Figure 1 shows the actors working in Senegal's Charcoal market. The market is currently composed of *surga*, mostly Guinean Fulbe migrant laborers hired by the *patrons* to cut and carbonize wood for the production of charcoal. 

Foremen called *kontrapalaas*, coordinate groups of surga into various working parties and act as intermediaries between surga and their *patrons*.

The *patrons* are merchants who are organized into cooperatives regrouped by the National Union of Forestry Cooperatives (UNCF). These predominantly urban-based merchants hire surga, give them subsistence advances and return (about three months later) with a trucker to buy the charcoal when the *kontrapalaas* informs them that the charcoal is ready. The transporters are truckers who transport the charcoal from the forests to the cities where it is consumed. Once in the city, patrons sell their charcoal to a *coxeur*, or wholesaler, who then distributes charcoal to the vendors, called *Diallo kerin*.

II. Prices, Quantities, Incomes and the Distribution of Benefits:

A. Income and Distribution in the Sector:

1. Surga, Patrons, Coxeurs and Villagers:

Table I presents estimates of 1987 charcoal prices based on extensive surveys conducted in 1987 and present prices based on a spot survey of the market conducted the last week of June 1994, in Dakar and the Tambacounda region. In the table, these prices are compared with the price structures the Forest Service's Division of Forest Exploitation considers to be currently in effect (The Forest Service is officially called: Direction Nationale des Eaux et Forêts et Conservation des Sol--DEFCCS). For the purposes of this report, I will use the price structures derived from my June spot surveys.

Using prices from Table I, Table II and Table III present estimates of the vertical distribution of income in the market in 1987 and 1994 respectively. Table II evaluates the vertical distribution of income and of profit within the market (the top half of the table) and the benefits that accrue to one small village, Daru Fall, that was host to charcoal makers in the region of Tambacounda (bottom half of table). Subtracting the subsistence cost of living at the time from the net income of each actor derives a rough estimate of annual profits.

The net annual average income figures show that income is highest among the coxeurs and patrons. This figure does not include income and profits for the transporters since transport is considered here as an exogenous cost.

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3This report will also use the term *woodcutter* to refer to the *surga* or primary producers. Woodcutting here includes the cutting of wood and its carbonization.

4*Kontrapalaas* come from among the *surga*. They are simply surga favored by their patrons. They cut and carbonize wood, while playing the role of foreman.

5For a detailed description of the social, economic and political economic dynamics of this market see Ribot 1994; 1993; 1990.
Figure 1: Organization of Senegal's Charcoal Market
Table I: Price Structure of Charcoal Delivered to Dakar from the Region of Tambacounda: Survey Data and DEFCCS Estimates

<table>
<thead>
<tr>
<th></th>
<th>Actual Prices Derived from Surveys 1987</th>
<th>Actual Prices Derived from Spot Checks 6/94</th>
<th>&quot;Real&quot; Prices Estimated by DEFCCS 2/94</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Producers (Surga) Price (or Margin)</td>
<td>512</td>
<td>550</td>
<td>750</td>
</tr>
<tr>
<td>Forest Tax</td>
<td>75</td>
<td>250</td>
<td>250</td>
</tr>
<tr>
<td>Truck Loading and Unloading Labor:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-Loading</td>
<td>60</td>
<td>115</td>
<td>75</td>
</tr>
<tr>
<td>-Unloading</td>
<td>(25)</td>
<td>(65)</td>
<td>(65)</td>
</tr>
<tr>
<td>Diverse Costs</td>
<td>(1987 Extrapolations)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-Unspecified</td>
<td>67</td>
<td>91</td>
<td>200</td>
</tr>
<tr>
<td>-Paid by Surga</td>
<td>103</td>
<td>140</td>
<td></td>
</tr>
<tr>
<td>-Paid by Patron</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>-Paid by Coxeur</td>
<td>27</td>
<td>77</td>
<td></td>
</tr>
<tr>
<td>-Paid by Diallo kerin</td>
<td>227</td>
<td>308</td>
<td></td>
</tr>
<tr>
<td>Total:</td>
<td>663</td>
<td>900</td>
<td>800</td>
</tr>
<tr>
<td>Transport</td>
<td>365</td>
<td>1127</td>
<td>250</td>
</tr>
<tr>
<td>Patron Price</td>
<td>1796</td>
<td>3250</td>
<td>2325</td>
</tr>
<tr>
<td>Urban Wholesale (Couceur) Margin</td>
<td>142</td>
<td>150</td>
<td>250</td>
</tr>
<tr>
<td>Coxeur Price</td>
<td>1940</td>
<td>3400</td>
<td>2575</td>
</tr>
<tr>
<td>Vender (Diallo kerin) Margin</td>
<td>389</td>
<td>590</td>
<td>200</td>
</tr>
<tr>
<td>Total:</td>
<td>2329</td>
<td>3990</td>
<td>2775</td>
</tr>
<tr>
<td>Price per Kg in Dakar</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-Official</td>
<td>40</td>
<td>95</td>
<td>50</td>
</tr>
<tr>
<td>-Estimated</td>
<td>56</td>
<td>95</td>
<td>70</td>
</tr>
<tr>
<td>-Measured</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Sources: ReS 1994a; ReS 1994b; Ribot 1990; Field Surveys (see Annex A for more detailed explanation of table and data).

In this market the benefits are concentrated in the hands of the patrons and the coxeurs. As can be seen from the analysis based on 1987 data, roughly 50 percent of the profits are with the patrons, 20 percent with the coxeurs, 20 percent with the surga and 10 percent with the Diallo kerin. While the surga retain 20 percent of the profits (a portion of which they send back to their families in Guinea), they are a very large group, and the total profit each retains is very small. In addition, the income among surga is evenly distributed, hence, there are few surga making more than twice the average.

There is a considerable amount of concentration among the patrons and coxeurs. The figures in this table show the average income in each group. But, of the over 4000 patrons,
Table II: Vertical Distribution of Income from Commercial Charcoal Production in Senegal 1987

<table>
<thead>
<tr>
<th>Groups Involved in Charcoal Market</th>
<th>Group Size</th>
<th>Avg. Net Income (1000 CFA per person)</th>
<th>Group Net Income (CFA x10^5)</th>
<th>Percent of Net Market Income</th>
<th>Percent of Market Profit</th>
<th>Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retailers + Outlet owner</td>
<td>1,850</td>
<td>270</td>
<td>490</td>
<td>10.3</td>
<td>10.5</td>
<td>even</td>
</tr>
<tr>
<td>Urban Wholesalers</td>
<td>300</td>
<td>1,705</td>
<td>525</td>
<td>10.6</td>
<td>18.4</td>
<td>skewed</td>
</tr>
<tr>
<td>Merchants</td>
<td>4,100</td>
<td>465</td>
<td>1,925</td>
<td>39.5</td>
<td>52.6</td>
<td>skewed</td>
</tr>
<tr>
<td>Charcoal Makers</td>
<td>11,650</td>
<td>165</td>
<td>1,925</td>
<td>39.6</td>
<td>18.4</td>
<td>even</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>4,830</td>
<td>100</td>
<td>100</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Forestry Dept Taxes/Fees           |            | 385,000                             | 385                         | 4.6                         | NA                      |

<table>
<thead>
<tr>
<th>Daru Fall</th>
<th>(DF)</th>
<th>(DF) (all villages)</th>
<th>(all villages)</th>
<th>c' skewed</th>
<th>g'c skewed</th>
</tr>
</thead>
<tbody>
<tr>
<td>-Payoffs</td>
<td>500</td>
<td>0.1</td>
<td>17.5</td>
<td>0.2</td>
<td></td>
</tr>
<tr>
<td>-Room/Food</td>
<td></td>
<td>6.0</td>
<td>315</td>
<td>4.0</td>
<td></td>
</tr>
</tbody>
</table>

Comparisons

| GDP/capita                         | 145        | NA                                 |
| Min. Wage                          | 595        | NA                                 |

SOURCE: Data taken from Ribot 1990.

Notes:

- c' = skewed by class.
- g' = skewed by gender.

a large portion are registered as cooperative members just to fill cooperatives with dummy members, justifying larger quotas for the cooperative. Only 15 to 20 of the 4000 registered patrons control over 50 percent of the commerce (Ribot 1990; Madon 1987). Similarly, most coxeurs are small operators, while there are only on the order of 25 who control half of the urban wholesale market. Many of the larger coxeurs also are owners of vending outlets,
hence they also collect part of the margin indicated under the Diallo kerin and outlet owners. In short, in the analysis of 1987 data, the average income of the top group of larger patrons and coxeurs bring in profits on the order of 30 or 40 million and 10 million FCFA per year respectively. (Ribot 1990.)

Table III shows an analysis of the vertical distribution using the June 1994 spot-checked price data. These are rough estimates that simply put the conclusions from 1987 in more current terms. These spot-check prices were checked by one of the largest merchants in the market who confirmed that these prices are accurate.

Table III: Vertical Distribution of Income from Commercial Charcoal Production in Senegal 1994 Estimate

<table>
<thead>
<tr>
<th>Groups in Charcoal Market (6,400,000 sacks/year produced for urban consumption)</th>
<th>Group Size</th>
<th>Avg. Volume of Sacks Handled per Person per year</th>
<th>Avg. Net Income per Sack</th>
<th>Avg. Net Annual Income (CFA x10^6 per person)</th>
<th>Group Net Income (CFA x10^6)</th>
<th>Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retailers + Outlet owner</td>
<td>3,300</td>
<td>1,950</td>
<td>513</td>
<td>1.0</td>
<td>3,300</td>
<td>even</td>
</tr>
<tr>
<td>Urban Wholesalers (Dakar Only)</td>
<td>300</td>
<td>11,700</td>
<td>150</td>
<td>1.76</td>
<td>530</td>
<td>skewed</td>
</tr>
<tr>
<td>Merchants</td>
<td>4,350</td>
<td>1,560</td>
<td>987</td>
<td>1.54</td>
<td>6,700</td>
<td>skewed</td>
</tr>
<tr>
<td>Charcoal Makers</td>
<td>18,300</td>
<td>350</td>
<td>459</td>
<td>0.16</td>
<td>2,930</td>
<td>even</td>
</tr>
<tr>
<td>Total</td>
<td>26,250</td>
<td>2,109</td>
<td>13,460</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Sources: Ribot 1990; RPTES 1994:49; Derivation of figures discussed in Annex A.

A similar analysis, assuming the 1987 horizontal distribution of income in the market today, shows that the income gained from the sale of charcoal in Dakar for the wealthiest 20 patrons and the top 25 coxeurs would average 92 to 120 million CFA per year for the patrons, and around 11 million for the coxeurs. These estimates are based on spot prices taken at one period during the year (June 1994). Caution must be taken since these latter figures are extrapolations over the whole year for prices and quantities that vary with the seasons. This high degree of concentration in the market is certainly present today. For example, in August 1994 the single largest patron in the market was allocated a

---

6All figures are in current CFA.

7Assuming the consumption in Dakar is 3,500,000 sacks per year (RPTES 1994:22).
supplementary quota (above the initial national quota) of over 250,000 sacks for his private enterprise (Sarr 1994; personal communications with DEFCCS 1994). The profits (expenses subtracted out) from selling the charcoal from this supplementary quota alone is on the order of 280 million FCFA (half a million U.S. dollars). (This figure does not include the income that this same merchant--who also owns trucks--makes from transporting the charcoal at a price fixed at around 30 percent above the market price for transport. Simply the fixing of the transport price would add an additional 75 million FCFA in profits.) In short, the large merchants and coxeurs in this market concentrate enormous wealth.

In stark contrast to the income of the large coxeurs and merchants, minimal benefits remain with village populations. The bottom half of Table II shows what happened in one village of 500 Serer and Wolof inhabitants in the Tambacounda region. In 1987, 35,000 sacks of charcoal were produced in the surrounding forests by 100 migrant surga living temporarily in the village. This village gained a total income of 17 million CFA from payoffs to the village chief (5000 FCFA per truckload). An additional total of 315 million FCFA was paid to the heads of household for the rental of a hut and a "bowl," or meals (at 6000 FCFA per month per surga). On average, if the income were evenly distributed, each villager would have a gross income of 6,100 FCFA per year from the woodfuel trade. This meager income remaining in the villages, represents only about four percent of the gross market revenues. In other words, four percent of the sales price of charcoal remains in the village. Further, this little income is not evenly distributed within the village. The income from payoffs goes to the village chief--it is not clear how much is spent on behalf of the village. The income from food and housing goes to the male heads of households, while the women do the work of cooking meals and cleaning house. Hence, the small portion of benefits from the charcoal trade that remain in the forest villages is skewed along gender lines, and perhaps along lines of authority as well.

2. Transport as a Special Issue:

The above analysis counts transport as an exogenous expense paid by the patrons. The price of transport in this sector, however, is not competitive. It is fixed in collusion among the transporters and the patrons. The larger patrons in the market own trucks. Together with the other truckers working in the charcoal markets, the transporters and merchants have colluded to fix the price of transport from the Tambacounda region (the largest production center in Senegal) to Dakar, for example, at 900 FCFA per sack. This price is, according to truckers interviewed in June 1994, about 30 percent hire than the price they can command in transporting other goods. Hence, there is approximately a 300 FCFA per sack benefit, above the competitive price, that accrues to truckers due to collusion in this sector.

3. Summary:

The current situation in the market is one of highly skewed distribution of income. Villagers retain a very small portion of the benefits, less than five percent of the market's gross revenues, that flow from the commercialization of the forests in which their

\[^8\text{Unlike the figures presented above, the expenses are not yet subtracted from these due to the difficulties in estimating the value of the housing and food that villagers supplied. In other words, these are overestimates of the "benefits" that remain in the village. The actual benefits are therefore below four percent.}^\]
communities are located. In the next section I will discuss the history of how access to the benefits of forest resources has been maintained through forestry policy, and how a small group of merchants have managed to concentrate and control these benefits. It is critical to understand the mechanisms of concentration if decentralization is to proceed in a manner that devolves benefits of commercial forest activities as well as responsibilities for forest management to village communities. This section illustrates the distributional problems within the market. The next section sketches some mechanisms by which actors are included and excluded from production and marketing at each level of the market. The policy analysis section that follows, helps explain how this distribution came about and how the new and proposed forestry policies may shape it.

III. Maintaining Concentration: structures and mechanisms

The ultimate question is how the benefits concentrated high up in the market can be devolved to village populations so as to make it worth their while to manage the resource base. To do this there are at least three reasons that the mechanisms currently underpinning concentration must be understood. First, some of these mechanisms need to be removed so that the benefits of the market are available to village populations. Second, these mechanisms are useful for devolving benefits and control to village populations. Third, these mechanisms are pervasive and have deep historical roots. If these mechanisms are not well understood, they will re-emerge in the hands of the same groups now controlling market benefits. Indeed, concentration will re-emerge in this market regardless of the new policy strategy taken. Hence, concentration must be monitored and the mechanisms by which it is achieved must be understood so as to be able to identify the problem as it re-emerges and to adjust policies in response to the new situation. Policies are applied in a complex and fluid context. They must be as flexible as the social and political economic arrangements that will reshape them in the process of implementation.

Below is a quick sketch of the entry and exit barriers and mechanisms used to maintain them at each level of the market.9

1. Surga:

Surga have had access to labor opportunities in the charcoal market through long-standing relations with their merchant patrons. There is a long and complex history of the dependent productive relation between the migrant charcoal makers and the patrons (see history section, above, and Ribot 1990). In short, access to labor opportunities in the market depends on relations with patrons. Under current policies, local villagers wishing to enter the market often cannot because:

1) Villagers cannot find a patron from whom they can obtain an identity card and a production permit, or to protect them from the fines or abuses of Forestry Agents if they are to produce outside of these legalities;
2) They cannot afford to organize themselves into cooperatives so as to be able to obtain their own quotas, identity cards and permits, due to the high entry barriers in the form of social relations and in the form of official and unofficial payments that

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9This section was written as an annex, however, given the essential nature of these elements to the policy analysis and formulation process they are included here.
make entry prohibitive (see discussion under "Protecting Fledgling Peasant Producers");

3) Without a patron to provide subsistence loans a villager cannot afford to support himself\(^{10}\) during the cutting period;

4) Due to the caste nature of charcoal production (usually associated with blacksmiths), many villagers will not enter this profession. Migrants are less subject to these constraints. As one migrant now living permanently in Koumpentoum explained: "There are things you don’t do where you live. If you ask me to take a broom and sweep the streets here in Koumpentoum, forget it! But, if I go to Europe and you ask me, I would have no problem doing it."

5) Villagers will not cut in the area around their village if the other villagers do not want them to. Migrant laborers, however, armed with a cutting permit (permis de coupe) and backed by Forest Service agents asserting that the forests belong to the state and not to the village, can more easily work in these areas. This is particularly true since they do not have to live in the village after their work is done. Hence, the solidarity of villagers serves to make villagers more conservative, while the migrants who are more closely tied to their patrons than to the villagers, and who can use the protection of the foresters, can enter by force and produce without stigma.

This list of entry barriers is not exhaustive, but it outlines the main problems that villagers wishing to cut wood and produce charcoal face. Today there are many villagers, whom I have interviewed, who would be very happy to produce charcoal if given the opportunity. They have simply not been able to obtain permits and quotas. These same villagers are against migrants cutting in their forests, partly because they would like to do some cutting themselves and partly because they have felt the effects of over-cutting in their areas.

2. Patrons:

Barriers to entry into marketing include:

1) Difficulties in entering and in forming cooperatives, mentioned above. Cooperative membership is required by the state and the number of cooperatives in the market is limited.

2) Without entry into cooperatives, villagers cannot obtain permits, identity cards or quotas.

3) Without quotas villagers cannot obtain circulation permits.

4) Required merchant licenses (also discussed under "Professional Cards and Cooperative Membership") are also hard to obtain, and without a merchant’s license villagers cannot operate in the market (in a cooperative or firm).

5) Villagers cannot afford to pay the price of transport up front.

6) Villagers cannot afford to make the necessary payoffs or pay the price of auction to enter the market through the route of "quittances" (discussed in history section).

7) Villagers cannot afford to pay the taxes and fees prior to selling their product, hence, they cannot afford to obtain a circulation permit.

\(^{10}\)Note that the woodcutters of Senegal, unlike Burkina Faso, are all men.
8) Villagers cannot afford to hire woodcutters, because they cannot afford the subsistence loans, and don’t have access to the permits and identity cards.
9) Villagers may have difficulties in finding transport even if they have the money to pay. This issue may arise if the patron’s hold on the market is broken, since access to transport may be a mechanism that patrons can use to regain control over access to marketing in the absence of permits, licenses, identity cards and quotas.
10) Villagers may also have trouble finding buyers. Merchants tend to have developed relations with urban wholesalers (coxeurs) and often have credit arrangements with their coxeurs where they advance the coxeur the charcoal or at times where they take loans from the coxeurs to support their own surga in the forests. Some merchants have their own vending points. Villagers may not have access to these retail outlets.
11) Villagers may also lack information about urban prices, and hence, not know when it is worth transporting their goods nor what price it is worth paying for labor and transport at any given moment.\footnote{Woodcutters and villagers rarely have even a rough notion of the prices of woodfuels in Dakar. They usually give estimates that are well below the wholesale price, reflecting the systematic misinformation provided to them by patrons and truck drivers.}

3. Coxeurs and Diallo Kerîñ:

Entry into the urban wholesale markets is different than entry into labor and the rural end of marketing because there are few policies touching this portion of the market.

As in the relation between patrons and surga, Diallo kerîñ (urban charcoal vendors) are dependent on their coxeurs (urban wholesalers). They cannot afford to purchase charcoal on their own. They must buy it on credit from their coxeurs. Both the patron-surga and coxeur-Diallo kerîñ relations are embedded in interlocking credit-labor relations. As with the patrons the coxeurs, who are a source of loans for their Diallo kerîñ, set the terms of trade.

The coxeurs have a virtual monopoly over the urban charcoal market. This is due to their access to financial capital, knowledge of the urban market, and social links to their Diallo kerîñ. Diallo kerîñ lack the finances necessary to purchase large amounts of charcoal. Simultaneously, few patrons have the capital necessary to front charcoal to a Diallo kerîñ. Most patrons are also not in the city frequently enough to collect on such debts. Coxeurs on the other hand are able to purchase whole truckloads of charcoal (or even several truckloads at a time) from patrons. They then distribute the charcoal to their Diallo kerîñ on credit. They collect payments on the debts frequently and keep close track of the vendors they supply.

Information about where charcoal is needed is also crucial for patrons to sell their charcoal. There are over 1500 charcoal kiosks or outlets in the city of Dakar alone (Khennas et al., 1986). Transporters and patrons literally cannot afford the fuel necessary to drive around Dakar looking for Diallo kerîñ who need charcoal and can afford to pay for it. Coxeurs know exactly where charcoal is needed, how much and when. They can purchase a truckload of charcoal from a patron, lead the patron’s truck directly to vendors, unload the charcoal and let the patron and the trucker leave with their money.
Finally, the coxeurs retain control of urban distribution via their social ties to their Diallo kerifi. Each coxeur supplies a set of Diallo kerifi with charcoal. Coxeurs will only sell to their own Diallo kerifi. Many coxeurs own the charcoal outlets that they supply; around 400, or 27 percent, of the 1530 outlets are owned by the approximately 300 coxeurs working in the market, thus their Diallo kerifi are their employees. Others are owned by the Diallo kerifi themselves, patrons or other third parties. In any event, a given coxeur is responsible for the provisioning of his Diallo kerifi with charcoal. Diallo kerifi rarely buy directly from patrons.

The coxeurs’ control of information, finance capital and access to retail outlets also gives them an effective monopoly on urban storage. Access to urban storage would allow patrons to wait until the price of charcoal was high rather than being forced to sell their charcoal to the coxeurs upon arrival in Dakar. Since there are no urban storage facilities other than the retail outlets themselves, and because coxeurs control access to these retail outlets, coxeurs also control access to urban storage.

Access to retail outlets in the city, that is the ability of villagers to purchase an outlet to sell their own firewood and charcoal, is politically controlled (allocation of public urban space), and requires payments for the rental of the space (even when public) and the payment of municipal taxes. These factors may constitute barriers to village entry into vending.

4. Summary:

Villagers entry into Senegal’s woodfuel markets is restricted by barriers based on 1) policies, 2) credit, 3) information, 4) social relations, and 5) collusive forms of collective action—exclusionary and predatory behavior of the merchant and coxeur classes.

Options:

In designing policies to devolve the benefits of the woodfuel trade to rural populations, focus on removing the above barriers. For example:

1. Policy Barriers to Eliminate:
   a. Costs of forming legal collectives (cooperatives, GEI, village associations, etc.)
   b. Permits,
   c. Exploitation Licenses,
   d. National Quota,
   e. Tax prior to sale.

2. Economic Barriers to Avoid Creating:
   a. Costs of producing management plans (Management Plans are discussed below), and
   b. Costs of registering woodcutting collectives (cooperatives, GEI, village associations, etc.).

3. Facilitate access to credit (see discussion under management plan options and under general options).

4. Provide price information through radio and newspapers.

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12Cf discussion of Garage at Bargny, discussed in policy analysis section. It is to break this coxeur hold on urban markets that the patrons want to control Bargny, the entry to Dakar.
5. Set up means of communications so that producers supplying woodfuel and Diallo keriñ demanding it can find each other. (This may require a bulletin board or some equivalent mechanism in the city of Dakar or at Bargny. Alternatively, a Diallo keriñ association could work with a primary producer association to facilitate exchange.)

6. Undermine the need for social relations with government for access to productive resources such as management plans, collective formation or vending points.
   a. Reduce and publish the required fees,
   b. Simplify procedures
      - require only one signature at most,
      - spell out procedures.
   c. Remove all limits on the number of entrants at all levels of production, exchange, transport and marketing.
   d. Establish clear and accessible recourse channels.

7. Monitor and pursue with any legal means collusive behaviors.

This rough outline of the mechanisms affecting market access and the control of benefits is filled out in various ways in the remainder of this report. The next section, "Policy Analysis," provides an historical background to the ways that many of the mechanisms mentioned here were established. The "Policy Analysis" section then proceeds to evaluate new and proposed policies, and other important policies shaping the sector which are not included in the Forestry Codes.
SECTION III: POLICY ANALYSIS

I. Abbreviated History of Forestry Policy and Access to Forest Benefits in Senegal--
Policy and the Politics of Access:

Over this century Senegal’s land and forestry policies have helped shape the relation among villagers, state agents and members of the charcoal market through control over access to forests, forest product markets, and forest labor. Access to state agents and officials has also shaped control over resource access. Forestry policy and practice has progressively separated commercial from subsistence forest uses and users, and concentrated control over forest-based production and forest product markets in the hands of urban merchants. Progressively more centralized policies separated charcoal production and marketing from forest village control while relegating villagers to a limited set of usufructuary rights. Below, I review the history of regulatory policies and the patterns of policy implementation in the woodfuel sector with an eye toward their implications for forest and market access and control.

A. Land Law, Forestry Codes and Local Forest Resources Control:

In 1904, following the French Civil Code, the colonial administration decreed that "lands that are vacant and without master [owner or lord] in the colonies and territories of French West Africa belonged to the state" (République Française 1904:4). In 1906 the administration put into operation a system of registration for occupied lands, introducing private property into West Africa. Alain Bertrand, forester and scholar working in West Africa, argues that the new colonial law eroded the legitimacy of indigenous systems of land tenure and forest management, which some authors argue were attentive to forest conservation (Bertrand 1985:26-29; Chaumé 1985:20-21).

In June 1964, four years after independence from the French, Senegal’s governing socialist party passed the Law of National Domain, nationalizing all lands not registered or occupied prior to the date of institution of the law (Le Roy 1985:683). With the implementation of the law, 97 to 98 percent of all lands in Senegal were officially brought under the management of the state (Gueye 1985:615; Le Roy 1985:669). The law provided continued usufructuary access to villagers (Le Roy 1985:683-685; République du Sénégal--RdS 1981:12-14). The law also gave rural councils the responsibility of managing their usufruct. It did not, however, give them the ability to protect the forests they used from

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13Translation Note: "Les terres vacantes et sans maitre, dans les colonies et territoires de l' Afrique Occidentale française, appartiennent à l'Etat."

14Further land-tenure legislation in 1955 and 1956 partly relinquished state ownership, established in 1904, of lands "appearing unowned or unused." This legislation extended private property beyond the limits of occupied lands. (Bertrand 1985:26.)

Le Roy (1985:669) cites the decrees on immatriculation of 1932, on the public domain of the state of 1928 and on the private domain in 1935, as the land-tenure statutes introduced by the colonial powers. Prior to the fifties regulations, land was registered, however, not land which "appeared unowned or unused."

15Hence, responsibilization is by no means a new policy. Perhaps its past effects should be studied.
commercial exploitation. Under this new law, the entire forested domain and all commercial forest exploitation fell under the auspices of the Forest Service (Le Roy 1985).16

Usufructuary rights were limited through a series of ever tighter forestry codes in 1900, 1935, 1965 and 1974. Senegal's first forestry code was established in July 1900 by the Colonial Service of Agriculture and Forests. It was a simple code written by the French for the entire French West African colony. This code gave forest usufruct rights to local populations, while requiring permits for commercial exploitation of all forest products (Gouvernement Général de l'Afrique Occidentale Française--GGAOF 1916:3-7).

Based on codes designed for Indochina and Madagascar, the 1935 code was much more elaborate than that of 1900. This new code extended state ownership and control of the territory's forests and forest products. The code outlined limited non-commercial usufructuary rights for indigenous populations. It also specified penalties for infractions, permits required for commercial production, etc. (GGAOF 1935).17 In 1965 the 1935 colonial forestry code was revised to adjust the definition of the forested domain to conform with the new Law of National Domain. The only other change concerning woodfuels was the addition of storage permits to the already existing production and transport permits required for woodfuel commercialization (Bertrand 1985:31; RdS 1965, and 1965a). By taking control over forests out of the hands of villagers and relegating their use rights to non-commercially valuable products, land law together with forest codes circumscribed village control over forest use.

B. Access to Commerce:

While villagers use rights were spelled out and limited, commercial rights were allocated to urban merchants, clearly separating village from commercial uses, and villagers from control over access to commerce. Control over access to usufruct and marketing became progressively more centralized and more elaborate.

Control over entry to charcoal commerce was built up over the century starting with commercial production permits in 1900, transport permits in 1908, and merchant licenses available only to urban-based French citizens in 1941 (Gellar 1982:17; RdS 1916).18 In 1941 decrees were issued giving the state control over the price at which charcoal could be sold (RdS 1941:443-445). While earlier policies restricted who could enter the market, a 1972 law creating a limited number of Professional Licenses allowed the Forestry Department to also restrict how many people were entering the market (RdS 1972:1539). This was then followed in 1980 by a quota restricting how much charcoal could be produced nationally, giving the Forestry Department the role of allocating the quota among merchants

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16This is also true of Senegal's new 1993 forestry code and the proposed 1994 application decree. However, in the new code, the Forestry Service is provided with administrative means to define these responsibilities and penal means to assure that they are carried out. (RDS 1993; RDS 1994.)

17The code was further elaborated in a subsequent decree, GGAOF 1935a.

18The 1941 decree restricted production permits to French citizens. In effect, since by law the only Senegalese granted French citizenship were those living in the urban centers (the communes), this decree gave special privilege to urban merchants. The distinctions between urban and rural citizenship were abolished in 1946. (Gellar 1982:17; RdS 1916.)
In 1983 merchants were then required to form or enter cooperatives, reducing the task of allocation and simplifying market control. These cooperatives were difficult to enter, requiring political and social connections and considerable fees and bribes, making it difficult for forest villagers to gain access (Ribot 1990). As entry to the market became more difficult and more centralized, the prospect for rural populations to independently market forest products became more remote.

C. Access to Production Labor Opportunities:
Charcoal production too was separated from local control. Urban based merchants worked with migrant labor from Mali and Guinea, further separating local forest villagers from commerce. While the Forestry Department controlled entry to commerce through licenses and quotas, merchants controlled entry to production. Rural populations could extract and market forest products only under the license and within the quota of a charcoal merchant. But, there was an additional dimension to this rift. Not only have rural populations had little control over marketing or production, but, local village populations rarely participate in either.

Charcoal is produced by migrant laborers. Production as well as marketing has historically been dominated by single foreign ethnic groups--Malian Bambara before World War II and Guinean Fulbe thereafter. The use of foreign migrant labor in charcoal is often attributed to taboos against charcoal production and the caste nature of charcoal producers (blacksmiths) among most ethnic groups in Senegal. Most villagers consider charcoal production dirty and lowly work and many Senegalese feel that even the money earned in the charcoal trade is dirty or brings bad luck. It is also conceivable that using migrant labor was a deliberate move by merchants to avoid conflicts within villages over charcoal production vs. subsistence forest uses. Migrant laborers would be less concerned with local needs and less swayed by village resistance. In addition, their vertical ties to merchants--who are by and large of the same ethnic and national origins--are much stronger than their horizontal ties with local populations or their ties to local chiefs--usually of different ethnic origins (cf Alavi 1973). It is also possible that migrant labor was simply cheaper. In short, this predominance of migrant labor has further separated local villagers from commercial forestry.

D. Access and Implementation--Multiple Meanings of Forestry Policy:
The manner in which policies are partially applied, circumvented and transformed also helps consolidate control of forest access in the hands of select merchants, further undermining village control. Despite the history of policies aimed at managing and then limiting production and demand, both continue to grow. Historically, policies have been applied and unenforced, transformed or circumvented. In 1889 managed rotations to protect the banks of the Senegal River were not enforced, in 1916 foresters complained that permits were not delivered and cutting was not being monitored, during World War II the managed forest of Thiès was over-cut, in the 1980s and 90s quotas were grossly over-allocated, from

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19While the quota existed since World War II, it was not used to restrict production quantities until well after the 1968 drought brought attention to the issues of desertification, etc.

20Today, the charcoal makers probably make more than do peasant farmers (see Ribot 1990).
the 1950s through early 90s protected forests were de-classified at the request of powerful religious leaders (GGAOF 1898; GGAOF 1916; RdS 1941; Ribot 1990; O’Brien 1971:223-224; K. Freudenberger 1991).

Non-implementation and non-enforcement have several causes and functions. Some policies are simply difficult or costly to monitor, such as the cutting and carbonizing of protected species or green trees. Villagers and producers get around many policies through a mix of avoiding foresters and small payoffs. But, more easily enforced policies, such as the quota, the production season and parcel location are only selectively enforced. Powerful merchants have been able to appeal to multiple levels of authority, including religious leaders and politicians, to gain entry into the markets, access to restricted areas, quotas, and exemption from prosecution (Ribot 1990:ch.9).

Such incomplete enforcement seems to contradict the above arguments about evolving control and centralization. But, on closer inspection non-enforcement can itself be an important aspect of access control. Policy non-enforcement can serve a number of ends. It allows a free supply of charcoal, serving the needs of merchants and urban end users, as well as politicians who take the heat in times of shortages. Also, the higher the commodity flow, the larger the tax base--in Senegal’s charcoal market even much of the "illegally" produced charcoal is taxed (Ribot 1990). In addition, the excessive allocation of licenses, permits and quotas, as well as exemption from prosecution for those not within the legal controls, is a selective form of access control. At the local level, it can be a way for forest agents to extract small payments or favors by threatening to fine offenders or by letting them off the hook. Higher in the market it can also be a way of delivering access to marketing and production to select individuals, usually the more powerful merchants, and it carries political, economic and social value for those who allocate, and those to whom allocations are made.

The ability to control and allocate resources may provide reasons to maintain forestry policies that are not serving their nominal ecological functions. For example, the value of non-enforcement helps explain the simultaneous lowering of the national charcoal production quota while not enforcing it. In recent years the quota, set during the late 80s and early 90s at only 50 to 70 percent of demand, has been lowered on ecologically based arguments by officials who know it is unenforced at its current low level. The lower the quota, the bigger the difference between the quota and demand, the more resources--as in extra quotas--

\[2\] The line between legal and illegal is very fuzzy. The quota is exceeded by 1) the ministry handing out more quotas, 2) overloading trucks, and 3) the sale of confiscated charcoal not counted within the national quota. The first and last of these means are legal. On the first, taxes are paid. on the latter two taxes are not paid. The majority of the excess charcoal is permitted through the first.

available to allocate. At present extra quotas are being allocated--mostly to a small group of powerful merchants--and supply of charcoal continues to meet the growing demand.\footnote{This year the national quota was set at 628,057 Quintals (about 1.4 million sacks), while measured consumption was approximately 3.5 million sacks (RDS 1994a; RPTES 1994s:22). In addition, there was a readjustment of this quota in mid season in which the largest merchant in the market received 125,123 Quintals of the 300,000 Quintals added to the national quota (Sarr 1994).}

According to officials, ten percent of the national quota is reserved to be allocated to those merchants who use their initial quota efficiently. Most merchants receive no reserve quotas. But, the largest merchant in the market received reserve quotas to the tune of seventeen times his initial quota just three weeks into the season (not enough time to have used his initial quota) (Ribot 1990). Excess reserve quota allocation (beyond the legally prescribed ten percent) is the primary mechanism by which the national quota is exceeded (Ribot 1990). This dynamic is still occurring today (See September 1994 article "Le Charbon de la Discord," Sarr 1994).

In the forests, social relations and small favors or gifts, called \textit{cogo goro}, "the price of kola nuts," can partly account for much of policy circumvention, such as carbonizing charcoal off season, cutting green trees or protected species, or the illegal sale of confiscated charcoal (Ribot 1990:325). For example, at the village level, merchants having the appropriate relations with the Forest Service can influence the location of charcoal production plots or the amount of charcoal to be taken, while villagers may have little say (through official or unofficial channels) over the disposition of surrounding forests.\footnote{Selective allocation of policies can be within the legal framework of the policy--as in specified entry criteria such as French citizenship or literacy. It can also be illegal, as in the allocation of the national quota (or of quotas in excess of this legally specified amount) or of permits and licenses by officials and agents based on social and political relations or on economic transfers.}

In the cities, vendors fix their scales to vary the weight of the kilogram so as to allow the real price fluctuate while keeping the nominal price fixed. Some vendors are fined others not. The selectivity in these areas is around personal relations, based on friendship, ethnicity or caste, as well as the ability of individuals to pay the price of kola.

Non-enforcement is by no means random. Selective allocation along social or political-economic lines adds to these benefits the ability of state members to cultivate alliances (cf Bates 1981). In some manner agents and officials gain (economically, politically or socially) through control over allocation while powerful merchants gain through more exclusive control over marketing. Control over resources (of the state and of nature) is located somewhere in an affiliation of state and market members--some mix of official and unofficial conflict and cooperation over resource access and control. Selective non-enforcement and enforcement serves as another handle on control over access to usufruct, production and marketing of forest products.

E. Summary:

Over the history of charcoal production, those doing the cutting are migrant laborers working for urban or non-locally based merchants and selling to urban, industrial or government users. Local populations neither participate in charcoal production nor marketing. While regulations have not, as nominally intended, limited natural forest
production, they do serve to tax the market, exclude rural populations from commerce, centralize control over production and marketing, provide a handle on resource allocation, and provide oligopsony conditions for those merchants with access to state officials and agents, and hence, state-controlled resources (cf Boone 1992:6-13). Officials and agents allocate access to forests and to marketing, while non-local merchants control access to production work.

Colonial and post-colonial governments have had genuine concern over the fate of West Africa's forests since at least the late 1800s. But, the dynamics seen here are not a matter of the intentions of officials and agents, but rather of the set of historically rooted needs and power relations in which production, marketing and the policy process take place (see Ribot 1990; 1993a; Boone 1992). It is difficult to evaluate whether officials and agents, given their social, economic and political-economic obligations and needs, in addition to contradictions built into policies—such as the quota far below demand—can remain within the spirit or letter of the law. As President Senghor said to foresters in the 1950s concerning a powerful marabout who wanted to clear land in a protected forest: "in view of the applicant's personality' to consider the matter 'with care and in a positive spirit'" (O'Brien 1971:224). The forest was cleared soon after.

II. Review and Critique of New Forestry Code and Application Decree:

Senegal's new forestry code consists of Law 93.06 of 4 February 1993 (RDS 1993) and the proposed Application Decree (RDS 1994). While the laws speak of including local populations in resource management (as does the 1964 Law of National Domain), it is not clear from these documents that local populations will reap any benefits from their participation. Participation in forest management is reaffirmed, but by no means assured, by the new laws. In short, the new code creates privileges to be allocated, but does not create any new rights for local populations. Below I sketch out what the new laws allow and why they do not truly constitute decentralization or devolution of the benefits that flow from Senegal's forests to local populations. Many of these problems can be addressed through modifications of the application decree.

A. Repartition of the Forested Domain:

Senegal's forested domain is not defined nor repartitioned by the forestry code, but rather it is defined in the 17 June 1964 Law of National Domain (RDS 1964--discussed above in historical policy review). This 1964 law is still in force.25 The law of national domain and the application decree of the new forestry code places the entire forested domain under the management of the Forest Service. The law divides the nation into four zones: urban classified, pioneer, and terroir (village commons). Forests fall within the Classified Domain of the State. The terroirs are zones serving the livelihoods of rural populations. The only rights existing within the terroirs are those of usufruct. The forested portion of terroirs is subsumed within the Classified zones for all other purposes. The pioneer zones are reserved for State discretion for purposes of national interest--mostly zones of agricultural

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25There is a proposal for the revision of this law in the report of the Working Group Charged with Implementing the Process of Regionalization (Diouf and Hugot 1993:34).
development. With some ambiguity of nomenclature, the Classified Domain is divided into the forested Classified Domain of the State and the Protected Domain of the State (RDS 1964; cf RDS 1994:art.D9). Together these domains encompass the Forested Domain of the State. Below those areas named Classified are those that have been subject to an act of classification. Those entitled Protected include all those forests within the Classified Domain that have not been subject to such an act.26

1. The Classified Domain of the State:

The classified domain is defined in article D2 of the application decree of the new code and the procedures for classification and declassification are defined in articles D16 to D21 (RDS 1994). The definition and procedures for establishing this domain are essentially the same as in past codes (GGAOF 1935; RDS 1965; RDS 1974). The power of decision remains highly centralized.

Classification and declassification of forests is conducted by a regional commission composed of the Prefect, eight directors of regional technical services of the state, one representative of the regional council (elected representative) and the heads of the local collectives (also elected representatives) with an interest in the area in question. The commission is presided over by the Governor of the Region and the Forestry Service Regional Inspector is the secretary. This Regional Commission prepares a dossier on the act of classification or declassification and presents it to a National Commission, analogously composed of representatives of the central government (National Assembly, prime minister’s office, the Economic and Social Council and directors of technical services of the state. The National Commission retains the power of decision over proposals. (RDS 1994.) In short, while there is some local representation in classification cases, the ultimate decisions are retained by the central state.

The power to de-classify and classify forested lands should be reconsidered in the light of many past events and one recent one. Since the creation of the classified domain in the 1930s, there have been many declassifications of forests under pressure from Mouride (a Sufi Muslim Sect) brotherhoods. In 1954, upon request by the head of the Mourides, 1200 hectares were declassified and cleared for peanut farming in the forest of Délai against the advice of all foresters. From 1966 to 1981, 29,500 hectares were declassified and cleared in Délai and Boulel. In 1971, 80,000 hectares of public lands were given to the Mourides and cleared. Most recently, in April of 1991 a different set of powers, "Cultivation Contracts," (des contrats de culture) which allow farming to be practiced in classified forests, were used to permit Mourides to clear 45,000 hectares (173 square miles) for peanut farming in the forest of Mbegué, classified since 1936.27 These clearings of classified forests--through declassification and Cultivation Contracts--were all affected without public debate. (K.

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26For an excellent review and bibliography on Land Tenure in Senegal, see Hesseling nd:13-27; and Park 1993.

27This act of transferring the forest to the Mouride Brotherhood was done without state resistance. K. Freudenberger (1991:15) recounts that those clearing the forests were:

...assisted by numerous government agencies, including the state forestry agents whose water cisterns (intended for fighting forest fires) provided water for the forest cutters, firemen who contributed first aid and an ambulance service, and a police force which kept the peace and ensured that curious observers were made to feel unwelcome.
Freudenberger 1991:9-15.) These are just the large and dramatic examples—many small examples of such effective declassification are carried out routinely in the form of Cultivation Contracts.

Neither the power to classify and declassify nor the allocation of Cultivation Contracts (RDS 1993:art.L19; RDS 1994:arts.D33-34) are subject to public review or public debate. Nor are they in any manner under the control of populations surrounding these areas. In the new code the Cultivation Contracts have only slightly changed. In article D33 of the new code the identity of the farmer is no longer required as in the 1965 code, and fewer procedures are specified (RDS 1993:art.D29-31).

Cultivation Contracts in both the old and new forestry codes provide a large loophole through which the Forest Service can legally make arrangements to provide any classified forest to anyone by constituting a contract with a LC. This loophole should be eliminated.

2. The Protected Domain of the State:

All forested lands not having been subject to classification belong to the Protected Domain of the State. Within the protected domain of the State some rights over forests have been devolved to local populations. The first article of the new code affirms the State's primacy over the forested domain, while creating the possibility of granting some control over forest resources to individuals and to LCs. It reads: "The right to exploit forests and forest lands in the national domain belong to the State which can exercise them directly or grant them to third parties or local collectives, following procedures defined in the present chapter." (RDS 1993:art.L1,p.1). These procedures boil down to the elaboration of a management plan by the Forest Service for LCs (more on management plans below) (RDS 1993:art.L6). In the application decree the preamble confirms that this is only a possibility and not a right or certainty in enumerating among other changes that the new code brings "...the possibility to concede a part of the forest patrimony of the State to Local Collectives..." (RDS 1994:2).

In the National Domain the Forest Service can also permit forest exploitation, after the payment of forestry taxes (RDS 1994:art.D41) or after sale of the plots or forest products by the Forest Service (RDS 1994:art.D49,D50). The Forest Service can deliver permits in these cases or sell the wood on a plot to physical or moral persons (physical meaning an individual; and moral meaning corporations, cooperatives, etc.) or Rural Collectives (RDS 1994:art.D51,D52). In short, the Forest Service can decide who will exploit which forests, when. They control commercial exploitation in all forests. The Forest Service can license forest production, it can sell forest resources, or it can give commercial exploitation rights to LCs within the its forested domain.

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28Translation Note: "Les droits d'exploitation des forêts et terres à vocation forestière du Domaine national appartiennent à l'État qui peut les exercer directement ou les concéder à des parties ou aux collectivités locales, selon des modalités définies au présent chapitre."

29Translation Note: "...la possibilité de concession d'une partie du patrimoine forestier de l'État à des collectivités locales..."
3. The Private Forest Domain:
The new code also facilitates the privatization of planted forests. The first article states: "Anytime, if forest formations were regularly planted within the national domain in the form of private plantations, in the opened, in lines or enclosed, they are the property of the private, physical or moral, persons who created them, except for any appropriation of terrain of the national domain," (RDS 1993:art.1). Since all existing forests belong to the national domain, this clause makes plantations on non-forested areas private property. The same article excludes re-forested zones from this clause. This limits private ownership of planted forests to those forests planted on agricultural lands or in areas where forests have not existed in the past.

4. Classified Domain of Regions, Local Collectives?:
In the process of elaborating Senegal's Decentralization plans, there is discussion of a "classified" forested domain over which regions and LCs have the "competence," or jurisdiction, to manage and lease (Diouf and Hugodot 1993:40-41). There is, however, no mention of this domain in the new forestry codes. The creation of such a domain would be an important step in the direction of local forest control (see options section below).

5. Summary:
In sum, the new codes create the possibility for the Forest Service to give LCs the right to sell or exploit products of forests for which those LCs have contracted to manage the restoration under terms to be specified by the Forest Service. The new distribution of benefits and costs from this change will depend on the discretion of the Forest Service in the elaboration of management plans and on whether the Rural Councils (the elected representative bodies) of the rural LCs actually represent villagers (both to be discussed below). The new code also facilitates the privatization of forests planted on agricultural and non-forest (as opposed to deforested) lands. These are all very limited changes.

Options:
1. In terms of controlling the disposition of the forest resource, the new code does not provide the following rights to LCs, which would constitute the decentralization of control of forests to LCs: 1) the right to protect part or all of the forests in its territory from commercial exploitation; or 2) the right to protect from commercial exploitation all or part of the forests or forest species within its territory (Mali has established such rights, see Ribot 1995a; Burkina Faso is proposing similar measures, including the possibility of classifying forest domains in the name of Local Collectives

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30Translation Note: "Toutefois, si des formations forestières ont été régulièrement implantées sur le Domaine National sous forme de plantations individuelles en plein, d’alignement et d’abris, elles sont la propriété des personnes privées, physiques ou morales, qui les ont réalisées, à l’exclusion de tout appropriation du terrain du Domaine national."

31There is also a private forested domain of the state including such entities as military bases, etc.

32I use the word territory although there is no territory "belonging" to the Local Collectives. Rather, territory refers here to the area over which Local Collectives have administrative jurisdiction.
and villages, see Ribot 1994). Giving such rights to remove from commercial availability part or all of a LC’s forested domain would allow Collectives to:

a. Remove from commercial circulation the resources which they desire for usufruct value, and

b. To withhold from commercialization by others resources that they may wish to exploit at some later date (such as when they or the Forest Service have elaborated a management plan to their satisfaction).

This ability to remove "their" forests from the market—that is to choose to conserve their forests—gives villagers leverage over the forest resource which they do not otherwise have. With this protection, they cannot be threatened by the prospect of the Forest Service conceding their forests to third parties (still possible under current law). They will also not have to accept management plans, in the face of such risks, that do not present acceptable terms.

The ability to remove their forests from commercialization does not mean that if the LC chooses to commercialize that they can do so at will. If the collective should choose to commercialize, they will still be subject to some set of minimum environmental standards. The new forestry codes will require management plans (discussed in the following section).

Such local control could be established by:

a. Creation of a forested domain of LCs (similar to what has been done in Mali—RDM 1994g; Ribot 1995b),

b. Elimination of the Protected Domain of the State by repartitioning it into the domains of the LCs.

c. Institution of the right of LCs to protect all or any part of their forested domain and to protect any species that they judge to merit protection (also similar to Malian law).

* A second-best way to accomplish these same ends within the existing legislation would be through the use of management plans to (the legality of such measures is not clear):

a. place the entire territorial jurisdiction of the LCs under the management of the LC (by decree of the Forest Service);

b. Enable LCs to elaborate and propose their own plans following simple guidelines (also see discussion of Agreements of Understanding, next section); and

and

c. Allow LCs to remove from commercial use the forest lands within their territorial jurisdiction pending the elaboration and approval of a management plan. These propositions are discussed in more detail under the discussion of management plans.

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*This would have to include a clause to grandfather in a transition from the current externally controlled situation to one of local control. One way to do this would be to delay implementation of the third proposition for the first five years. Hence, only those requesting management plans could block others from using the forests in their jurisdiction during the transition period.
2. Close the loophole provided by Cultivation Contracts:
   a. Eliminate Cultivation Contracts.
      The Management Plans outlined in the new code are essentially a more
      structured form of the Cultivation Contract--i.e. an agreement to
      reconstitute the forests after they are cut. Hence, cultivation contracts
      are not needed. In addition, they provide an unnecessary way to
      circumvent the need for a management plan. Use Management Plans
      for production in Classified Forests.  

3. Add to the procedures for declassification of forests a forum for public debate.
   Declassification should be announced in Senegal’s major newspapers and on the
   television and radio at least 90 days in advance of the proposed signing of the
   declassification. The place and area to be cut and the reason should be announced.
   This would give concerned citizens a chance to mobilize and lobby their deputies in
   the national assembly.

4. Revise management plan procedures as described below to create effective control
   over forest benefits by LCs.

B. Management Plans:
   Article L6 of the new code states that the Forest Service will draw up and approve a
   management plan for each LC. This plan will specify the rights and the obligations of each
   LC. (RDS 1993.) The LC can then assign to physical or moral persons (i.e. individuals or
   corporations) forest plots within an area under a management plan (RDS 1993:L8).35 The
   LC can also auction or sell the wood on plots not assigned (RDS 1993:L8).36 These plans
   will be elaborated by the Forest Service for, and at the request of, LCs (RDS 1994:art.D12).
   The plans require all owners37 and users of forest formations to manage regrowth or
   plant forests as maintenance is needed, and to delimit their property and to implement their
   management plan in collaboration with the Forest Service (RDS 1993:L9,L10).38 The

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34Classified forests should not be production forests. Forests that were originally classified as production
reserves, such as those along the railroad tracks, should be declassified. Production in those forests classified for
other purposes should be subject to local control to whatever extent possible. For example, surrounding villages
or Rural Communities should have the first commercial rights to cut wood in Classified forests when the Forest
Service deems such cutting necessary. In this manner, the local communities would at least be partly compensated
for the loss to them that Classified Forests represent.

35LCs have the right to sub-contract their managed area to any moral or physical person of their choice.

36To be taxed 20 percent in addition to the exploitation taxes and fees (RDS 1994:art.D53).

37Here owners are the State in the case of Natural Forests, and, LCs and private owners in the case of planted
forests.

38Article D12 states that the forestry service is responsible for management in the forests of the State (Classified
forests and the private domain of the state--e.g. military installations...). For all other forest formations in the
National Domain, the Forest Service will elaborate management plans, at the request of LCs, who will be
responsible for their management.
Forest Service will monitor implementation and will also retain the right to revoke these management plans (RDS 1994:D13). In short, the occupants of the lands subject to a management plan drawn up by the Forest Service will be obligated to implement that plan. This constitutes an important new power of the Forest Service: power over labor within LCs.

The first chapter of the application decree (RDS 1994:art.D10-D15) spells out the procedures by which management plans will be drawn up and implemented. In the elaboration of plans the Forest Service is required to take into account ecological as well as socio-economic concerns (RDS 1994:art.D11). They are nowhere required to take into account the will of the LCs or their members. They are only required to elaborate the plans with the LCs, but it is the Forest Service that ultimately approves these plans. So, while LCs do "participate," control of all decisions, and ultimately of the forest resource, remains with the Forest Service.

If LCs can obtain a management plan in a timely manner and if they can shape the obligations related to those plans, then this management system does give LCs considerable control over the disposition of the forests within planned areas. However, while texts make this possible, they do not assure it. Hence, they do not establish any new rights.³⁹

There is also a question of what happens when the Forest Service has already given an area as a concession to other groups (i.e. merchants and their migrant lumberjacks). There is no requirement for the Forest Service to consult the LCs if they are to concede forests or sell forest products in the territorial jurisdiction of an LC. There is no clause stating whether the Management Plans of LCs take precedence over State granted concessions.

In short, in the new laws, the management plans present a formula for participatory corvée. They require the participation of rural populations in forest management by giving them responsibilities (often called responsibilization) giving them little control over what those responsibilities will be. These new codes could, without careful attention, end up as a continuation of the long evolution of tighter controls over the charcoal trade, adding a handle on village labor (for replanting and maintaining the forests) to current controls (which are not abrogated by the new laws) over who can produce charcoal, where and when they can produce it, who can market it, how many merchants can enter the market, how much they can market, and the price at which they can sell—not to mention selective control over when and for whom these policies apply (see Ribot 1995). There are several reasons that this legislation is dangerous if not modified:

1. **Foresters are given a handle on Participatory Corvée:** It is the first legislation in a long history of progressively more centralized legislation that gives the Forest Service a handle on rural labor. It does so with little in the way of checks and balances.
2. **Not-so-visible costs of management may outweigh the benefits:** Reforestation has had little success in the Sahel. It has always required more time and labor than expected. The management of regeneration and protection of forests may be easier, but it is still not known by either the foresters or the villagers how much labor it will require. Hence, there is little basis for rural populations (or foresters) to judge whether entering into a management contract with the Forest Service is a net cost or

³⁹Rather, the new code simply admits the possibility of privileges to be allocated by the Forestry Service.
benefit. Villagers may enter into a contract they cannot fulfil, seeing the up-front benefits without seeing the multiple longer-term costs (see Ribot 1995).

3. Villagers risk losing their forests if they don't enter management contracts: If villagers refuse the management plans the foresters can give or auction their forests away. Hence, they may accept sub-optimal terms given that with the threat of losing their forests to urban merchants or migrant charcoal makers (as is happening today), they will gain nothing.

4. Entry into contracts that are net losses for rural populations is more likely since decisions in many rural areas are made by those who reap the benefits but don't pay the costs--i.e. the costs and benefits are not both internal to the decision maker's accounts: Those who are making the decisions over these plans are not the same persons who will be supplying the labor for reforestation and forest protection, nor will they be the ones who must walk farther for firewood and other non-timber subsistence forest products (roots, barks, twigs, nuts, fruits, leaves and game used for food, fodder, medicines, fiber, fertilizers, fences and dies). Women gather non-timber forest products and tend to manage forest plantations in these areas. Men are the woodcutters and men occupy the positions of authority--Members and Presidents of the Rural Councils of the LCs and chiefs of villages. In the past, in Senegal's villages men have made choices to allow woodfuel production to the detriment of a large portion of their population. (See Ribot 1995, and see discussion of the case of Maka, below.) (The composition of representation in the LCs and at the village level is critical here, see section IV.)

5. The conditions set out in this new forestry code do not foster a high producer price: The right to sell is not worth having for a good (forests) that is not scarce. It is also not worth having if there is no effective stumpage fee. LCs will be competing for buyers with the Forest Service who will be delivering permits to cut, now called exploitation permits, at the price of the forest tax, and who will be auctioning plots at whatever price they see fit. They will also be competing with other LCs. Unless the product is made scarce by the possibility of removal from the market by those groups who don't want to have surrounding forests cut (and there are many--see for example the case of Maka, Annex B), the producer price will remain low.

The current price for wood in the forests is effectively zero. Hence, unless some changes are made, the privilege of selling trees and production plots will not

40The word woodcutter here includes charcoal makers. It is used in order not to have to distinguish between those who make their living cutting wood for direct sale and those who also convert it into charcoal.

41Without defining a domain of the Local Collectives and without giving them the right to protect that domain from all and any exploitation, the Forestry Service is essentially reserving the right to give their forests away or sell their forests out from under them.

42Maintaining a higher producer price and maintaining higher flows of forest benefits to villages can be separate issues. The latter can be dealt with through a tax and a local fund (as discussed in recommendation). The prior can be dealt with by creating scarcity, by providing producers with information on urban prices, or by fixing the producer price--through legislation or through the creation of producer organizations.
constitute a benefit. The sale price may also not be sufficient to cover management costs. The price may remain low with the new policies since the Forest Service will be selling plots and allocating permits outside of the areas under LC management plans, constituting competition with any LC that attempts to raise its price. There is no incentive to pay more to LCs. The LCs will also be competing against each other. Some mechanism will be necessary to assure that 1) the expenses of required management are covered and set aside, 2) to help increase the income from forests that does not have to be reinvested in those forests, and 3) to help retain that income within the forest villages.43

As they stand now, the new laws are hardly a change from the long history of central control handed down through generations of forestry codes.

Options:

The first question that should be addressed is whether and under what conditions are Management Plans necessary? This is a complex question that depends on one’s assumptions about the state of the resource and about the social and ecological consequences of woodfuel production for the forests. The word assumptions is used because there is insufficient data available to generalize about whether or not regeneration after firewood and charcoal production in the Sahel is actually taking place. The little data that there is indicates that regeneration is robust.

Peasants interviewed in Niger, Burkina Faso, Mali and Senegal all claim to cut firewood and produce charcoal in the same area about every 7 to 14 years. In Senegal, the charcoal makers return to the same area approximately every 12 to 14 years. In Niger and Burkina Faso the peasant firewood cutters claimed that one can re-cut an area after 7 years. In Mali they said for firewood you can cut after 3 years, but for the big stems needed for charcoal you need to wait at least 7 years. They all claimed that most of the species good for woodfuel regenerate. Hence, woodfuel production can be carried out in fairly short rotations with little or no management.

There have been few studies of forest regeneration in West Africa. Those that have been conducted have indicated that natural regeneration is occurring (Ribot 1990; Arbonnier and Faye 1988; Giffard 1974; Clément 1982; Niang 1985; Jensen 1994) Given the importance of the question of regeneration for how woodfuel planning and management should be conducted, there should be more research on natural regeneration. In short, until otherwise demonstrated, the area cleared for urban consumption should not be considered deforestation, rather, it is temporary forest clearing with good natural regeneration. There are some species composition changes, but, most of the good fuelwood species do return.44

43 In Niger, Burkina Faso and Mali, there is a portion of the tax that goes directly into a local forest management fund.

44 Local woodfuel collection is not degrading to forests except in rare occasions. It usually consists of the gathering of deadwood and some cutting of green wood from fallows and from the boarders of fields—often species maintained for just this purpose. Hence, wood consumed by rural peasants should not be counted in the woodfuel consumption used to calculate the total area deforested annually. It is not relevant. The relevant figure for wood taken by forest clearing is that of urban consumption. Hence, the figures for the surface cut each year should be
Rather than Management Plans, a simpler option, better matched to the circumstances, would be an "Agreement of Understanding." This is an agreement that the signatories have understood the minimum environmental standards to which they are expected to comply. Such an agreement would be signed by the representatives of the LC and by the representatives of any village in which production would take place. This agreement would cover the standards for commercial forest production, including such details as cutting technique, types of protected species and formations, guidelines for maintaining sufficient forest for other local forest uses, etc. These minimum standards should be kept simple. Given the nature of regeneration, they would not, for example, need to require replanting.

An essential component of the Agreement of Understanding would be the specification of production ceilings. Production ceilings differ from quotas in that they specify the maximum amount of wood that a given forest formation can produce in a given period of time under natural regeneration or under managed regrowth. The agreement should specify how production ceilings are to be estimated, and the Forest Service should estimate a production ceiling for the community when such an agreement is signed. Production ceilings are needed to prevent one rural community from selling and collecting taxes on the wood cut in other areas as much as they are designed to protect the local forests from over exploitation so as to preserve the many other functions of forests.

The most important arguments for agreements of understanding over management plans are: 1) that agreements of understanding are not about the approval of the Forest Service—rather, they are the acknowledgement by local populations of a set of minimum environmental standards and practices; 2) agreements of understanding are considerably simpler than management plans; 3) most production circumstances do not require management for robust forest regeneration, hence they are a more efficient way of safely giving village communities production rights. The Forest Service will need to estimate the maximum production of a given area for each community requesting to sign an agreement of understanding. They will also provide advice for any community wishing to augment its production (and hence, its production ceiling) through more elaborate management techniques. In this case, management plans would be reserved for those communities wishing to increase their output.

The following discussion and options concerning Management Plans could be reworked replacing "Management Plans" with "Agreements of Understanding."

If the Forest Service does chose to continue along the path of control through Management Plans, some of the following options may help to remedy the problems discussed above:

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If the area is being cleared for agricultural use, then the forest clearing is more permanent, and can be considered deforestation. But, areas cleared for agriculture should not be attributed to woodfuel production. It should be considered agricultural use. Woodfuel is a "windfall" benefit that is a by-product of the agricultural activities. The other ecological and eco-system functions lost by forest clearing for agriculture (even when it contributes to woodfuel production) should be attributed to agriculture.
1. **Require** the following attributes of the new management plans:

   a. Local control, in whatever form it takes (including a Management Plan), must cover the entire territory of jurisdiction of the LC, unless the LC chooses to leave the use of a portion of these forests under the management and discretion of the Forest Service. In other words, the Forest Service should not have the right to allocate production permits in the territorial jurisdictions of the LCs without express permission of the LC.\(^\text{45}\)

   Since the LC’s territorial jurisdiction is contiguous, this would place the disposition of the entire protected forested domain of the state in local hands. This act would leave only the classified domain of the State in central State hands. The "Protected" Domain of the State would be eliminated.

   b. Guidelines for management plans should be drawn up. These guidelines should be based on ecological criteria and local forest use patterns. Within plans the areas to be cut, the approximate maximum quantities expected to be delivered from those areas (a production ceiling), and the measures of protection or restoration should be specified.\(^\text{46}\) These guidelines should be designed so that LCs can easily follow and meet them on their own, so that they cannot be broadly interpreted at the discretion of foresters, and so that LCs have a clear basis to claim their commercial forest use rights.

   c. Given the important role of women in forest management, guidelines should include measures or procedures for the protection of women’s interests. These guidelines should be used to assist women in evaluating the costs and benefits of forest management plans to themselves.

   d. A separate (e.g. in the absence of men\(^\text{47}\)) general council of women in each LC should be convened to discuss and to elaborate of modify the management plans and decisions. The approval of this council should be required for all management plans and decisions (cf Burkina Faso’s village representation system--Ribot 1994; Ribot 1995b).

   e. The approval of the council of elders or chief and the council of women of each village within the LC should be required before the submission of the plan for approval by the Forest Service. Their role should be to approve the portion of the plan for the zone affecting their village (their terroir).

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\(^{45}\)That is, for the purposes of reducing the pervasiveness of rent-seeking and reducing competition between LCs and the State, the Forestry Service should not have the right to allocate production rights.

\(^{46}\)There should be no nationally fixed quota. All and any LCs wishing to enter into woodfuel production and having requested or proposed a plan should be allowed to produce as much wood as their forests permit.

\(^{47}\)This strategy was used in the BKF (FAO Burkina Faso natural resource management project) project and appears to have given women a forum for discussion, for gaining awareness of their rights, and for developing a position before entering into a male-dominated dialogue.
f. Require that the Forest Service review management plans proposed by the LCs within 30 days or that the plan will be considered approved by default.\(^4\)

This will expedite process and reduce the possibility of the Forest Service withholding plans for economic or political reasons. It will give the Forest Service incentives to be more efficient.

2. When these laws are put into effect they should be implemented uniformly across the country. They should not be implemented only through a "test project" (e.g. RDS 1994a). Any isolated test project will not be able to reflect the relative scarcity of wood that would be hoped for if LCs had the above rights. This relative scarcity at the level of supply may raise the producer price.\(^4\)

3. Accompanying measures should include:
   a. Technical assist from the Forest Service should be available upon request by LCs desiring to produce woodfuels or elaborate management plans.
   b. Translation of guidelines into local languages and distribution throughout the country. Translations should also be back translated by independent parties to check for accuracy of expression.
   c. Diffusion of guidelines to all villages.
   d. Workshops on management plans held in all (of the 317 Rural Communities--RDS 1994a:2) for all villages in the LC. All members of all villages should be invited to these workshops. Not just notables or men.
   e. Accompanying measures should be carried out by several independent non-governmental institution with extensive experience in rural extension work.

Most of these options could easily be worked into the existing articles of the proposed regulatory part of the new code.

Note that these options provide local resource control. None of these options give villagers the right to destroy the forests. That is, they give villagers the access to the benefits of the resource, but not the right to destroy the resource. It is not clear, by the way, that villagers would "anarchically" or "abusively," as their actions are often described, cut their forests even if allowed to.

C. Exploitation Rights and Permits:

In the new code, cutting permits (permis de coupe) are re-placed by exploitation permits (permis d'exploitation). The new permits are essentially the same, with the addition of the number and date of the receipt for tax payments, the quantity of product permitted, the

\(^4\)This time limit would apply to establishing production ceilings in the case of Agreements of Understanding.

\(^4\)Note that it is not clear that even with a raised producer price that the urban price will go up. In addition, relative scarcity in supply does not mean that there will be shortages in the urban areas. It simply means that the producer price will be higher. The urban price depends more on the intermediary prices (which will drop and become less important with the implementation of the strategy discussed below) than on the producer price, which is a relatively small portion (less than 15 percent) of the final price of woodfuels.
place of production, the identity and professional card number of the "beneficiary" (i.e. the patron). (Sall 1994:3.)

Authorization for any and all forest exploitation requires permission from the Forest Service (RDS 1993:art.L12; RDS 1994:art.D41). Commercial exploitation of any resources within the national domain (i.e. within all natural or replanted forests) cannot be done until after the payment of taxes and fees (RDS 1993:art.L2; RDS 1994:art.D41).

In current practice most producers cannot afford to pay fees before the sale of their product, hence they cut without permits. Alternatively they make arrangements with the Forest Service to pay later. This makes them vulnerable to extortion by Forest Service agents or to exorbitant fines (see RDS 1993:art.L38-41). To eliminate this difference between policy and practice the taxes and fees could be paid at the moment of delivery of a circulation permit. This change would facilitate small operators entry into the market by reducing the up-front capital they would need to enter into production and by reducing the level of protection they may need by a patron or merchant who would protect them in the event of "problems" with the Forest Service.

Options:


2. Eliminate the requirement for permits for exploitation of wood within the production areas of LCs. Replace them by identity cards for any woodcutter authorized by the LC. These identity cards allow cutting, but circulation permits will depend on the production ceiling, the meeting the environmental standards and payment of necessary taxes (similar to the system in Burkina Faso). No LC could obtain circulation permits for more wood or charcoal than is permitted in their management plan.

3. Exploration identification cards should have the same information as production permits. Add to the information on the exploitation identification cards the name of the LC in which the woodcutter is authorized, and make the permit deliverable by the Rural Council of the LC (RDS 1994:art. D43). Such identification cards should also specify the villages around which woodcutters are authorized to cut. Village authorization should require approval of village representatives.

4. Have production identification cards delivered only by the LCs. The Forest Service should not be able to deliver permission to cut. Such permission should be locally controlled.

5. For production within classified forests, permits could still be issued by the Forest Service. But, production-oriented classified forests should be declassified. Production within non-production oriented reserves is sometimes necessary as part of management. This should be the only situation under which classified forests are commercially exploited. Further, first rights to commercialization in classified forests should go to surrounding villages.

D. Pricing Policies:

A recent (spring/summer 1994) memo "Memorandum sur le prix du charbon de la" RDS (n.d.) presents the arguments for raising and fixing the price of charcoal. In the past
the price of charcoal has been held down to protect the budgets of urban laborers and their households. Today the arguments are toward raising the price to protect the environment. Two questions emerge concerning price fixing: Is it possible, and is it necessary?

To start with, it is not clear that enforcing price fixing is possible. Prices have been fixed by the Ministry of Commerce (see Table IV) since the 1930s, but the real price has varied as a function of the weight of the "kilogram" sold. In the late eighties in Dakar the Kilogram varied between 740 and 795 grams (Khennas 1987; Dieme et al. 1991:12). So, while the price has been fixed in the past, these fixed prices have not been respected.

Direction Nationale de l'Energie has implemented a new policy to rigorously enforce the fixed price by also regulating and monitoring weights. For the moment, the price and weight are both according to policy. However, this is probably because the price was recently adjusted by raising the price from 40 to 95 FCFA per kilogram and a campaign was launched to augment the kilogram to bring it up to its proper weight. But, when the "market" and fixed prices are no longer in sink, the weight elasticity of supply is likely to come back into play.

But, is price fixing necessary? One reason to fix the price of charcoal is price stabilization. It is likely that the fixed price has kept the price in Dakar relatively stable since the population buying charcoal would not tolerate great fluctuations in the weight of their "kilogram" knowing that the price was supposed to be fixed. Perhaps it would be worth experimenting by lifting the fixed price.

E. Taxes:

1. Relative Taxation of Charcoal and Firewood:

The tax on charcoal is currently 500 FCFA per quintal and the tax on firewood is 400 FCFA per Stere. Depending on one's assumptions about the efficiency of charcoal production with indigenous kilns, the tax per stere on the wood consumed for charcoal production is approximately 185 to 280 FCFA per Stere consumed in production. This difference in stumpage fee constitutes an incentive bias in favor of charcoal over firewood. While commercial firewood consumption in Senegal is under ten percent of the consumption of charcoal, the relative bias toward charcoal could have a significant effect over the long run. If those entering the cities, who typically consume firewood when they first come to the city and later switch to charcoal, were to continue to consume firewood, this would significantly slow the rate of growth in urban woodfuel consumption. It is not, however, clear that readjusting the relative taxes on firewood and charcoal, even with a bias toward firewood, would result in such a switch in fuelwood consumption patterns. Charcoal consumption is more convenient and is associated with higher status.

Even if the relative tax would only slightly alter consumption there are two reasons that the relative tax should, if anything, be biased in the other direction. The most obvious is one of resource use efficiency. The other reason to bring these fuel taxes into line or even favor firewood use is that firewood is consumed by the poorest urban households. The existing higher tax on firewood is regressive.

Option:
1. Reassess the tax on firewood and charcoal, making the tax on the primary wood higher for wood cut for charcoal production than for wood cut for firewood.
Table IV: Evolution of Official Charcoal Prices (FCFA) in Senegal

<table>
<thead>
<tr>
<th>Year</th>
<th>Coxeur Price (Sack) (kg)</th>
<th>Diallo Kerif Price (Sack) (kg)</th>
<th>Retail Stumpage Price: Fee/Tax (Sack) (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1936</td>
<td>2.5</td>
<td></td>
<td></td>
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<tr>
<td>1937</td>
<td>2.5</td>
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<tr>
<td>1938</td>
<td>2.5</td>
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<td>1939</td>
<td>4</td>
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<tr>
<td>1940</td>
<td>3</td>
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<tr>
<td>1943</td>
<td>5</td>
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<tr>
<td>1944</td>
<td>4.3</td>
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<tr>
<td>1950</td>
<td>6</td>
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<td></td>
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<tr>
<td>1953</td>
<td>4</td>
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<td>1956</td>
<td>8</td>
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<td>1958</td>
<td>506 10 550 11 600 12</td>
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<tr>
<td>1962</td>
<td>500 10 550 11 600 12</td>
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<tr>
<td>1968</td>
<td>550 11 600 12</td>
<td>1.7</td>
<td></td>
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<tr>
<td>1972</td>
<td>765 15.3 15 16.7 900</td>
<td>1.5</td>
<td></td>
</tr>
<tr>
<td>1973</td>
<td>855 17.1 3 18 1000</td>
<td>1.5</td>
<td></td>
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<tr>
<td>1978</td>
<td>1.5</td>
<td></td>
<td></td>
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<tr>
<td>1980</td>
<td>20 1.5</td>
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<td></td>
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<tr>
<td>1981</td>
<td>1040 1190 23.8 1450 29</td>
<td>1.5</td>
<td></td>
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<tr>
<td>1983</td>
<td>30 1.5</td>
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<td></td>
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<tr>
<td>1984</td>
<td>30 1.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1986</td>
<td>1439 1640 32.8 2000 40</td>
<td>1.5</td>
<td></td>
</tr>
<tr>
<td>1988</td>
<td>5.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1994</td>
<td>3375 3675 81.7 4275 95^</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Sources:** Tall 1974:53; Baldé 1974; CTS 1987:22-28; Dubois 1971; Gouvernement Général de l'Afrique Occidentale Française 1940 and 1944; Phillipe Laura, Personal Communications, 7/5/94.

**Note:** The official prices are called “prix de grossiste,” and “prix de demi-grossiste,” or wholesale and demi-wholesale prices. These refer to the price at which the patrons are permitted to sell to the coxeurs and the price at which a Diallo kerif is permitted to buy from the coxeurs. The coxeur is the grossist and the Diallo kerif is the demi-grossist.

^1994 prices were officially calculated on the basis of a 45 kg sack. Previous official prices are based on an assumed sack of 50 kg.

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To avoid confusion with options presented below, this tax is to be charged on the quantity of charcoal produced, but the tax calculated in a one-time calculation is based on an estimated average efficiency of charcoal production. It should not be estimated in the field according to the (un-knowable) efficiency^30 of production of each kiln.

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^30Efficiency is, for example, a function of: wood species, whether that wood was dead or live, the moisture content in the wood, the moisture content of the air, etc.
2. Danger of Expressing Taxes and Quotas in Stères:

It has been proposed that taxes and quotas be based on stères (of wood) rather than on quintals (of charcoal) (RDS 1993a:31). This change in policy is designed to encourage greater transformation efficiency in the production of charcoal (as opposed to affecting the relative price of firewood and charcoal). There are two risks involved with this switch. First, basing quotas and taxes on the amount of wood cut is open to a wide range of interpretation of the standing wood in a given lot and the actual area under consideration. This leaves considerable room for negotiations between Forest Service agents and woodcutters or merchants. Second, if the estimate of the wood actually used is based on the amount of charcoal produced (calculating backward from assumed efficiency differences between the indigenous kilns and the Casamance kilns), then the assumed efficiencies will drive a switch from one kiln to another. It is not clear, however, that the Casamance kiln is any more efficient than the indigenous Bambara or Carée kilns currently used in Senegal. Hence, there is a risk that the assumptions now being used will drive a switch toward the much less convenient and perhaps not more efficient Casamance kiln.

The labor now used to cut wood (3 months for a kiln of 300 sacks) is, certainly already sufficient incentive for producers to use the most efficient technology for transformation.¹

Option:
1. Continue to tax woodfuels according to the quantities loaded into trucks. This system of measuring quantities is much more accurate than estimating surface area or estimating efficiencies.
2. Allocate transport permits up to the allowed production ceiling for each LC. Collect the tax according to the quantity transported. In this manner the units of measure for taxation purposes will not be opened to interpretation or negotiation. Further, this proposed system is consistent with the above proposals to pay the exploitation tax at the time of transport and not before production.

3. Disposition of Tax, Fine, Sale of Confiscated Goods, and Fee Revenues:

Article L3 (RDS 1993) specifies that the revenues from rents and sales will feed the National Forestry Fund. The application decree specifies that this fund is to be fed by taxes, sales and auction revenues, license and permit fees, fines, damage compensation with interest, and the sale of confiscated products. It will also be fed by a 20 percent tax on forest products sold by LCs. This fund will finance conservation and protection of forest resources, restoration of forest resources and soil conservation, Forest Service equipment and infrastructure, temporary personnel and Forest Service transport costs and uniforms. (RDS 1994:art.D53,D54.)

¹Charcoal makers find the most difficult periods of production the three months of cutting and the two weeks of kiln firing when teams of two survey the kiln 24 hours a day. This is an enormous amount of work that they do not want to lose through low efficiency firing. They are very concerned about efficiency while constructing the kilns and while firing.
Concerning LC access to these funds the application decree states: "Subsidies and reimbursements, not totaling in excess of 25 percent of the annual amount of the National Forestry Fund, can be allocated to LCs and local organizations, to public and private establishments, as well as to physical persons who are distinguished by their acts of environmental protection and reforestation" (RDS 1994:art.D55--emphasis added). These subsidies and reimbursements are allocated by the Minister responsible for the forests following proposal by the director of the Forest Service (RDS 1994:art.D56).

In the minutes of the regional meetings and in the national report of the "Regional Conference on Land Tenure and Decentralization (Conference Regionale sur le Foncier et la Decentralisation), there are numerous calls for a portion of the tax on natural resources to be channeled to the LCs (RDS 1994b). But, in the new laws all taxes go into the national fund and the entire fund is controlled and allocated by the Forest Service. No control over the funds has been devolved to the LCs, as has recently, and successfully, been done in Mali, Burkina Faso and Niger. This formula of central control and allocation is rife with potential for embezzlement, favor allocation and central decision making where local choices and decisions would more than suffice. Furthermore, without a direct interest in the taxes on forest products, the LCs will have little incentive to enforce the collection of forest taxes.

Options:
1. Divide revenues derived from the forests within the territorial jurisdictions of the LCs (from taxes, sales and auction revenues, license and permit fees, fines, damage compensation with interest, and the 20 percent tax on forest products sold by LCs) among the LCs and the National Forestry Fund.
2. Divide the portion allocated to the LCs as follows:
   a. A portion earmarked for forest management within the LC,
   b. A portion earmarked for credit to woodcutters and charcoal makers in the LC, and
      This portion of the fund could contribute toward facilitating entry into other aspects of the woodfuel trade (renting transport, selling in the cities, etc.) and could also facilitate the payment of subsistence needs during production, and purchase of important tools of the trade such as bicycles and axes. The lack of such a fund is part of what makes producers currently dependent on the large woodfuel merchants.
   c. A portion earmarked for credit and for public works for the betterment and development of the entire community, to be used at the discretion of the LC.

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52Translation Note: "Des subventions et récompenses, en dépassant pas globalement 25% du montant annuel du Fonds Forestier National, peuvent être accordées aux collectivités et organisations locales, aux établissements publics et privés, ainsi qu'aux personnes physiques qui se sont distinguées dans des actions de protection de la nature et de reboisement."

53In Niger and Burkina Faso, tax collection in areas where Local Communities have a stake in the taxes have been reported at 100 percent.
This portion of the fund acknowledges that forest use is for the entire community and that it subtracts from the entire community. Hence revenues from forestry should contribute to the well being of the entire community.

3. Use the portion earmarked for the National Forestry Fund as currently specified, but requiring that at least 25 percent be spent subsidizing and compensating LCs and other groups for exemplary environmental betterment works. This 25 percent should not cover expenses of Forest Service equipment and infrastructure, temporary personnel and Forest Service transport costs and uniforms, mentioned above.

III. Other Policies Shaping Distribution in the Woodfuel Sector:

As can be seen from the history of policies applied to Senegal's woodfuel sector, the establishment of merchant licenses, the organization of the merchants into cooperatives by the Forest Service, the national quota limiting woodfuel and charcoal production, and the practice of fixing of the price of woodfuel and charcoal, are as important as the forestry code in shaping the distribution access to benefits within the sector. In this section I will discuss these and other policies not explicitly mentioned in the forestry code.

A. Woodfuel Production Quotas:

At the 6 July 1994 Seminar on the "Sustainable Supply of Cities with Charcoal: Diagnostic and Perspectives,"54 where the Forest Service, the Direction of Energy and the Forestry Merchants (Patrons or Exploitants Forestiers) were brought together to discuss the issues in this sector, one of the Forest Service speakers spent his time at the podium assuring the patrons that they would not give quotas to the villagers. In the afternoon the conference focused on the question of whether the patrons would or would not help the Forest Service to diffuse the Casamance kiln (supposedly higher efficiency than indigenous kilns). The Forest Service speaker confronted patrons on why they would not help. The patrons, in turn, responded by asking why they had given quotas directly to "their" surga, turning their surga against them. The creation of a cooperative to encourage the adoption of the Casamance kiln had given woodcutters direct access to quotas. Because of this transfer of access control from patrons to surga, the patrons successfully blocked the diffusion of this new kiln. The patrons insisted that this transfer was unacceptable.

But, giving quotas, or equivalent access to the forest resource, to villagers is effectively what devolving the control, management and benefits to rural populations is about. The Forest Service should not be assuring the patrons of the contrary. Rather, the Forest Service should be prepared for resistance [if they intend to devolve forest control], like that brought against the Casamance kiln, but of much greater magnitude.

The quota is not even mentioned in the forestry code. But, the quota is the single most important policy that has served to concentrate control over the benefits of the woodfuel markets in the hands of powerful individuals. This quota is fixed annually by decree of the Ministere de l'Environnement et de la Protection de la Nature (RDS 1994a:art.8). It is not

54Translation Note: "Approvisionnement durable des villes en charbon de bois: Diagnostic et perspectives." (RDS 1994c.)
specified in this decree or any other place on what basis that annual quota will be
determined.\textsuperscript{55} The quota is then allocated among the regions and among the interested
parties (cooperatives, groupements and corporations) by an ad hoc commission representing
numerous parts of government.\textsuperscript{56} In 1994, however, against existing forestry law, the
commission was made up of eight members of the Forest Service, the President of the
National Union of Forestry Cooperatives, and one representative of the President of Locally
Elected Officials (RDS 1994a:7). This was a rather un-representative group for such an
important commission.

In 1994 the national quota was fixed at approximately 1.4 million sacks (682,057
Quintals). In the same year, however, the consumption the city of Dakar alone was on the
order of 3.5 million sacks: well over double the national quota (RPTES 1994a:22). It has
been well known since at least 1987 that consumption of charcoal far exceeds the annual
quota (Madon 1987; Leitmann 1987; ESMAP 1989; Ribot 1990). Demand far above the
fixed annual quota has been met year after year. It has been met through a series of
adjustments and allocations directly from the office of the Minister responsible for Forests
and the Director of the Forest Service. There are also other methods for acquiring
supplementary quotas, such as the feigned confiscation of illegally cut charcoal which is then
sold by Forest Service agents to its original owner at "auction." The owner who takes this
route receives a receipt, a "quittance," which serves as a circulation permit. This latter route
to supplementary quotas is insignificant compared to those quotas directly allocated by the
Forest Service and by the ministry (merchant, coxeur and Forest Service interviews, 1985-
1994; Ribot 1990). Cultivation contracts, mentioned above, are another route.

Each year, though it is well known that the quota is far below demand and far below
the quantities supplied, the Directorate of the Forest Service has argued to lower the quota in
the name of environmental protection. However, the quota functions in no way to protect
nature. The farther below demand the quota sinks the larger the opportunities for allocating
the limited quota along political and social lines. The larger this opportunity, the more
difficult monitoring and controlling the quantity and origin of woodfuels. In other words, the
schism between the quota and the actual demand undermines forest management while
creating opportunities for the allocation of favors. The environmental cries are, as far as can
be seen from policy, merely justifications for creating these opportunities. The Forest

\textsuperscript{55} There is a formula for allocation. It is a function of the number of persons in a cooperative and the previous
year's production quantities. But, there is no formula for determining the magnitude of the entire national quota.

\textsuperscript{56} The commission is presided over by the Director of DEFCCS and composed of representatives of: the
President of the Republic's office; the Prime Minister's office; the Commission for Rural Development of the
National Assembly; the Economic and Social Council; the Minister of the Environment and the Protection of Nature;
the Minister of Energy, Mines and Industry; the High Commission of Police; the Direction of Agriculture; the
Direction of Domestic Commerce; the Direction of National Parks; the Direction of the Environment; the director
of forest exploitation of DEFCCS; the regional inspectors of DEFCCS and heads of forestry projects; the Institute
of Environmental Science; the Center of Environmental Monitoring; the president of the National Union of Forestry
Cooperatives of Senegal; the President of Local Elected Officials; and the Federation of NGOs of Senegal.
Service appears to be trying to conserve the environment, while actually reducing its ability to manage by structuring policies that cannot be implemented.\(^{57}\)

Another function of establishing a national quota and allocating it by region is the spatial management of woodfuel production within Senegal. This can be achieved by simply delimiting broad zones where the commercial cutting of green wood for firewood or charcoal is forbidden. But, even this type of limitation should be sparingly applied. In order not to discourage woodfuel production in zones that are less forested, there should be no restrictions on the cutting and commercialization of dead wood and no restrictions on the harvesting of wood from within the boundaries of agricultural fields. The clause making planted forests in fields privatizable will partly enable this practice. There should also be a clause that makes it possible to harvest dead wood as well.

In short, the national quota is absolutely useless, and even counter-productive, as a resource management tool. The decision as to how much wood a given forest area can provide should be made on a LC by LC basis. The only conceivable function of the national quota is a rent-seeking one. This rent-seeking opportunity can be easily eliminated by eliminating the national quota.

**Options:**

1. Eliminate the national quota (see phasing out strategy, below).
2. Forbid the creation of any quota in this sector based on any non-locally determined criteria (see discussion and options regarding management plans). Forbid the use of the quota as a tool to limit national production or consumption.

**B. Professional Cards and Cooperative Membership:**

The 4 September 1972 decree creating the professional card for Forestry Producers (Exploitant Forestier) and the organization of the market into cooperatives in the early eighties are neither necessary nor productive (RDS 1972). These are both ways of creating entry barriers into the market. Both the number of cooperatives and the number of professional cards has been limited. The fees (official and unofficial) necessary for creating cooperatives and for obtaining professional cards are beyond the means of most woodcutters. The elimination of both of these requirements would greatly facilitate market entry. Since there are no special skills necessary for being a woodfuel merchant (as opposed to being a woodcutter, where some skills are required), there is no justification for having a license or identity card for entry into this profession. The permission to trade in woodfuels should be contingent upon the possession of a circulation permit, which depends on having an exploitation permit or an I.D. card and a locally specified quantity (quota) based on a management plan of a LC.

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\(^{57}\)For an exposé on the most recent set of quota allocation events, see Sarr 1994. Also see Ribot 1989.
Option:
1. Eliminate the Professional Card.
2. Allow all and any organizations (GEI, Associations, individuals, corporations) sanctioned by LCs to produce and market woodfuels in and from the territorial jurisdiction of the LC.

C. Garage at Bargny:
There are currently discussions between the Forest Service and the charcoal merchants on the establishment of a charcoal depot at the entry to Dakar (Bargny). This idea of a depot is not new. The DEFCCS began attempting to establish a depot with a large truck stop (parking lot) in about 1972. For the DEFCCS, the depot and the truck stop would have been used to help keep track of charcoal entering the city. DEFCCS wanted all trucks entering Dakar to line up at the truck stop and wait to be met by coxeurs (the urban wholesalers) at Bargny on a first come first served basis. This long-standing project never got off the ground. When the National Union of Forestry Cooperatives (UNCF) was established in 1982, DEFCCS decided that they would hand the matter over to the Union, since it was in the patrons’ interest to establish such a depot and lot. This too did not work, and the idea was defeated in such a manner that it did not come up again until 1994. A bit of the history may clarify why it did not work and why it is not in the interest of the Forest Service to support it now.

In about 1983/84, the UNCF attempted to establish a depot at Bargny (the DEFCCS checkpoint at the entrance to Dakar) where patrons could store their charcoal upon arrival at Dakar, rather than being forced to sell regardless of the price they could receive. Such a depot would function to transfer some of the oligopoly power over urban storage and distribution away from the coxeurs, consolidating control in the hands of the patrons. The UNCF was to have financed this depot out of a ten FCFA tax on each sack of charcoal entering Dakar. This tax, which was temporarily instituted, would also have contributed to the general treasury of the Union. The Union’s president, however, was said to have stolen the money to purchase himself a truck. A fight broke out between two groups of patrons, those in favor of the president and those against him. Those against him refused to pay the ten FCFA and the fee strike eventually resulted in the abolition of the ten FCFA fund and of the depot.

The proposed lot would be a great disadvantage to coxeurs and a great advantage to the patrons. One patron pointed out that requiring the coxeurs to come out to Bargny could not work. The coxeurs would simply refuse to do it. One high forestry official at DEFCCS in Dakar told me that the coxeurs actively lobbied against the depot and lot over the years. He said that the coxeurs were willing to put out a considerable amount of money (presumably in bribes) to keep the affair of the depot at Bargny from working. Another forester said that coxeurs argued forcefully against the depot and even had people write

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58 The high DEFCCS official said that the coxeurs were ready to give 10 to 13 million FCFA to prevent the affair from working. It was not clear in the interview to whom this money would have been given or from what individual coxeurs or group of coxeurs it would come. I did not have the opportunity to follow up on these questions.
articles arguing against it. In addition, both he and the high official mentioned above thought that the coxeurs helped augment the conflict between the two factions of patrons during the incident over the ten FCFA coxeurs by supporting those patrons who were against the fee. The incident wound up in the coxeurs’ interest by putting an end to the depot question. As one coxeur put it, "we did not want the depot or the parking lot and it ended up in our favor."

There are two possible reasons to establish a depot. One is to help consolidate the power of the patrons over the market. The second is to help break the coxeur oligopoly over urban distribution. The prior would only make entry into the market for those who are not members of the National Union of Forestry Cooperatives more difficult. This would make market entry for independent producers and for LCs not wishing to join the union very difficult. The latter, breaking the coxeur oligopoly could be approached in several alternative ways. Providing direct access to vending points for producers, and providing credit to independent vendors may facilitate independent urban sale. But, it is not certain that this oligopoly is all that inefficient. The profits are high among the coxeurs, but the margin is low. Hence, I would not make breaking this oligopoly a priority.

Options:
1. The Forest Service should not assist in the establishment of a union (read merchant)-controlled Depot.

IV. Legal and Institutional Issues:

A. Local Councils, Representation and Traditional Authority:

A charcoal truck made a deep rut in front of the entry to a villager’s house six years ago. The trucker refused to help fill it in. The guy who’s house it was "...could not get his wagon out of the compound. His children couldn’t get out." The villagers got together and said that they would not let any more charcoal trucks to through the village. The truckers then complained to their patron (a small charcoal merchant in Koumpentoum). The patron came to the village to tell them to let trucks through. The villagers blocked the route with branches. When the truck driver and patron tried to pass the villagers confronted them with sticks and said "go around the village."

The villagers explained that "officially we could complain to the Forest Service or the LC, but both are in the pockets of the big charcoal patrons like B____ S____ and S___ M____." When I spoke with a Rural Councilor, he expressed exasperation and said "...it’s true. We have no power. The President of the council and the Préfet make the decisions." He even expressed embarrassment at being a councilor. (June 1994)

59The forester, a director of one of the regional forestry service offices, did not know what journals or exactly when. I was unable to check this.

60Translation Note: Please translate Forest Service as Eaux et Forêts when it is used in quotes.
The new forestry code creates the possibility of devolving new responsibilities for forest management to the LCs. The question of whether LCs have been given any real new rights or powers of decision over the resource have been discussed above. Here I will provoke a few complementary questions: Do the LCs represent local populations? Do they have any real powers? Are the LCs the appropriate institutional structure to which resource management decisions should be devolved. And, how do Rural Communities articulate with existing local institutions? Given its brevity, this discussion can only touch the surface of a very complex set of relationships and problems.

1. Who Represents Rural Populations?:

The Local Collective (LC) is considered the "base community," or grass roots, of political and administrative functions of the Senegalese Government. Senegal's 317 rural LCs are called Rural Communities. Each arrondissement is divided into two to seven Rural Communities, each regrouping between ten and fifteen villages. RCs include between 2000 and 15,000 people. The Rural Community is governed by the Rural Council (RC). Below I will use LC to refer to the Rural Community (as an administrative and geographic unit), and RC to refer to the Rural Council (as the governing body of the LC). Figure 2 shows where the LC and RC are located in the larger political-administrative scheme. The Forest Service, in theory, will relate to the RC through the Interior Ministry's Local Development Office (the CERP—see diagram).

Representation on the councils of Senegal's Rural Communities is constituted 3/4 of members elected by universal suffrage and 1/4 of representatives chosen by a general council of cooperatives operating within the LC. Lists of candidates for the council of the Rural Community are presented by political parties for election. The list with the majority of votes is elected. Once elected, the council chooses a president of the of the Rural Community from among themselves. Independent candidates cannot present themselves as candidates for election.

Until 1986, the President of the rural council was the representative of the Sous-Préfet, who is appointed by the Minister of the Interior (RDS 1993b:4). In 1986, in the spirit of decentralization, the powers of the Sous-Préfet, being that the Sous-Préfet is too close to the Rural Council and too influential given this proximity, was transferred to the Préfet (RDS 1994b:13). This effectively gave the Rural Council more independence in decision making, but did not give them any more powers than they already had. It is now the Préfet, rather than the Sous-Préfet who must approve all decisions of the RC. Hence, now the President is officially the representative of the Préfet, who retains ultimate decision making power. As one villager expressed it: "the rural council is not representative, they are always conferring with the sous-préfet...now they don't listen to villagers" (Méréto June 1994). These villagers said they felt that village chiefs would better represent them. They said "we need a village chief or at least someone respected in the village. The RC does not include respected people because the RC is too political."

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61As one villager put it: "the Councilors are chosen by Deputies in the National Assembly. Deputies choose people based on those who support them in their elections. The list is made by the Deputy. The Councils are chosen by the parties." (Koumpentoum June 1994.)
The villages each have a chief. This chief is proposed by the Sous-Préfet after consultation with the heads of household compounds. The chief is then named by a decree from the Préfet. The decree must also be approved by the Minister of the Interior. (RDS 1972a:968). Given that most heads of households are men and that most household compounds have on the order of ten or twelve persons, this means that the chiefs are chosen by a small male minority. The chief works under the authority of the Sous-Préfet and the president of the Rural Council, and is charged with the application of laws, administrative decisions and decisions of the Rural Council.

Another problem that arises in deciding who should be given the power to manage the forest resource is that the village is, by and large, the existing institutional level at which most resource management decisions are taken. When asked whether the RCs or village chiefs were more appropriate, villagers consistently felt that the village chiefs would be the
best people to give control over forest use decisions. Indeed, some villagers said "the village chief is representative, the councilors are not" (Daru Fall, Méréto, Maka, June 1994). Village chiefs and councils still make many resource management decisions today, even with land-tenure and other resource-use disputes officially in the jurisdiction of the Rural Councils. Including villages in resource management may not only be more efficient in the sense of integrating those closest to the resource and with the most experience in resource management, but it may also help bring about more legitimate resource management decisions. This in turn may increase implementation.

Two issues emerged in interviews of villagers and of rural councilors in the region of Tambacounda and in interviews in Dakar. First, villagers often don't feel that the rural councils represent them. The lists presented are composed by parties based in urban areas and out of the range of their influence. In addition, the villagers do not feel the cooperatives, who appoint 1/4 of the Council's members, represent them. The councilors I interviewed also felt that they were not viewed as legitimate, which undermined the little power they had. The second issue is that of jurisdiction and powers, called "competence." The councilors feel that part of their lack of legitimacy stems from the fact that they have so little power and so few resources that they are unable to perform even the smallest of duties.

The story of Makacoulibantang presented in Annex B is of a Rural Council that tried to represent villagers in a woodfuel dispute. They accomplished a lot, even though their efforts were compromised by the relation between traditional authority, the Forest Service and the charcoal interests. One possible moral of the Maka story is that successful local resource management organization will have to include village chiefs. Such inclusion may help legitimize, and hence empower, the rural councils. It would, of course, help if these rural councils had power of decision over the forest resource and if they were actually chosen representatives of the local population.

This case hints at some possible formulas for success. First, it demonstrates that the schism between traditional authority (at the level of village chiefs) and elected Councils can undermine the authority of councils. Why in this case did villagers allow village chiefs to compromise their wishes? Villagers probably did not challenge the chief's decision, though they complained about it, because of the powerful legitimacy that village chiefs still enjoy. The rural councils, being an administrative creation of the central government, and not being chosen for election by the local populations (they are seen as representing party politics and other notables), are yet to have much local acceptance.

If rural councils are made more representative, they may gain more legitimacy. If there is a transfer of real powers of decision over the disposition of forests to the Rural Councils, and if income from forest taxes is channelled in their direction, they will have powers that could lend them legitimacy. In addition, if they are required to include the council village chiefs and village councils in decisions over the disposition of those resources

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62 Lack of representation in cooperatives is not new. For an example in agricultural cooperatives see Cruise-O'Brien 1975.

63 In other cases, such as that of Mbegué discussed in the historical review of policies, the RC was coopted by powerful outside interests--marabouts, politicians, etc.
the participation of these chiefs may also help legitimize the decisions that the Rural Councils make.

Options:

Three measures within the new application decree of the Forestry Code could help to ameliorate both the legitimacy of the Rural Councils and facilitate their role in managing the forest Resource. These measures are also presented in options for modifying the Management Plans and in the summary of options at the end of this report.

1. In the elaboration of Management Plans require:
   a. Require village chiefs and/or village councils (more research on this question should be done) be consulted as to:
      - Where cutting can take place,
      - When cutting can take place,
      - How much cutting can take place, and
      - Who can cut within their terroir (i.e. who has access to the forests).

2. In the implementation of Management Plans require:
   a. The approval of the village chief or of some representative at the village level (e.g. a consensus of the village council) be required for the segment of the management plan concerning the village's terroir.
   b. If the village chief does not approve, production should be withheld in the village's terroir, but the management plan should still be implemented for the other areas within the territory of the Rural Community.

3. Include village authorities in a council to decide the disposition of the portion of the tax revenues from forest exploitation earmarked for public works.

4. Research on the legality of using the Forestry Code as a tool to require such inclusion may be necessary.

Additional Options:

5. Revise the Electoral Code:
   If the electoral code is not revised to admit independent candidates to stand for elections for rural councils, and if the appointments to the council by cooperatives are not withdrawn, research should be done on an alternative level of governance to which forest resource control should be given.

6. Review and revise process by which village chiefs are chosen.

7. Channel a portion of the exploitation tax directly to Rural Councils.

2. Recognized Non-Governmental Institutions:

There are a number of state-recognized non-governmental institutions that operate in the villages and could be the basis of forestry exploitation organizations. These include: cooperatives, Economic Interest Groups (GIE), Village Groups, Village Associations, and societies (or corporations). These are all private sector organizations with legal standing. Each has its own procedure for establishment and each has its own particular tax status.
As currently constituted, local cooperatives are represented on RCs. This has given cooperatives inordinate powers in the LCs. Cooperatives are not elected bodies, hence, they should not be privileged in an elected body.

Non-governmental and commercial organizations should not be privileged in any manner in decisions over production and management of a public resource. Their council and proposals should be welcome, but their existence and operation in a given place should be subordinated to the approval of elected bodies.

As mentioned under "Maintaining Concentration," these organizations are often, particularly cooperatives, difficult to form or enter. Significant entry barriers in the form of fees, unofficial payoffs, the need to appeal to social relations, and administrative complexities prevent peasants from re-grouping in these formations. This itself presents a significant barrier to peasant entry into the woodfuel trade.

Option:
1. Remove cooperative representation from the RC.
2. Eliminate entry barriers into woodfuel production organizations.

B. Conflicts Between Migrant Charcoal Producers and Local Populations:
As mentioned above, most firewood and charcoal in Senegal is cut by migrant laborers, primarily from Guinea. There are many villages that do not want migrant charcoal producers working in the forests surrounding their villages on which they depend for a multitude of forest products. (See discussion of Maka case, Annex B; RDS 1993a:28.)

Option:
1. Follow above options for subordinating decisions over the disposition of forests within management plans to Rural Councils with the approval of village chiefs.

C. Organizing the Market:
In the name of better controlling the charcoal market, individual licenses for charcoal production were eliminated in 1983 and all those operating in the market were required to join cooperatives. Some firms already existing in the market were permitted to continue operation. This organization of the market into cooperatives was designed to reduce the number of groups that the Forest Service would have to interact with, in order to facilitate the dissemination of information, training of commercial producers to conform to the existing policies, and the regulation of quotas. (RDS 1993a:13.)

Instead of facilitating management, this organization of the market has resulted in the empowerment of a select group of merchants, giving them a base for organizing among themselves and lobbying and coercing the Forest Service, and providing them the tools for controlling access to marketing and forest labor opportunities (see historical discussion and in "Maintaining Concentration").

One extremely important problem that has come from the merchant hold on marketing, is that whenever the Forest Service attempts reforms that are not in the interest of the merchants, the merchants threaten to fabricate shortages. These shortages are organized by the merchants and are politically threatening to the Forest Service, and the Minister
responsible for forests. It is the policies helping to maintain merchant oligopolies that allow
the merchants to exercise sufficient control over supply to create these shortages. These
shortages need to be addressed. Fear of these shortages prevents the Forest Service from
making decisive reforms in the sector.

Option:
1. Eliminate all controls on entry into forestry commerce.
   a. Eliminate Professional Cards
   b. Eliminate the National Quota
   c. Allow any individual or group wishing to work in the charcoal market to
      organize into a cooperative, GIE, society or Association.
      [Don’t worry about whether such organizations can find a Rural
      Community willing to give them access to their forests. Also, don’t
      worry about having a glut of producers. That will be their problem.]
   d. Have Rural Communities deliver woodcutter identity cards and/or
      exploitation permits.
2. Consider measures to prosecute those responsible for fabricating shortages. Appeal to
   the media to inform the public of who is responsible for shortages when they occur.
SECTION IV: STRATEGIES AND OPTIONS

1. Strategy for Woodfuel Sector Reform--Glasnost avec Perestroika:

   A. Oligopoly Substitution Decentralization with a Free Rider Benefit: A transitional strategy

   It is clear from the analysis of income that there is a considerable amount of profit to be made in the woodfuel market. These high profits are due to the oligopsonistic hold that patrons (merchants) and coxeurs (wholesalers) have on the market. This oligopsonistic structure can also serve as a tool to encourage villagers to enter the market and manage the resource. They simply need protected access to the profit margins that the existing oligopoly has created.

   The idea is to create a parallel market--to circumvent the existing structures. This parallel market will benefit from the artificially high profits that the current market has created.

   Below I outline a strategy based on facilitating the entry of peasant-based organizations into the woodfuel sector. This strategy will take advantage of the artificially high prices created by the current oligopoly structure of the market to make such entry attractive and profitable. As peasant-based organizations slowly enter the market, forming marketing channels parallel to the existing oligopoly, the power of the oligopoly will be eaten away and the market will tend toward more competitive prices. As the oligopoly loses the tools by which it has maintained its control over the market, more peasants enter and prices drop, the oligopoly will dissolve.

   Simultaneously, producer prices can be raised by a combination of new tax and fee structures and by giving local communities firm control of the resource. Tax and fee structures can help rural communities obtain a higher price for their product, while local control over the resource itself may make the resource more scarce, hence increasing its market value. Encouraging collective action among RCs (Rural Communities) to raise prices among themselves may be another route to increasing village income from woodfuels.

   B. Oligopoly as "User Group."

   The market we are speaking of is dominated by oligopolies. It is not a competitive arena. The primary oligopoly in the market, that of the patrons, as discussed above, is supported by patron's control over quotas, the limits on licenses, and the difficulties in forming or entering a cooperative. These restrictions on market access allow patrons to determine the high wholesale price and the low producer price. Like the price, however, the quota has not been respected in the past and today it is still not respected. The quota is far below demand. Hence, the quota is not limiting production. It serves at the present time as a way of allowing the powerful merchants (in conjunction with the Forest Service) to determine who has access to the market and the distribution of market shares.

   The oligopoly has served to raise the price of charcoal in Dakar. This has had two positive effects. First it has, at least marginally, slowed the rate of consumption (through conservation and substitution effects), and second it has created an opportunity for peasants to charge a higher price for forest access. The problem is that the enormous profits being reaped by the oligopoly do not return to the forest villagers, but are spent or invested

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"For a discussion of the secondary oligopoly, the coxeurs, see "Maintaining Concentration."

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elsewhere by the patrons, coxeurs and transporters. The oligopoly that these merchants have
created, with the aid of the Forest Service, can now serve as a tool for promoting
decentralized forest management.

This market, with its oligopoly formations, represents a well coordinated form of
collective action. The patron's "common property" is the market and their base of
operations or "user group" for controlling market access is the National Union of Forestry
Cooperatives (UNCF). This union colludes on producer and transport prices, and organizes
the distribution of access to the market (through its handle on quota distribution and on
cooperative membership). It is this collective action in the management of the market that
has created a large profit margin that now represents an opportunity for change.

C. The Free Rider Benefit:

In speaking of collective action, game theorists often speak of the "free-rider
problem." Free riders are persons who benefit from collective action but do not pay their
dues. In this case we can harvest a "free-rider benefit" by facilitating entry into the market
by villagers wishing to produce and market charcoal. These villagers are not part of the
oligopoly (the current market "user group"). If they can enter the market, they can collect
the benefits (high prices) created by the oligopoly--until, of course, the oligopoly collapses
due to infiltration by free riders. This high benefit for the first peasants entering the market
as free riders can be used to encourage resource management and to encourage more
villagers to enter into the woodfuel trade (the first entrants will collect an early bird free-
riders rent). If the Forest Service assists in creating parallel marketing channels, while
temporarily leaving the current market structures in tact, new members of the market can
collect free-rider benefits by collecting the same profits that the oligopoly now collects.
These fledgling locally-based charcoal producers--cooperatives, GEI, AVDE--if independent
of the current oligopoly operators, can use the oligopoly rents to invest in forest management
and village development. In this manner, village based institutions can produce charcoal,
vertically integrate the market, and retain the entire benefit that is now being captured higher
up in the markets. (Rather than collecting only the producer price of 550 FCFA per sack,
they could also collect some portion of the 1850 FCFA of profit per sack currently being
captured by other actors higher in the market.)

In short, by supporting access to the market by village-based woodfuel cutters and
charcoal makers, these villagers can profit enormously off of the artificially high prices
created by the current oligopoly. In doing so, the entry of more and more village-based
producers will slowly undermine the oligopoly, eventually bringing the merchant's margin,
and perhaps prices, down.

D. Substituting Oligopoly with Competition and Free Rider Benefit with Higher
Producer Prices:

Two simultaneous transitions must take place for this strategy to work. First, as
discussed earlier, the oligopoly must slowly be gnawed away at by the progressive entry of
"free riders." Second, the producer price (and village benefit) must be raised by
progressively reducing open access to forests (and via a community development fee on
woodfuels). At first the peasants will gain sufficient revenues from the trade to both profit
from the activity and invest in maintenance of the resource (when necessary). This profit
will come from the oligopoly rents that these free-riders will be able to mine. As these rents
are lost to progressively more competitive conditions, another mechanism for maintaining a sufficient income to cover the costs of management and of forest losses, and to make entry into the woodfuel trade worthwhile will have to be put in place. These will be 1) scarcity created by firm local control of the resource in the hands of RCs--many of whom will take their forests out of the commercial stream, and 2) taxes or fees that funnel resources directly to the RCs.

E. Protecting the Fledgling Peasant Producers:

One of the new roles of the Forest Service will be to protect fledgling peasant operators from the predatory and exclusionary tactics of the existing oligopoly. In the past some alternative cooperatives have been able to enter, while others have been blocked.

There are examples of two types of peasant cooperatives that have formed in the market and persist to this day. The first were created by a World Bank financed Terres Neuves project in the Tambacounda Region. These cooperatives were created in the seventies to permit relocated villages to profit by carbonizing and selling the wood cut from fields they were clearing as part of a transmigration project. With outside assistance, these earliest peasant cooperatives were able, to pay the fees, fill out the appropriate forms and negotiate the social relations to form their cooperatives. To do so, they nevertheless, had to pay more than 900,000 FCFA in bribes ("kola") alone. (Ribot 1990.)

A more recent example is that of the two groupements formed to encourage the use of the supposedly more efficient Casamance kiln. To encourage its use, the Forest Service provided quotas directly to the producers. There was, and has been since, fierce resistance from the patrons. The resistance was so deeply felt that these two small cooperatives were the most heated subject of discussion at the 6 July 1994 forum held with the patrons at Cap des Biches. The patrons have been against the new kiln, not because of efficiency or facility of use, but because it provided a way for producers to have direct access to markets via access to quotas. The Forest Service gave production quotas directly to surga (woodcutters) willing to join the groupements and use the new kiln. Giving surga access to quotas represented a great threat to patron control over marketing. The Casamance kiln became a symbol of this threat and was hence successfully defeated by the patrons. While the Casamance kiln cooperatives are still functioning, their membership and production has not expanded. Indeed, they have stayed small and ultimately have stopped using the new kiln.

While I would argue that the kiln did not succeed partly because it is no more efficient than the highly sophisticated indigenous Bambara and Carée kilns, there was an other, more important force that prevented this from working even with large economic incentives provided by the offer of quotas. The patrons first uniformly refused to use the new kiln. They then had arsonists burn the wood that was cut and set aside for demonstration and training workshops. They then launched a very successful misinformation or smut campaign against the kiln and its users, convincing their surga to shun those who used the new kiln. Today there are few Casamance kilns in operation. It was the patrons, and not only the shortcomings of this kiln that defeated this effort.

65"Séminaire regroupant les exploitants forestiers, la Direction de l'Energie et la Direction des Eaux et Forêts" (MEMI 1994).
Another problem that will be faced in devolving resource control to RCs is the strong influence patrons (and other notables—e.g. marabouts and politicians) have over RCs. In recent interviews with current patrons, one said: "If you give the quotas to the RCs, it will be like giving them to us. We are all relatives. They are our brothers." Patrons will, with relatively small bribes and by dint of their social status, be able to buy off many RCs. They will also, as in the case of Maka (see Annex B) purchase village chiefs if the RC gets in their way. This will certainly occur. In the same manner they will also be able to purchase the proposed management plans from Forest Service agents and officials—this is nothing new.

For the case of RCs that are bought off or pressured into accepting the merchant’s terms, there are only a few things that can be done to mitigate this. First, if the representatives of RCs are locally accountable (which they are not now), then the populations have the possibility to vote out or otherwise influence those who don’t represent their interests. If they choose not to vote them out (for reasons of traditional authority or embeddeness in dependent productive relations) then perhaps all that can be done is educating populations to their rights—this presents a whole other set of important unaddressed issues. The problem can also be mitigated by a good set of accompanying measures that inform rural populations of their rights and address these issues of merchant influence publicly. As for the question of purchasing Forest Service personnel, that should be dealt with by the creation of recourse channels for those wronged by this practice and by disciplinary action. Unfortunately, this is not easy to administer since there are few police policing these police. This latter suggestion should be a subject of further debate and inquiry.

**F. How to Proceed:**

There are many elements to this strategy. In the body of this report I have presented a number of options not repeated here, but consistent with the goals of this strategy. The above description of the strategy and the following elements are a rough sketch of a strategy that will require an initial vision and multiple re-visions along the way. The primary elements as I see them are the following:

**Introduce Agreements of Understanding:**

Management plans (specified in the new Forestry Code) can be one mechanism for devolving control of forests into local hands. They can, however, be more elaborate than necessary. They may also be more complex to implement on a large scale than the Forest Service has the trained personnel to accomplish. One alternative to Management Plans would be to use *Agreements of Understanding*. These would operate exactly like the Management Plans from the administrative perspective. They would be agreements between the Rural Councils and the Forest Service. By signing these agreements the Rural Council would be acknowledging that they understand and are responsible to operate within a set of environmental standards and guidelines. The primary role of the Forest Service would be to:

1) diffuse these agreements and make sure that the Rural Councils and the Villages affected by production understand the agreements and sign them before production; and

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*This presumes that there will be new rights—something the new code does not confer.*
2) to make estimates of the production ceiling for a given RC or for a given village within that RC.

If villagers desire higher production ceilings they could obtain them if they are willing to elaborate or have the Forest Service elaborate a management plan. Here the Forest Service would function as an extension agency. The difference between the Agreement of Understanding and the Management Plan is that the Agreement of Understanding can be implemented with minimal demands on the Forest Service. If the agreed standards and guidelines are not respected, the right to produce can be suspended--transport permits could be withheld.

This strategy would require:
1) the drawing up of minimum environmental standards;
2) the elaboration of simple production guidelines; and
3) the establishment of simple rules to determine local production ceilings.

Move From Fixed National Quota to Ecological/Local-Need-Based Production Ceilings:
A process for eliminating the national fixed quota and moving to locally based production ceilings must be established. Such a process should simply allow for several years of transition so as not to cause any abrupt reduction in supply caused by the time it may take village communities to learn of and begin to participate in the new forestry strategy.

1) Initially hold the national quota for existing merchant cooperatives constant. That is, give the merchants' cooperatives the same quotas they receive today.

2) Implement the system of management plans and agreements of understanding described in earlier options.

3) Begin the transition to Local Control by requiring the Forest Service to first obtain written permission from both the RC and the village in whose surrounding forests the Forest Service assigns production plots to merchants with quotas. Wood cut must be kept within the quotas that these merchants are receiving based on their historical allocation, and within the production ceiling for the given RC.

4) Allow existing merchants to expand their production (beyond their quota) only by persuading RCs to request Agreements of Understanding or management plans. Then the RCs can sub-contract or lease forest access to the merchants. Alternatively, RCs requesting Agreements of Understanding or management plans could produce and sell their product to the merchants desiring to purchase more charcoal. The RCs could also sell to wholesalers or to vendors in the city if they wish.

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67Given the enormous influence of patrons, this will not be a difficult requirement.
5) RCs who request Agreements of Understanding or elaborate management plans will receive a local production ceiling based on the ecological potential of their area. (This is equivalent to a quota, but limited only by local ecological and social criteria.)

6) When RC Agreement of Understanding or management-plan based production is approximately equal to the difference between the national quota and actual demand (given that the current national quota is far below national demand), reduce the national quota by 20 percent per year over five years. Eliminate the national quota. From this point on the only basis for determining the level of a given area's production ceiling should be ecological potential of the area and the needs of rural populations for other forest products and functions.

Tax and Fee Incentives:

7) From the outset change the tax structure on woodfuels to temporarily include two categories as follows:
   a. Areas Under Village Production (those under management plans or Agreements of Understanding),
   b. Areas Under Direct Merchant Production (to be phased out).

8) Have higher tax in Merchant Production areas than in Village Production areas. This can be a fixed difference or a phased-in difference to ease in the incentive to move to entirely village controlled production. This division provides incentives for Patrons to shift toward Village Production areas and for villagers to enter production. When national quota is eliminated, eliminate Merchant Production Area tax.

9) Proceeds from the Merchant Production area tax should go directly to the National Forestry Fund—it could be earmarked to subsidize extension services for Agreement or Understanding and management plan development for RCs. Divide the proceeds of the Village Production area tax (or fee) among:
   a. National Forestry Fund
   b. Rural Community Forestry Fund (could be integrated into (c))

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68The quota applies only to cooperatives and merchants working in the market prior to the implementation of this plan.

69No tax differential is needed between areas under Agreements of Understanding and those under Management Plans. The establishment of management plans should be reserved solely for those RCs wishing to increase their production beyond the production ceiling established with an Agreement of Understanding. These RCs should enter into this more complex form of production (managed production) based on the additional value that they can obtain by the increases in profits that management may bring. In short, if management plans are worth implementing, then RCs wishing to increase the profits from their forests will request them.

70These areas and the associated tax will be phased out as the national quota is phased out.
c. Rural Community Development Fund: To be used by the community to supply credit for woodfuel production and marketing endeavors, credit for other activities, public works, etc....

This repartition of revenues provides incentives for Rural Communities to request Agreements of Understanding and management plans. The details of these divisions of tax revenue should be determined with input from RCs—i.e. participatively.\(^{71}\)

As in Burkina Faso and Niger, the revenues (fees or taxes) could be collected directly by the RCs.

10) Use national fund to finance RCs to elaborate management plans and to diffuse information on Agreements of Understandings, etc.

**Measures to Encourage Vertical Penetration of the Market by Village-Based Producers:**

11) Facilitate market entry for village based producers.
   - Allocate local production-ceiling 'quotas' directly to RCs.

12) Make credit from the community development or forestry fund RC available to local charcoal makers. Encourage them to use this credit for: tools, subsistence during production process, storage of charcoal until the rainy season to reap higher prices, paying transport, establishing village-owned urban retail outlets, and fronting charcoal to their village-owned outlets.

13) Break current price fixing on transport of woodfuels.
   [This will require some study and reflection as to how to do this. Transport is already available for rent (paid by the sack), but there are two problems to be solved: communication with transporters to coordinate pickups, and breaking the fixed price.]\(^{72}\)

14) Encourage RCs to form a woodcutters association to coordinate transport and to negotiate transport and wholesale prices with the Coxeurs (wholesalers).

15) Provide producer, transport, and urban wholesale price information over the radio. Have this service provided by the Ministry of Commerce.

16) Encourage producer groups to obtain vending points or make contacts with vendors in the cities (every village has a village association in Dakar).

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\(^{71}\)Mali's tax structure and the participatory process by which they arrived at it would be worth consulting for this process.

\(^{72}\)RDS 1993a:31 suggests making the current merchant cooperatives into marketing and transport specialists. This is the last thing that is needed. The merchants need absolutely no assistance in organizing. Indeed, some action against the current widespread collusion among merchants would be in order.
a. Intervene to help get vendors’ permits for village groups.

17) Have all producer I.D.s and Permits delivered by RC.

18) Facilitate formation of GIEs, Associations and Cooperatives:
    - Reduce fees,
    - Simply procedures.

Accompanying Measures:
19) See discussions of accompanying measures in text under "Management Plans" and Below.

Vision and Re-vision:
20) Institutionalize an iterative policy review and re-vision process.

G. Negotiation Strategies:
The above strategy will certainly meet resistance by merchants. They may, as in the past, threaten to create shortages, or interfere with entry of producers into the market by blocking the formation of new cooperatives (as with the Casamance kiln cooperatives), blocking transport, and blocking sale in Dakar. Implementing a strategy of this nature will be a delicate task given the powerful interests at play. To successfully reform this sector at least two basic reform elements will be necessary 1) for the forest service to be prepared with a clear and convincing strategy, 2) to be transparent and public in any and all negotiations with commercial interests in the woodfuel sector, and 3) to swiftly implement accompanying measures over the entire forested domain informing RCs, village authorities and rural populations of their new rights (should any be worked into the new codes).

II. Other Key Options:
Below are some key options from this analysis. These options are all discussed in more detail along with many more options in the text.

Representation:
A. Revise the Electoral Code: Make Rural Councils locally accountable and representative.73

B. Assure proportional representation of women in woodfuel production and management decisions. (See earlier recommendations under Management Plans.)

73This is a complex problem, but restructuring representation at the level of the Rural Council appears much less complex than addressing the also questionable representation at the village level. Representation is THE key issue for questions of participation. Given the limitations of time and resources, his subject cannot be developed in this paper. Nonetheless, it is flagged here to indicate that even if it is beyond this analysis, it cannot be ignored.
C. Study the prospects for establishing redress channels so that, once informed of their rights and obligations, peasants can have recourse when their rights are misinterpreted or denied.

Rights over the Disposition of Forests:
A. Establish a Forested Domain of Local Collectives

B. Establish the Right of Village Populations and RCs to Determine if Commercial Exploitation will take place, What types of Commercial Exploitation will take place, and Who has the right to engage in commercial exploitation in their domain.
   1. Villages must have the right to reject production in surrounding forests even when the RCs accept production in their Domain.

Entry into Marketing:
A. A strategy for integrating village-based woodcutters into other aspects of woodfuel commerce should be developed (see "Maintaining Concentration"). This should facilitate:
   1. Access to transport,
   2. Access to urban wholesalers,
   3. Access to urban vendors.

Accompanying Measures:
A. Provide Accompanying Measures to inform villagers of their new rights.
   1. Translation into local languages,
   2. Diffusion of texts,
   3. Workshops reading and explaining texts, and
   4. Training workshops for Forest Service Agents.

Establish Recourse Channels:
A. To help assure that forest access and revenues from forest production activities are securely in the hands of rural communities, channels of legal recourse both inside and outside of the forest service must be established.
# Annex A: Price Data

## Table V: Price Structure of Charcoal Delivered to Dakar from the Region of Tambakounda: Comparison of Survey Data and DEFCCS Estimates

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<td>- Unloading</td>
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<tr>
<td>- Paid by Surga</td>
<td>67</td>
<td>91</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Paid by Patron</td>
<td>103</td>
<td>140</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Paid by Coxeur</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Paid by Diallo kerif</td>
<td>57</td>
<td>77</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total:</td>
<td></td>
<td></td>
<td>227 4</td>
<td>308</td>
</tr>
<tr>
<td>Transport</td>
<td>663</td>
<td>900</td>
<td>800</td>
<td>1000</td>
</tr>
<tr>
<td>Merchant (Patron) Profit Margin 4</td>
<td>365</td>
<td>1127</td>
<td>250</td>
<td>350</td>
</tr>
<tr>
<td>Patron Price</td>
<td>1796</td>
<td>3250</td>
<td>2325</td>
<td>3025</td>
</tr>
<tr>
<td>Urban Wholesale (Coxeur) Margin</td>
<td>142</td>
<td>150</td>
<td>250</td>
<td>300</td>
</tr>
<tr>
<td>Coxeur Price</td>
<td>1940</td>
<td>3400</td>
<td>2575</td>
<td>3375</td>
</tr>
<tr>
<td>Vender (Diallo kerif) Margin 7</td>
<td>389</td>
<td>590</td>
<td>200</td>
<td>350</td>
</tr>
<tr>
<td>Diallo Kerif Price</td>
<td>2329</td>
<td>3990 4</td>
<td>2775</td>
<td>4025</td>
</tr>
<tr>
<td>Price per Kg in Dakar</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Official</td>
<td>40</td>
<td>95</td>
<td>50</td>
<td>95</td>
</tr>
<tr>
<td>- Estimated</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Measured</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Price per Kg in Dakar</td>
<td>56 4</td>
<td>95 10</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Sources:** RdS 1994a; RdS 1994b; Robot 1990; Field Surveys (see Table A, below, for data).
Notes for Table V:

1See Ribot 1990.

2These prices are best estimates from interviews during the last week in June 1994. Taking into account that the prices vary slightly with the season (see Ribot 1990), this column presents estimates that are explained in table ___ in appendix ____.

3These prices were prepared by DEFCCS in an internal memo entitled "Prix de vent du charbon de bois rendu Dakar pour un sac de 42 kilogrammes." Personal Communication Yero Sow, 6/25/94.

4For detailed breakdowns see Table ____ in Appendix ____.

5These estimations are based on the evolution of the price of transport in the same sector since there are no other price indices available. Transport from Tambakounda went from 663 CFA/sack to 900 CFA/sack. Hence, a price rise of 36 percent. If anything these estimates are high, since this sector depends on imported oil and has, thus been most affected by the devaluation of the CFA. Note, for example, that the income of the producers has barely changed.

6Margins in this table are the profit margins, i.e. the income per sack after subtracting off expenses. These are not the gross margins.

7The Diallo kerin shares his income with the outlet owner (Ribot 1990).

8It is my impression that this figure is a bit high, making the Diallo kerin’s margins larger than it may actually be. Using other methods of estimation, assuming that the margin has gone up proportionally to that of the Surga, the new margin per sack comes out to be 417 FCFA and the price of the kilogram falls out at about 91 FCFA. But, since the urban cost of living has gone up faster than the rural cost of living, this figure is by no means unreasonable.

9Ba et al. 1987:18.


11This estimate is inconsistent with the above figure for the vendor’s price.
### Table A
#### Prices from Spot Survey
#### 25-30 June 1994

<table>
<thead>
<tr>
<th>Who/Date</th>
<th>Where</th>
<th>Surga Price</th>
<th>Charg ing</th>
<th>De-charg ing</th>
<th>Trans-port</th>
<th>Merchant (Patron)</th>
<th>Urban Wholesale (Cost/eur)</th>
</tr>
</thead>
<tbody>
<tr>
<td>El Haji Matar Diop, Patron 6/25</td>
<td>M' Bour</td>
<td>550</td>
<td>65</td>
<td>50</td>
<td>900</td>
<td>3200</td>
<td></td>
</tr>
<tr>
<td>Malamine Badji, Chef d'Inspection, 6/25</td>
<td>Kountoun 600</td>
<td>375-600</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Portos</td>
<td>&quot;</td>
<td>500</td>
<td>65</td>
<td>50</td>
<td>900</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Malamine Badji, Patron 6/25</td>
<td>&quot;</td>
<td>500</td>
<td>65</td>
<td>50</td>
<td>900</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Serifou Diallo, Patron 6/26</td>
<td>Meret</td>
<td>640</td>
<td>25</td>
<td>900</td>
<td>3400</td>
<td>3440</td>
<td></td>
</tr>
<tr>
<td>Elders</td>
<td>Maka-colibanang</td>
<td>550-575</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>El Haji Modou Sow, Patron 6/29</td>
<td>Kountoun 900-1000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Surga</td>
<td>Maka Road</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agna Diallo, Patron &amp; Regional Charcoal Union Leader</td>
<td>Tamba-counda</td>
<td>575</td>
<td>65</td>
<td>50</td>
<td>900</td>
<td>3200</td>
<td></td>
</tr>
<tr>
<td>M. N'Diaye, Chef d' Inspection DEFCCS</td>
<td>Tamba-counda</td>
<td>500-550</td>
<td>65</td>
<td>50</td>
<td>900</td>
<td>3200</td>
<td></td>
</tr>
<tr>
<td>Transport-er (hitch-hiker), 6/29</td>
<td>Kountoun 600</td>
<td>600</td>
<td></td>
<td></td>
<td>3250</td>
<td>3300</td>
<td></td>
</tr>
<tr>
<td>Vendors (Diallo kerin)</td>
<td>Dakar</td>
<td></td>
<td></td>
<td></td>
<td>3400</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-Bobo Diallo</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3400</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-Mamadou Diallo</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3500</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-Mamadou Moye Diallo</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3200-3400</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-Alpha Oumar Diallo</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3400</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-Alpha Diallo</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3400</td>
<td></td>
<td></td>
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<td>-Alpha Diallo 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3400</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-Diallo</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3400</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-Mamadou Saliou Diallo</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3400</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-Coundian Camara</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3400</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Average                          | 555                  | 57          | 50        | 908          | 3250        | 3399             |                           |
| Number of Data Points            | 8                    | 5           | 4         | 6            | 5           | 10               |                           |
| Best Estimate                    | 550^                 | 65^         | 50        | 900^         | 3250^       | 3400^            |                           |

Notes for Table A:

Serifou Diallo estimated Coxeur's Margin at 40 FCFA (6/26/94).

Transporter said that the cost of oil is 300 FCFA per liter and he uses 150 liters per trip from Tamba to Dakar. He also noted that before the fine for problems was 6000 FCFA. Now it is only 30000. So, instead of payoffs, he pays the fine and goes. (6/29/94.)

Alpha Diallo (the Diallo kerini) said that only new or small coxeurs sell a sack at 3300. The big ones sell between 3400 and 3500. He also said that some of the Diallo kerini who work in sandy areas where the trucks will not go have to pay an additional 100 FCFA per sack for the use of a wagon. (6/30/94.) [That is probably where the 3500/sack price comes from.]

The prices vary as a function of supply, the availability of labor (planting and harvest times are difficult during years with good rains), ease with which charcoal can be brought to a paved road (this is difficult during the rains), quality of charcoal, accessibility of the vending point, the volume the particular urban wholesaler deals in and whether the sales point is owned by the urban wholesaler or not. In general, the producer price (the surga's price) varies the most during the year. The urban price variations are buffered by the fact that the urban sale price is fixed by the state.

This table is, in my estimation, the best possible estimate of the price structure available today. The numbers being used in other reports are either taken from the official prices, which are not expected, or are estimates derived from previous reports, often themselves based on estimates or even earlier reports.

1The ranges given were averaged first and then entered into the average of the list of prices. This final figure is just the rounded off result.

2The single outlier was given by a relatively poor patron. Sixty-five FCFA seems to be the mode in the market. In addition, it is possible that the figure he gave is the loading of sacks or the charging of the truck only and not, as this figure usually includes, the two together.

3This price is fixed by the truck owners along with the large charcoal merchants who also own trucks. With this price truckers claim to make much more than they do transporting other goods. It would be interesting to know the difference between the charcoal transport fixed price and the competitive price for transporting other goods.

4The figure 3200 emerges a number of times. I suspect that the true figure is a bit higher, but not too much higher. The patrons have a motive to state a lower price so make it seem like they make less. Since the trucker, who witnessed a sale recently, gives a figure that falls on the average, I chose to use the average here.

5Calculated in the same manner as the Surga price. Generally, the lower prices represent vendors who bought from smaller urban wholesalers, who sell for less. These small coxeurs, or bana bana make up a small portion of the urban wholesale market (Diallo kerini interviews 6/30/94).
Table VII: Cost Composition for a Sack of Charcoal
Sold in Dakar in 1987

| Expenses: Labor + Profit, or Percent of Final Net Income: Price: |
|-----------|----------------|----------------|----------------|----------------|
| (FCFA/sack) (FCFA/sack) (%) |
| Surga     | 470            | 20.2           | 2.9            |
| Net Income: 67 |              |                |                |
| Expenses: (10)^a | (0.4) | (0.2) | (2.3) |
| -Tools: (4) | (0.2) | (0.2) | (2.3) |
| -Bicycles (53) | (2.3) | (2.3) | (2.3) |
| -Work Parties (kiië) | (2.3) | (2.3) | (2.3) |
| External Factors | 75          | 3.2            | 28.4           |
| -Taxes | 663          |                |                |
| -Transport |                |                |                |
| Patrons: | 365           | 15.7           |                |
| Net Income: 103 |              |                |                |
| Expenses: (5) | (0.2) | (0.2) | (2.3) |
| -Cooperative Costs (9) | (0.4) | (0.4) | (2.3) |
| -Payoffs |                |                |                |
| -Village Chiefs (5) | (0.2) | (0.2) | (2.3) |
| -Forest Agents (2) | (0.1) | (0.1) | (2.3) |
| -Lost Advances (2) | (0.1) | (0.1) | (2.3) |
| -Additional Quota Fees (80) | (3.4) | (3.4) | (2.3) |
| -Paying kontrapalaas^d | 20 | 0.9 | 1.5 |
| -Unloading in Dakar^e | 35 | 1.5 | 1.5 |
| Caxeurs: | 142           | 6.1            |                |
| Net Income: 0 |          |                |                |
| Expenses: 142 | 6.1 | 2.4 | 2.4 |
| Diallo Kerin: | 332         | 14.3           |                |
| Net Income: 57 |              |                |                |
| Expenses: (29) | (1.2) | (1.2) | (2.3) |
| -Taxes and duty: (25) | (1.1) | (1.1) | (2.3) |
| -Rent on outlet: (3) | (0.1) | (0.1) | (2.3) |
| Totals: 965 | 1364 | 41% | 59% |
| Percent of Total: 965 | 1364 | 41% | 59% |
| TOTAL Cost of Sack in Dakar: 2329 | 100% | |

Source: Ribot 1990.
^Numbers in parentheses are constituents of the bold numbers directly above them.
^Transport is included as an expense for the patrons since in practice the patrons usually pay this expense out of their margin.
^A kontrapalaas is a foreman who works between the patron and his surga. Since patrons pay the kontrapalaas and the labor for unloading charcoal in Dakar, these have been listed under the patrons. They are patron expenses. The patrons also pay the surga for loading the trucks in the bush,
Table VIII: Vertical Distribution of Income from Commercial Charcoal Production in Senegal 1994 Estimate

<table>
<thead>
<tr>
<th>Groups in Charcoal Market</th>
<th>Avg. Number of Sacks Sold per year</th>
<th>Number of Actors at each Level of Market</th>
<th>Avg. Net Income per Sack</th>
<th>Avg. Net Income (1000 CFA per person)</th>
<th>Group Net Income (CFA x10⁴)</th>
<th>Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retailers + Outlet owner¹</td>
<td>1,950</td>
<td>3,300</td>
<td>513</td>
<td>1000</td>
<td>3.3</td>
<td>even</td>
</tr>
<tr>
<td>Urban Wholesalers (Dakar Only)³</td>
<td>11,700</td>
<td>300</td>
<td>150</td>
<td>1755</td>
<td>0.96</td>
<td>skewed</td>
</tr>
<tr>
<td>Merchants</td>
<td>1,560</td>
<td>4,350</td>
<td>987</td>
<td>1540</td>
<td>6.3</td>
<td>skewed</td>
</tr>
<tr>
<td>Charcoal Makers</td>
<td>350</td>
<td>18,300</td>
<td>459</td>
<td>160</td>
<td>2.9</td>
<td>even</td>
</tr>
</tbody>
</table>

Sources: Ribot 1990; RPTES 1994:49; Estimations derived from above tables in this Annex.

Notes for Table VIII:

²This is the number of sacks produced by the average surga, the number of sacks bought and sold by the average actor at other levels of the market. For surga and Diallo kerin and coxeurs I am assuming that the number of sacks handled at each level of the market has remained approximately the same since 1987 when the last detailed field based surveys were conducted (Ribot 1990). Here I am simply assuming that as the market has grown or contracted the number of actors has grown and contracted proportionally. Hence, the large number of sacks handled by a Coxeur reflects the fact that there are few coxeurs in the market. For patrons I am assuming that the number of sacks handled is equal to the volume now produced divided by the number of patrons registered with DEFCCS. This number will give a conservative result since most registered patrons are not active in the market. Their names are simply listed with a cooperative to justify a larger quota.
³These figures are derived by dividing the volume handled by the measured urban consumption of charcoal (RPTES 1994:22).
⁴This number is the gross profit margin minus the expenses at each level of the market. Subsistence expenses are not subtracted.
⁵Retail are often coxeurs.
⁶For this analysis I am assuming that patrons deliver directly to Diallo kerin in other cities.
⁷This is derived by dividing the consumption in Dakar of 3,500,000 sacks per year (RPTES 1994:22) by the number of coxeurs estimated to be operating in Dakar (Ribot 1990; RPTES 1994).
There are currently 6347 coop members, 250 GIE members and 10 societies. Or about 6600 registered charcoal "exploitants" (Observateur 1994) Only about 2/3 are active in any measure in the market (see Ribot 1990) leaving around 4350 patrons.
Annex B: The Story of Makacoulibantang

The Rural Community of Makacoulibantang (Maka) in the Tambacounda Region brought about successful (though less than optimal for the villagers) forest resource management. Maka is a LC in the center of Senegal’s largest charcoal production region. In Maka and two neighboring Rural Communities villagers asked their Rural Council to protect the surrounding foresters from migrant charcoal makers. While the council was unable to evict the unwanted migrant charcoal makers from their terroir they did achieve concessions from the Forest Service that helped reduce the impacts of charcoal production.

The region around Maka had been an official charcoal production area over a decade ago. After production in the area was officially closed by the Forest Service, the charcoal makers kept working in the forests. By the late eighties villagers were fed up. The villagers in the Rural Community of Maka did not want charcoal surga working in their forests. Villagers said the "surga chase women who are collecting forest products, they cut areas we use for grazing, and they start bush fires" (Maka, June 1994). Rural councilors added that with woodcutting rains won't come, and that they didn’t want charcoal makers because there is no benefit in it for the Rural Community. They couldn’t tax charcoal makers and it was only foreigners that were working. So, the Rural Council was opposed to the re-opening of production. (Villagers, Rural Councilors Adjoint of Sous-Préfet, Maka, June 1994.) As the region’s deputy put it: "Villagers wanted to stop charcoal production in the area. They decided not to give the charcoal makers a place to stay in the villages. Villagers wanted to fight charcoal makers in the forests. The population wanted to force them out." (Maka’s Deputy in National Assembly--Kabina Kaba Jakhaté, July 1994).

Villagers discussed the issue with their Councilors, the President of the Rural Community went to the Préfet in the regional capital, Tambacounda, and in 1990 the Préfet signed a decree closing the area to charcoal production (Adjoint to Préfet June 1994). In 1993 the Forest Service scheduled new production "rotations" in the area (arrêté ministeriel no. 15411/MDRH/DEFCCS of 21 December 1992 organizing the 1993 season). Due to the Prefectorial decree closing the region to production in 1990, the Forest Service had the Préfet sign a decree to re-open the area to charcoal production (Arrêté No. 010/D.TC of 1 March 1993, re-opening the area). The Préfet did not inform the local population.

When villagers heard of this they were angry. Some villages wanted a complete stop to charcoal production while others simply wanted it to be better organized. The villagers were demanding to manage their forests. Some villagers also wanted to be able to work charcoal themselves—they wanted access to quotas. Again, the Rural Council represented the villagers and demanded to block the re-opening of the charcoal season. Villagers themselves threatened violence if the charcoal makers were to show up.

The Sous-Préfet and Préfet organized three meetings to resolve the brewing dispute. Two were held in Maka (24 February 1994 and 31 March 1994) and one in the Tambacounda (later in the spring). Merchants, Foresters, Rural Councilors, village chiefs, the Préfet and Sous-Préfet were present at all the meetings. While the Rural Council consistently fought against allowing charcoal producers in the area, representing the will of

---

74The three Rural Communities, Maka, Endoga Babakar and Kahéne (all in the arrondissement of Maka) were against exploitation in their region. Maka was simply the most vocal.
the villagers, ultimately, the village chiefs accepted to host them. Each group made their arguments and a final compromise was reached.

In minutes from the March meeting one Regional Division Chief of the Forest Service, reinforcing his colleague’s argument, reminded villagers that "...the reform [revision of the new code] has clearly defined the prerogatives of LCs and that the management of forest formations belongs to the Forest Service and the receipts generated belong entirely to the nation." The charcoal merchants (patrons) argued that without charcoal Dakar will have shortages (Rural Council member in Maka, June 1994). The Forest Service also expressed concern that there is a national need for charcoal production. As one regional Forestry Inspector said, "villagers cannot just decide who can exploit the forests, they are national domain."

A compromise was eventually reached among the parties involved. The forest of Bokko was excluded from charcoal production because villagers used it for grazing. A five kilometer buffer zone was established along the Gambia boarder to avoid conflicts with Gambian authorities. Villagers were promised a list of who was permitted to cut, who their patron was, where they were permitted to cut, and when they were permitted to cut, so that the villagers could know about whom to complain if there was a problem. The Forest Service promised that they would organize the charcoal production in a way that will not cause them problems. (Sy 1994:2-3.)

The compromise made the Forest Service, the Merchants and some village chiefs happy. Rural Councilors and other villagers, however, insisted that they were still not in agreement with the solution that was met. Villagers throughout the area insisted that they still did not want charcoal produced in their forests. One villager also pointed out that nothing was done so that villagers could work in charcoal production themselves.

To explain what they found to be an unsatisfactory outcome a group of Rural Councilors from Maka said: "The big patrons (B__S__ and D__A__) and the Forest Service (Inspector Fall from Tambacounda) made the population understand that it is the right of the State to carbonize and dispose of the trees as they like." Foresters interviewed expressed similar attitudes, saying that the forests are to serve the "whole ___" and were needed to provide fuel to the cities. Foresters asserted that the forests don’t belong to villagers. They belong to the state.

The patrons then went straight to the village chiefs. The councilors advised the chiefs not to accept the agreement. Some accepted the terms offered. According to councilors and villagers, the patrons paid off the chiefs with sacks of rice. Nonetheless, the one chief I interviewed in my first trip to Maka said "I did not go to the meeting because I was in Kaolack. I would throw out the charcoal makers if I could. Most villagers would agree."

After these interviews I went back to speak with local Forest Service agents. They explained that this was a managed forest in which it was time for production rotations to return. "When the decree was made," they said "certain village chiefs, pastoralists and Rural Community representatives did not want the charcoal makers." They explained that village chiefs accepted kickbacks and the villagers accepted afterwards. They went on to say, "if we did not go to Maka to produce, 1) the rotation would not be respected, and 2) the other regions would react if the production was moved to their forests. Other Rural
Communities would not accept what Maka rejected. We, the Forest Service, are the managers of the forest domain.

I also interviewed one of the large charcoal merchants involved in these negotiations, D___ A___. His story was a bit different. He recounted that:

There was a problem in Maka in that there were fraudulent charcoal makers. Village chiefs had surga carbonizing for them. Village chiefs were already involved. They take a percentage of the profits. The villagers asked the Sous-Préfet what percentage they could have. The Sous-Préfet said they don't have any right to any percentage. He told them, 'now there is nothing, but in the future there will be a law where the villagers will get something. But this will not be from the patrons. It will come from the tax.'

The villagers asked for the right to tax the surga. Patrons agreed that they should be able to assess them of the 1000 FCFA per year head tax that village chiefs collect on villagers.

This was his rendition of the resolution of the problem.
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