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**Decentralized Provision of Public Services and  
Governance and Management of Renewable  
Natural Resources: The Senegal Case**

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## ACRONYMS

AM	Association des Maires
APCRADR	Association Nationale des Présidents des Conseils Ruraux et d'Arrondissements de Conseils Départementaux et Régionaux ...
APE	Association des Parents d'Eleves
APS	Association pour la Promotion de la Santé
AVD	Association Villageoise de Développement
BHS	Banque de l'Habitat du Sénégal
CCCE	Caisse Centrale de la Coopération Economique
CDD	Comité Départemental de Développement
CER	Centre d'Expansion Rural
CILSS	Comité Inter-Etat de Lutte Contre sa Sécheresse au Sahel
CONACILSS	Conseiller National du CILSS
CONGAD	Conseil des Organisations Non-Gouvernementale d'Appui au Développement
CR	Conseil Rural or Communauté Rurale depending on context
CREDIBLE	Regional Center for the Elaboration and Development of Locally Based Initiatives
CS	Comite de Santé
CSS	Compagnie Sucrière Sénégalaise
CUD	Communauté Urbaine de Dakar
DS	District Sanitaire
DCL	Direction des Collectivités Locales

EF	Eaux et Forêts (Water and Forestry Service)
ENDA	Environnement et Développement du Tiers Monde
FAC	Fonds d'Aide et de Coopération
FAIB	Fonds d'Appui aux Initiatives de Base
FECL	Fonds d'Équipement des Collectivités Locales
FNGF	Fédération Nationale des Groupement Feminins
FONGS	Fédération des Organisations Non-Gouvernementales du Senegal
GIE	Groupement d'Intérêt Economique
GOS	Government of Senegal
ICS	Industries Chimiques du Sénégal
ISE	Institut des Sciences de l'Environnement
ISRA	Institut Sénégalais de Recherches Agricoles
LDN	Loi sur le Domaine National
MDRH	Ministère du Développement Rural et de l'Hydraulique
MEFP	Ministère de l'Economie, des Finances, et du Plan
MFEF	Ministère de la Femme, de l'Enfant et de la Famille
MEN	Ministère de l'Education Nationale
METM	Ministère de l'Équipement, des Transports, et de la Mer
MI	Ministère de l'Interieur
MSPAS	Ministère de la Santé Publique et de l'Action Sociale
MTPN	Ministère du Tourisme et de la Protection de la Nature
MUH	Ministère de l'Urbanisme et de l'Habitat

NGO	Nongovernmental Organization
NRGM	Natural Resources Governance and Management
NRM	Natural Resources Management
OCS	Organisation Communautaire Sanitaire
OHLM	Office des Habitations à Loyer Moderé
PARCE	Projet d'Aménagement de Reboisement des Forêts du Centre-Est
PAST	Projet d'Ajustement du Secteur des Transports
PDES0	Projet de Développement de l'Élevage au Sénégal Oriental
PIC	Plan d'Investissements Communaux
PLD	Plan Local de Développement
PICOGERNA	Projet Intégré de Conservation et de Gestion des Ressources Naturelles
PREVINOBA	Projet de Reboisement Villageois Dans le Nord-Ouest du Bassin Arachidier
PS	Parti Socialiste
PEUL	Projet Environnement Urbain de Louga
RNR	Renewable Natural Resources
SAED	Société d'Aménagement et d'Exploitation des Terres du Delta
SENELEC	Société Sénégalaise de Distribution d'Énergie Électrique
SIAS	Société Industrielle d'Aménagement Urbain du Sénégal
SICAP	Société Immobilière du Cap-Vert
SONATEL	Société Nationale des Télécommunications
SONEES	Société Nationale d'Exploitation des Eaux du Sénégal
TRIMF	Taxe Représentative de l'Impôt du Minimum Fiscale

<b>UASP</b>	<b>Unité Agricole-Silvo-Pastorale</b>
<b>UNDP</b>	<b>United Nations Development Programme</b>
<b>USAID</b>	<b>United States Agency for International Development</b>

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## I. EXECUTIVE SUMMARY

### A. Overview

Senegal is very much in the forefront of Sahelian decentralization efforts. It probably has the most developed and comprehensive system of local government in the region with 317 Rural Councils and 43 urban municipalities as well as a broad array of well-organized nongovernmental organizations (NGOs) and community-based associations involved in providing public goods and services and in Natural Resources Governance and Management (NRGM).

This report analyzes the Senegalese decentralization experience in the following areas:

- devolution of authority from the central government to local government with particular emphasis on rural local government;
- mobilization of local financial resources, particularly for local rural government;
- non-centralized provision and production of public goods and services; and
- governance and management of natural renewable resources.

A three-person multidisciplinary team compiled the report which was based on an extensive review of the literature on decentralization experiences in Senegal, interviews, and field work during two missions (October 9-October 20, 1991 and March 5-April 2, 1992). The team met with a wide range of Senegalese government officials, donors, NGOs, local government officials, and community-based associations. The field work was conducted in the Rural Communities of Sangalcam, Taiba-Ndiaye, and Mbane which were selected as research sites because they illustrate three distinct and representative Senegalese agro-ecological zones.

The team found that the "Second Administrative Reform" launched in 1990 marked an important step forward in advancing the decentralization process in Senegal. The reform reduced state tutelage over local government by transferring direct control over budgetary matters from representatives of the central government to elected local government officials.

Since the 1980s, the Government of Senegal (GOS) has shown a greater willingness to transfer more of the responsibility and burden for providing and producing decentralized public services to local government, community-based organizations, and the private sector. Local community-based management committees have been set up throughout the country to deal with primary health care, school construction, and water management and other needs.

The team was struck by the vitality of many community-based organizations and the courage shown by the rural populations in seeking local solutions to their problems.

Much needs to be done to strengthen and expand local government's financial base. If local government is to have more responsibility in providing public goods and services, it will also need more resources, either through transfers from the central government or by expanding the local tax base through higher rates and putting those who can pay on the tax roll.

Proposed changes in the land and tree tenure codes, when finally legislated, will grant local government jurisdictions greater authority to manage their own renewable natural resources. The Rural Councils will thus play a much greater role in allocating land, planning land use, and managing forestry, fishing, and water resources in their jurisdictions. Donors and NGOs have encouraged and helped finance community-based management of renewable natural resources (RNR), particularly in the domain of forest resources. Women's and youth groups have played the major role in local reforestation efforts.

At the local level, land use problems are complex and will require flexible conflict resolution mechanisms adapted to local conditions. The land tenure law will also need to be clearer concerning property rights, the definition of land development (*mise en valeur*), and the duration of land use rights in order to provide individuals, communities, and private firms exploiting land and other natural resources with sufficient security to encourage long-range investments.

The protection and development of Senegal's RNR is crucial to the country's economic future. The future looks bleak in the Peanut Basin unless the soil fertility there can be restored and other products found to provide the rural populations with alternative sources of income. With good NRGM, forestry and livestock products may yield significant sources of additional income and contribute to the restoration of soil fertility. Senegal's food production will depend increasingly on irrigated agriculture and more efficient management of the country's water resources. Senegal's rich fishing resources, which have been one of the bright spots of the economy, must be protected and carefully managed. Finally, Senegal must also deal with the environmental pollution problems originating from large-scale enterprises that menace the country's RNR and the health of its citizens.

The donor community and foreign NGOs have played a vital role in supporting Senegal's laudable decentralization efforts. For example, the World Bank, USAID, and Canada are providing financial and technical assistance to establish fiscal cadastres in Senegal's urban communes. The French are providing technical assistance to help Senegal strengthen local government structures. Many donors are supporting a variety of NRGM programs, with USAID making this area one of its top priorities in its development assistance strategy for Senegal. Foreign and domestic NGOs are also working closely with the GOS, particularly in the areas of NRGM.

## **B. Constraints**

Several obstacles persist, however, as constraints on the effective implementation of current decentralization policies in Senegal:

- the lack of sufficient local resources and a viable tax system to support the expansion of local government services provision and recurrent costs;-
- the tendency of the central government to set uniform standards and priorities for local government despite major differences in local conditions, needs, and priorities;
- the lack of sufficient credit mechanisms to help local government, community-based organizations, and the private sector finance projects;
- the lack of adequate training for local government officials, particularly in the rural areas, needed for local government duties and NRGM;
- confusion in land and tree tenure rules which may cause frequent disputes among different claimants to land resources; and
- a lack of locally based conflict resolution procedures and enforcement mechanisms enjoying the confidence of the local populations.

## **C. Recommendations**

Based on its findings, the team recommends the following actions to overcome some of the obstacles mentioned above.

### *Local Government*

- Provide more training programs to upgrade the management skills of local government officials, especially in the rural areas.
- Translate major texts concerning local government finances, budgetary procedures, taxes, land and tree tenure laws, and other areas affected by local government into the local languages and use of these translated materials in functional literacy and numeracy training programs for elected rural officials.
- Increase transparency in local government proceedings by making minutes, budgetary decisions, and financial records of local government readily available to constituents in local languages.

- Encourage closer collaboration between local government officials, community-based organizations, and locally based central government agents in formulating local development and land use plans.
- Establish a paralegal service to provide legal advice to local government officials and their constituents concerning their rights and obligations vis-a-vis the various state laws directly affecting them.

### ***Mobilization of Local Resources***

- Provide greater flexibility for local government bodies to set and raise tax rates.
- Diversify and expand tax base by tapping previously unexploited potential sources of taxes already sanctioned by law.
- Establish a rural cadastre to identify potential sources of real estate and other taxes in the more developed Rural Communities and fully exploit urban commune cadastres after their completion to expand the municipal tax base.
- Increase incentives for local tax collectors and state services responsible for establishing tax rolls.
- Establish payment of user fees in proportion to real costs and the ability of the population to pay local government, specialized community-based, and private producers of public services.
- Increase transparency in tax collection.
- Maintain surveillance and technical assistance role of state administrative and treasury agents to check corruption and misuse of local government funds.
- Transfer resources from central government to poorer local government jurisdictions.
- Provide access to credit for rural local governments having demonstrated competent budgetary management skills.

### ***Provision of Public Goods and Services***

- Explore ways to contract out certain public goods and services to private sector entrepreneurs and community-based groups.

- Provide more training in management and bookkeeping skills for officers of community-based organizations involved in public service production.
- Increase communication and collaboration between local populations, local government officials, and state health and educational planners in allocating resources.
- Decentralize the medicine and drug distribution system.
- Provide local government (urban and rural) with greater flexibility to determine boundaries of jurisdictions providing specialized goods and service.

### *Natural Resources Governance and Management*

- Upgrade management and technical skills of Rural Councils and community-based groups involved in NRGM through training programs.
- Provide Rural Council officials with training in forestry resources management when and if the new forestry code is passed.
- Retain some veto powers for the conservation service to check potential overexploitation of forests.
- Continue the integrated NRGM approach applied by certain projects and monitor the results to test its effectiveness and replicability.
- Conduct further hydrological and geological studies to identify potential water sources and to take measures to prevent or retard salinization of existing water supplies.
- Conduct a campaign to eradicate various diseases emerging in the Senegal River region following changes in the ecosystems after the completion of the Diama and Manantali dams.
- Investigate the accuracy of local complaints concerning pollution of the environment by large-scale chemical, mining, and agro-industrial firms and, if confirmed, take the measures necessary to protect the environment and the health of Senegalese citizens adversely affected by the pollution.

Despite its longstanding centralist tradition, Senegal has made considerable progress in pursuing decentralization policies. It now seems to be on the threshold of major changes in central government-local government relations. Finally, Senegal's democratic system, which has fostered the growth and development of locally based voluntary associations, provides a crucial condition for effective decentralization and merits study as an option for other Sahelian states.

## II. INTRODUCTION

### A. Background

Since the historic May 1989 Ségou Conference, the *Comité Permanent Inter-états de Lutte contre la Sécheresse dans le Sahel* (CILSS) and the Club du Sahel have moved forward in studying, clarifying, and promoting appropriate decentralization strategies for the Sahel. This report on Senegal is one of several country reports commissioned by the Club du Sahel and CILSS to provide pertinent background materials for the Regional Conference for the Elaboration and Development of Locally-Based Initiatives (CREDIBLE) scheduled to be held in Praia in early 1994.

Senegal is very much in the forefront of Sahelian decentralization efforts. It probably has the most developed and comprehensive formal system of local government in the region with 317 Rural Communities and 43 urban communes. Senegal also has a broad array of well-organized nongovernmental organizations (NGOs) and community-based associations involved in providing and producing public goods and services for urban and rural dwellers and managing local renewable natural resources. Finally, Senegal's rich associational life benefits from an open and democratic political system which gives its people the right to organize freely with a minimum of state control.

Since 1990, the Government of Senegal (GOS) has launched what it calls the "Second Administrative Reform" which promises to further advance the decentralization process by reducing the state's tutelage over local government and preparing legislation to give local communities greater control over land allocation and natural renewable resources management. The movement towards greater decentralization has been linked with further liberalization of the political system. In April 1991, an important segment of the opposition joined the government and helped draft legislation to establish a more liberal electoral system and give opposition parties greater access to the media. The Senegalese experience thus provides an interesting case study of decentralization in a democratic context.

The report focuses on four main areas of crucial importance to Sahelian decentralization strategies:

- devolution of authority from the central government to local government;
- non-centralized provision of public services;
- governance and management of renewable natural resources; and

- mobilization of local resources, particularly at the rural government level. Its main objective is to present specific information and analysis drawn from Senegal's decentralization experience that will deepen understanding of the decentralization issues confronting the Sahelian countries at the 1994 Praia conference.

## **B. Approach and Organization of the Mission**

Three consultants with extensive experience in the Sahel prepared the report which was based on two missions to Senegal. The first mission team consisted of two consultants from Associates in Rural Development, Inc. (ARD): one, an American institutional analyst and decentralization specialist and the other, a Sahelian agronomist and specialist on natural resource management. The first mission based most of its findings on documentation and interviews gathered in Senegal from October 9 through October 20, 1991. The short duration of the trip and broad scope of inquiry precluded field work outside of Dakar. The second and longer mission to Senegal began on March 5, 1992 and continued through April 2, 1992. The team added a third member, a French specialist on local government finances. Much of the team's time during the second mission was spent in the field to ascertain the impact of Senegal's decentralization policies on the rural populations. Three representative Rural Community jurisdictions were chosen as principal field sites: Sangalcam, Taiba Ndiaye, and Mbane, each representing a different agro-ecological zone.

The first mission met with a wide range of Senegalese government officials in several ministries involved in various aspects of decentralization (e.g., Interior, Education, Rural Development, Finance); donors and financing agencies (e.g., the U.S. Agency for International Development [USAID], *Caisse Centrale de la Coopération Economique* [CCCE], World Bank), and NGOs (e.g., ENDA and PADEC). During the second mission, the team during field visits met with the presidents and other elected officials of the Rural Communities; village chiefs and notables; the leaders of youth, women, and other community-based groups involved in providing public goods and services and managing natural renewable resources; prefects; subprefects; local treasury agents; and locally based Senegalese government officials from the *Centres d'Expansion Rurale* (CERs) and other state agencies involved in natural resources management and provision of public goods and services (see Appendix A for a list of persons contacted and their institutional affiliations).

The team also reviewed a substantial portion of the literature on local government, decentralization, and natural resource management in Senegal (see bibliography for complete list of works and documents consulted). One of the most important documents reviewed was the Research Triangle Institute's (RTI) 1989 study, *Promoting Economic Development and Employment Generation through Decentralization in Senegal*, prepared for USAID/Senegal. It provided an overview of Senegal's decentralization system and policies, an analysis of local government operations and expenditures, and policy options.

While providing much useful data, the RTI study lacked in-depth analysis of local government finances and did not address the issues of decentralized natural resources management and governance or the role of community-based groups in producing public goods and services. While building on the RTI study, the present study provides a more detailed analysis of local government finances in Senegal as well as a more comprehensive approach that considers decentralized management of natural resources by local government and community-based groups--an important factor in promoting economic development. It also highlights the potential of nongovernmental community-based groups in providing and producing public goods and services not provided by central and local government.

Decentralization itself is a broad, multifaceted term which incorporates five sub-concepts:

- ***Deconcentration*** refers to the transfer of administrative authority from higher to lower levels or from central to field offices. It is the most common and most palatable form of decentralization for Sahelian governments and is usually justified in the name of bringing the administration closer to the people.
- ***Delegation*** denotes the transfer of decision-making authority from the central government to semi-autonomous organizations not wholly controlled by the central government, but ultimately accountable to it. Examples are public enterprises and corporations, special service districts, housing authorities, and special project implementation units. These organizations provide a wide range of public services (e.g., water, electricity, housing, and extension services).
- ***Devolution*** refers to a permanent transfer of decision-making authority from a higher level to a lower level autonomous government. In the Sahelian context, it usually implies the transfer of power from the central government to local government units such as urban municipalities and Rural Councils.
- ***Deregulation*** refers to the reduction or elimination of legal constraints and controls over private and public conduct. It is often associated with liberalization policies. These are designed to facilitate market decentralization by reducing state regulation of the economy. The goal is to allow market forces to operate more freely. Deregulation may also facilitate NGO activity, as it has in Senegal.
- ***Privatization*** involves the transfer of state-run enterprises or services to the private sector. For example, one can privatize a public corporation or enterprise such as an electric company or privatize medical, veterinarian, and educational services previously provided exclusively by the state.

Decentralization can also have a spatial dimension designed to include the allocation of more economic resources and public services outside the capital city, the generation of more regional and local developmental activities, and a greater emphasis on regional and local planning. Spatial decentralization is primarily geared to developmental objectives rather than to the transfer of power and functions from central to local authorities.

This report examines the various forms and mixes of decentralization found in Senegal to promote the provision and production of public goods and services, local management of renewable natural resources, and the mobilization of local finances. A useful distinction can be made between provision and production of public goods. Provision refers to decision-making concerning the quantity and quality of services to be provided. Production entails combining inputs to produce the public goods and services. Provision is generally a public sector activity; production can involve governments and non-government and private actors as well.

### III. DECENTRALIZATION AND DEVOLUTION TO LOCAL GOVERNMENT

#### A. Historical Background

Local government in Senegal existed only in urban areas during the colonial period. Rural areas in Senegal had no local government. Instead, French colonial administrators governed in an autocratic fashion, assisted by African canton chiefs subject to the direct control of the colonial administration and not accountable to the African constituents in their jurisdiction.

Unlike other French West African colonies, Senegal enjoyed a long tradition of urban government institutions due to Senegal's special status within the French West African Federation. Modern Senegal's urban government institutions date back to the early years of the Third Republic when France granted citizenship status and municipal government institutions to the residents of the "Four Communes" of Goreé (1872), Saint-Louis (1872), Rufisque (1880), and Dakar (1887). The "Four Communes" were governed in the same manner as cities in metropolitan France and were subject to similar rules (Johnson 1971). Urban local government consisted of a municipal council elected by the citizens. The members of the council chose the mayor from their ranks. Senegal was the only French colony in French West Africa to enjoy urban political institutions similar to those in France until the mid-1950s when France extended this privilege to the capitals of other colonies in the French West African Federation.

Senegal also had 14 "mixed" urban communes. The mixed communes were small towns headed by a French colonial administrator who served as mayor. Until the post-World War II political reforms extended the suffrage to include most Africans, a restricted electorate of Frenchmen, naturalized African citizens, and local notables named by the French colonial administration chose the members of the municipal council. However, the administrator-mayor had full responsibility for drawing up and executing municipal budgets. Municipal councils in the "mixed" communes had limited powers.

The colonial system prevailed until 1960 when the GOS reorganized the territorial administration and organization of the country to bring the administration closer to the rural populations. The administrative reform of January 1960 divided the country into 7 *régions*, 28 *cercles* which were renamed *départements* in 1964, and 85 *arrondissements*. These administrative districts were headed by governors, prefects, and subprefects. The number of regions eventually expanded to 10 when the regions of Diourbel, Sine-Saloum, and Casamance were subdivided.

During the early 1960s, the GOS expanded the scope and powers of local government institutions and promoted decentralization by taking the following measures:

- transforming the mixed communes and the departmental capitals of the interior into full communes with their own elected municipal councils and elected mayors;
- setting up a national *Fond de Concours Communal* to help finance public investments by urban government;
- establishing elected regional assemblies to represent the rural populations. The regional assemblies set the rate of the rural head tax which was the main source of revenue for regional spending. Regional governors named by the central government presided over these assemblies which had limited powers and small budgets;
- introducing regional investment programs and planning as part of the national planning process and setting up local- and regional-level development committees, generally dominated by state officials from the territorial administration and technical services;
- laying the groundwork for future rural government units through plans to create self-governing rural communes which were to emerge with the maturing of the cooperative movement; and
- establishing multifunctional *Centres d'Expansion Rurale* (CERs) at the arrondissement level designed to provide a wide range of services and technical assistance for local people.

Senegal's decentralization policies suffered a temporary setback during the mid-1960s which corresponded with the establishment of a presidential regime and movement towards a *de facto* one-party state. During that period, the central government reinforced its tutelary authority over local government institutions in order to depoliticize local government and exercise tighter control over local expenditures by taking the following measures:

- tightening the Interior Ministry's (MI) tutelage over the administration of communal budgets and increasing the prefect's role in communal affairs;
- drastically cutting the flow of resources from the central government to the communes;

- strengthening the powers of the regional governors who became super-prefects while reducing the regional assemblies to little more than rubber stamps for approving government-initiated programs; and
- delaying plans to establish rural communes until the 1970s.

After several years of slow progress, the Administrative Reform of 1972 marked the next major phase in Senegalese decentralization policy and set the stage for the establishment of rural government jurisdictions. Law 72.25 of April 19, 1972 established the rules for creating three to four Rural Community jurisdictions with their elected Rural Councils (CRs) in each arrondissement. The Administrative Reform was gradually implemented throughout the country beginning with the regions of Thies and Sine-Saloum in 1974, Diourbel and Louga in 1976, the Casamance in 1978, the Fleuve in 1980, Senegal Oriental in 1982, and Cap Vert in 1984. Senegal now has 317 Rural Communities to complement the country's 43 urban communes.

Each Rural Community had an elected CR headed by a president chosen by the council members. The cooperative movement named one-third of the Rural Councillors while the other two-thirds were chosen by direct universal suffrage. The CRs were granted broad powers in three major areas:

- regulation of local markets, fairs, cattle walks, and residential zoning patterns;
- allocation of uncultivated land and the revision of existing land tenure systems under their jurisdiction; and
- financing of local development projects through a CR budget supported primarily by the rural head tax.

In practice, however, the central government maintained its tutelage over the Rural Councils through the subprefect. Tutelary powers gave the central government the right to veto the deliberations of Rural Councils, to suspend or dissolve individual councils, and to remove their presidents and other officers. The budget and major decisions concerning land allocation, before they became operative, also had to be approved by the administrative authorities. The presence of the subprefect at all CR meetings tended to intimidate council members who felt strong pressure to implement state development priorities rather than their own. The fact that the CRs by statute could not hire personnel also reinforced their dependency on central government officials.

The state's tutelage was particularly heavy in financial matters. The main responsibility for executing the budget lay with the subprefect who served as the *ordonnateur* or budget manager. The president of the Rural Council thus had little control over the local budget or funds. The subprefect's control over the budget and CR expenditures deprived the CRs of much of their financial autonomy and became a major point of contention between

rural officials and the central government. Local control over finances was further limited by the fact that the Rural Community's funds had to be deposited in a Treasury account controlled by a Ministry of Finance agent.

The state tutelage was somewhat less heavy in the area of urban government, the role and powers of which were largely defined by the June 30, 1966 communal code. As in many francophone unitary states, urban government in Senegal consisted of the following:

- a municipal council chosen by the urban electorate in periodic elections empowered to deliberate and approve the municipal budget;
- a mayor elected by the municipal council and responsible for executing the budget and council decisions and managing the communal staff operations. The mayor also served as the representative of the central government in exercising such prerogatives as maintaining public order and keeping vital statistics;
- the strong tutelage of the state over communal affairs. Supervisory powers over municipal government were delegated by the President of the Republic and later by the Prime Minister to the Minister of the Interior. Within the MI, the *Direction des Collectivités Locales* (DCL) monitored the legality and substance of municipal decisions. The central government determined the areas in which local government could function. Any decisions in areas not expressly approved by the state were invalid while decisions taken by the municipal council on a wide range of subjects were not enforceable until approved by the MI; and
- the granting of financial autonomy which gave the communes the responsibility for preparing, adopting, and executing their own budget, financed by locally generated resources. However, the financial autonomy of the communes was constrained by a narrow legal framework established by the central government which sharply curtailed local options.

The communal code applied the same rules to all municipalities outside of Cap Vert regardless of size. Thus a small commune like Oussouye with a population of under 5,000 had the same mandate as a large regional capital like Thies despite the great disparity in population and potential tax base. The main concession to size was that the smaller communes had fewer members on the municipal council than the larger communes.

In 1972, cities serving as regional capitals underwent a major change in status which gave the central government direct control over the execution of municipal affairs through the appointment of a municipal administrator (RTI 1989). In these communes, the state-appointed administrator replaced the mayor in executing the decisions of the municipal

council and administering the budget. Instead of a mayor, these special status communes had a council president who represented the population in dealing with the government.

In 1977, the GOS established the *Fonds d'Équipement des Collectivités Locales* (FECL) to help the communes finance their investment programs. Until the late 1980s, the FECL distributed an average of 1.3 billion CFA a year to various communal investment projects (e.g., market construction, road transport stations, purchase of graders, and city hall and classroom construction). Funds are divided between local government units in the *Communauté Urbaine de Dakar* (CUD), urban communes in the interior, and the Rural Communities. To be eligible for FECL grants, Rural Communities must collect 100 percent of the rural tax. In 1988/1989, 85 CRs (less than one-quarter of the CRs) received small grants of 3 million CFA each. More recently, the GOS has increased the amount of the FECL to 2.5 billion CFA a year and has plans to raise it up to 4 billion CFA. However, central government financial problems (i.e., Treasury liquidity problems) have prevented distribution of all the funds set aside for local government investment.

Dakar, the national capital, had its own special status within the Senegalese system of municipal government. The centralizing trends of the mid-1960s led to the suppression of Gorée and Rufisque as separate communes and their incorporation into the commune of Dakar in 1964. The commune of Dakar thus encompassed the entire region of Cap Vert. Although Dakar retained the office of the mayor, and the mayor continued to play the major role in the hiring of municipal personnel, the commune itself was administered by the Governor of the Cap Vert Region. In 1972, Dakar's municipal council was enlarged to include representatives of the socioeconomic sector. In 1979, a municipal administrator was named by the state to administer the commune.

In 1983, the GOS introduced a new administrative reform which established the *Communauté Urbaine de Dakar* (CUD), divided the Cap Vert Region into three urban communes (Dakar, Pikine, and Rufisque-Bargny) and two Rural Communities, and eliminated the municipal administrator. Instead, the CUD was administered by a ten-person committee consisting of five representatives from Dakar Commune, three from Pikine Commune, and two from Rufisque-Bargny Commune. Committee members selected a president and two vice presidents. The CUD's technical and administrative services were run by a state official named by the Minister of the Interior. The CUD was responsible for the following services:

- street and road construction and maintenance;
- street cleaning;
- garbage collection and treatment;
- management of the municipal hospital;
- management of municipal parks and public gardens;

- management of municipal slaughterhouses;
- management of Muslim and Christian cemeteries;
- management of municipal scholarships;
- management of municipal personnel training centers;
- maintenance of street lights; and
- repair and equipping of municipal schools and social centers.

Much of the budgetary resources for the CUD came from revenues contributed by the three constituent communes, with Dakar providing nearly 90 percent of the total. However, revenues continued to remain totally inadequate to finance all of the services for which the CUD and the communes were responsible due to inadequate tax bases and poor tax collection records. As a result, urban government had few resources to invest and the operating budget consumed most of the available funds. For example, in 1989/1990, personnel charges, street cleaning costs, and municipal scholarships alone absorbed 75 percent of the CUD budget.

Although Senegal had the most comprehensive and representative system of local government in Francophone West Africa at the end of the 1980s, this system, in terms of full devolution of authority to local government institutions, still reflected the heavy-handed tutelage of the central government. This could be seen in several areas:

- dominance of the CRs by the subprefects;
- execution and administration of CR and communal budgets by representatives of the state appointed by the central government rather than by locally elected officials;
- absence of real financial autonomy of the CRs and communes as reflected in their inadequate tax bases and lack of authority to levy their own taxes and user charges; and
- financial centralization of CR and communal funds in the Ministry of Finance which kept most local government revenues blocked in Treasury accounts.

The credibility and effective functioning of local government institutions were also adversely affected by such factors as the following:

- the lack of French literacy of most Rural Councillors;

- the long distances between the seats of Rural Communities and other villages in their jurisdiction which reduced communications and effective participation of Rural Councillors from distant villages;
- the dominance of the CRs by rural notables and elders;
- political factionalism as reflected in competition for offices and the spoils of office;
- the tendency of the larger and more politically influential villages in the CR to receive the majority of CR investments;
- limited financial resources and relatively low and uneven tax collection rates;
- the politicization of municipal hiring practices which led to a plethora of unskilled personnel who consumed most of the communal budget while impairing efficient provision of urban services;
- the imbalance between administrative and technical personnel in the urban communes while most of the smaller communes lacked technical personnel; and
- the limited accountability of elected officials in local government to the general public due to the absence of competitive party politics which could subject local government officials to the scrutiny of criticism by opposition parties. The boycott of municipal and CR elections by Senegal's opposition parties has aggravated this situation.

## **B. Recent Developments: The Second Administrative Reform**

In 1990, the GOS introduced a major institutional reform which reduced state tutelage and gave locally elected officials greater control over local government and community resources. This reform transferred responsibility for executing local government budgets from representatives of the central government to locally elected officials. Thus, the presidents of the CRs assumed the role of budget manager previously played by the subprefects while the mayors in the urban communes replaced the municipal administrators as budget managers of communal budgets.

The president of the CR was given the power, subject to the control of the council and the surveillance of the tutelary authority, to:

- prepare and propose the annual CR budget and control budgetary expenditures;

- manage Rural Community revenues;
- direct communal works, organize public market bids, and lease communal goods according to the rules established by law and regulations pertaining to the communes; and
- conserve and administer the community properties.

While these reforms gave local elected officials more direct responsibility in managing local government affairs, the central government continues to exercise its tutelage in two main areas. Thus, the prefect and governor must approve CR budgets before they become operative, and the state-dominated departmental development committee (CDD) still sets the tax rates for the CRs in their jurisdiction.

Urban municipal budgets are still subject to the approval of the MI before becoming operative. However, the MI has fewer reservations about transferring managerial powers to the mayors and the municipal councils than to the rural presidents and councillors. Urban mayors are generally well educated and in a position to hire qualified technical staff, whereas 75 percent of Rural Councillors are still illiterate in French. The Second Administrative Reform also includes strengthening the financial base of urban government by establishing *cadastres fiscaux* in Dakar and in all of Senegal's regional capitals. This project is financed by the World Bank (Dakar), Canada (nearly all of the regional capitals), and USAID (Ziguinchor).

One of the main obstacles to truly self-governing local government units remains the high degree of centralization over fiscal powers and local government revenues exercised by the Ministry of Finance through the Treasury. Thus far, little has been done to decentralize central government's fiscal control and use of local revenues or to give local government units more autonomy in taxing powers.

The 1990 reforms represent part of an ongoing process towards greater decentralization. The GOS has established a *Commission Nationale Chargée d'Elaborer un Projet de Loi de l'Orientation de la Politique de Décentralisation et un Nouveau Code de l'Administration Communale* which is exploring further reforms. The Commission consists of 37 members and includes 13 mayors, a university professor, and representatives of all the concerned ministries involved in decentralization (e.g., Health, Urban Affairs, Rural Development, Education, and Tourism). The Commission is seeking to identify the best mechanisms for achieving effective decentralization and the respective roles and powers of central and local government. A French mission was asked to provide technical assistance concerning the next phase of the reform in the spring of 1992. By mid-1992, the Commission had not yet presented its final recommendations.

Important changes in the electoral code passed by the National Assembly in late 1991 could encourage greater participation in municipal and rural council elections and make these institutions more accountable to their constituents. These include lowering the voting age to 18, establishing national identity cards for all eligible voters, providing an obligatory secret ballot, and establishing proportional representation rules which will allow opposition parties a greater voice in local government. However, these changes will not go into effect until the next municipal and rural council elections now scheduled for early 1995. --

One of the most interesting recent developments was the establishment of the *Association Nationale des Présidents de Conseils Ruraux et d'Arrondissements, de Conseils Départementaux et Régionaux* (APCRADR) in January 1992. Headed by a prominent Dakar-based businessman and the president of the Rural Council of Taiba Ndiaye, APCRADR has the potential for becoming an important organization for defending the prerogatives of rural local government, improving the efficiency of local government officials, and increasing the rural populations' awareness and understanding of local government.

Although APCRADR by statute is open to all the presidents regardless of political or religious convictions and affiliations, it is in fact dominated by officials belonging to the *Parti Socialiste* (PS). The PS is the major governing party and controls all of the rural and urban communes due to the opposition's boycott of the last rural and municipal elections. Given its present composition, the APCRADR could also be used as an instrument of the party in power to win the political support of rural populations by providing more and better rural government services.

Senegal also has an *Association des Maires* (AM) which has lobbied for more powers and resources for urban government. The AM has requested that transfers of new functions from the central government to local government also be accompanied by the transfer of funds or funding authority to local government to enable the latter to meet its new responsibilities. The AM has also succeeded in establishing twinning arrangements for specific Senegalese towns with counterparts in Europe and North America. These arrangements have provided urban municipalities with additional financial resources and technical assistance. Senegal's use of twinning arrangements to further the cause of urban government is more advanced than in other Sahelian countries.

## **C. Organization of Rural Local Government and Governance Issues**

### **1. Spatial Organization and Central Village Dominance**

Rural Senegal is divided into 317 CR jurisdictions. Spatially the CR consists of a central village and approximately 15 to 65 villages located within a radius of 5 to 10 kilometers from the central village. CRs in silvo-pastoral and other less populated zones generally cover a much wider area. The population size also varies considerably and ranges from 5,000 to 30,000 people, depending on population density in the CR jurisdiction.

According to Senegalese law, the CR is made up of a group of villages, residing in the same common geographical area, that share common interests and are capable of finding the resources necessary for their development. As an institution, the CR often comes into conflict with some of the villages within its boundaries.

The central village or seat of the CR tends to be larger than most villages in the jurisdiction. As the seat of the CR, the central village generally has more facilities and public services (e.g., schools, dispensaries, wells, seccos, and markets). Central villages that are also the capital of the arrondissement tend to have even more facilities (e.g., the CERs). In principle, the central village of the CR was to become the main development pole for other villages in the jurisdiction and provide public goods and services which smaller villages could not provide. During the heyday of the cooperative movement in Senegal, the seat of the rural cooperative and accompanying marketing services also coincided with the seat of the CR. More recently, the 1983 cooperative reform gave village cooperative sections (*sections villageoises*) financial autonomy and shifted the main locus of cooperative decision-making from the central village to the village level.

## 2. *Tensions between CRs and Villages*

In most of the CRs, a certain degree of tension exists between the central village and other villages in the jurisdiction. In many cases, the president of the CR comes from the central village, as was the case in Taiba-Ndiaye and Sangalcam before the 1990 elections; so do a disproportionate number of councillors on the Rural Council. Since most CRs have only 21 to 28 members, this means that many villages have no direct representation on the Rural Council. Moreover, the limited budgetary resources of the CR means that only a small fraction of the total number of villages in a given jurisdiction benefit from CR-financed projects in a given budgetary year.

Village chiefs are expected to collect the rural head tax for the CR's coffers of the CR. While they may receive a personal rebate of 7 percent to 10 percent of the taxes they collect, their villagers may not necessarily see any of the taxes they pay returned to their community in the form of CR-provided public goods and services. Smaller and less politically connected villages tend to receive less than their fair share of CR investments. The failure to receive benefits can lead to local disaffection with the CR and lower tax collection rates.

Another area of potential conflict concerns the allocation of land use rights. According to Senegalese law, the Rural Council has the authority to reallocate land within its jurisdiction. This can put the CR in conflict with traditional land use patterns and village decision-making structures. In areas where land is still relatively plentiful, the village chief still tends to allocate unused land. However, in areas where land is scarce or particularly valuable, the allocation or reallocation of land by the CR can lead to intense conflicts with traditional claimants to the land, particularly when those receiving land use rights are outsiders. For example, in the CR of Sangalcam, a significant amount of land has been given

to wealthy functionaries and businessmen from Dakar, often at the expense of the village community. Thus, the village of Tivaouane-Peulh in the Sangalcam CR has lost much of its traditional grazing lands to the so-called "Sunday farmers" from Dakar.

Every CR has a land committee (*commission domaniale*) which examines individual requests for allocation and reallocation of land in the jurisdiction. The commission then sends a delegation to the village to speak with the concerned parties and to investigate the present situation. After the investigation in which the president of the CR usually plays a major role, recommendations are presented to the Rural Council for approval. In case of a sharp conflict between the CR and the village or individuals in the village, the subprefect or a higher administrative official often intervenes to arbitrate the dispute. In case, arbitration fails, the aggrieved party may have recourse to the courts to protect his claims.

Although the CR clearly has ascendancy over the village as a unit of local government, traditional institutions such as the *conseil des notables* and the village chief continue to play a major role in village decision making. Although not directly elected by the people, the village chief named by the central government generally reflects the continuation of traditional authority patterns and the wishes of the local population. The *conseils des notables* consists of older heads of families in the village. The role of village chief is incompatible with that of the elected Rural Councillor living in the same village. The rural councillor does not directly represent his village, but is elected from a list presented by his/her party. This can lead to conflict and factionalism within the village when the village chief and Rural Councillor disagree.

### 3. *CR and Village-based Provision of Public Goods and Services*

When discussing the role of rural local government in the decentralized provision and production of public goods and services, it is useful to distinguish between services provided by the CR and those furnished at the village level. As a unit of local government, the CR has an investment budget which provides for school, dispensary, well, and community hall construction; markets; and other services. Although having no formal budget of its own, the village often provides a similar range of public goods and services--schools, health posts, recreational facilities for youth, wells--through its residents' voluntary contributions in land, labor, and capital. Village investments thus complement central and local government provision of desired services.

Before the 1972 administrative reform, central government financed most of the village-level public goods and services. Since then, the CR and village-based community groups have assumed a much greater role in providing village-based social infrastructure and other services. The disengagement of the state from the countryside, the rapid spread of community-based groups, and the rising importance of international and Senegalese-based NGOs working closely at the village level during the 1980s and early 1990s have reinforced these trends.

One of the most promising developments in Senegal is the growing evidence that local populations are taking more initiative on their own and no longer waiting for central government or the CR to provide needed public goods and services. The so-called "*mentalité d'assisté*," whereby villagers express their needs and wait for the providential state to step in to satisfy their requests, has begun to recede. A division of labor between the central government, the CRs, and community-based groups in the provision and production of public goods and services is also emerging. The central government thus provides the personnel for schools and dispensaries and more costly infrastructure such as hospitals, secondary schools, and large boreholes; local government finances small-scale social infrastructure investments; village-based groups usually finance the smallest-scale projects. Thus, the central government finances hospitals; the CRs finance dispensaries; and villages finance health huts.

#### **4. *Changes in Rural Local Government Since the Second Administrative Reform***

The Second Administrative Reform immediately preceded the November 1990 municipal and rural government elections. The elections resulted in greater representation for women and young men on the Rural Councils. This trend reflected the ruling party's desire to broaden its leadership base and give a larger voice to two key groups in Senegalese society whose support would be crucial in the 1993 national elections. Another trend was the presence of highly educated "village sons" presiding over the Rural Councils and the presence of more rural officials with formal education.

Field interviews with elected rural officials generally revealed greater satisfaction with the CRs as representative institutions as a result of the Second Administrative Reform. Local officials hailed the transfer of control over budgetary matters and disbursements from the subprefect to the CR president. However, many complained about the lack of compensation for their time and argued that rural government officials should receive some payment for their services. With their increased responsibilities, CR presidents, particularly those not literate in French, have also come to rely more heavily on their unpaid secretaries to keep CR records which, by law, are written in French. Secretaries tend to be young Rural Councillors with at least a primary school education. The majority of Rural Councillors remain illiterate in French and have little experience with formal local government and budgetary processes. There was general agreement concerning the utility of more training in local government procedures for Rural Councillors, the translation of basic laws and texts into the national languages, and the provision of functional literacy and numeracy courses for elected officials.

Administrative officials in the field generally accepted the need for reforms. However, some expressed the view that the Second Administrative Reform was implemented without sufficient preparation of the presidents and Rural Councillors for their new responsibilities and called for more training of local officials. Although stripped of most of their former powers, the subprefects continue to play a major role in many CRs in leading tax collection

drives and providing technical assistance to CR presidents in drawing up current CR budgets. Administrative officials also saw the need for continued surveillance of the CRs by the territorial administration in order to check corruption and to ensure compliance with national legislation and planning policies.

## IV. MOBILIZATION OF LOCAL FINANCIAL RESOURCES

### A. Introduction

Well before the grave crisis in Senegal's public finances starting at the end of the 1970s, the GOS in 1972 (Law 72-25 of April 19, 1972) transferred some of its authority to the Rural Communities.

The main objective of the reform was to associate the local populations in promoting their own development through local government. The 1972 reform did not give sufficient autonomy to the local populations. They were not given the authority to directly manage their resources. The local populations often felt excluded from the decision-making process because it was the subprefect who elaborated and executed the budget and disbursed the CRs' funds. A second weakness of the reform was that it did not permit the mobilization of sufficient resources to significantly alter the living conditions of the local populations. The lack of local control over CR spending and the paucity of resources mobilized led to widespread disappointment with the reform and demands for change.

In 1990, the government responded by inaugurating the Second Administrative Reform which transferred full budgetary control to the presidents of the CRs. While the 1990 reform satisfied the demand of the people for more direct control over local government, it did not resolve the problem of the limited ability of local government to mobilize sufficient resources to satisfy the local population's needs in public goods and services.

Based on a sampling of several Rural Communities (Mbane, Gae, Taiba-Ndiaye, and Sangalcam), this section provides an analysis of the characteristics and structure of local government financing which is then used to generate ideas on how to mobilize more financial resources at the CR level.

### B. Basic Characteristics of Rural Community Resources

#### 1. *Weakness of CR Resources*

The principal characteristic of CR resources is their small volume. For example, in the Senegal River region, the financial resources of the CRs examined by the mission for the 1990/1991 fiscal year amounted to only 200 to 500 FCFA per person. The Rural Community of Sangalcam near Rufisque managed to mobilize close to 1,000 FCFA per person; however, more than half of this amount came from fines levied by gendarmes patrolling an important road passing through Sangalcam.

These resources are very modest, especially when compared with those of the urban communes. Thus, in 1990/1991, the urban commune of Dagana, which was in considerable financial difficulty following the events in Mauritania, mobilized 1,300 FCFA per person;

that of Richard-Toll, more than 4,300 FCFA per person; and the *Communauté Urbaine de Dakar*, more than 6,500 FCFA per person.

On the other hand, in the Rural Communities visited by the team, one was impressed by the size and diversity of local resources collected to provide collective goods and services that fell outside the CR budget.

## 2. *Financial Tax Base Not Adapted to Public Needs*

A second important characteristic of CR resources is that they are not well adapted to fully meet public needs. The law (Article 76 of Law 72-25 of April 19, 1972 and modified by the Laws 79-82 and 83-59) provides the CRS with several sources of revenue:

- *the rural tax*--Every resident from age 14 to 60 must pay the rural tax (1,000 FCFA). The rural tax is usually collected by the village chief on the basis of a tax roll established by the subprefect and a treasury agent (*percepteur*). The chief receives 7 percent to 10 percent of the taxes collected. These are turned over to the treasury agent who serves as the CR accountant;
- *the TRIMPF (taxe representative de l'impôt du minimum fiscal)*--Salaried workers living within the jurisdiction of Rural Communities are also subject to an income tax which can vary between 900 FCA and 18,000 FCFA in addition to the rural tax;
- *minimum fiscal tax*--Professionals subjected to the *patente* and landlords with rental incomes must pay a minimum fiscal tax between 600 FCFA and 12,000 FCFA;
- *real estate taxes*--These taxes are based on the rental value of buildings and real estate located in the CR;
- *business tax or patente* (Law 90-01 of January 2, 1990)--The business tax is levied on industrial and commercial activities operating in the CR. This tax is well adapted to the small scale of commercial and industrial activities generally in the rural world; and
- *license fees*--These come from the sale of alcoholic beverages and other activities.

In 1986, the law expanded the diversity of potential CR revenue sources to include taxes on birth, death, and marriage certificates; market rental and parking fees; and on slaughterhouses, movies and entertainment, advertising, gas, and surveys (*bornage*). The CRs also received 60 percent of the product of fines levied for infractions of the law committed inside the rural community.

Rural Communities can also supplement their own resources through subsidies provided by the Local Government Equipment Fund (FECL). These subsidies do not amount to much. In 1988/1989, 255 million FCFA were budgeted for Senegal's 317 CRs (800,000 FCFA/CR).

The law pertaining to rural local government finances authorized CRs to dispose of resources proportional to their size (rural tax), the importance of the industrial and... commercial activities operating in their jurisdiction (minimum fiscal tax, TRIMF, *patente*, and licenses) and the value of the real estate and modern buildings developed in their area (real estate taxes). However, in reality, the rural tax provided most of the CRs' financial resources.

### *The Rural Tax as Primary Source of Revenue*

The rural tax constitutes the bulk of the tax base of CRs, providing an average of 70 percent of the total resources in the CRs covered in this report. Three factors explain the predominance of the rural tax. First, the tax base in many CRs is low because of the low level of commercial and industrial activities in the area. Second is the weak recovery of other local taxes. For example, many buildings in the CRs near Dakar are, in principle, taxable, but few pay any real estate taxes to their CR. In other instances, taxes are not collected because of the lack of logistical means to cover large areas or the lack of initiative on the part of local authorities. Finally, the third reason for the predominance of the rural tax stems from the fact that many taxes earmarked for the CR, though collected, wind up in the coffers of the urban communes. For example, the rural community of Mbane gets none of the TRIMF levied on the 800 wage-earners working for the CSS, even though many of the workers are Mbane residents. The CR of Mbane's loss in 1990/1991 amounted to approximately 12 million FCFA, or nearly double the revenue actually collected that year.

Another example of this phenomenon concerned the case of the CR of Ndoulo which did not collect taxes from the SEIB, a large peanut oil plant operating within the boundaries of the CR. Instead, the taxes went to the city of Diourbel.

### *The Rural Tax as Difficult and Costly to Collect*

The evolution of the recovery rates of the rural tax for Senegal's different regions is traced in Table 2 in Appendix B.

Only three regions, Fatick, Kolda, and Ziguinchor, had a rural tax recovery rate higher than 80 percent in 1990/1991. Some regions such as Louga and Saint-Louis have rural tax recovery rates averaging under 60 percent. Recovery rates in many CRs have been very erratic over the years (see Table 3 in Appendix B for a detailed analysis of rural tax recovery rates in the Department of Dagana).

The recovery rate depends on several factors:

- the authority of the subprefect;
- the degree of confidence the local populations have in the people managing CR funds;
- the degree of commitment of CR officers to collecting the rural tax; and
- changes in rural exodus migration patterns.

The departure of a subprefect, conflicts between villages, or the changing of a president of a CR can all affect the rural tax recovery rates. However, certain difficulties can also adversely affect tax collection rates. The CRs of Gae and Mbane had excellent recovery rates during the early and mid-1980s despite poor rainfall in their areas. However, starting in 1988/1989, the economic situation deteriorated and led to a sharp drop in the number of taxpayers in the area as young men left their communities to seek work elsewhere. This in turn led to a sharp decline in collection rates since those who left remained on the tax rolls.

The establishment of an accurate tax roll and the collection of the rural tax seem to be especially costly, particularly in relation to the amount involved. In the CRs visited by the mission, tax collection invariably involved tours by the subprefect, treasury agents, and the secretary of the CR who needed to use administrative vehicles in order to reach all the villages in the area. When one considers the high cost of gas and amortization and maintenance of vehicles, the long distances which have to be covered, and the amount of time spent by government and CR officials in collecting taxes, rural tax collection is clearly a costly venture.

### *Rural Tax as a Necessary Revenue for the CRs*

Despite all of the inconveniences discussed above (rigidity, high costs of collection), the maintenance of the rural tax seems necessary for three reasons.

First, the rural tax still constitutes the bulk of the receipts of most Rural Communities. This is particularly true of the poorest CRs which cannot count on other taxes because of the low level of industrial and economic activity in their jurisdiction. In a large number of CRs, no other tax or local user fees could provide an amount of revenue comparable to that provided by the rural tax.

Second, the very process of collecting the rural tax, which must be paid by all adults, creates a certain feeling of belonging to the same rural community. A cost recovery program based strictly on user fees and other charges would not have the same effect in creating a sense of membership in the rural community. In Taiba-Ndiaye, the rural tax recovery rate

increased from 40 percent to 90 percent, following an active campaign by the CR's leadership to explain the importance of paying the tax.

Third, the rural tax collection campaigns provide the opportunity for important exchanges between the leadership of the CRs and their constituents. The local population's reticence to pay sometimes reflects dissatisfaction with the kinds of projects and activities carried out by the CR with tax funds. The campaign also can permit CR officials to link CR investments to tax recovery rates, thus emphasizing the need for their constituents to make a greater effort if they are to benefit from more investments.

### *The Essential Role of the State*

While the mobilization and management capacities and the authority of the Rural Communities vary tremendously, the role of the state administration in mobilizing local resources at the present time appears to be indispensable for most CRs when it comes to setting up tax rolls and collecting taxes.

CR leaders interviewed said that without the support of state officials such as the subprefect, treasury accountants, and tax agents, it would be much more difficult if not impossible to collect financial resources for the rural community. While some CRs undoubtedly do well in collecting their taxes, state intervention remains necessary in most CRs to avoid a fall-off in tax collection rates. This intervention has been explicitly requested by different CR officials. The administration, especially the subprefects, continue to actively support the CRs. Thus, despite the transfer of powers from the subprefect to the presidents of the CRs since the establishment of the Second Administrative Reform in 1990, there seems to have been no reduction of the subprefect's involvement with the Rural Communities.

In addition to their tax collecting role, state officials also provide indispensable assistance in checking and policing the management of CR financial resources. For example, the collection of resources involves village chiefs, representatives of the CRs, and market tax collectors. In the case of the market collectors, it is difficult to recruit stable and honest individuals for the job. Some form of state surveillance is needed to discourage embezzlement of funds or a lack of rigor in handling CR finances that would provide disincentives for taxpayers to meet their obligations. The Treasury service through the CR accountant (*receveur*) plays this indispensable role by tracking CR revenue and expenditure totals and the amounts actually spent. The Treasury accountant also checks the bookkeeping records of the CRs and provides other financial services.

### **C. Propositions for Increasing Rural Community Financial Resources**

The mobilization of more local financial resources can be achieved through adjustments in the rural tax and expanding the revenues currently authorized by law. Other

measures could be taken in favor of certain CRs, permitting them to deal with specific problems.

### ***1. Adjustments in the Rural Tax System***

In the absence of substantial alternative resources, the rural tax will continue to provide the bulk of CR revenues, especially for the poorest Rural Communities. Certain improvements could be made in the current system.

- ***Change the law to give CRs the option to raise the rural tax.*** The present rate of 1,000 FCFA in many communities is very low compared to the people's ability to pay. This tax could be raised to 2,000 FCFA. Poorer CRs would have the option to retain the old tax rate.
- ***Provide prompt payment to rural tax collectors.*** By law, only the village chief can receive remuneration. In many CRs, the secretary and other officials collect rural taxes without remuneration. This situation engenders conflicts and frustrations, and poses a dilemma. If the law is changed to provide payment for all tax collectors, this will create conflicts between the village chiefs and CR officials. On the other hand, if it is decided to maintain the role of the village chief, the latter should receive prompt payment for his services as an incentive to carry out his job more effectively, while the administration should take measures to reinforce his authority.
- ***Provide taxpayers with accurate information concerning the composition of the tax roll, the amount of rural taxes collected, and the use of these taxes.*** This information could be translated into the local languages and made available in the CR headquarters. These documents could also be used as part of an adult functional literacy program. Transparency in the rural tax collection system would likely facilitate higher recovery rates.

### ***2. Increased Diversification of CR Revenue Sources***

The preponderance of the rural tax in rural commune revenues can be explained by the limited tax base of most CRs. This is particularly true of the poorer CRs. For these CRs, the law does not provide for any significant source of revenue other than the rural tax. On the other hand, most of the CRs visited by the mission are not in this situation and can enlarge their tax base by better enforcement of current local government tax legislation. More resources can be raised in the following areas:

- ***TRIMF***--If the TRIMF were enforced in Rural Communities such as Mbane, Gae, or Taiba-Ndiaye, the CRs would have access to more substantial and diversified revenues. For example, 800 residents of Mbane work for the CSS and would bring in 12 million FCFA in new revenues if TRIMF taxes were

returned to Mbane. The approximately 150 workers living in Gae could, through the TRIMF, generate 2.25 million FCFA in new revenues for the Gae CR. This would amount to 65 percent of Gae's actual receipts in 1990/1991. A large number of Taiba-Ndiaye residents work in the Taiba Phosphate mines and their TRIMF, if returned to the CR, would also provide substantial new revenues for the CR budget.

- ***More systematic application of the patente***--Here the main problem is the lack of means and incentives for state tax collectors to apply the business tax since all of the revenues would be turned over to local government. To remedy this situation, the administrative services could be given a share of the receipts as compensation for levying and collecting the tax.
- ***Increased real estate and land development tax revenues***--In semi-urbanized CRs like Sangalcam, many buildings and improved real estate remain untaxed. The introduction of real estate taxes would establish more equity in the existing tax system and provide CRs with supplementary revenue sources. Tax reforms could widen the base by lowering the threshold for exemptions and reducing the prescribed tax rates to encourage greater compliance with the law. Lands allocated by the CRs to private individuals who have used this land for orchards and vegetable farming with enclosed walls and other improvements could also be put on the tax rolls. However, the successful application of this kind of tax would probably require the elaboration of a rural cadastre. CR lands taken over by large enterprises such as the CSS and the Taiba Phosphate Company could also be taxed to compensate the CR for the land being exploited by the enterprise.
- ***User fees and cost recovery charges***--Since the second phase of the administrative reforms, many CRs are involved in attempts to recover the costs of providing various services. A more rigorous collection of market fees could provide additional resources. There also is a trend towards charging for services and infrastructure construction and maintenance (e.g., water, schools, dispensaries) which takes place outside of the framework of the CR budget. The mobilization of these local resources collected by various specialized committees and associations--APEs, health committees, water management committees, women's and youth groups--supplement the resources mobilized by local government to provide public goods and services. For example, the resources mobilized by the local populations in the village of Taiba-Ndiaye alone probably surpasses that mobilized by the entire CR of Taiba-Ndiaye through taxes. This example may be somewhat of an exception given Taiba-Ndiaye's exceptionally well-organized community organizations and relatively favored position. However, it is indicative of the potential local communities have to mobilize significant levels of resources to provide collective goods and services desired by their local residents.

### 3. *Additional Tax Revenue Potential*

Rural Communities where livestock activities are important generally have few commercial and artisanal activities, little developed real estate, and few buildings. To compensate for the absence of taxable resources, these CRs might revive the cattle tax, which was previously collected at the same time as the rural tax until its abolition following the 1973 drought. The restoration of the cattle tax would face several obstacles:

- decline in income of many herders affected by recurrent drought;
- difficulty in counting the number and attributing individual ownership of livestock herds;
- difficulty in seizing cattle and other livestock in case of non-payment of taxes because of the mobility of herds; and
- traditional resistance to restoring a tax after its abolition.

Nevertheless, reviving the cattle tax offers certain advantages. One could use the same collection structures used for the rural tax and lower unit tax collection costs. A cattle tax might also provide incentives for herders to practice more intensive livestock raising, and thus put less pressure on traditional pasture lands being overgrazed. Only the relatively privileged sectors of the population who could afford to pay would be taxed.

During the course of the mission, the team was not able to test the feasibility of the proposed cattle tax nor the relevance of the arguments in favor of its restoration. However, none of the leaders of the CRs interviewed rejected this proposal out of hand. Several CR officials did underscore the need to keep the tax rate very low if it were to be accepted by the local populations.

While revisions in tax legislation could provide some CRs with new sources of revenue more adapted to their potential and needs, the poorest Rural Communities may need more external financial assistance to meet their collective needs. In such cases, subsidies and transfers of resources to these CRs may be necessary. At the present time, the *Fonds d'Equipement des Collectivités Locales* (FECL) is the only mechanism capable of playing this role. However, the poorest CRs have little chance of receiving support from the FECL since they rarely pay the 100 percent of rural taxes required by the FECL to be eligible to receive funds. The degree of support is also limited by the relatively small size of the FECL. The government's present financial difficulties preclude any major increase in these funds. However, it would be useful to make the criteria for access somewhat more flexible and to target these funds to the poorest CRs.

A project for allocating funds to the poorest CRs by setting aside 25 percent of the rural tax was elaborated in 1975 without being applied. The procedure was relatively complicated and the transfer of resources would have been based on a relatively small resource base.

Certain CRs having demonstrated exceptional management ability under strict conditions should be granted access to credit to purchase equipment. For example, without credit, Taiba-Ndiaye's Water Committee cannot afford to purchase meters to discourage the waste of water resources. The savings made by curbing water waste would permit reimbursement of the loan. Strengthening the management skills of officials responsible for handling CR finances is also an essential precondition for successful credit programs.

#### D. Conclusions

Senegal's Rural Communities are the result of a long gestation process which began in 1972. The 1990 reform in granting more autonomy to the CRs reduced one of the fundamental causes of local people's dissatisfaction vis-a-vis rural local government. However, the persistent weakness of the CRs' financial resources considerably limits their capacity to promote development activities.

The rural tax will continue to provide the bulk of CR resources, especially for the poorer CRs. By raising the rural tax rate and applying more rigorously some of the existing tax legislation, revenues can be diversified and increased considerably.

The greater autonomy of the CRs provides a favorable environment for strengthening and diversifying the financial resources of the Rural Communities. Numerous initiatives following the 1990 reforms have been taken. Moreover, parallel to the mobilization of the CR's own resources, substantial funds have also been mobilized at the local level by community-based committees, groups, and associations. Despite the movement towards greater autonomy in mobilizing local resources, state agencies still have an important role to play as the management capacity of most CRs is still weak. State officials such as the subprefect and treasury agents also continue to play essential roles in helping rural local government to mobilize resources.

## V. NON-CENTRALIZED PROVISION OF PUBLIC GOODS AND SERVICES

In Senegal, as in most Sahelian countries, the state, through its central ministries, directly provides much of the public goods and services in such areas as education, public health, potable water, and roads. The failure of central government to adequately meet the public's needs in these areas has led to new state policies which are transferring more authority and responsibility to local government and non-state actors and institutions. This section provides a brief survey and analysis of the following:

- Senegalese policies, programs, and projects concerning the non-centralized provision of public goods and services (examples of innovative programs are cited);
- the main actors involved in delivering these services (e.g., local government, special jurisdictions, local communities and specialized associations, donors, NGOs, and the private sector); and
- the key issues and constraints associated with transferring more responsibility and power to non-centralized providers and producers of public goods and services.

### A. Educational Services

The *Ministère de l'Éducation Nationale* (MEN) is primarily responsible for providing formal educational services to Senegal's population and establishing national educational policy. In 1988/1989, the GOS allocated 22.8 percent of the national budget to the educational sector and paid for 87.6 percent of the total cost of public schools (Kinsey et al.). More than three-quarters of the state's educational budget goes to paying the salaries of school teachers and administrators. Less than 5 percent is allocated for school supplies and textbooks. The rest of the budget consists of resource transfers to subsidize secondary and university students and university operations. In 1987, recurrent costs consumed 99.2 percent of MEN's total budgetary expenditures, leaving virtually nothing for investments in school infrastructure. Since the beginning of the 1980s, GOS has allocated a larger share of the education budget to the primary education sector. Heavy pressure from university students and professors, a powerful interest group in Senegal, makes it difficult for the GOS to divert more resources from higher to primary school education.

Although primary school enrollment rates rose from 40.9 percent in 1978 to 54.6 percent in 1987, the educational system is facing a serious crisis due to the growing number of students entering school and the inability of the system to train enough teachers to accommodate them. Low salaries and poor working conditions have discouraged Senegalese from entering the teaching profession, resulting in teacher shortages and growing class sizes.

This has led the government to rely more on private schools and to shift more of the burden for assuming educational costs to local governments, communities, and parent-student associations (APEs). A major effort will have to be made if the GOS is to achieve its goal of getting all primary age children into school by the year 2000. The World Bank has encouraged the GOS to shift resources from higher education to the primary school sector and has increased its contribution to financing primary school funding since the mid-1980s.

Private schools, concentrated mainly in the urban areas, provided 60 percent of the enrollment for pre-primary schools, 8.9 percent of the enrollment for primary schools, 35.3 percent of the enrollment in lower secondary schools, and 21 percent of the enrollment in upper secondary schools in 1985. These figures have gone up in recent years. The GOS and donors have been supportive of the expansion of private school education as a means of cutting down on state expenditures in education. The GOS provides modest subsidies to over 40 percent of the private schools. Most private schools are Catholic. Koranic schools, supported by parents, local religious leaders, and Arab states, have been rapidly expanding in the rural areas. In some rural areas, they are far more numerous than the public schools. Unlike other Senegalese private schools, they do not follow a state-prescribed curriculum and do not receive subsidies.

Local government is primarily responsible for school construction, rehabilitation, and maintenance. Between 1977 and 1985, municipal resources allocated to education grew from 2.4 percent to 20 percent of municipal budgets (Kinsey et al.). A significant part of the rural commune budget is also allocated for these purposes. Families and parents' groups have also contributed to school construction and maintenance. During the 1980s, local communities built more than two-thirds of the new classrooms located in rural areas.

The village-based APE has played an increasingly important role in financing school construction and providing school materials in the rural areas. The APE is a relatively new organization. The oldest APE encountered in the team's field work dated back only to 1973; most had their origins in the 1980s. The APEs generally collect dues (*cotisations*) from each family based on the number of students going to school. The amount of annual dues varied considerably depending primarily on the degree of integration of the village into the money economy. The APE of Malicka, a large village attached to the urban commune of Pikine in the Cap Vert region, levied 5,000 francs CFA per student while those in poorer rural areas levied fees from 200 to 500 francs CFA per student. Some villages levied monthly fees. Other means of raising money for schools in rural areas consisted of soliciting contributions from wealthy village sons living in the towns; special collections for specific purposes (e.g., benches and tables); entertainment events in which the proceeds would go to the schools; and contributions by political parties during election campaigns. In some cases, village schools had their own gardens and proceeds were used for school improvements.

Senegalese schools are woefully lacking in school supplies, texts, and basic school equipment such as chairs, desks, and blackboards. While the state pays for all the school teachers in the public school system, it has little left over for basic school infrastructure and

equipment, thus leaving the responsibility to local government, local communities, and parents. Senegalese school teachers are more reluctant to teach in villages that have poorly equipped schools.

The criteria for choosing CR and village-financed school construction sites do not always coincide with those of MEN and regional planning officials. In some instances, villages may construct a classroom and not get a teacher because their village does not fit the criteria laid down by the MEN. The village may be too small to justify posting a teacher there; it may already have several classes while other villages in the area have none; or it may be too close to another village with school facilities.

Adult functional literacy and numeracy programs in the national languages constitute another important educational service in the countryside. These programs are generally part of various training projects financed by foreign donors or NGOs. The village usually provides the site for the courses and sometimes maintenance for the trainers. Women's groups, in particular, have enthusiastically welcomed functional literacy programs. Although the Senegalese government in 1991 set up a Basic Education and Functional Literacy Ministry, it is not clear whether this ministry will have sufficient funding to expand its programs and make functional literacy an important priority in the rural areas.

A promising new program to reduce the costs of school construction, rehabilitation, and maintenance involves collaboration between the MEN, local government, APEs, and the private sector. Financed by the World Bank, *Projet Education IV* provides funds for 450 local schools in the Diourbel, Fatick, and Louga regions. Rather than having the state handle all phases of construction, rehabilitation, and maintenance, the MEN provides funding for heavy equipment and materials that cannot be produced locally. Local government manages the project and is free to hire local construction firms to carry out the work.

The local population also makes a contribution in providing local materials (e.g., sand and water) and voluntary labor. School *comités de gestion* consisting of representatives from the APE, the school director, and a representative of the CR or the municipality sign a protocol with the MEN which specifies each party's respective responsibilities in the task at hand (e.g., school construction, rehabilitation, or maintenance). However, the protocol does not provide penalties for government laxity in meeting its contractual obligations. Disputes are generally resolved through negotiations among the concerned actors. The *comité de gestion* is presided over by the mayor or the president of the CR; the vice-president is the head of the local APE; while the secretary-general is usually the local school principal. By decentralizing the project management and production of these services, the project has succeeded in cutting costs by as much as 50 percent. The project also provides training in basic maintenance and rehabilitation skills. It remains to be seen whether the project will survive once external financing ends.

## B. Primary Public Health Services

The *Ministère de la Santé Publique et des Affaires Sociales* (MSPAS) has primary responsibility for defining and implementing Senegal's national health policy. Slightly more than 5,000 health personnel work for the MSPAS, including 459 doctors, 2,487 nurses, and 482 midwives. After falling steadily since the 1970s, the percentage of the national budget allocated to the health sector is once again rising. The 1990/1991 state budget allocated 4.7 percent of total expenditures--approximately 11.5 billion CFA--to the health sector. The central government now contributes an estimated 33 percent of the total spent on health in Senegal while foreign donors during the 1980s provided about 18 percent of total health spending. The donors, headed by the World Bank, are pressing the GOS to increase the portion of the budget going to the health sector and reorganize the overly centralized health care delivery system.

During the 1980s, the private sector and local communities assumed a greater role in providing basic health services. During this period, private sector health expenditures accounted for 40 percent of total health expenditures while local government budgets provided 9 percent of health expenditures. In 1988, Senegal had approximately 1,400 *cases de santé* (CS) or health huts at the village level staffed by local male and female health agents. The CS distributed basic medicines and provided simple primary health and maternity services outside the formal public health system. Over 2,400 village health agents supported by their local communities work in this system.

Also during the 1980s, USAID sponsored a semi-sustainable village health hut program in the Peanut Basin. Approximately 50 percent of the health huts in the project area are still functioning on their own resources following the end of USAID funding for the project about a year ago. The majority of private physicians, clinics, and mid-wives are concentrated in Greater Dakar and are geared to serving Senegal's middle and upper classes. The rest are located in major urban centers such as Saint-Louis and Thies. On the other hand, non-profit NGOs operate throughout the country and provide an estimated 10 percent of primary health care, and maternity and childcare services. There has also been a growing interest in traditional African healers and medicines. ENDA, a Dakar-based NGO, has encouraged research on traditional local medicines and distributed information on this topic throughout the country.

In 1989, the GOS announced a new national health policy which stressed greater decentralization in the provision of primary health services (World Bank, March 1991). The new policy included the following elements:

- increased participation of local populations through *organisations communautaires sanitaires* (OCS) and a greater role for NGOs and the private sector;

- greater decentralization of the public health system, primarily through strengthening the system of specialized health jurisdictions--*districts sanitaires* (DS);
- rationalization of the production, use, and distribution of basic medicines;
- better management of human, material, and financial health resources; and
- establishment of adequate user fees to cover costs of medicine and auxiliary health personnel at the local level (*postes de santé*--PS) while the MSPAS continues to pay the salaries of state health personnel: doctors, midwives, nurses.

The new system of health districts will create 45 DSs and cover the entire country. Each DS will service a population of 150,000 to 300,000 people. As of mid-1992, the new districts were not fully operational. Most of the village health committee leaders interviewed in the field were not aware of the new changes. An important innovation of the new system is the development of a network of autonomous OCSs. These will consist of local CSs which will participate in the management and financing of local primary health care delivery. The new system will provide the local CSs with a legal status, financial and managerial autonomy, and clearly defined rules for financial management. The new system incorporates new rule changes to avoid some of the pitfalls of the former system which gave the *Associations pour la Santé* (APSs) representing the local populations tutelary powers over CSs at the grassroots level. As a result, local people often felt excluded from the decision-making process and lost interest in participating and financing primary health care activities. The rural notables who frequently dominated the APSs managed local health funds poorly and often diverted funds from their intended purpose.

The CS at the rural health post level, which covers about 10,000 people, will have a general assembly which will include *chefs de carré* and representatives of women's and youth organizations. The General Assembly chooses a bureau which is responsible for approving local health care programs, user fees, conditions of participation and access to health services, and use of available funds. Bureau members will be held accountable, due to new legislation which will provide legal sanctions against those members violating the rules and misallocating resources. This provides the CS with control and rule enforcement mechanisms which did not previously exist.

Each Rural Community will be expected to contribute from 1 to 3 million FCFA and to charge about 400 FCFA per consultation. Receipts are expected to cover 100 percent of the costs of medicines, the salaries of auxiliary personnel, and part of the recurrent costs of operating the local health post. Expenditures on medicine are expected to take up 70 percent of receipts; salaries, 25 percent; and recurrent costs, 5 percent. These are suggested targets rather than legally binding obligations.

While clearly an effort to decentralize the present public health care delivery system, this program seems to have been designed from above and sets more or less uniform standards for all of the DSs and CSs. It remains to be seen whether the system will be flexible enough to allow for local variations in the patterns of CS spending to meet health care priorities as defined by the local populations themselves.

As in the case of school construction, local government and local communities assume most of the responsibility for building neighborhood and rural dispensaries, maternity units, and village health huts. The MSPAS continues to be responsible for hospital and large-scale medical construction. Neighborhoods in urban areas often lack sufficient primary health care facilities due to national health budget cuts and insufficient municipal revenues for infrastructure investment. In the countryside, the CR budgets, which are almost exclusively investment budgets, allocate a significant portion of funds to building health facilities (e.g., health posts and maternities). Most CRs have a social affairs committee which receives requests for dispensaries and maternities from the villages and makes recommendations concerning the allocation of CR budgetary resources. Villages generally provide for simpler health facilities from their own resources. Thus, most of Senegal's 1,400 village health huts were built with local labor and materials.

Villages that have health huts, maternities, or dispensaries usually have their own health committees (CS); villages with no health facilities generally do not. Services in these facilities are not free. Adults pay 200 FCFA per consultation and children 100 FCFA. Having a baby delivered at the local maternity clinic costs about 2,500 FCFA. The CS generally collects money from the villagers to construct facilities or to purchase essential medicines. The president and the treasurer usually work closely with the local health agent--the state nurse or the auxiliary nurse--in ascertaining needs and purchasing medicines. In many cases, the signature of all three is required on purchase orders. The CS also works closely with local health officials in mobilizing rural populations for vaccination campaigns, and for mother and child health-care programs. In all the villages visited by the mission, the residents reported that infant mortality rates were lower than in the past and that their children were generally more healthy.

It is worth noting that some of the basic health statistics in Senegal have improved (e.g., infant mortality rates, life expectancy, morbidity rates for major diseases such as malaria and measles) despite a general decline in government spending in the health sector since the 1970s. In this instance, locally and NGO-produced primary health care services have probably been a major factor in improving the basic health statistics. Prenatal and maternal baby care programs, vaccination campaigns, the distribution of inexpensive medicines, and better water supplies have all contributed to this positive development.

## C. Municipal Services

Due to large differences in the scale of their respective budgets, it is useful to make a distinction between the urban services provided by the CUD and its communes which comprise about half of Senegal's total urban population and those provided by smaller municipalities outside of Cap Vert. For the most part, CUD and municipal budgets are devoted primarily to covering personnel costs, despite central government guidelines encouraging municipal government to allocate 25 percent of their budget for investment. Although Senegalese legislation is clear about financial and administrative responsibilities, there are no standards for service provision and little technical assistance from the central government (RTI 1989).

### 1. Garbage Collection and Sanitation Services

Adequate garbage collection has been a chronic problem for Senegal's towns. Since 1985, the CUD has contracted out this task to the *Société Industrielle d'Aménagement Urbain du Sénégal* (SIAS). The SIAS receives 2 billion CFA a year from the CUD to collect Greater Dakar's garbage. SIAS' garbage trucks operate effectively only in areas where the streets are paved. This means that poorer neighborhoods with unpaved streets and roads have not been well served by the system. However, in many neighborhoods, the local population have organized themselves to co-produce garbage removal. They use wagons to collect the garbage which they deliver to areas accessible to SIAS's trucks. This system seems to be working fairly well as observers have noted a distinct improvement in the city's appearance because of improved garbage collection. Dakar has also benefitted from a remarkable clean-up drive launched by various youth groups since 1989 to beautify the city.

In most of the interior towns of Senegal, garbage collection is directly carried out by the municipal governments. In most instances, the municipality rents the trucks and equipment and then uses its own personnel. Most garbage collection takes place in the center of town. Outlying residential and poorer neighborhoods are often neglected. Some of the larger regional centers are now contemplating signing contracts with SIAS. Although local government officials have expressed interest in privatizing the production of services, the private sector in the interior has shown little interest in organizing garbage collection companies. Little work has been done on analyzing actual costs of garbage collection.

The Mayor of Louga has recently launched an innovative project--*Projet Environnement Urbain de Louga* (PEUL). It hopes to solve Louga's garbage collection problems while providing employment and revenues to local Louga residents who will be trained and organized into a *Groupement d'Intérêt Economique* (GIE). In 1984, the government passed a law that enabled small-scale entrepreneurial groups to constitute economic organizations having financial autonomy and access to formal credit sources. The proposed GIE in the PEUL project will be responsible for collecting and recycling garbage

into compost which will be used to fertilize reforestation and vegetable garden projects. The city, which will assume primary responsibility for managing the project, is now seeking funding to get it started.

Most of Senegal's urban communes lack the modern heavy equipment needed to maintain sewer systems. Most towns rely on open air canals or septic tanks. Dakar has 95 percent of Senegal's sewers. A state enterprise, the *Société Nationale d'Exploitation des Eaux du Sénégal* (SONEES), operates the sewer mains but lacks the resources to function effectively outside of Dakar. The GOS recognizes that sanitation services are a relatively low priority in the government's global water policy due to lack of financial resources. Italy and the African Development Bank have supported projects to upgrade sanitation facilities in Dakar and elsewhere. Lack of proper sewage collection and treatment presents serious health risks for Senegal's urban populations and the natural environment.

*Environnement et Développement du Tiers Monde* (ENDA) has launched some neighborhood projects in Dakar in which the local populations build their own simple facilities to evacuate household waste and drain excess water collecting in ponds near their houses. Although an interesting experiment, the scale is too small to resolve Dakar's enormous sanitation problems.

## 2. *Public Utilities: Water and Electricity Services*

Greater Dakar has been experiencing water shortages due to the rapid population growth. Consumer use constitutes about 50 percent of the total water used in Dakar. The GOS is counting upon the Canal du Cayor project to solve Dakar's water problems in the future.

SONEES is responsible for providing drinkable water to Senegal's urban centers. Until recently, the urban communes have provided public standpipe facilities and free water for local populations. This has created several problems:

- populations tend to waste water because, as it is free, they have no incentive to use the resources more carefully;
- urban communes cannot afford to pay SONEES for the water consumed by the public standpipes because of insufficient municipal revenue collection. In 1987, the communes owed an estimated 1.2 billion CFA to SONEES; and
- non-payment of municipal water bills deprives SONEES of the revenues which it needs to maintain its services.

One solution now being tested is the privatization of existing public standpipes and the suppression of public standpipes in neighborhoods where 75 percent of the population are hooked into the SONEES system. Under the privatization system, the exploitation of each

public standpipe is turned over to a private water manager (*fontainier*) who charges a user fee of 5 CFA per basin of 25 liters. So far, only a small fraction of the total number of public standpipes in urban Dakar has been privatized. It remains to be seen whether the *fontainier's* estimated monthly earnings of 5,000 to 17,000 CFA per month will provide sufficient incentive to attract reliable private water managers.

The number of private subscribers connected to the SONEES system has risen steadily in the past decade, especially in Dakar, due to financing by the *Caisse Centrale* to install the basic infrastructure. Local users also contribute part of the costs of hooking up their homes to the system. Approximately 60 percent of urban consumer water use is plugged into this system while public standpipes provide 40 percent of urban water consumption. The expansion of privatized public standpipes and private consumer subscription to SONEES will ease the current burden on urban communal resources. It also marks the beginning of a sustainable public water works system.

Municipal government is also responsible for public street lighting. The *Société Nationale d'Electricité* (SENELAC) produces the electricity and supplies the light poles. It then bills the communes for these services. Like SONEES, SENELAC often has problems collecting full payment from the communes because of the generally poor state of urban finances.

For their part, public utilities such as SONEES and SENELAC often do not pay the communes the taxes they owe after collecting fees from paying customers connected to the water and electricity systems, because they see this as a way to reduce the communal arrears for services supplied.

### 3. *Other Municipal Services*

Communes are responsible for all street and road maintenance in their jurisdiction except on national roads. Outside of Dakar, few municipal governments can afford to acquire and keep up the equipment needed to maintain streets and roads. They often call the *Ministère de l'Équipement* for assistance or contract out the task to the private sector.

Communes also play an important role in allocating lots and putting in basic infrastructure for urban housing projects. However, the communes play only a minor role in providing urban housing. This remains the domain of the *Ministère de l'Urbanisme et de l'Habitat* (MUH), the *Société Mobilière du Cap Vert* (SICAP), the *Office des Habitations à Loyer Modéré* (OHLM), and the *Banque de l'Habitat Sénégalais* (BHS). Since the mid-1980s, the World Bank has financed a wide range of low and middle income housing in the CUD.

Communes in Senegal also provide infrastructure to support private sector activities. This includes the construction of public market facilities, transport stations for taxis and trucks, lodging facilities, artisan centers, and special areas for industrial zones.

#### D. Rural Water Services

One of the GOS' main national priorities during the 1980s was the provision of water services to the countryside. Between 1981 and 1991, the number of boreholes increased from 100 to 550. While the larger boreholes have been financed mainly from the state budget and foreign aid, the CRs have financed construction of wells and smaller boreholes within their jurisdictions. Well construction and repair is often the most important single item in CR investment budgets. In some instances, villages have built wells and boreholes with funds collected by the local community and contributions from former village residents working abroad or in the capital. NGOs have also financed the construction of numerous wells throughout the country.

Lacking sufficient personnel to maintain the rural water infrastructure, the Senegalese Water Ministry has turned over partial responsibility for maintenance of rural boreholes to local management committees (*comités de gestion*) who select someone from their area to serve as a *conducteur* or borehole manager. The *conducteur* receives training from the Water Ministry concerning preventive maintenance and small repairs. After being trained, the *conducteur* returns to the village and receives a small stipend from the community for his services. Unfortunately, the stipend is often not enough to retain the *conducteur*, who leaves to seek more remunerative employment in the towns. To remedy this problem, there are now plans to train women to do the job as they are less likely to leave the village.

The rural water distribution system in the village of Taiba-Ndiaye reflects a high degree of organization by its residents. Taiba-Ndiaye has a large borehole that was donated by the Japanese. The borehole provides water directly to 92 village households hooked into the system. It also supplies two public fountains and provides water for sale to herders.

A mechanic who receives 30,000 francs CFA per month manages the system. This entails keeping the books for expenditures and receipts, purchasing fuel and other materials, and enforcing the collection of user fees. Expenditures include costs for fuel needed to pump the water from the borehole, for maintenance and repair, and for the equipment required for household hookups. The mechanic is assisted by a *comité de gestion* which collects 200 francs CFA per month from each adult male and 150 francs CFA per month from each adult female hooked into the system. People pay an additional fee if they have showers and faucets. At the public fountain, water is sold at 50 francs CFA per container. Herders bringing their livestock to the borehole also pay a fee proportionate to the size of their herd and the kind of livestock being watered.

One of the most interesting aspects of the system is its payment enforcement mechanisms. Fee collectors keep 10 percent of what they collect. If a subscriber does not pay, the management committee uses several means to pressure the delinquent client. First of all, the names of those with arrears are broadcast over the loudspeakers of the village mosque. The village chief and local notables follow up with a visit, urging the delinquent customer to pay. Then, a *comité de saisie* is authorized to seize some of the delinquent's assets (e.g., a

pot, a sheep, etc). The impounded item is not returned until the person pays. The final step is to cut off the recalcitrant's water supply.

Despite the relatively efficient organization of the system, it still runs a chronic deficit for several reasons:

- irrational use and waste of water;
- theft of water by non-subscribers; and
- the absence of individual incentives to conserve water since users are charged a flat fee rather than a specified amount based on the water actually consumed.

During the interview, the manager suggested that the village purchase meters to control water use and to assess charges based on use. The Taiba-Ndiaye case study demonstrates that villagers have the capacity to manage and incrementally improve their own water supply systems.

## **E. Rural Road Services**

At the present time, the *Ministère de l'Équipement, des Transports, et de la Mer* (METM) retains most of the responsibility for road construction and maintenance in the country. In 1991, the government launched the *Projet d'Ajustement/Investissement du Secteur des Transports* (PAST). One of the main objectives of PAST was the privatization of road construction and maintenance services. Up to 75 percent of such services were to be privatized by the end of the project, financed jointly by the World Bank, FED, BAD, France, Italy, and Finland.

Local government in the rural areas is responsible for maintaining small feeder roads. Thus, part of the CR budget goes to rural road maintenance. Villages also rely heavily on local voluntary labor to co-produce partial maintenance of feeder roads. As the CRs do not have the equipment needed to maintain feeder roads, they call on state services or the private sector to do the grading.

In rare instances where the CR is located in an area near a large-scale enterprise, it sometimes benefits from road maintenance services provided by the private company as a "gift" to the CR. Thus, the *Compagnie Sucrière Sénégalaise* (CSS) used some of its graders for rural road maintenance in the CR of Mbane while the Taiba Phosphate Company did the same for the rural community of Taiba-Ndiaye.

## F. Mechanical Millet Milling Services

In many Senegalese villages, mechanical millet milling is an important service provided by local women's committees. Introduction of this service has saved many hours of labor for young girls and women who previously had to pound millet by hand. It has freed them for other remunerative activities (e.g., tree planting, vegetable gardening, and artisanal production).

In most communities, millet milling as a collective activity for women's groups began with a gift of a mechanical mill from either the state or an NGO to the village. The women's group then organized a *comité de gestion* and named officers to run the operation.

The village of Djingué provides a typical case study of a collective millet milling service produced by village women. Djingué received its mill in 1991 as a gift from the Ministry of Social Affairs. The village men built a sheltered area to house the millet mill and protect it from the elements. The village women set up a *comité de gestion*. Some of the officers were trained to operate the mill. The group charged 15 FCFA per kilo or 25 FCFA for two kilos. The operation drew women from other villages as well. Receipts were set aside for four purposes:

- to purchase fuel to run the mill;
- to put aside money for repairs and replacement of the mill;
- to pay the women who ran the mill; and
- to invest part of the profits in other remunerative activities engaged in by the women's group in the village such as cattle fattening, raising rabbits, and petty trading.

## G. Rural Legal Services

Legal services and courts in Senegal are highly centralized in the capital and in the larger towns. Moreover, the rural populations often do not understand the complex web of laws and regulations emanating from the capital that directly affect their everyday lives. These include laws and regulations concerning inheritance, hunting and forestry rights, land use and location, the rights of women and youth, and family matters.

Rural local government thus far has no mechanisms to provide legal services for rural people. During the colonial period, public letter writers and so-called *agents d'affaires* charged fees to tell rural people about legal issues and help them to resolve legal disputes. In 1980, the GOS abolished the role of the *agent d'affaires*. That left only the public letter

writers to function as rural legal advisors. Rural residents rarely hired lawyers who lived in the larger towns and charged more for their services than most rural dwellers could afford.

During the mid-1980s, the Ford Foundation sponsored a project to train paralegal specialists to provide free legal services to rural populations (CONGAD 1987). The training included providing knowledge of the rural environment and laws specifically applicable to the rural areas, including land tenure and tax laws. The project operated in Eastern Senegal where legal services, even in the regional capital of Tambacounda, were virtually nonexistent. OFADEC, one of the major NGOs working in the region, provided most of the logistics for the paralegal personnel who were recruited from among university students. The project improved peasants' understanding of the law and their rights and obligations. It also created a dialogue between state agents and law enforcement officials on the one hand and rural people on the other.

Provision of paralegal services was a highly innovative project. Successful implementation of decentralization strategies requires that local people fully understand the new laws and regulations affecting them and their relation to the state. Availability of paralegals also provides rural people with greater access to legal recourse when laws are violated by state agents or their own local officials. These paralegal services would be particularly helpful if attached to the CRs. It would also be useful to translate the most important laws and regulations affecting rural dwellers into the local languages. One might add a paralegal agent to the team now working for the *Centres d'Expansion Rurale* (CERs).

## H. Rural Extension Services

In 1960, the GOS set up multifunctional CERs to provide a wide range of extension services to rural populations at the arrondissement level. Since their inception, the CERs have been underfunded and unable to effectively fulfill their original mission. The CERs were supposed to provide technical assistance to the Rural Communities in areas such as agriculture, animal husbandry, fishing, forestry, home economics, and land use planning. Most CER activities depend heavily on donor-financed projects since the government rarely commits enough resources to do more than pay the salaries of local CER agents.

With the growing emphasis on decentralization, the CERs will be called upon to play a greater role in supporting the CRs. Recently, CERs have helped CRs draw up four-to-five-year local development plans, through the support of the German-based Conrad Adenauer Foundation. Ideally, the CERs would be financed by local resources and be directly accountable to the CRs. However, CRs, in fact, lack the financial resources to support the CERs; moreover, the current law forbids them to hire personnel even if they had the funding to pay CER agents. In reality, CER agents remain accountable to central government hierarchies and CERs still suffer from logistical problems (lack of vehicles, gas) which are overcome primarily through external funding.

Contact with CER officials in the field revealed a diversity of roles played by the typical CER in its relations with the CR and villages in its district. In some areas, the head of the CER served as secretary of the CR and maintained a record of Rural Council meetings. In other areas, CER personnel were consulted by villagers and CR officials for technical advice on diverse small-scale projects. CER personnel also played important roles in organizing rural youth and women's groups. Finally, CER personnel often served as an auxiliary arm of the territorial administration. For example, CER personnel accompanied the subprefect during the intensive government campaign in the spring of 1992 to register eligible rural voters.

One CER head noted that Rural Council officials rarely used the local development plans elaborated by the CERs despite the fact that these were based on frequent consultations with the local populations. Instead, CRs tended to allocate resources according to more political criteria.

Senegalese national policy clearly supports greater decentralization and deconcentration in the provision of public goods and services in several key areas. Thus, parastatal agencies such as SONEES are transferring more decision-making authority to the local level. Perhaps more significantly, the GOS has encouraged the creation of local community-based management committees to oversee service provision in such key areas as education, primary health care, and water distribution. Local government in many areas, while responsible for providing many services, still lacks the financial base and taxing authority to improve and expand services. The current financial crisis precludes the central government from transferring more resources to local government. NGOs, local communities, and the private sector are playing an increasing role in providing or supporting the provision of basic services in such key areas as primary health care, education, and well construction. Further movement towards greater decentralization in provision of public goods and services will depend primarily on a GOS policy of greater fiscal and financial decentralization, a sounder tax base for local government, and an expanding economy which will permit local government jurisdictions and local communities to afford to pay for more and better public services.

## **VI. DECENTRALIZED GOVERNANCE AND MANAGEMENT OF RENEWABLE NATURAL RESOURCES**

### **A. Introduction**

Despite an urbanization rate of nearly 40 percent, Senegal remains a predominantly rural country with an annual population growth rate close to 3 percent. High birth rates and a drop in mortality rates explain the overall growth rate. Moreover, Senegal's rural economy, though declining, still contributed an estimated 282.5 billion francs FCFA to the national economy in 1988 (N. Dieng, November 1990).

Previous studies and people interviewed during the mission were unanimous in citing strong demographic pressures and increased herds as major factors contributing to the degradation and decline of Senegal's natural renewable resource base--soils, vegetation, water, and fauna.

Because of the negative consequences of a declining natural resource base for economic development, natural resources governance and management (NRGM) has become a growing concern for African countries and their partners in the international donor community. Since the late 1970s, Senegal has given more and more attention to environmental issues as part of its overall national development strategy and has devoted more resources and energies to this end.

This section provides the following:

- Senegal's policy options concerning rural development and NRGM as defined in the Eighth Senegalese Social and Economic Development Plan (1989 to 1995);
- a brief survey of Senegal's natural resource base and the issues involved;
- an analysis of several major projects and activities involving NRGM; and
- a series of case studies providing examples of the governance and management of renewable natural resources in three different agro-ecological zones.

### **B. Policy Options in Senegal's Eighth Development Plan**

Senegal's Eighth Social and Economic Development Plan (1989-1995) notes the widespread destruction of renewable natural resources (RNR) and stresses the need to conserve, renew, and reproduce these resources which are being depleted through various activities.

Within the framework of an integrated rural development strategy, the Eighth Plan envisages "the optimal exploitation of resources in order to improve living conditions in the rural areas (e.g., food supplies, incomes, environment, etc.)" as a final objective. This objective is to be achieved by meeting the following goals:

- diversification of food production; adoption of policies favoring development of the production and consumption of local products; transformation of local cereals; adoption of specific strategies for each major food production and marketing network; and reduction of food imports (rice and wheat) to a bare minimum;
- maintenance of traditional export production and development of new products to revive exports and encourage traditional and new export products;
- combat against desertification which entails activities to prevent the degradation of ecosystems via a qualitative transformation of production systems, an improvement in the management of natural resources, better protection of soils and forests, and more secure usufruct rights that vest producers with control over the fruits of their efforts; and
- optimal management of natural resources through training, information, improvements in the living conditions of the rural populations and their acceptance of greater responsibility for NRGM.

From the above goals, it is clear that a high level of rational management of natural resources is a necessary condition for the success of the Plan. Before examining this issue in greater detail, a brief sketch of Senegal's human and natural resource base will be useful.

## C. Senegal's Natural Resource Base

### 1. *Human Environment*

Since independence, Senegal's population has doubled, passing from 3.5 million in 1960 to over 7 million people in the early 1990s. Fertility rates are relatively high. One recent study indicated that Senegalese women had an average of 7.3 children. At the same time, the mortality rate, although declining from 26 per thousand in 1960 to 18 per thousand in 1988, remains high. Life expectancy is 50 years.

The Senegalese population is unequally distributed. Seventy-one percent is concentrated on only 30 percent of the land, mainly in the west-center of the country. The rest of the population (29 percent) occupies 70 percent of Senegal's area (regions of Saint-Louis, Tambacounda, Kolda, and Ziguinchor). Population densities vary from 2,767 people

per square kilometer in the Dakar region to only 7 people per square kilometer in the Tambacounda region.

The active population rose from 1,598,257 in 1960 to 2,468,083 in 1980, a growth rate of 2.2 percent. The number of women involved in economic activities rose from 651,476 in 1960 to 983,018 in 1980.

Senegal is characterized by a high degree of international and interregional migration. Thousands of Senegalese work abroad in European and African countries. Interregional migration began well before the colonial period and still continues. Today, migrations are predominantly from the rural areas. Much migration is directed towards Dakar, the major pole of attraction. Other migratory patterns flow from the more densely populated rural areas in the west to the more sparsely populated areas of Eastern Senegal, the Casamance, and the Sine-Saloum. Incentives for migration are essentially economic and primarily concern adult males. This pattern has led to labor shortages in certain areas where women are saddled with a growing share of the agricultural work.

To sum up, one can retain the following characteristics of the Senegalese population:

- a high growth rate;
- a very young population;
- an unequal distribution of population due to the unequal development of different regions; and
- strong population pressures which have major effects on NRGM.

## 2. *Natural Environment*

This section reviews important aspects of the natural setting within which NRGM occurs.

### *Climate*

Senegal is both a maritime and a Sudano-Sahelian country. Since the late 1960s, drought has characterized the climate and adversely affected Senegal's different ecosystems. Senegal has a single rainy season and a dry season. The rainy season lasts from three months in the north to up to six months in the south. Senegal alternates between good and bad years of rainfall.

## *Natural Regions*

Senegal has five natural regions:

- the Senegal River Valley with flood recession agriculture;
- the Niayes, moist bottomlands in the dunes along the Atlantic coast;
- the silvo-pastoral zone;
- the forest zone; and
- a dryland agricultural zone.

## *Renewable Natural Resources*

Senegal's renewable natural resources include water, soils, vegetative cover, and animals.

Water resources consist of surface and underground water. Senegal has appreciable surface water resources, the most important being the Senegal and Casamance Rivers and, to a lesser extent, the Gambia River. Construction of reservoirs in the form of lakes is a distinct possibility for enhancing the capacity of the Senegal River to provide water for irrigation.

Hydrological research has also indicated the existence of several geological layers containing aquifers that could double or triple the amount of water resources in certain areas. Some aquifers suffer from an excess of mineral salts, which can threaten potable water supplies and water used for irrigation purposes. Aquifers providing drinkable water are often overused (e.g., the main aquifer of the Peanut Basin, located along the Sebikotane-Pout-M'Bour axis, also provides part of Dakar's water needs). Probable consequences of developing new underground water resources should be carefully studied before exploitation begins in order to avoid serious mistakes. This is especially true for aquifers which cannot be recharged.

Senegal's topography is generally flat and uniform except in parts of Eastern Senegal, the Thies region, and the Upper Casamance. Soil types vary according to rainfall and biogeographical zones.

### **The Peanut Basin**

The Peanut Basin is one of Senegal's most important agricultural regions; its soils are sandy and light. Soils in the Peanut Basin used to be managed through a rotational production system that left some land fallow, maintained trees on the land, and used animal manure as organic fertilizer. This system permitted regeneration of soils due to accumulation

of organic matter, recycling of plant nutrients, and constitution of strong root systems which markedly improved the nature of sandy soils. Intense population pressures on the land caused the old system to disappear, and soil degradation and greater vulnerability to aerial erosion have ensued.

The sandy soils of the Peanut Basin are not very fertile and require reconstitution by regular additions of nutrients from manure and plant residues. When possible, farmers in the Peanut Basin use animal manure and crop residues to improve soil fertility.

Effective land management here is particularly important since the Peanut Basin provides 82 percent of Senegal's peanut production and more than half of its cereal production. The Peanut Basin covers 33 percent of Senegal's total area. It is home to more than half of Senegal's population and close to 65 percent of Senegal's rural population.

### **Eastern Senegal**

Eastern Senegal contains rocky and shallow soils, generally occurring in laterite basins covered by a thin layer of relatively unfertile soil. The most sought-after areas are found in the bottomlands (*bas-fonds*) which have deeper, finer, and more fertile soils formed through alluvial deposits.

Eastern Senegal currently experiences less population pressure than other parts of the country. Farmers are thus able to fallow part of their land for up to five years. Rainfall in Eastern Senegal is higher than that in the Peanut Basin and allows the cultivation of more remunerative cash crops like cotton. Because of its advantages, Eastern Senegal has a steadily growing population which will eventually put more pressure on the region's limited fertile soils.

### **The Ferlo**

The Ferlo corresponds more or less with Senegal's silvo-pastoral zone and serves more as a grazing area than an agricultural one. Maintaining sufficient vegetative cover to support the growing number of livestock using the area is a major RNR management problem for the Ferlo. More efficient herd management is also needed to prevent disappearance of topsoil following the first rains through water erosion.

Other problems in this zone are dune displacement and desertification that threaten to lower the carrying capacity of the Ferlo. The unwillingness of herders to reduce the size of their herds aggravates the situation.

### **The Senegal River Valley**

The Senegal River Valley possesses the best land resources in Senegal and a permanent source of water. The land use system now practiced associates:

- millet production on the *dieri* soils (sandy soils and rainfed agriculture);
- traditional flood recession crops on the *walo* soils (heavy clay soils); and
- irrigated agriculture with more or less complete control of water supply.

Rice is the most prevalent crop in the heavy and sandy soils.

### **The Niayes**

All along the coastal strip between Saint-Louis and Dakar is a narrow band of land dominated by dunes and containing fertile soils, sandy and rich in humus and organic matter; a shallow water table facilitating easy access to water; and a mild maritime micro-climate. These factors make the Niayes a particularly favorable zone for fruit and vegetable production. The Niayes are situated between dunes. When the dunes move, they threaten crops and road communications.

### **The Casamance**

The Lower and Middle Casamance plateau contains deep and ferrous soils which are subject to water erosion. The more shallow soils exist in Upper Casamance and are generally found in laterite basins.

The river ecosystem in the Casamance is fragile and depends on rainfall. Low rainfall obliges agriculture to move towards the higher plateau lands. The traditional system of setting up small dikes to prevent salt intrusion is one of the peculiarities of the land management system in the Casamance. However, during periods of low rainfall, the traditional methods are inadequate to the task, and there is a high risk of the soils drying out and becoming more acidic.

Senegal's vegetative resources vary according to the prevalent climate found in any given area.

- The Sahelian climatic zone contains steppes and bushy savannah lands dominated by Acacias (*radiana*, *seyal*, *senegal*, *albida*), *Balantites aegytiaca* and annual grasses.

- The Sudanic climatic zone contains wooded savannah lands dominated by larger tree species like caïlcédrat (*Khaya Senegalensis*) ven, (*Pterocarpus erinaceus*), néré (*Parkia biglobosa*), and ronier (*Borassus flabellifer*).
- The Sub-Guinean climatic zone is characterized by a dense forest with *Parinari excelsa*, *Chlorophora regia* and palm oil trees (*Elaeis guinensis*).
- Other vegetative cover found in Senegal includes the palm trees (*Elaeis guinensis*) found in the Niayes and along the Atlantic coast, the gonakier forests (*Acacia nilotica*) in the Senegal River valley floodplain, and the mangroves (*Rhizophora*) found in the estuaries of the Saloum and Casamance Rivers.

The vegetative cover has deteriorated in the Sahelian and Sudanic climate zones because of the combined effects of drought and the lowering of water tables.

Senegal's animal resources include livestock, wildlife, and fishing products (e.g., fish, lobsters, and shrimp).

Senegal's livestock resources in 1986 consisted of the following:

- 2,483,500 head of cattle (long-horned zebus in the north and small, tse-tse fly-resistant Ndama in the south);
- 3,954,000 sheep and goats;
- 314,000 horses;
- 254,700 donkeys;
- 7,700 camels;
- 310,600 pigs; and
- 12,300,000 chickens.

The livestock sector accounts for approximately 30 percent of the total value of Senegal's primary sector and represents 6.5 percent of Senegal's GDP.

Nearly all livestock forage comes from natural pasture lands, which, like water holes, depend upon rainfall. Since the late 1960s, these grazing lands have been adversely affected by chronic drought and have decreased in size, affecting cattle grazing routes. The low level of productivity and high mortality rates of Senegalese livestock are directly related to poor nutrition and sanitary conditions.

The most favorable regions for livestock are Saint-Louis, Louga, and Tambacounda, encompassing the silvo-pastoral zone and Kaolack and Kolda where rainfall is generally higher.

Several forms of livestock management can be found in Senegal. These vary according to climatic and geographical zones:

- a sedentary agro-pastoral type found in irrigated agricultural zones and in the floodplains of the Senegal River Valley;
- a transhumance-oriented agro-pastoral type moving within a reduced grazing zone found in the Ferlo;
- a long distance transhumance type operating between Senegal and neighboring countries; and
- an agro-silvo-pastoral type which associates livestock, peanuts, cereals, and *Acacia albida* found in the Sine and parts of southern Senegal.

Effective livestock management depends to a large extent upon maintenance of traditional grazing lands and cattle routes and the introduction of more intensive livestock management practices. This raises questions concerning the role of the appropriate government authorities in implementing livestock development policies; acceptance of greater responsibility and more participation by the local populations in range management; and resolution of political and social problems (e.g., disputes between herders and farmers competing for similar resources, border disputes over transhumance routes).

Wildlife provides rural populations with food and a means of earning money. The wildlife sector also generates revenues for government through the fees and licenses paid for hunting permits. Animal parts and skins are sold on local and foreign markets. Receipts from hunting provide resources for both the formal and informal sectors. The formal sector draws income from hunting concessions and facilities, permits, admission tickets to national parks, and the right to hunt and sell birds. The receipts deriving from the marketing of various wildlife products could be increased by formulating and implementing a policy that would call upon rural people to accept more responsibility in taking measures to conserve and protect wildlife resources.

Drought has adversely affected the rate of increase of Senegal's wildlife population by lowering water tables and destroying forests and grasslands through bush fires. More sophisticated firearms that make it easier for hunters to bring down wild animals and birds also pose a threat to Senegal's wildlife resources.

Senegal has a wealth of fishing resources, including freshwater and saltwater fish, shrimp, crabs, and other seafood. By the late 1980s, fishing products had become Senegal's

most valuable export. Senegal's maritime fishing areas produced an estimated 270,000 tons in 1985. Senegal's artisanal and industrial fishing sectors have provided the Senegalese people with an annual per capita consumption of 26 kilograms of fish, the highest per capita rate in West Africa.

Senegal has several zones favorable for development of fishing resources:

- a coastal zone stretching over 718 kilometers, which contains an abundance of fish because of the convergence of two main ocean currents that foster a rich supply of nutrients;
- the Senegal and Gambia Rivers, which contain a wide variety of freshwater fish and possibilities for crabs and shrimp;
- the *bolons* of the Sine-Saloum and Casamance regions, which provide a home for saltwater fish;
- the marshes between the dunes of the Niayes, the alluvial plains of the lower and middle Senegal River Valley, and Lake Guiers, which all contain traditional freshwater and saltwater fishing potential.

The most important area for freshwater fish is along the Senegal River. Before the construction of the Diama and Manantali dams, the Senegal River produced 28,000 to 30,000 tons of fish and kept 10,000 fishermen employed full-time. However, construction of the dams has now transformed the Senegal River's water regime and sharply diminished its fishing resources as the loss of certain key fishing areas was not compensated by the creation of an artificial estuary which would provide new fishing grounds.

Senegal's maritime fisheries are endangered through overharvesting in Senegal's coastal waters by well-equipped foreign fishing fleets. Stricter enforcement of Senegal's fishing rights in its territorial waters is needed to prevent the rapid depletion of its ocean fishing resources. Senegal also has a fishing code that seeks to prevent freshwater overfishing by regulating fishing seasons and net sizes.

Efficient exploitation of Senegal's RNR is necessary to improve the living conditions of Senegal's rural populations. Effective management of Senegal's RNR means increasing rural production while sustaining the productive capacity of RNR. This can be achieved by maintaining and improving soil fertility and water quality, creating a better balance between livestock herds and the carrying capacity of grazing areas, and preventing the overexploitation of forest, fishing, and wildlife resources. Protection and conservation of Senegal's natural environment thus are essential elements of NRGM.

## D. Case Studies of State, NGO, and Donor Involvement in NRGM

This section provides four short case studies sketching out NRGM approaches and projects involving different partners. The analysis provides a brief synthesis based on interviews and documents collected during the course of the mission.

### I. *Projet Intégré de Conservation et de Gestion des Ressources Naturelles (PICOGERNA)*

PICOGERNA is an experimental project designed to develop a methodology for promoting integrated NRGM throughout the country and to enhance local people's capacity to manage and conserve RNR in the Departments of Kaffrine, Tambacounda, and Bakel. It builds upon the experience and advances of two previous projects: *Projet d'Aménagement de Reboisement des Forêts du Centre-Est* (PARCE), operating in the Department of Kaffrine, and *Projet de Développement de l'Élevage au Sénégal Oriental* (PDESO), operating in Eastern Senegal.

Financed by the World Bank, the Caisse Central, FAC, and Norway, PICOGERNA is an autonomous project attached to the *Ministère du Développement Rural et de l'Hydraulique* (MDRH). PICOGERNA has a three-person multidisciplinary staff consisting of an agronomist-geographer, forestry engineer, and veterinarian at the national level; at the regional and local levels, it has agricultural, forestry, and livestock cadres and extension agents. PICOGERNA has both a national and a local focus.

The main objective of the national-level focus is to provide Senegal with the tools needed to formulate a coherent national NRGM policy that would benefit from feedback from the rural residents at the grassroots level. This objective would be enhanced by promoting the participation of rural populations in development programs and giving them greater responsibility in managing RNR in their communities and on their farms. Unlike the traditional top-down approaches, the project would formulate NRGM policies and programs which would integrate the rural population's knowledge of their environment and local priorities and potential. These policies would provide a practical strategy for insuring the preservation and development of soil, water, vegetation, livestock, fishing, and wildlife resources.

The national component of the PICOGERNA team is working in the following areas:

- providing an analysis of the various policies, plans, and codes affecting NRGM (e.g., environmental action plans, forestry codes, and land tenure laws), and proposals for a more coherent overall national environmental protection and conservation policy which would harmonize and resolve various contradictions among existing codes, plans, and policies;

- evaluating different experiences in NRGGM (e.g., projects, NGOs, and regional development agencies) within Senegal and elsewhere in the Sahel region, and drawing the lessons needed to formulate more realistic and effective policies; and
- formulating future integrated NRGGM projects based on a careful analysis of the results of PICOGERNA's activities at the local level.

The local focus of PICOGERNA has two major objectives:

- to develop local people's capacity to become more autonomous in carrying out various activities designed to promote NRGGM, initially introduced under PARCE and PDESO. These activities included the organization of agro-silvo-pastoral units (UASP) to manage RNR within a specific area, functional literacy programs, agroforestry projects, and programs to prevent forest fires. The UASP can cover one or more villages. In more densely populated areas like in Kaffrine, the UASP corresponds with the village. In sparsely populated grazing areas, the UASP usually corresponds with a group of herders and their zone of activities; and
- to formulate and implement NRGGM programs in 20 agro-silvo-pastoral units in three sectors--Kaffrine (West), Tambacounda (Center), and Bakel (East). PICOGERNA also envisaged choosing one pilot Rural Community in each sector with which it would examine the possibility of making a general land tenure study to examine different forms of land allocation in the CR. The study would help the CRs make more effective decisions in allocating land and managing RNRs and also provide some scope for private initiatives in this area.

PICOGERNA addresses one of the major issues related to decentralized management of RNR, namely, the need to provide long-term land use rights to the rural populations. It is clear that they will not invest time and money to improve their land unless they can be assured that they will have the right to benefit from the fruits of their investments. Thus, farmers will not plant trees, dig wells, put in irrigation systems, or invest in improving soil fertility if they have no long-term land use security.

The problem of land use and ownership security is prevalent throughout the country. PICOGERNA seeks to better understand this issue by carefully studying different forms of land use and allocation of land patterns in the sectors where it operates and to link land tenure problems to that of NRGGM.

PICOGERNA has already organized several studies and workshops to study land tenure. For example, PICOGERNA formulated a working document which was discussed during a 10-day national workshop held in November 1991. The workshop involved the *Aménagement du Territoire* service, prefects, and other administrative officials in the zones

where the project is active. The workshop discussed the results obtained in the test zones of Kaffrine, Tambacounda, and Bakel, and reforestation and land management projects in the Center-East sector of Gouda, Koussanar, and Koulor. In these zones, the populations made important contributions by providing voluntary labor.

One of the most interesting aspects of PICOGERNA is the collaboration between PICOGERNA officials and local populations, in elaborating village RNR development plans. First, PICOGERNA agents study land occupation patterns, the human and natural environment, socioeconomic and environmental constraints to developing the natural resource base, and local priorities. Following this diagnosis, a development program is drawn up with the villagers reflecting local priorities. In some instances, these programs involve activities which are not directly related to NRGM (e.g., village health huts, training *matrones* midwives, providing villages with a mechanical millet mill to free up more time for women's activities, and well construction).

In Kaffrine, for example, a contract between PICOGERNA and the Village Natural Resource Management Committee (COVIGERNA) of the village of Ndialo Bambaly spelled out the respective obligations of the two partners concerning construction of a well, health hut, and pharmacy for livestock medicines, and the purchase of inputs needed for diverse agricultural, forestry, and livestock activities. These activities involved human and financial investments on the part of the villagers while PICOGERNA provided financial and technical assistance and acted as an intermediary for the village with other state technical and financial services. The subprefect and the president of the district CR also signed the contract as concerned observers.

PICOGERNA also signed protocols with local technical services which detailed their mutual obligations. For example, PICOGERNA would compensate the health service for providing a *matronne* to train village women, or the literacy service for paying and maintaining trainers to carry out a functional literacy program in the village.

In case of unresolvable disputes between PICOGERNA and the village concerning the execution of the contract, the dispute would be submitted to the arbitration of a commission comprised of the subprefect or his representative and the president of the CR or his representative.

Evaluations of PICOGERNA raised several critical issues:

- the relative contribution of PICOGERNA and the local populations in financing the development program. Some donors thought that villagers needed to pay a larger share if they were to obtain ownership of the project;

- the length of time needed to develop a dialogue based upon mutual trust between the project and the local populations. Some donors thought that a year was too long and wanted faster implementation schedules of village development programs; and
- the role of state development officials in directing the project. Some donors suggested that NGOs could do a better job of managing the project than state agents who would find it difficult to change top-down ways of doing things. These are issues that need to be discussed at greater length. On the other hand, evaluations contained little criticism of PICOGERNA's basic premises and methodology which were taken to be sound and replicable.

2. *Project SEN/87/027: Integrated Agro-silvo-pastoral Development of Four Pilot Villages and a Pastoral Zone*

Following the recommendations of the 1985 African Ministers' Environmental Conference held in Cairo, the GOS initiated a pilot project in collaboration with the United Nations Development Programme (UNDP). This project encourages greater local participation in and control over NRGM that would promote food and energy self-sufficiency.

Financed by the UNDP, executed by the FAO, and under the tutelary authority of the Ministry of Tourism and Protection of Nature, the project seeks to test responses to NRGM programs of different socio-professional groups in four villages:

- Kayar, a fishing village on the Atlantic coast 70 kilometers from Dakar (vegetable farming and rural sanitation);
- Samba Dia, a farming village in the Peanut Basin;
- Widu-Thiengoly, a herder village in the silvo-pastoral zone; and
- M'baniou, a village of sedentary herders near Bakel.

The project is based on sectoral studies executed in the concerned villages. Villagers are then asked to formulate and carry out land management and NRGM strategies in their communities. Diagnostic studies at the village level suggested the utility of engaging in some of the following activities:

- linking agro-silvo-pastoral activities to protecting the environment;
- identifying small-scale micro-projects;
- cattle fattening;

- reducing the work burden of women; and
- transforming fruits and vegetables.

For each of these activities, villagers contractually commit themselves to mobilize 20 percent of the total cost of the project and carry out specific environmental protection and land management activities. The project works largely through protocol agreements that stress the importance of human investments as constituting a major part of the village's contribution. Service contracts clarifying the kind of technical assistance and collaboration between the village and various state services and NGOs operating in the same zone are established through protocol agreements.

The project works closely with the CR in defining an integrated development program for each village and land unit. The project works in several sectors--agriculture, livestock, forest and energy, fishing, commerce, health, and training. The main interventions involve villagers and local GIEs who have access to formal credit services.

The project contributes to local planning and the elaboration of the CR's development plan. It also helps the concerned parties draw up project proposals that can be submitted to various donors for financing. Each village has its own village development committee consisting of representatives of the GIEs, village notables, and representatives of the CR.

The project is coordinated and supervised by a trained agent recruited by the FAO who works closely with the CER in the district. To motivate CER agents to participate, the project provides per diem and training. In case the local CER is understaffed, the project provides funding to strengthen and enlarge the staff.

The final objective of the project is to lay down a solid basis for sustainable development which takes into consideration short- and long-term considerations affecting the achievement of a balance between protecting the environment, socioeconomic development, and the rational exploitation of RNR.

### 3. *Le Conseil des Organisations Non-Gouvernementales d'Appui au Développement (CONGAD)*

Senegal has two main NGO umbrella groups, CONGAD based in Dakar, and the *Fédération des ONG du Sénégal* (FONGS), which groups hundreds of Senegalese rural-based NGOs and associations. The mission was unable to visit the Thies-based FONGS and thus focused on CONGAD.

CONGAD was created in February 1982 as a group of 65 Senegalese NGOs to meet the need for coordinating NGO activities and developing closer and better monitored links between the NGOs and the Senegalese government.

CONGAD's basic objectives as presented to the mission are summed up as follows:

- promote better coordination and harmonization of activities among development-oriented NGOs;
- improve collaboration among development-oriented NGOs in fostering the spirit of mutual assistance;
- make documentation on development available to NGOs and their clients. (In 1987, CONGAD set up a computerized information and documentation center and library and "CONGAD-INFO," a newsletter which keeps its members abreast of NGO activities in the country);
- constitute a forum of exchanges for development-oriented NGOs, international organizations, and concerned private agencies;
- strengthen relations between the NGOs and the GOS, and provide support to NGOs dealing with the Senegalese administration; and
- strengthen South-South and North-South ties, and establish a true partnership in these relationships.

CONGAD carries out these objectives by organizing exchanges of ideas and encouraging its larger members to help smaller ones by sharing their professional experiences and expertise with the latter. CONGAD also helps small NGOs and *Associations Villageoises de Développement* (AVDs) to formulate their programs and find the means to carry out their development activities, and to draw up project proposals according to the criteria specified by diverse financial sources. CONGAD stresses the need for efficient management and encourages its members to maintain light, flexible, and effective organizations.

At the national level, CONGAD facilitates NGO-GOS consultations and arranges regular meetings with the *Ministère de la Promotion de la Femme, l'Enfant, et de la Famille* (formerly the *Ministère du Développement Social*) which has the tutelary authority over the NGOs. It has also initiated numerous meetings, seminars, and workshops that have permitted its members, government representatives, and local leaders to exchange information and experiences. CONGAD has also been effectively involved in national-level programs established by the United Nations such as the *Fonds d'Appui aux Initiatives de Base* (FAIB) and *Réseau Afrique 2000*.

At the international level, CONGAD serves as an intermediary between Senegalese NGOs and international NGOs and donor organizations such as the International Council of Voluntary Agencies (ICVA), PACT (Private Agencies Collaborating Together), the Ford Foundation, the NGO/World Bank Consultative Group, and UNDP. It also has extensive ties with Sahelian NGO umbrella organizations in Mali, Niger, and Burkina Faso.

In Senegal itself, CONGAD's membership has played a major role in implementing village reforestation projects throughout the country. Senegalese-based NGOs are among the most actively involved NGOs in NRGGM projects in the Sahel region.

#### **4. Réseau Afrique 2000**

The UNDP-sponsored *Réseau Afrique 2000* project seeks to mobilize and support community-based groups and NGOs fighting against environmental degradation.

The project is currently financed by contributions from Canada, Denmark, Italy, Japan, and Norway. France, the Netherlands, New Zealand, and Great Britain are also contemplating making financial contributions to the program. The UNDP names the national coordinators for *Réseau Afrique 2000* and sets up national selection committees composed of representatives of UN organizations, the GOS, and local NGOs.

The main objectives pursued by the project are to:

- furnish financial and technical assistance to support community initiatives aimed at protecting the environment and promoting sustainable development;
- support efforts undertaken by local community-based groups, NGOs, and technical institutes to improve their efficiency; and
- disseminate information concerning successful and unsuccessful projects and ecological practices and the causes of their success or failure.

The *Réseau* project provides financial and/or technical assistance to community projects in the following areas:

- raising awareness and providing training in environmental issues and practices;
- reforestation and tree planting techniques;
- agro-silviculture;
- management of natural forests;
- erosion control;
- water management and water collection techniques;
- conservation; and
- use of local materials in infrastructure and equipment.

## E. Land Tenure, Land Use, and NRGM

Land tenure is one of the most difficult NRGM issues to resolve. Finding a simple solution to land tenure and land use problems is complicated by the great range of differences in conditions within the same agro-ecological zones, among different ecological zones, and among multiple claimants to the same land.

In 1964, the Senegalese government nationalized Senegal's land resources in order to discourage land speculation and prevent the emergence of forms of latifundia or large landholdings in the country. The 1964 *Loi sur le Domaine National* (LDN) was also intended to give farmers working the land usufruct rights without their having to pay rents to traditional landholders. The LDN also created "pioneer zones" in which the state could allocate land for developmental purposes. Most of the pioneer zones were located in the Senegal River Delta where individuals and farmer groups received access to plots of irrigated land managed by the *Société d'Aménagement et d'Exploitation du Delta* (SAED). In 1987, the state eliminated the pioneer zone status and transferred the authority to allocate land in the former pioneer zones to the Rural Communities.

In principle, the LDN eliminated traditional property rights and methods of making claims to land through the rights of ax, fire, etc. Occupation of the land no longer automatically conferred property rights. Usufruct rights now depended on continuous use and development of the land. Land not being used or developed could be taken away from the individual and reallocated to others by appropriate state and local community bodies. In 1972, the CRs were granted authority to allocate and redistribute land within the boundaries of their jurisdictions.

The LDN created several problems which hindered rational land use and development in Senegal. First, traditional landholders became more reluctant to lend land to other cultivators for fear of losing their land rights. Instead, they cultivated a bare minimum to maintain their claims to the land. Second, farmers using borrowed land were reluctant to make long-term investments to improve the land because they had no assurance that they would be able to benefit from the fruits of their investments since they had no clear-cut property rights. Third, the absence of property rights meant that farmers could not put up their land as collateral in order to obtain loans and credit. Banks would be reluctant to lend because they could not seize the land in case of non-repayment of debts. This discouraged investments to improve land. As long as land was relatively plentiful and production technology simple, this did not constitute a major problem. However, the expansion of irrigated agriculture along the Senegal River spurred by the Diama and Manantali dams raised land values and increased the need for more modern and costly technologies to develop the land.

The Senegalese government is currently exploring solutions to Senegal's land tenure problems which may entail giving out long-term leases that will ensure usufruct and ownership rights over improvements made on the land during the duration of the lease. In

principle, this means that a bank or creditor could seize land in case of non-payment of debts and sell land use rights to others as a means of getting back its money. It also means that farmers planting trees on the land would have secure rights to exploit these tree resources when the trees matured. The government is also seeking to limit the amount of land that may be allocated to large-scale agro-business firms in any given CR jurisdiction. Land tenure reforms thus have to harmonize and reconcile state, CR, village, and individual claims to the same land and their different priorities for land use. Land tenure reforms would also have to take into account the need to provide tree tenure rights to encourage development of individual and community forestry resources. For example, in the past, community support and enthusiasm for village woodlot projects were somewhat dampened by the fact that the participants were not sure that they, rather than the state, would enjoy the fruits of their labor because of the forestry service's control over the exploitation of forestry resources.

One of the main NRGM areas related to land tenure and land use issues in Senegal concerns the exploitation of forestry resources. The Forestry Code in Senegal and other Sahelian countries traditionally gave the state great powers in managing and protecting forest resources. The forestry service itself served primarily as a policeman which used repressive means to protect classified forests and wildlife. It also regulated the exploitation of forest products through various licenses.

Since the mid-1970s, the forestry service in Senegal has become increasingly development-oriented. The government is currently revising its forestry code and contemplating transfer of control over and responsibility for classified forests to the CRs as part of its decentralization program and policy of giving local communities more responsibility in NRGM. In March 1992, PICOGERNA organized a seminar in Thies to discuss the revision of the forestry code. Some forestry officials argue that safeguards must be maintained to prevent CRs from depleting forestry resources in their districts through imprudent allocation of cutting permits in formerly protected forest areas. The new Forestry Code could also provide the CRs with new sources of revenue through licensing fees, taxes, and community exploitation of its forestry resources. The counterpart of this new authority of the CRs to benefit directly from exploitation of forestry resources in their jurisdictions would be a greater responsibility to protect and develop these resources by fighting forest fires, preventing unauthorized use of these resources, and organizing tree planting campaigns. The role of the forestry service would be transformed from that of policeman to one of technical advisor.

Local land use plans might help to avoid irrational use of RNR by the CRs. This would entail drawing up contracts negotiated between local government bodies and concerned technical services. These plans would integrate all facets of NRGM on community land and coordinate environmental protection measures to combat desertification, soil degradation, and the deterioration of water quality. State agents would play the role of technical advisors and promote greater local participation and responsibility in making decisions affecting NRGM.

## **F. Case Studies in Natural Resources Governance and Management**

### ***1. Introduction***

The second phase of the mission was devoted primarily to field investigations. The team chose three field sites reflecting different agro-ecological zones: the Niayes, the Peanut Basin, and the Senegal River. The specific field sites were chosen following consultations and discussions with government officials from the Ministries of the Interior, Rural Development and Hydraulics, and Tourism and Environment. Mission members also discussed potential field sites with experts from USAID and several NGOs.

In the field, the team met with administrative officials, Senegalese specialists managing NRGGM projects, local elected officials and village notables, and community-based groups actively involved in NRGGM.

The case studies were based on individual and group interviews which provided data concerning local production systems and institutions. Interviews and data gathering focused on four main categories of information:

- local production systems and institutions;
- the attributes of RNR, local communities, and working rules regulating access, use, and investment in NRGGM;
- interactions among resource users and others; and
- outcomes of interactions in terms of the results for resource users.

The limited time available to team members did not permit them to gather complete data. As a result, the study suffers from certain gaps and imprecise information. Nevertheless, the case studies will contribute to a better understanding of NRGGM in Senegal.

### ***2. Basic Characteristics of Field Sites***

After five days of preliminary work in Dakar contacting various people involved in NRGGM, the following sites were chosen:

#### ***Agro-ecological Zone I: The Niayes***

The team chose two main field sites in the Niayes: the villages of Malicka and Tivaouane-Peulh. Visits were also made to Rufisque, Niaga, Mbambilor, and Sangalcam to consult with administrative officials, CER agents, and elected officials representing the Rural Community of Sangalcam.

### *Malicka*

Situated right on the Atlantic Ocean in the Cap Vert peninsula, Malicka is administratively part of the urban commune of Pikine. A semi-urbanized village, Malicka's principal RNR consists of forestry resources composed of a small classified forest of filao planted along the Atlantic Ocean front and fruit trees. The main production systems are based on vegetable farming and household livestock. No unexploited land suitable for agriculture remains since Malicka is now totally enclosed within an urban zone. The matter of insufficient cultivable land is a serious one for Malicka, especially for village youth who either work in Dakar or have emigrated.

### *Tivaouane-Peulh*

Tivaouane-Peulh is a village of Peulh herders who originally were involved in extensive livestock herding. Most of the inhabitants have become vegetable farmers because of the steady disappearance of the village's pasture lands over the years. Tivaouane-Peulh raises the issue of the survival of extensive livestock herding in the Niayes which was originally a major grazing area.

### *The Peanut Basin*

#### **Djingué**

Djingué is a small village located in the northwest corner of the Peanut Basin in the region of Thies. Residents engage in farming, forestry, and household livestock activities. According to the villagers, the huge Taiba Phosphate Company took over a large portion of Djingué's land without providing compensation or other advantages. The village now has a limited land area. Its arable land is fully allocated. Moreover, Djingué and neighboring villages seem to be suffering from environmental pollution which could adversely affect their rural activities and health. Another apparently unresolved conflict is the toxic waste coming from the *Industries Chimiques du Sénégal* (ICS), Sénégal's largest chemical factory and, according to Djingué's residents, the source of several illnesses and environmental problems.

### *The Senegal River*

#### **Mbane**

Mbane is a village located near Lake Guiers. It is at the same time the seat of the CR and the arrondissement which carries its name. Mbane benefits from a wide range of natural resources that are threatened by population pressures and drought, particularly in the *dieri* lands away from the lake. It also has a wildlife reserve and bases its production system on fishing, agriculture, herding, and reforestation activities.

## G. Malicka

### 1. Introduction

The village of Malicka is located not far from Yeumbel and can be considered part of Dakar's suburbs. Although a village, it has some of the benefits of being semi-urbanized. It has two poultry feed factories. It has an estimated population of 20,000. The majority are Lebou while Peulhs, Halpoulers, and Manjaques constitute significant minority groups in the village.

The principal production systems are:

- vegetable farming--cabbages, turnips, potatoes, condiments, onions, bissap, etc.;
- tree culture--coconut, papaya, and citrus trees; and
- household livestock--poultry and one cattle herd belonging to a resident.

RNR problems arise for the village to the extent that it is an integral part of Pikine commune, on the outskirts of Dakar, one of the largest capitals in West Africa. Nearly all the cultivable land is already used and other land is constantly being taken over for housing. The analysis of RNR in Malicka will focus on two natural resources and deal with their potential for development, bottlenecks retarding their development, and problems related to environmental pollution.

### 2. Local and Supra-Local Institutions

#### *History*

The Séne, Sow, Gadiaga, and Kébé families settled at Malickamère near the Atlantic Ocean after responding to the request of the head of the Layene Muslim Brotherhood who ordered the residents of Yeumbel village to give the newcomers land. Between 1920 and 1922, the residents of Malicka were moved to an area near Wouye Lake where most of the vegetable farming and horticulture are currently located. (One prominent Halpouler herding family remained at the old village site.) The founding families were Wolofs (Séne, Kébé) and Halpoulers (Sow, Gadiaga). These were then joined by other families, mostly Wolofs and Peulhs, and much later, by Manjaques from the Casamance who were the only Catholics in a predominantly Muslim village.

#### *Organizational Forms*

Traditional forms of organization have undergone significant transformations because of the impact of Dakar's urbanization on the now semi-urban village. Age groups no longer exist under their traditional forms. Instead, village youth are organized within a sports and

cultural association (ASC) which, on occasion, contributes labor to help with village projects. ASC members vary in age from 15 to 30 years. The youth have a cultural center that also serves as a youth center.

Village women are generally members of women's groups that organize *tontines* or revolving savings associations where the members take turns using the group's savings. They also have a *Centre d'Animation Feminine* (CAF), led by the political leader of the women's section of the PS in the village which includes most of the village's women.

Other groups organized for socioeconomic purposes in the village are the GIEs which have replaced the old cooperatives. The latter died for lack of credits.

The elders meet regularly at the village chief's home to discuss village issues.

### *Local and Supra-local Institutions*

The village chief and notables of Malicka are drawn from the ranks of the Sow, Gadiaga, and Kébé families who founded the village. The status of chief is hereditary and held by the oldest male in the Séné family. The three other founding families constitute the village notables who, with other prominent families that arrived later, form the village council. This council deals with important issues concerning the village. Due to Malicka's large population (20,000), the village chief is assisted by a president of the village quarter delegates.

Parallel to these traditional political structures is a modern political institution linked to the national political system and local government. Malicka thus has two municipal councillors sitting on the Pikine municipal council. They are chosen in the village by the local PS party section and defend Malicka's interests. Attached to the urban commune of Pikine, the village receives technical and administrative assistance from Pikine's municipal services, such as the agricultural agency at the prefecture level.

### **3. *Management of Land Resources***

Malicka has little cultivable land. Its arable land covers an area of 20 hectares and has been used exclusively for vegetable farming. Most of the land was formerly devoted to rainfed crops. These are no longer grown due to two essential factors: the drought which first hit the area in the 1960s, and the growing salinization of the soils caused mainly by the lack of rain and increasing salinization of the soil. These areas have been transformed into housing sites. The only remaining arable lands are shared with the villagers from Yeumbeul, the first occupants.

The increase in the number of families, drought, and salinity of the soils and water all combine to present a serious problem as to who should occupy the land and how the land should be used.

Family land has been fragmented into smaller plots to satisfy all family members. Cultivable land in Malicka is used exclusively for fruit and vegetable production. Landholders generally agree that land should not be sold as long as it is needed by those having traditional family tenure claims. Like most Sahelian societies, Malicka excludes women from holding land despite the fact that women often constitute the most dynamic element in village society in that they participate in all the work and market village fruit and vegetable production. In Malicka, the land is a private good which can be borrowed, lent, and sold.

Within the village, there are no real land tenure ownership disputes. Villagers know precisely which families own which parcels of land. While the owners are free to rent or to lend their land, they rarely sell land used for vegetable farming.

Land that was previously used for rainfed crops is now, because of drought and salinity, being sold as housing sites. The village chief is kept informed about all land sales operations. His witness and approval is important to ensure arbitration in case of conflicts and/or litigation. The chief tries to resolve conflicts on an amicable basis as much as possible. If he cannot, cases are brought to the attention of higher-level legal authorities at his own request or that of the concerned parties. Demand for land is mounting and houses are now being built in flood zones.

#### **4. *Management of Forestry Resources***

This section concentrates on the classified filao forest planted during the colonial period between 1948 and 1949 by the *Eaux et Forêts* (EF) Service which recruited villagers to plant trees. Some villagers became forestry agents. The forestry service still retains the entire responsibility for managing this classified forest and retains a guard on the site to protect the forest. Planted to fix the dunes all along the coast and to fight against wind erosion, the development of the forest plays an invaluable role in protecting the ecosystem and environment while stabilizing the dunes and providing the residents of Malicka with dead wood for cooking. The forest also permits the village to develop its land, primarily through agricultural activities. Although fruit trees count as part of forestry resources, they will not be dealt with in this section.

##### *Attributes of Forestry Resources as Economic Goods and Attributes of Rules Governing Access and Use*

The Malicka woodstocks have the characteristic of common pool goods. On the one hand, they are not easily subject to exclusion since it is difficult to control access to trees. On the other hand, consumption of products harvested from trees is separable and competitive (rivalrous).

Current rules fixed by Senegal's forestry code permit gathering of dead wood in the forest but forbid the use of axes, machetes, and other wood-cutting tools. However, it is clear

that despite the rules prohibiting cutting, traffickers come during the night to illegally harvest wood for sale. Those caught are obliged to pay fines directly to the EF service.

Malicka's residents do not feel responsible for managing the classified forest which they call "Tollou Bourre" (field of the government). Nor do the young people who come from Dakar and its suburbs to camp in the forest.

Exploitation of forest resources is forbidden in the Cap Vert region, where populations are not associated with the management of classified forests. Even trees planted by local people cannot be cut.

Nature protection committees have been established in the villages to assist the EF service in combatting abusive cutting, pruning, and stripping of the *kadds* (*Acacia albida*)--a tree much appreciated by the public for the abundant browse it produces in the dry season. These committees have replaced the old anti-bush fire committees. To discourage the local populations from destroying the trees, EF inflicts fines which range from 50,000 FCFA to 100,000 FCFA.

The Senegalese forestry code, now being revised, sets all the rules regulating access to forestry resources.

## 5. *Production Systems*

Malicka residents employ a production system that integrates agriculture, household livestock raising, and poultry farming. The production system is primarily agricultural and consists of vegetable and fruit farming complemented by small livestock activities and use of forestry resources.

Vegetable farming is practiced on approximately 20 hectares of land divided between the residents of Malicka and Yeumbel. Wells with a water table only 2 meters to 3 meters deep provide the water for irrigating the fields. Watering is done manually and requires much physical labor. Irrigation used to be carried out directly from the lake, but years of drought have considerably reduced its volume and area, and it is no longer big enough to meet all irrigation needs.

Nearly every family raises goats, sheep, and poultry. Two to four sheep are raised in the household for fattening. Poultry-raising has reached a semi-industrial stage and its products are completely marketed. One family in Malicka possesses an important herd of cattle and grazes the animals on the grass that grows along Lake "Wouye". The family also provides supplementary cattle feed.

Fruit farming--coconuts, papaya, and citrus--is also practiced, but to a lesser extent than vegetable farming which is the principal economic activity of the village.

## *Strengths and Weaknesses*

### **Weaknesses**

- Lack of sufficient land resources, made more acute because Malicka and Yeumbel share a limited area of land. This land shortage is due primarily to the non-cultivation of a large part of the land following years of drought and subsequent conversion of the land for housing purposes.
- A drop in the volume of water in Lake "Wouye" and the beginning of salinization of its water through repeated drought cycles.
- Permanent use of the same soils for vegetable farming and the non-intensification of the production system due to weak returns on vegetable farming occasioned by an oversupply of produce on the national market. This is further intensified during certain seasons by competition from imported potatoes and onions. The marketing problem has been aggravated by the loss of the Mauritanian market following the 1989 Senegalese-Mauritanian conflict.
- Plant diseases that have been difficult to treat because of production patterns which do not permit crop rotation or land fallowing.

### **Strengths**

- The proximity to town which gives the village certain advantages concerning the marketing of its agricultural products by its women who go directly to Dakar to sell them. Proximity to Dakar also provides Malicka's residents with greater opportunities to work in Dakar.
- The association of agriculture and livestock-raising through the alternative use of products from the two areas. Cows, sheep, and goats are fed agricultural products while the livestock provide manure for agriculture whose byproducts provide compost.

## **H. Tivaouane-Peulh**

### ***1. Introduction***

The village of Tivaouane-Peulh is part of the Rural Community of Sangalcam. It has a population estimated at less than 500 people, composed of a majority of Halpoulers (Peulhs and Toucouleurs), and about 12 Wolof families (Baol-Baol and Adjors).

The main production systems are:

- livestock--cows, sheep, goats, horses, donkeys;
- vegetable farming--onions, condiments, lettuce, leeks, sweet potatoes, carrots, cucumbers, etc.;
- tree culture--coconut and citrus trees; and
- rainfed crops--very uncertain activities, now increasingly abandoned due to the lack of rainfall.

The steady loss of the village's pasture lands and the lack of cultivable land threaten the long-term future of its Peulh residents. They have been particularly vulnerable to changes because of their lack of property rights over much of the village's land. It has already transformed the traditional way of life of the Peulhs in the village.

## 2. *Local and Supra-Local Institutions*

### *History*

The residents of the village estimate that the first Peulh families settled in the zone around 1932. The majority came from the Cayor region. For many years, these families lived in isolation from each other.

In 1968, several young men took the initiative to consolidate the community and asked for authorization to create the village. The government administrator at the time approved the request, but decided that it should be called Tir (palm oil) because of the numerous palm trees found there during this period. Thus a Wolof name was given to the location. The Peulhs did not like this and gave the village the name Tivaouane-Peulh because the great majority of the residents were Tidjani Muslims attached to the Sy Tidjani dynasty based in Tivaouane.

### *Village Organizations*

The village had several cooperatives which did poorly before disbanding. At present, the village has the following organizations according to interviews:

- a GIE with 26 members whose main activity is vegetable farming. The GIE has a classic bureau of officers, including a president, treasurer, and *commissaire aux comptes*. The GIE has a supply contractor who furnishes the agricultural inputs (diesel, seeds, etc.) in return for which the farmers market their entire crop through him. Not enough information was gathered to ascertain the advantages and disadvantages of the relationship;

- a women's GIE organized to sell milk (fresh and sour); and
- women's *tontines* organized to mobilize savings to meet the most pressing financial problems.

### *Local Institutions*

In 1968, the villagers designated a village chief. After his death, the village chose another chief from another family. Thus, the position is not hereditary as in Malicka.

In Senegal, the village chief is technically an administrative agent of the state, named by the prefect after consultation with the compound heads (*chefs de carré*). Before the nomination, an investigation concerning the candidate's moral character is generally conducted. The last word always belongs to the administration. (Decret 72-636: *attribution des chefs d'arrondissement et des chefs de village*).

The present village chief also consults with the notables and a Rural Councillor selected by the PS in resolving problems and managing current affairs. The Rural Councillor represents the village at the Sangalcam Rural Council.

### *Supra-Local Administrative Links*

Tivaouane-Peulh is part of the CR of Sangalcam which is attached to the prefecture in Rufisque. Unlike in most CRs, a prefect rather than a subprefect represents the territorial administration vis-a-vis local government due to the peculiar nature of the Dakar region which has only two CRs. Tivaouane-Peulh is serviced by the CER based in Mbambilor which is quite far from the village. The CER plays an important role in the resolution of conflicts and litigation over land and provides technical advice and expertise in rural development and sanitation.

### **3. Production Systems**

In its early days, Tivaouane-Peulh was primarily a village of pastoralists. The zone was still relatively sparsely populated and was well adapted to livestock activities. The Lebous, the original owners of the land, had large herds which they generally turned over to the Peulhs to manage.

Over the years, two factors have contributed to the demise of the extensive livestock system in the village. The first is related to the Lebous' property rights over the land and their ability to sell village land, especially pasturelands, to others. This occurred as formerly marginal grazing land became more valuable in light of the growing land speculation in the zone. The second factor is climatic and is related to the drought conditions which have prevailed since the late 1960s.

Production systems in Tivaouane-Peulh are based on the following:

- *livestock activities* practiced by the majority of the population. Each family has two to four head of cattle as well as a number of sheep and goats. The village has an estimated 2,000 head of cattle, 20 donkeys, and several dozen horses that are used for animal traction and transportation; and
- *vegetable farming* practiced on a 10-hectare perimeter belonging to 20 families. The perimeter is equipped with a borehole and a motor pump. The farmers use a drip irrigation system. The farmers received training from the now defunct BUD-Senegal operation that engaged several families from the Sebikotane and MBambilor zones to grow vegetables for export. At the time, the BUD-Senegal project controlled approximately 600 hectares of land, cultivated by 150 families.

This section will focus on the livestock production system since vegetable farming involves only 26 people and their families while livestock activities involve almost the entire village. Fruit farming and rainfed agriculture are also marginal, practiced by only six families in the village.

#### *Strengths and Weaknesses of the Production System*

##### **Weaknesses**

- *Occupation of space:* nearly all the land is occupied, eliminating most of the cattle paths providing access to grazing lands and slaughterhouses, as well as the grazing areas.
- *Isolation of village:* poor, sandy roads make access to the village difficult, particularly during the summer rainy season.
- *Inadequate forage supplies:* difficulty in obtaining sufficient quantities of cattle feed.
- *Pollution of Lake M'beusseus:* approximately 30 hectares in area, the lake's shores are used by herders as pasture lands, but they are also frequently used, unfortunately, to dump urban garbage.
- *Lack of a formal collective decision and commitment:* members of the village have failed to deal with and/or resolve immediate problems confronting them (e.g., the need to adopt a semi-intensive grazing system to modify the pastoral production system in light of the limited grazing land left in the village).

- *Marketing problems:* difficulties in marketing milk products due to isolation of the village.
- *Limited access to irrigated land:* exclusion of most villagers from access to irrigation facilities and vegetable, fruit, and rainfed crops.

#### Strengths

- *Agro-pastoralism:* association of agriculture and livestock activities and the possibility of improving residents' quality of life, due to an increase in income.
- *Irrigation control:* complete mastery of water supply for irrigation and thereby greater security in growing vegetable and fruit crops.
- *Effective GIE:* existence of an agriculturally based GIE which appears operational.

#### 4. Problems in NRGM

##### *Control over Land*

The arable land and village grazing areas for the most part belonged to Lebous. It is important to emphasize the fact that the Lebous were both farmers and herders who had large herds that they often put under the care of Peulhs.

In the beginning, the Peulhs were strictly herders. However, over the course of years, some Peulhs combined associating farming with livestock activities. Around 1952/1953, some Peulhs acquired access to farm land for a two-to-three-year period by paying 500 FCFA collateral to their Lebou owners. The Lebous were to return the money after the end of the contract. If they did not, then the land became the property of the tenant who paid at the beginning of the contract. Those interviewed indicated that many Peulh families obtained land in this way. Because they had no traditional claims or property rights to village grazing lands, the residents of Tivaouane-Peulh had no choice but to accept the steady shrinking of their grazing lands that the Lebou owners leased or sold to others as its value rose.

The Lebous (the original occupants of Cap Vert peninsula) took advantage of colonial land tenure rules to strengthen their claim to full ownership rights. For example, decrees issued in the 1930s permitted the traditional landowners to register their holdings and obtain an administrative certificate to that effect. The decree of May 20, 1955 established a land tenure register (*livret foncier*) that recognized the existence of customary land tenure rights and gave holders the right to register their land. This legislation permitted the Lebous, who had an excellent knowledge of their land boundaries, to register their land and receive official land titles. The mission was told that the Lebous quickly grasped that they needed to manage the land themselves in order to retain their ownership rights.

Those who could not afford to pay for the land surveying required under the official rules for registering lands and obtaining land titles often made a deal with the land surveyors by giving them one-third of the total area after the work was done. In this way, many Lebou families managed to establish full ownership rights. In the Niayes, land speculation has enabled several Lebou families to become rich. Rampant speculation is now a major source of concern for young Lebous who fear for their future because their parents may sell family property to others.

Land in the Niayes zone has long been the object of much speculation, particularly among civil servants and professionals with capital to invest. The so-called *jardiniers du dimanche*, "Sunday farmers," have shown particular interest in purchasing land for farming, housing, and agro-industrial ventures. In some parts of Rufisque, for example, non-residents own 70 percent of registered lands.

Land speculation is possible in the Niayes zone of Cap Vert precisely because the Lebous have modern property rights that give them the right to buy and sell their land. For the rural zones of the interior, the LDN declares that the state alone is "master of the land" and thus can organize, control, and guarantee usufruct rights. In 1972, the CRs received the right to allocate and redistribute rural lands in their jurisdictions. The absence of private ownership over rural land in the interior dampens land speculation because land cannot be bought and sold. At the same time, incentives to invest in improvement are less powerful.

#### *Problems Related to RNR Used in the Livestock Production System*

Villagers claimed that their herds were much larger when the climate was better. Good rainfall in the past created a favorable micro-climate for the development of livestock despite existence of tse-tse flies. Successive droughts sharply reduced existing grasslands and wooded areas which provided forage and fodder. The *kadds* (*Acacia albida*), for example, have practically disappeared from the zone.

#### *Attributes of Livestock, Pasture Lands, and Land Use Rules*

Livestock are managed by shepherds. The pasture lands constitute common pool goods to which it is difficult to control access. Consumption of forage produced on pasture lands is competitive. Two different sets of rules have been applied concerning use of pasture lands, as a function of demand for land.

During the period when rainfall was abundant and demand for housing in the area was weak, the land was used primarily for grazing and, to a lesser extent, for rainfed farming. Few problems arose since there was little competition to use the pasture lands except among individual pastoralists. Cattle paths were not necessary except during the rainy season when and if rainfed farming took place. In the rare case when wandering cattle damaged crops in a field, the owner of the cattle would generally compensate the farmer for his losses.

Settlement of these kinds of disputes required no outside intervention because the concerned parties resolved them among themselves.

The present rules affecting access to pasture land have changed considerably. With pasture lands now much more constricted, and construction and other activities all around, livestock are forbidden to enter fields, farms, and housing sites. The grazing zone is much smaller now and concentrated around Lake M'beusseus. The livestock from Tivaouane-Peulh and other villages use this area freely. During the rainy season, animals (mostly milk cows from M'boro) come there. No rules exist that exclude animals arriving from other areas. Rules require only that crops and trees providing forage in the vicinity not be destroyed.

### Interactions

The pasture lands, previously located in non-inhabited zones, have been greatly affected by the numerous homes and other buildings related to agricultural and industrial activities constructed in the traditional grazing areas. Herders have more problems finding suitable cattle paths to keep animals out of the built up areas. They now face grazing problems which are concentrated around Lake M'beusseus. According to the villagers, there seem to be no specific rules denying access to men and animals to use Lake M'beusseus and its products.

The area around Lake M'beusseus has become a garbage dump. It is thus possible, as many residents claim, that the water sources might have been polluted with adverse effects on the human and animal populations' water supply and irrigated vegetable farming.

## I. Djingué

### 1. Introduction

The village of Djingué is located in the arrondissement of Meouane in Tivaouane Department in the Thies region. It has a population of approximately 615 inhabitants. People grow millet, peanuts, manioc, and some fruit crops, and raise sheep, goats, horses, and chickens.

### *Principal Production Systems*

This section describes briefly the principal elements in local systems:

- agroforestry with agriculture predominating. The village practices rainfed agriculture in fields where there are *Acacia albida*, *Balanites*, and *Aegyptiaca*. Millet, peanuts, and manioc are cultivated underneath the canopy of indigenous trees. The *Projet de Reboisement Villageois dans le Nord-Ouest du Bassin Arachidier* (PREVINOBA) provides assistance to the village to conserve and

regenerate its *kadd* trees (*Acacia albida*) and to plant windbreaks of (*Holodericea*, *Prosopis juliflora*, and *Euphorbia balisamifera*). The village has a reforestation committee which manages reforestation activities and the community tree nursery located on the village commons;

- vegetable farming by a women's group that cultivates an area of 3,000 square meters; and
- livestock raising activities which are not very important because the grazing area is nonexistent. Horses and donkeys are raised for animal traction and transportation. Households raise small ruminants (sheep and goats) and chickens. People also fatten cattle for important religious and family events.

## 2. *Local and Supra-Local Institutions*

The village population traces its roots back to 1609 to Malick Cissé, a marabout originally from Gabou in the Fouta who established Salifa in the Casamance. In 1809, the people moved into the current area and established the village of Djingué. The name originally was Djingui, which means "it is evening" in Puular. The village is inhabited mostly by Wolofs of Halpoular origin and Serer. The village is Muslim with a Tidjani majority and a small Mouride minority.

### *Forms of Organizations Related to NRGM*

#### **Women's Group**

The women's group, comprising 96 members, was founded in 1986. It started as a local initiative by village women to resolve some of their own problems and to contribute to the social and economic development of their village. Organized along classic lines with a president, vice president, treasurer, and other officers, the women's group is active in several areas:

- irrigated vegetable farming using a well constructed in 1978;
- a savings *tontine* (rotating savings mechanism);
- a mechanical millet mill managed by a women's committee;
- a collective field cultivated during the rainy season providing income which goes into the women's group treasury; and
- cattle fattening. The women buy two to four head of cattle which they raise and then sell just before holidays and other events. They also raise sheep and goats. The group pays a shepherd to take care of their livestock.

The receipts from these different activities are used to meet village needs. For the harder field labor, the men from the village are obliged to contribute some of their time.

The women's group has links with other women's groups at the regional and national level. The women's group belongs to the *Fédération Nationale des Groupements Féminins* (FNGF) and pays an annual fee of 22,000 FCFA in dues. The president of Djingué's women's group attended both regional and national meetings of the FNGF which is under the tutelary supervision of the *Ministère de la Femme, de l'Enfant et de la Famille* (MFEF). The FNGF in 1992 had registered 4,348 women's groups. The FNGF has become an important conduit for distributing labor-saving equipment such as millet mills and for providing management training to women's groups.

Old members used to pay 150 FCFA per month dues in addition to providing labor. These dues were stopped once the group began to market its production. New members now have to pay a lump sum of 6,000 FCFA to join. In 1991, the women received training from a Peace Corps volunteer in building improved wood-burning stoves. *Monitrices* from the local CERs have also provided training to the women's groups.

#### **Youth Association**

Boys and young men from the ages of 13 to 30 are generally members of the youth association. They furnish labor for work in the fields on demand. Owners pay for the work, and money earned from these activities is used to satisfy certain village needs. For example, the youth association bought chairs and a tent that it rents to Djingué and neighboring villages for different ceremonies.

#### *Local Institutions*

The village has remained very traditional in its governance. The office of village chief is always held by the Cissé family, the village's founding family. When a sitting chief dies, he is succeeded by the oldest member of the Cissé family. The village chief is assisted by a council of village notables, comprising the oldest household heads, in resolving conflicts within the village. The current chief is also a prominent marabout. Because of the chief's advanced age (94), his eldest son runs most of the village's daily affairs.

#### *Supra-Local and Administrative Linkages*

The village is part of the arrondissement of Meouane and belongs to the Rural Community of Taiba-Ndiaye. In principle, the CER in Meouane provides technical assistance to the village in several areas. However, because of the relatively long distance from the village and limited logistical resources of the CER at Meouane, the villagers receive more support from PREVINOBA whose presence has been more effective. PREVINOBA is currently negotiating with an Italian NGO to build a windmill in the village to pump water. Funding for the project has not yet been found.

Although Djingué does not have its own Rural Councillor on the Taiba-Ndiaye CR, it seems that the village is well informed about the CR's activities. Meetings are open to the public and village leaders in the jurisdiction are invited to attend.

Despite its small size, Djingué seems to have relatively good access to external resources and institutions. This may be largely a result of the saintly reputation of the current village chief as a religious leader with close ties to the Sy family in Tivaouane.

### *3. Production Systems*

#### *Rainfed Crops*

These crops are grown during the rainy season. In a good year, the zone receives between 400 mm and 500 mm. The quantity of rainfall is irregular and varies from year to year.

Each household head, with the help of his family cultivates his fields. Certain work is done with help from others in the village. Every year, farmers prepare the soil just before the rainy season. The head of each farm unit generally has some equipment which, with the help of draft animals, permits him to practice semi-mechanized farming (animal traction). The farm head can also call on the youth association to provide certain field work.

The fields are private resources to which access is easily controllable when they are farmed. Crops harvested are competitive and divisible goods.

Land shortage prevents farmers from fallowing fields. Instead, farmers practice a bi-annual rotation of crops: peanuts followed by millet. Manioc is also often associated with millet. Farmers do not employ mineral fertilizer and use an insufficient amount of organic matter and pesticides, resulting in low yields. Annual food production does not cover local needs, and villagers are obliged to buy rice and millet to compensate for the food deficit.

The village benefits from a wide range of forest products such as baobab and jujubier fruit, and leaves and fruits of the ronier.

The shortage of firewood has reached a critical level. Women are obliged to use millet stalks for cooking because they cannot find firewood. The introduction of improved wood-burning stoves which use less wood has helped the situation somewhat.

A lack of pasture land has resulted in limiting village livestock to mostly small ruminants and chickens. The persistence of drought and the lack of sufficient land resources have degraded vegetative cover.

The village has institutionalized a system to sanction unwanted intrusion by animals in the fields under cultivation. The animal owner pays a fine of 500 FCFA for small ruminants and 1,000 FCFA for larger animals to the party suffering damages.

During the dry season, most village young men seek seasonal work in towns and return just before the beginning of the rains.

### *Strengths and Weaknesses of the Production System*

#### **Weaknesses**

- High degree of aeolian soil erosion.
- Lack of cultivable land which results in tiny plots and precludes leaving land fallow.
- Absence of pasture land.
- No or insufficient use of mineral fertilizer and organic matter.
- Insufficient food and cash crop production.
- Deterioration of environment through air pollution resulting from toxic deposits emitted by the ICS.

#### **Strengths**

- Cohesion of village and remarkable dynamism of its women despite limited financial means.
- Practice of linking agroforestry with livestock activities which constitutes the basis for diversified agricultural operations such as livestock fattening and vegetable farming.
- Sufficient draft animals readily available.
- Regeneration of *kadd* and ronier supported by the population and the availability of a wide range of forest products from at least six different forest species.

## **Interactions**

The farmers of Djingué work closely with PROVINOBA agents who provide advice concerning the regeneration of *kadd* and ronier trees in the fields and the establishment of "live fences" (primarily *E. holisericea*) to enclose their fields. The project also assists the village in producing plants in the village tree nursery and in planting trees.

## **Management of Land Resources**

All arable lands available for rainfed agriculture are exploited. No unexploited areas remain. Much of the original farm land was taken over by the Taiba phosphate factory.

Formerly, land was allocated to the marabout of the village, who divided it among all residents. Every family thus had land to cultivate. The village land area was sufficient for the people's needs and land conflicts were rare. In good rainfall years, agricultural production was sufficient to provide surpluses. Some families also prospered through extensive livestock activities.

This situation changed in 1955 when the Taiba Phosphate Company expropriated a large part of village lands. According to the people of Djingué, villagers never received compensation for their lost lands. Non-residents of the village were paid by the factory and the proceeds were not shared with Djingué. The perception of the villagers is that the lands were taken away from them unilaterally with no discussion; moreover, the establishment of the factory resulted in no benefits for the village. From 1955 until the establishment of the LDN, the village estimates that it lost 3 square kilometers to 4.5 square kilometers of cultivable land to the phosphate factory.

With the shortage of land and increased population in Djingué, some villagers have asked other villages to lend them farm land. These loans generally entail payment in the form of a share of the crop as part of the agreement.

The problem of land has become critical for the village and has intensified conflicts over land allocation. These conflicts are generally resolved by the marabout who is also the village chief.

## **4. *Problems of Pollution Created by the Chemical Factory***

The village and its surroundings are now encountering a pollution problem that they consider to be very disturbing. Since the opening of the factory, residents have noticed a marked increase in respiratory and skin ailments which did not previously exist. Trees and zinc roofs have also undergone strange changes which did not happen before. Team members were shown zinc roofs which, according to the owners, had holes in them only two to three years after being installed. Trees also were said to be different (color and state of the leaves) because of the chemical factory and the toxic fumes it emits.

This information should be confirmed as it affects the quality of life of Senegalese citizens. The team visited the *Institut des Sciences de l'Environnement* in Dakar to seek more information concerning the degree of pollution in the zone caused by the ICS, but found no data to confirm or to deny the claims of Djingué residents.

The explosion of an ammonia container truck that occurred in Dakar in March 1992, and led to the loss of many lives and injuries to hundreds of others, is a tragic reminder that appropriate cautionary measures have to be taken to prevent similar catastrophes. It also underscores the importance of verifying the accuracy of the information reported from Djingué and Taiba-Ndiaye and, if confirmed, of taking the necessary measures to eliminate or sharply reduce the toxic effects of the fumes from the ICS.

It is difficult for a small village like Djingué to defend its interests concerning the land expropriation and pollution problems just noted. However, there are some indications that Djingué's membership in the Rural Community of Taiba-Ndiaye may offer it some recourse since the entire zone has been affected by the phosphate and chemical operations. The president of the CR of Taiba-Ndiaye indicated that he was aware of the issues and would seek relief by negotiating for more jobs with the two companies for the residents in the jurisdiction and possibly for some financial compensation for damages done. The existence of local government bodies close to their constituents but linked to the broader national political system provides a greater opportunity for bringing local problems that cannot be resolved at the local level to the attention of the national authorities.

## **J. Mbane**

### ***1. Introduction***

The village of Mbane is the seat of both the arrondissement and the Rural Community bearing its name. It is located in the Department of Dagana not far from Richard-Toll. Mbane is a village inhabited primarily by Wolofs from the Walo with a population of approximately 2,000 people.

The main primary sector activities are:

- agriculture (irrigated agriculture, rainfed agriculture, and vegetable farming);
- livestock raising; and
- fishing.

Initially founded as a fishing village, Mbane now is more engaged in irrigated agriculture involving extensive control of water. Residents also practice rainfed agriculture, vegetable farming, and fishing. Small-scale household livestock raising is also prevalent.

Villagers generally turned their cattle over to Peulh neighbors who live near Mbane and share the same irrigated perimeter.

## 2. *Local and Supra-Local Institutions*

### *History*

Around 1854, fishermen from the Niang, Lo, Diouf, Fall, and M'bo families from the arrondissement of Ross-Bethio discovered the area around Lake Guiers which they found very favorable for fishing. In the beginning, they came only on a temporary basis, returning to their villages to farm. However, after a certain time, they established themselves permanently in the area.

### *Local Institutions*

Of the five families cited above, the Niang family first held the office of village chief. The status of chief passed back and forth over the years to different families. In 1939, the village chief came from the Wade family.

The presence of many birds, mosquitoes, and wild boars near the water obliged villagers to move further inland from the lake and create Diagle, where the office of village chief was confided to the Fall family.

Little by little, other villages were founded with different families holding the title of village chief--Khorkhadje (Der), Mbane Alla Yona (a Niang family not the same as the founding Niangs), Mbane Yellour (Niang), Diam Welli (Der), and, in 1954, the Sarrs returned to the former and present site of Mbane and the Niang family to Mbane Alla Yana. The Niang family gave the rights to the office to a nephew from the Ndiaye family.

In effect, there are now two village chiefs who, together, deal with all of Mbane's problems, and nine prominent families, comprising the *conseil des notables*, who advise the chiefs in resolving village conflicts and problems. All decisions committing the village have to be taken collectively.

### **Village-based Organizations**

Mbane has a women's group and a *Foyer des Jeunes*.

### **Women's Group**

The women's group was created in 1982 and now has 500 members. It has the usual component of officers--president, vice president, treasurer, and accounts commissioners.

In the beginning, the group's main purpose was to work to reduce the rate of rural exodus. In several Walo villages, young women left to seek work in the cities and returned only on the eve of religious holidays or for a new agricultural season. To provide alternative sources of income at home to discourage the exodus, the women organized various economic activities which included the following:

- farming 20 hectares of land in the *dieri*;
- cultivating 4 hectares of irrigated vegetable farming using a windmill provided by the Protestant Evangelical Mission to draw the water from the lake,
- millet milling using a mechanical mill distributed by the government; and
- conducting an animal fattening project with 13 head of cattle.

Forty-six active members participate in the vegetable farming project. Each member pays 5,000 FCFA a month as well as 100 FCFA per month for water. This payment permits the group to hire guards and maintain the windmill. Each woman also pays 570 FCFA for seeds.

#### *Foyer des Jeunes*

The *Foyer des Jeunes* was created in 1982 and organizes economic, cultural, and sports activities. It has 104 members, including 40 women who have their own subgroup. The *Foyer* is modeled on the exceptionally successful *Foyer des Jeunes* experience based at Ronkh.

For its agricultural activities, the *Foyer* engages in reforestation and animal fattening projects. Young people have also participated in a functional literacy training program that began in 1980 with the trainers provided by the Association du Walo. The literacy courses provided training in management, reforestation, livestock raising, vegetable farming, and sewing for the women.

The *Foyer* also farms 15 hectares of rice and 15 hectares of tomatoes. It has its own motor pump and bank account. The *Foyer* also has a livestock fattening project which buys cows at 25,000 FCFA and resells them for 150,000 FCFA after fattening.

A Zone Chief coordinates the 10 *Foyers* organized within the Rural Community of Mbane. The Zone Chief is named by the General Assembly, which also names the president of the committee, treasurer, secretary-general, and male and female organizers.

The zone, a section of the *Amicale du Walo*, can make loans to the different *Foyers des Jeunes*. In this case, a contract is signed that specifies the conditions for obtaining the loan. In case of non-repayment of the loans, the *Foyer* will no longer be eligible for future

loans. Various NGOs provide financial support to the *Amicale du Walo* which in turn lends money to the *Foyers*. Each person pays 500 FCFA for a membership card.

### *Supra-local and Administrative Linkages*

Mbane is the seat of the Rural Community. Diagle was the seat of the arrondissement before it was transferred to Mbane. When the government chose Mbane as the arrondissement seat, there were no offices in the village, hence the subprefect was sited in Dagana. It remains to be seen whether this situation is a permanent one. Being the seat of a Rural Community provides Mbane with a better infrastructure than other villages in its jurisdiction.

The headquarters of the CER is located in Mbane which now has a CER chief, livestock and forestry agents, and a very active *monatrice*.

An evangelical Protestant mission is also located in Mbane and has provided some assistance to the local population.

### **3. *Production Systems***

The main agricultural products consist of the following:

- rainfed crops--peanuts, millet, cowpeas, beref, and manioc;
- irrigated crops--rice;
- truck farming--primarily tomatoes and onions but also other vegetables, watermelons, and melons; and
- fruits--some fruit trees whose production is currently negligible.

Other activities include:

- household stock raising and cattle fattening operations by women's groups; and
- fishing, which in the beginning was very important, but the decline in fish populations has led to a drop in the number of fishermen.

### *Irrigated Agriculture at the Village Perimeter Level*

Mbane has 100 hectares of irrigated land of which 40 hectares are beginning to suffer from salinization. This leaves only 60 hectares as good land. During the rainy season, the farmers grow rice. During the dry season, farmers cultivate rice, tomatoes, melons, and watermelons.

#### **Attributes of Goods and Technology**

The perimeter is irrigated from a pumping station which brings the water into a canal. The water flows into a primary canal which in turn flows into secondary and tertiary canals located on individual plots.

The pumping station which lifts water from Lake Guiers to the primary canal is a collective good. It is difficult to control irrigators' access to water from this canal. They use it in common. The secondary canals are also common goods when used by several farmers.

The tertiary canals are private goods. Plots are divisible and access to these plots is easily controlled. All of the production harvested in these plots is divisible and competitive, easily controllable, and not consumed jointly.

The water transported to the canal and distributed to the individual plots is:

- from the pumping station to the canal, a collective good to which it is difficult to control access;
- in the secondary canals, a collective good since it is consumed by several users; and
- in the tertiary canals, a private good when it is consumed by a single user under conditions where it is easy to control access, and consumption of output is separable and rivalrous.

As long as the motor pump functions, there are no water problems. As a result of water from Manantali dam, the volume and level of water has increased and there is sufficient water for irrigation purposes.

#### **Attributes of Rules**

The farmers must respect the established water rotation. Downstream users depend upon the upstream users to respect the established rules. All water users must pay fees which in principle are calculated on the basis of fixed costs (amortization of certain material) and variable costs (inputs such as water and fertilizer).

The users themselves are responsible for maintaining the hydro-agricultural works. They supply labor and pay for preparing the land and other tasks.

Every member has a parcel of .2 hectares. Land is allocated to all members of the village. Even those repatriated from Mauritania since 1989 have been able to receive some plots. Within the irrigated perimeter, access to land becomes an issue. The village has more land in the *dieri* (sandy soils located in the non-flooded areas where rainfed agriculture is practiced).

Women do not have rights to land except when the children inherit land from the father following the death of the father. After a divorce, the woman must rejoin her family who will give her land to farm.

### Interactions

In Mbane Rural Community, many pastoralists have large herds. Conflicts caused by cattle wandering onto irrigated and rainfed fields occur frequently, especially on *dieri* fields. A cattle path has been constructed to permit animals to drink in Lake Guiers. If animals cause crop damage, the farmer brings them to a pound where they are locked up. A cow which remains eight days without being claimed can be sold.

To resolve this kind of conflict, the herder goes to see the owner of the destroyed field to discuss solutions. In case the two cannot resolve the issue, a committee of herders and farmers is set up to evaluate losses. In general, the two parties accept the decision of the committee. If they do not, the affair can be taken to the courts. The residents rarely go to court because they prefer to resolve their disputes in an amicable fashion to preserve good relationships with their neighbors. Transaction costs for going to court are also high and discourage court litigation.

For each animal locked up in the community pound, the owner in principle has to pay 4,000 FCFA for the first day, and 2,000 FCFA the second day and each day afterwards. This money is supposed to be transferred to the Treasury with a percentage deducted for the owner of the damaged field. According to informants, losses farmers sustain generally exceed the compensation received from herders paying fines. In practice, herders often paid less in fines than the set fees after negotiating a settlement with the aggrieved party.

Another problem faced by farmers is the crop damage caused by birds in both irrigated and non-irrigated fields. Birds are very numerous, their growth favored by the micro-climate created by irrigated sugarcane fields.

After the harvest, shepherds put their herds into the field to eat the crop residues. At this point in time, herds converge in the area from at least four different Rural Communities.

Yields of 5 to 6 tons per hectare of rice paddy can be obtained from the 100 irrigated hectares. This high yield results from transplanting rice. After the harvest, rice is transported to Richard-Toll to SAED which pays 33 FCFA per kilo. Tomatoes are sold to SOCAS (tomato cannery) at 30 FCFA per kilo. When these prices are below the market price, some of the production is sold clandestinely in parallel markets. At other times, the market is saturated and makes it difficult for farmers to move their produce.

### *Fishing Production System*

The village's fishing vocation was a major reason for choosing Mbane as one of the mission's sites. The first occupants of the village were fishermen. In the beginning, they came to Mbane only to fish during the dry season and then returned to Foss-Malaw, their village, to farm during the rainy season.

For quite some time, the zone was primarily a fishing area. During the pre-colonial and early colonial period, fishing was regulated by traditional rules. These disappeared under colonial rule when the *Eaux et Forêts* (EF) service took over responsibility for regulating inland fishing on the Senegal River and other fishing reserves such as Lake Guiers.

#### **Attributes of Fisheries as Economic Goods**

Lake Guiers, Mbane's fishing source, is a common pool good. No natural barrier prevents access to the lake. Fish taken from the lake are private goods which are divisible and consumed separately.

Lake Guiers was formerly an excellent fishing area with an abundant supply of fish and many fishermen. The same species of fish found in the Senegal River could also be found in the lake.

The fish were caught with the "dolink" (hook) or with nets. During the 1950s, fishermen from Saint-Louis came with motorized boats and used nets with very small mesh which caught even the tiniest fish. The Saint-Louisians overfished and caught small and large fish together, preventing reproduction and depleting the fishing resources.

Starting in 1957, the EF service tried to regulate fishing in the area and to end the many conflicts between Mbane and Saint-Louis fishermen. Between 1961 and 1968, several bitter conflicts between the two groups of fishermen took place. The Mbane fishermen sought to preserve the sustainability of their fishing activities, threatened by the massive destruction caused by the Saint-Louisians. The latter cared little about regeneration and reproduction of the lake's fishing resources.

In 1968, the EF service forbade the use of fishing nets below certain minimum mesh sizes. Nets with a rating of 40 or under were excluded and only nets with a rating of 46 or larger were authorized for use in the lake, according to the fishermen interviewed.

Fishing as an occupation is open to all. Any citizen who invests in a boat and fishing equipment and who pays his taxes and fees has the right to fish. One does not have to be a resident of a particular area to fish in that area. Approximately 100 fishermen come from other zones in the Senegal River region to fish in the lake. Most of these come from Gae, a large village north of Dagana in Mbane arrondissement.

The catch has declined considerably. Since the release of water from the Manantali dam, Lake Guiers has experienced a rise in its level and volume. The sudden disappearance of much of the grass around the lake and several species of fish has resulted. In addition, the lake has undergone changes and ecological and environmental disruptions through the joint effects of the CSS and the upstream and downstream dams.

Fish are now more numerous during the rainy season. The negative impact of the dams on the Lake Guiers area could have been counterbalanced, had an artificial estuary been constructed. This was not done.

The EF service also encourages pond-based aquaculture and is trying to develop certain fish species and introduce them in the lake and other places such as the irrigated perimeters.

A fishing cooperative which existed 10 years ago in Mbane no longer functions. Fishing is not a profitable venture at present, and more and more fishermen are losing interest in the activity. Fishermen's wives market their catches at Richard-Toll. Some earn as much as 1,000 FCFA to 3,000 FCFA a day.

Mbane also has a training center for fishermen run by the EF service. In the past, the center used to train 10 fishermen every 9 months; now it trains 15 people in 3 months. The head of the Center no longer has any personnel with him and works alone.

Lake Guiers provides the Rural Community of Mbane with the option of carrying out different forms of irrigated agriculture, fishing, and livestock activities (due to the grass all along the lake shore). It also furnishes water for human and animal consumption.

#### **Pollution Caused by the CSS**

The inhabitants of Mbane and vicinity claim that the lake's water has been polluted by the CSS factory which dumps water drained from its irrigated perimeters as well as effluents into the lake. Villagers believe these waters contain residues of fertilizer, pesticides, and other chemical products.

The people living around the lake have noticed the development of a soapy foam and a very high level of potassium chloride. They also claim that more and more people have vomited after drinking from the lake. The head of the local medical station notes that although there have been no deaths, the number of illnesses suffered by people drinking from

the lake has risen. To assess the true situation, a more thorough investigation would be needed to go beyond assumptions and provide an accurate evaluation.

#### **Illnesses and other Consequences of the Dams**

There is general agreement that following the construction of the upstream and downstream dams at Diama and Manantali, the incidence of the following diseases has increased: diarrhea, skin diseases, amoebic dysentery, and above all, schistosomiasis, which presently has ravaged Richard-Toll and its vicinity.

#### *Strengths and Weaknesses of Production Systems*

##### **Weaknesses**

- Insufficient cultivable land in the Hollades and/or fallow fields.
- Pollution of Lake Guiers.
- Reduction and/or disappearance of several species of fish because of dam construction and violation of certain fishing rules.
- Salinization of some irrigated lands.
- Isolation of area, especially during the summer rainy season.

##### **Strengths**

- Existence of several complementary production activities such as agro-silvo-pastoral and fishing activities which provide opportunities to improve living standards.
- Abundance of water to undertake semi-industrial and rural activities in agriculture, livestock, forestry, and fishing.
- Presence of the CER at Mbane with greater possibilities for technical assistance and training.

## **K. Conclusions and Recommendations Related to the Case Studies in Decentralized NRGM**

### ***1. Observations and Conclusions***

The effects of drought and desertification were readily visible in most of the zones visited by the team and affected a wide range of renewable natural resources--water, soils, forests, vegetative cover, fish, and wildlife. Most environmental problems were man-made (e.g., pollution), and others resulted from growing human and animal population pressures on limited natural resources.

Almost everywhere, water is one of the major constraints limiting rural production. Even when sufficient underground water sources exist, they are often difficult to tap. Other areas with relatively abundant water sources such as the Niayes suffer from water salinity. Lake Guiers was one of the few areas visited where water salinity was not a problem.

People everywhere mentioned water as a major priority. One of the major trends noted was a greater involvement of local groups in management of their water resources. Local management committees are taking over responsibility for allocating water resources at boreholes while community-based GIEs, women's groups, and youth associations have become more involved in irrigated agricultural projects.

Land shortages and its corollary, land tenure conflicts, seem to be growing more acute in the densely populated zones visited by the team. Generational conflicts between the older generation and youth were widespread, especially in Cap Vert where many elders preferred to sell part of their land rather than pass it down to their children. In many rural areas, cultivable land was extremely scarce. Djingué, for example, had only 94 hectares for the entire village.

Some conflicts over land developed between certain industries and villages who saw large tracts of village land taken over by mining and agro-industrial operations. Such was the case in the Rural Community of Taiba-Ndiaye where the phosphate company took thousands of hectares of land, and in the Rural Community of Mbane, where the CSS occupied thousands of hectares of irrigated land claimed by surrounding villages as their own.

The mission also noted insufficient forestry and pastoral resources due to climatic factors such as drought and desertification, occupation of land by agro-industrial activities in certain areas, and growing human and animal pressures on the natural resource base.

Senegal is now going through a major transitional period in the management of its forestry resources. In the past, local people were not associated with managing and protecting the country's classified forests. People saw these resources as state forests and expected state agencies such as the EF service and the CERs to ensure forestry protection and production. Now a new forestry code transferring responsibility for managing classified forests from the

central government to Rural Communities is on the verge of being passed with major implications for the future. The new forestry code corresponds with the GOS' commitment to decentralize NRGM and to transform forestry agents from policemen to technical advisors.

Senegal has also seen a great increase in the number of community-based groups and associations involved in village reforestation and agroforestry projects since the 1980s. NGOs have played a major role in financing and stimulating the development of these kinds of projects. Local communities also seem to be taking more responsibility in policing their forestry resources.

The shrinking of pasture lands requires more effective range management policies and more intensive livestock raising techniques, given the significant rise of Senegal's animal population following the worst period of drought and the growing importance of livestock as a source of rural income. The team noted the growing importance of small ruminants in the household economy and the decline of traditional extensive pasture lands which have suffered from drought or have been converted to other activities. Unfortunately, the team was unable to visit some of the innovative experiments in Eastern Senegal where herders organized themselves to manage their grazing lands and water resources in agro-silvo-pastoral units (UASPs).

One of the most interesting discoveries of the mission and still atypical of rural areas in other Sahelian countries was the pollution and environmental damage caused by large-scale enterprises operating in rural zones. These forms of pollution included the following:

- air pollution in the Mboro zone where there seemed to be emissions of toxic gas and acid rain from the ICS (contention of local population to be verified by further investigation);
- pollution from garbage and other waste dumped around Lake M'beusseus in the Cap Vert region; and
- pollution from draining polluted water from the CSS into Lake Guiers and from the ICS into the Atlantic Ocean (contention of local population to be verified by further investigation).

Local government seems to have a potentially valuable role in pointing out local pollution problems to higher authorities and in defending the interests of their constituents when menaced by environmental pollution.

The mission also noted some adverse impacts affecting Senegal's RNR base which developed following the completion of the Diama and Manantali dams in the late 1980s. These effects include the decline and/or disappearance of certain species of fish in Lake

Guiera and the appearance or spread of certain water-related diseases (schistosomiasis, amoebic dysentery, etc.) along the Senegal River, occasioned by changes in the ecosystem following dam construction.

## 2. *Recommendations*

It is essential to strengthen activities countering the adverse effects of drought and desertification.

- While the trend towards greater local involvement in NRGM in Senegal is promising, local people must participate even more in managing their land and natural resources, especially forestry resources. This will require upgrading management and technical skills of Rural Councillors and members of the various associations involved in NRGM projects. The proliferation of NRGM projects in Senegal also calls for greater ad hoc coordination and collaboration between the GOS, donors, NGOs, local government, and community-based groups (the five partners involved in the dialogue on decentralization policies) in determining each partner's respective role in fostering RNR development and providing sufficient monitoring and exchanges of information to facilitate replication of successful experiences.
- The EF service must play the role of advisor while giving up its traditional role of policeman. This means spending most of its time offering technical advice rather than issuing orders to people involved in NRGM projects or simply using resources. At the same time, the EF service should retain some role as guardian of the nation's forestry resources after the Rural Communities obtain the right to manage and exploit forest resources in their jurisdictions. The EF service should have some supervisory power to check potential overexploitation and abuse of forest resources by local communities and individual entrepreneurs.
- If necessary, further geological and hydrological studies should be undertaken to identify potential water sources and the measures to be taken to prevent or retard salinization and other forms of water pollution. Depending on local circumstances and need, national planners and local communities have to make hard choices concerning the allocation of scarce water resources. How much for human consumption? How much for animal consumption? How much for irrigation? How much for industrial purposes? SONEES, for example, provides water both for human and animal consumption and for agricultural purposes. Incentives and sanctions also need to be instituted at all levels to discourage wasting precious water resources.

- Local NRGM would be enhanced by the creation of local land use plans and/or a rural cadastre which would provide CR decision-makers and local communities with better information concerning the rational allocation and distribution of land to avoid haphazard and destructive patterns of land use. Local land use plans and rural cadastres should be drawn up with the active participation and collaboration of the local populations. The local development plans elaborated by the CERs that now cover one-third of the CRs should be extended to the entire country. Government officials, Rural Councillors, and other rural leaders should receive some training in land use planning. Land use and land tenure laws and regulations should be translated into national languages and information in these areas widely disseminated through rural radio and public meetings.
- A study should be made of the possibility of "recycling" for agro-silvo-pastoral purposes the mountains of earth created by the Taiba Phosphate Company during phosphate extraction.
- The accuracy of the information concerning the different forms of pollution described above should be investigated. If proven correct, then anti-pollution measures need to be taken based on a study of the real effects of the ICS and the CSS on the environment and the health and well-being of the citizens affected by the pollution.
- If possible, an artificial estuary should be built in the Senegal River region which would permit certain species of fish to develop and thrive again.
- A major public campaign should be organized to eradicate or, at the least, check the various diseases that have afflicted many people in the Senegal River following ecological changes caused by the construction of the two giant dams in the late 1980s.

## VII. CONCLUSIONS AND RECOMMENDATIONS

Senegal is very much in the forefront of Sahelian decentralization efforts. It probably has the most developed and comprehensive system of local government in the region with 317 rural communities and 43 urban communes. Senegal also has a broad array of well-organized NGOs and community-based associations involved in providing and producing public goods and services for urban and rural dwellers and managing local renewable natural resources.

Since 1990, the GOS has launched what it calls the "Second Administrative Reform." This promises to further advance the decentralization process by reducing state tutelage over local government and preparing legislation to give local communities greater control over the allocation of land and the management of renewable natural resources.

The growing demand for public goods and services has been exacerbated by Senegal's rapidly expanding population, now growing at an annual rate of 2.9 percent, and a high urbanization rate approaching 40 percent. This demographic pattern requires the expansion and development of public services to meet the basic needs of Senegalese in such key areas as primary health care, education, and potable water supply. Senegal's rural economy must also expand to generate the financial resources to provide more and better public goods and services at the local level. The revitalization of Senegal's rural economy in turn depends upon the local population's ability to protect and develop their RNR.

With the current crisis in Senegal's public finances, the GOS has shown a greater willingness to transfer more of the responsibility and burden for providing and managing decentralized public services to local government jurisdictions, community-based organizations, and the private sector. Local community-based management committees have been set up throughout the country to deal with such matters as primary health care, school construction and public water facilities maintenance.

At the same time, the GOS has been seeking to reduce the cost of public services through various decentralization and deconcentration programs which substitute local human and material resources for those previously supplied by central ministries at much higher cost. Some success has been achieved, for example, in lowering school construction and maintenance costs. Moreover, creation of village health huts staffed by local personnel supported by the community has reduced the cost of providing primary health care services, including distribution of essential medicines.

Much needs to be done to strengthen local government finance and to identify new credit sources to finance community-based projects. It remains to be seen whether local governments and communities will be able to afford the recurrent costs of various public services once the initial infrastructure investments have been completed. An expanding rural economy is also vital to support the growth of local infrastructure and public services.

Proposed changes in the land and tree tenure codes, when finally legislated, will give local government jurisdictions and rural communities greater authority to manage their own renewable natural resources. The Rural Councils thus will play a much greater role in allocating land, planning land use, and managing forestry, fish, and water resources in their jurisdictions. These changes will reduce state tutelage over local government and give local governments greater responsibility in decision-making. Donors and NGOs have played a major role in encouraging community-based management of renewable natural resources, particularly in the domain of forest resources. Women's and youth groups have played a major role in reforestation efforts.

At the local level, land use problems are complex and will require flexible conflict resolution mechanisms adapted to local conditions to solve land and resource disputes between rural and urban communities making claim to the same space; communities located adjacent to national borders with claims on both sides of the border; and disputes concerning land use in different agro-ecological zones within the same Rural Community. The land tenure law will also have to be clearer concerning property rights, the definition of land development (*mise en valeur*), and the duration of land use rights in order to provide individuals and communities exploiting land and other natural resources with sufficient security to encourage long-term investments. These issues are particularly important to land use decisions in the Senegal River Valley where land values have increased with the region's irrigated agriculture potential.

Protection and development of Senegal's RNR are crucial to the country's economic future. In the Peanut Basin, deteriorating soil conditions and the termination of subsidized credit for fertilizer and other inputs have led to a decline in peanut production and sales. The future looks bleak unless the Peanut Basin's soil fertility can be restored and other products found to offer rural producers alternative sources of income. Forestry and livestock products may yield significant sources of new income and contribute to the restoration of soil fertility with good NRGM. Senegal's food production will depend increasingly on irrigated agriculture and more efficient management of the country's water resources. Senegal's rich fishing resources, which have been one of the bright spots of the economy, must be protected and carefully managed. Finally, Senegal must also deal with environmental pollution problems that menace the country's RNR and the health of its citizens.

Several obstacles persist as constraints on the effective implementation of decentralization policies in Senegal:

- the high degree of fiscal and financial centralization which severely restricts local governments' financial autonomy;
- the lack of sufficient local resources and a viable tax system to support expansion of local government service provision and recurrent costs;

- the lack of sufficient credit mechanisms to help local governments, community-based organizations, and the private sector to finance investment projects;
- the tendency of the central government to set uniform standards and priorities for all local governments despite major differences in local conditions, needs, and priorities;
- the lack of training for local government officials, particularly in the rural areas, that they need to meet their local government responsibilities and manage renewable natural resources; and
- a lack of locally based conflict resolution rule-enforcement mechanisms enjoying the confidence of local populations.

The donor community and foreign NGOs have played a major role in supporting Senegal's laudable decentralization efforts. For example, the World Bank, USAID, and Canada are providing financial and technical assistance to establish fiscal cadastres in Senegal's urban communes. These will provide the basis for an expanded and sounder tax base. The French are providing technical expertise to help Senegal reinforce local government structures. Many donors are supporting a variety of natural renewable resource management programs, with USAID making this area one of its top priorities in its development assistance strategy for Senegal. The GOS has also developed excellent working relations with foreign and domestic NGOs operating in Senegal and has facilitated their participation in decentralization programs and projects. Senegalese mayors are forging closer ties with their counterparts in France and other countries by "twinning" Senegalese cities with external communities. Cultural exchanges have led to financial and technical collaboration in strengthening local government institutions and services.

Despite its longstanding centralist traditions, Senegal has made considerable progress in pursuing decentralization policies. It now seems to be on the threshold of major changes in central government-local government relations. Finally, Senegal's democratic system provides an important basis for effective decentralization and merits study as an option for other Sahelian states.

### *Specific Recommendations*

#### *Local Government*

1. Training programs are needed to upgrade the management skills of local government officials, particularly those in the CRs.
2. Government laws and regulations concerning organization of local government financial and budgetary procedures, taxes, land and tree tenure, and other areas affected by local rural government should be translated into national languages

and used as materials in functional literacy programs and other training programs for elected rural officials.

3. Minutes of CR meetings, budgetary decisions, and financial records should be made readily available to CR constituents and translated into local languages.
4. Measures should be taken to foster closer collaboration between CR officials, community representatives, CER agents, and other concerned officials in formulating local development and land use plans.
5. The possibility of providing some form of modest remuneration to compensate local government officials for their efforts should be explored.
6. Paralegal services should be made available to local governments to provide legal advice to local government officials and their constituents.
7. Greater support should be given to the *Unité d'Enseignement et de Recherche* (UER) of Saint-Louis university which specializes in local government and land tenure. The UER could be transformed into a Sahelian regional research and training center.
8. Senegal's political parties should support measures to further strengthen local government and to use local government as a training ground for political leadership.

### *Mobilization of Local Resources*

1. Change the law to give CRs greater flexibility in setting local rural tax rates that could be raised. Urban communes should also have more flexibility in setting rates.
2. Diversify local governments' tax bases. CRs should tap previously unexploited potential sources of taxes already sanctioned by law (e.g., *patente*, real estate taxes, and TRIMF).
3. Establish rural cadastres to identify potential sources of real estate and other taxes and fully exploit the urban commune cadastres after their completion to expand the municipal tax base.
4. Provide local tax collectors and state services responsible for establishing tax rolls with greater incentives to do their jobs.
5. Encourage CRs, urban communes, and specialized community-based providers of public services to charge user fees in proportion to real costs incurred in

production, adjusted when necessary through subsidization in light of the ability of the population to pay.

6. Investigate the feasibility of restoring the cattle tax in certain CRs with extensive livestock resources.
7. Make large-scale enterprises operating in rural jurisdictions pay their fair share of taxes.
8. Provide taxpayers with accurate information concerning composition of tax rolls, amount of rural taxes collected, and use of these taxes. This information should be translated into national languages and made available at CR and municipal centers.
9. Provide subsidies and transfer payments to poorer CRs and urban communes not capable of mobilizing sufficient resources to cover basic public service needs.
10. Provide credit facilities for CRs that have demonstrated good financial management capacity.
11. Maintain the role of state agents (e.g., the subprefect, treasury accountants) as a check against embezzlement of funds, poor financial management, and abuse of authority by local government officials.

#### *Provision and Production of Public Goods and Services*

1. Explore possibilities of contracting out public services to private sector entrepreneurs and GIEs, especially at the urban commune level. The PEUL is an interesting experiment which should be carefully monitored. Rural road construction and maintenance is another area where private entrepreneurs have a role to play.
2. Offer training in management and bookkeeping skills to officers of community-based groups providing or producing public services (e.g., APEs, water management committees, health committees, and millet mill management committees).
3. Foster greater communication between state educational and health planners, and CRs and local populations in determining allocation of educational and health services.
4. Decentralize the medicine and drug distribution system through the new health districts to improve access of rural populations to supplies.

5. Give local governments (urban and rural) more flexibility in establishing the boundaries of jurisdictions providing specialized public goods and services.

### *Natural Resources Governance and Management*

1. Upgrade management and technical skills of CRs and community-based groups involved in NRGM through training programs.
2. Continue the PICOGERNA approach to integrated NRGM and monitor the results to test its replicability in other regions.
3. Provide CR officials with training forestry resources management when and if the new forestry code is passed giving CRs control over protected forests in their jurisdictions.
4. Retain some veto powers for the Forest Service to check potential overexploitation of forests by CRs and entrepreneurs licensed by the CRs to exploit these resources.
5. Conduct further hydrological and geological studies to identify potential water sources and to take measures to prevent or retard salinization of existing water supplies.
6. Conduct a campaign to eradicate various diseases emerging in the Senegal River following changes in the ecosystems after completion of the Diama and Manantali dams.
7. Study the possibility of recycling the mountains of earth created by the Taiba Phosphate Company after extracting the phosphate for agro-silvo-pastoral purposes.
8. Investigate the accuracy of local claims that the CSS and ICS pollute the environment and, if confirmed, take needed measures to protect the environment and the health of Senegalese citizens adversely affected by the pollution.
9. An artificial estuary should be built in the Senegal River region to permit certain species of fish adversely affected by dam construction to thrive again.
10. Make greater use of the *Institut des Sciences de l'Environnement* in making environmental studies and organizing seminars for central and local government officials, and community-based groups involved in NRGM.

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## Introduction.\*

Par la loi 72-25 du 19 avril 1972, bien avant de traverser la grave crise des finances publiques de la fin des années 70, l'État sénégalais a engagé pour les zones rurales un transfert de responsabilité au profit des communautés rurales, collectivités locales décentralisées. L'objectif essentiel de cette réforme était d'assurer un meilleur développement local en associant les populations à travers des Conseils Ruraux élus. La réforme de 1972 a été progressivement mise en place. Elle a concerné successivement les régions de Thies (1972) du Siné Saloum (1974), de Diourbel (1976), de Louga (1978), de Casamance (1980), du Fleuve (1982), du Sénégal Oriental (1984) et a abouti à la création de 317 communautés rurales.

Cette réforme présentait l'inconvénient de ne pas donner une autonomie suffisante aux populations. Certes par la loi de 1972, l'État a confié au Conseil Rural le pouvoir important d'affecter les terres faisant partie de son territoire mais il n'a pas reconnu aux Conseil Ruraux compétence pour gérer les ressources des communautés rurales. Beaucoup de communautés rurales ont déçu les espérances initiales des populations qui se sentaient exclues des décisions

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\* La présente analyse repose pour l'essentiel sur un examen détaillé des Communautés Rurales de Mbane, Gaé, Taïba-Ndiaye, Sangalcam. Les données concernant les Communautés Rurales du département de Dagana ont été aussi recueillies auprès du service du Trésor de ce département. Des statistiques globales ont été fournies par la Direction des Collectivités Locales du Ministère de l'Intérieur et par l'Agence Comptable Centrale du Trésor. L'auteur a bénéficié d'entretiens approfondis auprès de divers responsables et cadres des Communautés Rurales. Il a également bénéficié d'une aide précieuse de la part de l'administration du Ministère de l'Intérieur, du Ministère de l'Économie et des Finances et du Ministère de l'Agriculture. Mention particulière doit être faite de la dette contractée vis-à-vis des services administratifs de Dagana ; ces services lui ont fourni pendant près d'une semaine, avec une grande efficacité, des informations dont certaines ont nécessité un travail important.

Sans pouvoir citer chacun nommément, l'auteur exprime ici ses remerciements les plus vifs à ses différents interlocuteurs, sans lesquels ce rapport n'aurait pu être élaboré.

essentielles : le sous préfet ordonnateur des dépenses de la communauté rurale prenait l'initiative d'établir le budget, le faisant approuver sans que la population puisse, le plus souvent, faire ressentir ses besoins et enfin le faisait exécuter largement lors du contrôle effectif des communautés rurales. De plus, la réforme de 1972 n'a pas permis de mobiliser des ressources suffisamment importantes pour ne pas décevoir les populations : la faiblesse des ressources des communautés rurales a souvent empêché des réalisations susceptibles de changer de manière significative les conditions de vie.

Ces difficultés ont incité les autorités sénégalaises à mettre en œuvre à partir de 1990 (loi n° 90-37 du 8/10/1990)<sup>1</sup> la deuxième phase de la réforme administrative : désormais le président de la communauté rurale devient l'ordonnateur du Budget à la place du sous-préfet. Certes la capacité d'initiative et d'autonomie par rapport à l'administration est dans les faits variable d'une communauté rurale à l'autre : certaines communautés rurales disposent d'une capacité de gestion significative et le Président assume l'intégralité de ses pouvoirs (communauté rurale de Sangalcam, de Taïba-Ndiaye) tandis que dans d'autres une assistance importante de l'administration reste en fait encore nécessaire. Cependant même pour les communautés rurales se situant dans cette dernière hypothèse, l'essentiel de l'initiative reste largement aux autorités de la communauté rurale<sup>2</sup>. Si la deuxième phase de la réforme fournit les conditions d'une décentralisation étendue au profit des représentants élus des communautés rurales, en revanche, la faiblesse des ressources de ces communautés rurales demeure alors que les populations ressentent plus que jamais l'urgence de satisfaire les besoins collectifs locaux.

Aussi paraît-il nécessaire à partir d'un échantillon de communautés rurales<sup>3</sup> de dégager les caractéristiques essentielles de leurs ressources et d'en analyser la structure ; on formule ensuite des propositions destinées à améliorer les ressources des communautés rurales.

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<sup>1</sup> L'élection des nouveaux Conseils Ruraux eu lieu en novembre 1990 et la passation des pouvoirs entre les sous préfet et les présidents de communautés rurales en décembre 1990.

<sup>2</sup> Ce constat a été effectué à partir des communautés rurales visitées par la mission ; il devrait être confirmé pour être généralisé.

<sup>3</sup> L'échantillon de communautés rurales sur lequel a porté l'analyse est indiqué supra page 1.

## **1 Les caractéristiques essentielles des ressources des communautés rurales.**

### **1.1 La faiblesse des ressources des communautés rurales.**

La principale caractéristique des ressources des communautés rurales est leur faible montant ; dans la région du Fleuve, les ressources propres des communautés rurales analysées sont comprises pour l'exercice 1990-91<sup>1</sup> approximativement entre 200 F CFA et 500 F CFA par habitant (Cf. tableau n° 1). La communauté rurale de Sangalcam proche de Rufisque parvient à mobiliser près de 1000 F CFA par habitant mais plus de la moitié de ces ressources proviennent du produit des amendes infligées par la gendarmerie sur une route importante traversant la communauté rurale (les communautés rurales perçoivent 60 % du produit des amendes sanctionnant des infractions sur leur territoire (Cf. infra)).

Ces ressources sont modiques : les communes urbaines malgré l'essor démographique de la plupart d'entre elles parviennent à mobiliser des ressources par tête nettement plus substantielles. Ainsi, en 1990-91 la commune urbaine de Dagana pourtant en grande difficulté à la suite des événements avec la Mauritanie mobilise par habitant plus de 1300 F CFA, celle de Richard Toll plus de 4300 F CFA tandis que le prélèvement de la communauté urbaine de Dakar est supérieur à 6500 F CFA.

Cependant dans les communautés rurales visitées, il a été possible de constater la diversité et l'importance des prélèvements locaux ne transitant pas par le budget de la communauté rurale mais permettant de satisfaire des besoins collectifs locaux (Cf. encadré n° 1).

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<sup>1</sup> Jusqu'à 1990-1991 l'exercice comptable des communautés rurales, comme celui de l'État, commençait le 1er juillet pour finir le 30 juin ; désormais il a été décidé de ne plus épouser la campagne agricole mais de se référer à l'année civile.

**Encadré n° 1 Les ressources hors budget des communautés rurales.**

Taïba-Ndiaye, communauté rurale située dans le département de Thies, dispose de ressources propres modestes qui sont complétées par un grand nombre de prélèvements ou de cotisations gérés par diverses associations (Comité de Santé, Groupe des Femmes, Groupe des Jeunes, Association de Parents d'Élèves, Comité de l'eau) et aussi par des apports sous forme de travail (investissement humain).

Les ressources ainsi mobilisées sont substantielles. Par exemple l'Association de Parents d'Élèves fondée en 1975 a financé 5 classes, la communauté rurale 2 tandis que l'État a pris en charge 4 classes dont 1 seule depuis 1975 ; à cet effet chaque parent d'élève doit s'acquitter d'une cotisation de 2000 F CFA par an tandis que les maçons sont bénévoles. Le Comité de gestion de l'eau se révèle aussi particulièrement actif pour couvrir les frais de pompage. Chacun des 70 branchements du village de Taïba-Ndiaye est taxé à 500 F / mois (800 F / mois si la maison est équipée d'une douche) et les consommateurs doivent verser 200 F CFA / mois pour les hommes, 150 F / mois pour les femmes tandis que le fût de 200 litres d'eau est vendu 50 F CFA. La recette potentielle s'élève actuellement à 190 000 F CFA / mois et le recouvrement est mené de manière efficace par 8 collecteurs.

L'ensemble des prélèvements divers hors budget de la communauté rurale est certainement aussi élevé à Taïba-Ndiaye que les ressources propres de la communauté rurale. Le cas de Taïba - Ndiaye est cependant exceptionnel : cette collectivité a été équipée depuis longtemps (dispensaire créé en 1932, école en 1950, bois de village en 1961). Ses habitants ont une longue pratique de la vie associative qu'ils mettent en évidence notamment par leur capacité à présenter des documents comptables utilisables pour chacune de leurs associations.

**1.2 Les ressources des communautés rurales sont inadaptées à leurs besoins.**

**1.2.1 Les différentes ressources des communautés rurales prévues par les textes.**

L'article 76 de la loi 72-25 du 19 avril modifié par les lois 79-82 et 83-59 permet aux communautés rurales de disposer de diverses ressources.

- La taxe rurale d'un montant de 1000 F CFA doit être payée par tout habitant âgé de 14 à 60 ans. La taxe rurale est recouvrée par les chefs de village à l'aide d'un rôle numérique établi par le sous-préfet et le percepteur lors d'une tournée de recensement ; le chef de village qui bénéficie d'une remise de 7 à 10 % des montants collectés reverse le produit de la taxe rurale au percepteur qui est le receveur de la communauté rurale.

- Les salariés résidant sur le territoire d'une communauté rurale sont assujettis non à la taxe rurale mais à une taxe représentative de l'impôt du minimum fiscal (TRIMF) comprise entre 900 F CFA et 18000 F CFA.
- Les titulaires de revenu professionnel assujetti à la patente, les propriétaires titulaires de revenus fonciers sont redevables de l'impôt du minimum fiscal dont le taux est compris entre 600 F et 12000 F CFA.
- La contribution foncière des propriétés bâties assise sur la valeur locative de ces propriétés est perçue au profit des collectivités locales. Il en est de même de la contribution foncière des propriétés non bâties urbaines.
- La patente (loi 9001 du 2 janvier 1990) assise sur les activités industrielles et commerciales implantées sur le territoire des communautés rurales constitue avec la licence (vente de boissons alcoolisées) une autre source de recettes des communautés rurales. Le régime de cet impôt est bien adapté à la réalité des activités commerciales et artisanales le plus souvent de petite taille du monde rural. En effet les petits contribuables, au régime du forfait, doivent payer spontanément une patente par anticipé dont le taux est compris entre 5000 et 50000 F CFA. A défaut de cette modalité de paiement une commission de recouvrement (un agent des Impôts, un agent du Trésor, un représentant de la communauté rurale, un représentant de la force publique) procède à une tournée de recouvrement sans qu'il soit nécessaire d'émettre puis de transmettre un document de rôle. Le recouvrement sur rôle est réservé aux contribuables plus importants assujettis au régime du réel.
- La loi de 1986 a élargi de manière sensible la diversité potentielle des ressources des communautés rurales qui peuvent aussi prélever des timbres sur les actes d'état civil, des locations sur les souks et les gargotes, des droits de stationnement, des droits de marché, des droits de stationnement, des droits sur la distribution des carburants, des taxes d'abattage, des taxes de bornage, des taxes sur les spectacles et sur la publicité. De plus 60 % du produit des amendes infligées sur le territoire des communautés rurales doit leur être reversé.

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Hormis ces ressources propres les communautés rurales peuvent bénéficier de subventions<sup>1</sup> du Fonds d'équipement des collectivités locales (FECL).

Les textes devraient permettre aux communautés rurales de disposer de ressources diverses proportionnelles à leur importance démographique (taxe rurale), à l'importance des activités industrielles et commerciales implantées sur leur territoire (impôt du minimum fiscal, TRIMF, patente, licences, contribution foncière sur les locaux industriels et commerciaux) et à la valeur des actifs fonciers détenus sur leur territoire (contribution foncière sur les propriétés bâties et non bâties). Or, dans les fait, la taxe rurale constitue l'essentiel des ressources propres des communautés rurales.

### 1.2.2 La taxe rurale ressource essentielle des communautés rurales.

Ainsi que le met en évidence le tableau n° 1 en annexe la taxe rurale constitue l'essentiel des ressources effectives des communautés rurales (en moyenne environ 70 %). Trois phénomènes expliquent la prépondérance de la taxe rurale. Dans certaines communautés rurales l'assiette fiscale correspondant aux divers impôts et redevances autres que la taxe rurale peut se révéler très réduite : faiblesse des activités commerciales et artisanales, inexistence d'actifs fonciers taxables. Le non recouvrement d'impôts locaux constitue aussi une autre explication : à l'évidence de nombreux bâtiments situés dans des communautés rurales proches du Cap Vert seraient taxables mais le recouvrement de l'impôt n'est pas entrepris. De même la patente de certaines communautés rurales ne peut être recouvrée en raison du manque de moyens<sup>2</sup>. Ceci est d'autant plus dommageable que les textes ont prévu pour les activités de faible dimension une patente par anticipation dont le mode de recouvrement par tournée est bien adapté (Cf. supra).

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<sup>1</sup> Ces subventions sont faibles : en 1988-89 255 millions de F CFA avaient été budgétisés en faveur des communautés rurales. Le Fonds de crédits municipal créé en 1990 ne concerne pas les Communautés Rurales.

<sup>2</sup> Par exemple les Services du Trésor de Dagana ne disposent pas de moyens de déplacement alors qu'ils desservent une zone particulièrement vaste (départements de Dagana, Matam, Richard-Toll).

Le non recouvrement de certains impôts ou redevances (taxe de marché, droit d'occupation du domaine public ...) provient aussi d'un manque d'initiative auquel la réforme de 1990 pourrait remédier dans certains cas<sup>1</sup>. Enfin, certains impôts (taxe représentative de l'impôt du minimum fiscal (TRIMF), patente) sont recouverts mais perçus contrairement aux dispositions légales par des communes urbaines : par exemple la communauté rurale de Mbane ne perçoit aucune TRIMF prélevé sur les 800 salariés de la Compagnie Sucrière Sénégalaise (CSS) pourtant résidents sur son territoire. Dans le cas de la communauté rurale de Mbane le manque à gagner s'élève à environ 12 millions de FCFA par an c'est-à-dire environ 2 fois les recettes recouvrées en 1990-91 (6,280 millions de F CFA).

On peut également citer le cas de la communauté rurale de Ndoulo qui ne perçoit pas de patente de la SEIB, usine de traitement des oléagineux installée sur son territoire : la patente est versée à la ville de Diourbel.

### **1.2.3 La taxe rurale une recette difficile et coûteuse à recouvrer.**

L'évolution des taux de recouvrement de la taxe rurale pour les différentes régions sénégalaises est retracée dans le tableau n° 2 en annexe.

Trois régions Fatick, Kolda et Ziguinchor se caractérisent par un taux de recouvrement supérieur à 80 % en 90-91 de la taxe rurale ; les deux premières régions ont également réalisé cette performance en 1982-83 et 1985-86.

Quatre régions Kolda, Louga, Saint Louis et Thies réalisent un taux moyen de recouvrement de la taxe rurale inférieur à 60 % ; Louga et Saint Louis réalisent traditionnellement de médiocres taux de recouvrement.

Une analyse détaillée pour le département de Dagana (Cf. tableau n° 3) permet de constater le caractère erratique de l'évolution des taux de recouvrement de la taxe rurale.

En raison du faible montant de cette taxe, ce taux de recouvrement semble déterminé avant tout par l'autorité du sous-préfet, la

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<sup>1</sup> Dans plusieurs Communautés Rurales visitées, nous avons constaté que la perception de taxes de marché était sérieusement envisagée. Un des obstacles essentiels paraît être la difficulté à recruter des collecteurs sérieux.

perception qu'ont les populations de la gestion de leur collectivité et le degré d'engagement des conseils ruraux dans le recouvrement de ces recettes. Le départ d'un sous-préfet, un conflit entre villages, le changement de président d'une communauté rurale peuvent affecter très fortement le taux de recouvrement de la taxe rurale. Cependant des difficultés persistantes sont susceptibles de peser sur les taux de recouvrement. Ainsi malgré une pluviométrie très faible de 1982-83 à 1985-86 (Cf. tableau n° 4) les communautés rurales de Gaé et Mbane ont réalisé d'excellents taux de recouvrement de la taxe rurale mais à partir de 1988-89 les difficultés se sont aggravées et ont entraîné une régression sensible de la population de ces deux communautés rurales ; le taux de recouvrement a alors chuté dans les communautés.

Sans qu'il ait été possible d'approfondir l'analyse sur ce point, l'établissement de l'assiette et le recouvrement de la taxe rurale apparaissent particulièrement coûteux relativement au produit dégagé. Le produit de la taxe rurale est consacré à hauteur de 7 à 10 % à financer les remises des chefs de village<sup>1</sup> qui en principe doivent recouvrer les rôles d'impôts numériques émis par les services des impôts avec le concours de la sous préfecture et procéder au reversement auprès du receveur de la communauté rurale. En fait, dans les différentes communautés rurales visitées, il a été constaté l'intervention active du sous-préfet, des services du Trésor et du secrétaire de la communauté rurale qui de surcroît sont conduits à utiliser des véhicules administratifs. Compte tenu du faible montant unitaire de la taxe rurale, de la dispersion des populations, le coût global de mobilisation des taxes rurales est très élevé relativement au produit.

#### 1.2.4 La taxe rurale, un recette nécessaire pour les communautés rurales.

Malgré les inconvénients (rigidité, coût élevé de mobilisation) exposés plus haut, le maintien de la taxe rurale apparaît nécessaire pour trois raisons essentielles.

Ainsi que cela a été souligné, actuellement la taxe rurale assure l'essentiel des ressources de la plupart des communautés rurales et dans le cas des

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<sup>1</sup> Selon les dispositions du décret 72 636 du 29 mai 1972 le chef de village est nommé par le Préfet du Département sur proposition du Sous-Préfet après consultation des chefs de carrés. Ses remises sur la taxe rurale sont comprises entre 7 et 10 % selon ses performances.

communautés rurales les plus déshéritées le produit potentiel des autres taxes prévues par les textes est très faible voire marginal. Dans un nombre important de communautés rurales, à court et moyen terme, aucun impôt ou redevance locale ne pourrait permettre de dégager des ressources d'un montant similaire.

De plus, l'expérience de diverses communautés rurales (Taïba-Ndiaye<sup>1</sup>) met en évidence combien le recouvrement de la taxe rurale rend concrète et conforte l'entité "communauté rurale" encore très récente : à l'occasion du recouvrement de la taxe rurale les membres de cette entité prennent conscience d'appartenir à une même collectivité<sup>2</sup>.

Enfin, les campagnes de recouvrement sont l'occasion d'échanges importants entre les autorités de la communauté rurale et ses administrés : la réticence à payer reflète parfois le refus de certaines actions ou réalisations de la part des administrés. De même les autorités de la communauté rurale de manière parfois explicite subordonnent certaines réalisations à une bonne performance en matière de taxe rurale ; la nécessité d'un effort des populations est ainsi mise en valeur.

### 1.2.5 Le rôle essentiel de l'État.

L'autorité, la capacité de mobilisation et de gestion des communautés rurales sont apparues extrêmement variables. Cependant, dans l'ensemble des communautés rurales, le rôle de l'administration dans la mobilisation des ressources apparaît actuellement irremplaçable tant pour l'émission de l'impôt que pour son recouvrement.

Les responsables des communautés rurales admettent que sans l'appui des administrations de l'État (Sous-préfet, Impôts, Trésor) il serait beaucoup plus difficile voire parfois impossible de recouvrer les ressources des communautés rurales. Certes, on peut constater la part active que prennent certaines communautés rurales dans le recouvrement de l'impôt mais l'intervention de l'État reste nécessaire pour éviter une chute des taux de recouvrement dans la plupart des

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<sup>1</sup> A Taïba-Ndiaye l'engagement actif des autorités de la Communauté Rurale a permis de porter le taux de recouvrement de la taxe rurale d'environ 40 % à 90 % pour 1990-1991.

<sup>2</sup> Un recouvrement des coûts en raison du lien étroit existant entre la prestation et le paiement ne peut promouvoir de la même manière le sens de la collectivité locale.

communautés rurales ; cette intervention a d'ailleurs été souhaitée explicitement par différents responsables de communautés rurales. L'administration, notamment à travers les sous-préfets, continue d'appuyer activement les communautés rurales dans leur tâche de recouvrement : il ne semble pas s'être produit d'effet de démobilisation de l'administration vis-à-vis des communautés rurales malgré le transfert de compétences intervenu lors de la deuxième phase de la réforme des communautés rurales.

Outre les missions qu'elle exerce directement lors de la mobilisation des ressources, l'administration apporte un concours indispensable dans le contrôle et la gestion comptable des ressources. La collecte des ressources des communautés rurales fait appel dans les fait à divers intermédiaires (chefs de village, représentants des communautés rurales, collecteurs de marché). Notamment dans le cas des collecteurs de marché il est difficile de recruter des individus stables et honnêtes. Un contrôle et une gestion comptable rigoureuse sont donc indispensables pour éviter des détournements ou un manque de rigueur qui entraîneraient des effets désincitateurs pour les contribuables s'acquittant de leurs obligations. Les services du Trésor à travers leur fonction de receveur des communautés rurales assurent ce rôle indispensable : la comptabilité du Trésor retrace l'ensemble des recettes et dépenses en prévision et en exécution des communautés rurales. Le comptable du Trésor procède aussi au contrôle de la régularité comptable des recettes<sup>1</sup> et crédite directement le compte de chaque communauté rurale pour les recettes qu'il encaisse.

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<sup>1</sup> Bien évidemment, le Trésor intervient pour gérer les dépenses : il s'assure de la régularité comptable des dépenses et effectue les paiements pour le compte de la communauté rurale.

## **2 Propositions pour améliorer les ressources des communautés rurales.**

Deux catégories de propositions seraient susceptibles de permettre aux communautés rurales de dégager des ressources plus adaptées à leurs besoins : un aménagement de la taxe rurale et un développement des recettes actuellement autorisées par la loi. Enfin, des actions complémentaires pourraient être prévues en faveur de certaines communautés rurales ou pour faire face à des difficultés spécifiques et notamment à la dégradation des pâturages.

### **2.1 Un aménagement de la taxe rurale.**

Malgré certains inconvénients importants et en l'absence de ressources alternatives substantielles la taxe rurale devrait continuer à constituer dans les années à venir une ressource essentielle des communautés rurales et particulièrement des communautés rurales les moins favorisées. Diverses mesures pourraient améliorer l'efficacité de cet impôt afin d'atténuer certains de ses inconvénients.

**2.1.1** Le taux actuel de la taxe rurale (1000 F CFA) apparaît dans beaucoup de communautés rurales excessivement faible à la fois vis-à-vis de la capacité contributive des populations, du coût de collecte de l'impôt et des besoins des communautés rurales. Aussi est-il proposé de permettre à chaque communauté rurale de retenir un taux de la taxe rurale compris par exemple entre 1000 et 2000 F CFA. Le principe d'une fourchette paraît nécessaire pour deux raisons essentielles : dans de nombreux cas, les communautés rurales peuvent disposer de ressources alternatives substantielles. (Cf. infra) et il est certainement utile de leur laisser un certain choix du mode de prélèvement. De plus, les communautés rurales comprenant des franges de populations en grande difficulté pourraient décider de ne pas accroître le taux de la taxe rurale afin de tenir compte de la capacité contributive des plus pauvres.

**2.1.2** La rémunération des collecteurs de la taxe rurale soulève parfois des difficultés importantes. Dans les faits des membres des communautés rurales (secrétaire notamment) pallient l'inefficacité de certains chefs de village et recouvrent à leur place la taxe rurale en leur apportant un concours

substantiel. Cependant, seuls les chefs de village bénéficient de la remise. Cette situation est source de confusions et de frustrations. Aucune solution évidente ne s'impose : la loi ne prévoit pas la possibilité d'affecter la remise au collecteur effectif qui s'il n'est pas le chef de village devient comptable de fait ; fournir cette possibilité risquerait de susciter des conflits préjudiciables au bon recouvrement de l'impôt. Cependant, si on décide de maintenir le rôle des chefs de villages on peut supposer que ces derniers agiraient de manière plus efficace si les remises étaient versées de manière ponctuelle<sup>1</sup> ; de plus, il serait alors nécessaire que l'administration notamment à travers l'action des sous-préfets facilite le renforcement de l'autorité des chefs de village en les formant et en les associant plus étroitement.

**2.1.3 Une des conditions fondamentales au bon recouvrement des impôts est une information claire des contribuables sur les contributions dues par chacun des membres des communautés rurales<sup>2</sup> sur le montant des ressources collectées et sur leur utilisation. Aussi serait-il probablement souhaitable que les chefs de village disposent non d'un rôle numérique mais d'un rôle nominatif établi à partir du recensement administratif : on connaîtrait ainsi nominativement les défaillants alors qu'actuellement on dispose seulement des restes à recouvrer globaux par village. De plus cette modalité permettrait un meilleur contrôle des chefs de village. Afin d'élargir la diffusion de l'information, il serait probablement souhaitable d'adapter la présentation des documents comptables afin de les rendre plus accessibles : pour cela, à côté du terme comptable français une traduction en langue locale pourrait figurer accompagnée éventuellement d'un symbole. La disponibilité dans les maisons communes des documents comptables essentiels (prévision et exécution) devrait être assurée (aucune des communautés rurales visitées n'a été en mesure de produire facilement ces documents). Peut-être pourrait-on utiliser ces documents comme support pour des actions d'alphabétisation des adultes ?**

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<sup>1</sup> Les retards de versements des remises apparaissent comme un phénomène général.

<sup>2</sup> Une bonne information éviterait certaines difficultés de recouvrement de l'impôt. Par exemple, une opinion assez répandue est que les salariés sont injustement favorisés en étant dispensés de taxe rurale, ceci bien évidemment démobilise les contribuables assujettis à la taxe rurale. Il serait utile de faire savoir qu'en fait ces salariés sont assujettis à la taxe représentative de l'impôt du minimum fiscal (TRIMF) retenue par précompte sur leur salaire. Le montant de la TRIMF, progressif en fonction du revenu du salarié, est supérieur au montant de la taxe rurale.

## 2.2 Une diversité accrue des recettes des communautés rurales.

Le caractère prépondérant de la taxe rurale parmi les recettes des communautés rurales explique en partie la faiblesse et le manque d'élasticité de leurs ressources par rapport à l'assiette fiscale taxable. Dans le cas de communautés rurales particulièrement pauvres, démunies en activités commerciales et artisanales, sans actifs fonciers taxables, sans résidents salariés, la législation ne permet pas de dégager des recettes substantielles autres que la taxe rurale ; pour de telles communautés rurales la mobilisation des ressources est très difficile en raison de la faible capacité contributive des populations. Les communautés rurales visitées ne se situent pas dans cette hypothèse : compte tenu de la législation existante une forte diversification des recettes apparaît possible dans le cadre de la réglementation actuelle pour ces communautés rurales.

2.2.1 Les dispositions légales concernant le recouvrement de la taxe représentative du minimum fiscale (TRIMF) assise sur les salaires au profit de la collectivité locale de résidence du salarié si elles étaient appliquées permettraient à des communautés rurales telle que Mbane, Gaé ou Taïba-Ndiaye<sup>1</sup> de disposer de ressources à la fois plus substantielles et plus diversifiées. Par exemple, ainsi que cela est indiqué plus haut, Mbane devrait percevoir environ 12 millions de F CFA par an correspondant aux 800 salariés de la CSS résidant sur son territoire. La communauté rurale de Mbane pourrait alors envisager un quasi triplement de ses recettes qui en 1990-91 s'élevaient à 6,280 millions de F CFA. De même environ 150 salariés de la CSS résident permettraient à la communauté rurale de Gaé de disposer d'une recette supplémentaire d'environ 2,25 millions de F CFA par an soit 65 % de ses recettes effectives de 1990-91.

2.2.2 Un recouvrement systématique des patentes serait aussi de nature à conforter les recettes des communautés rurales. La difficulté essentielle est le manque de moyen et de motivation de l'administration fiscale pour asseoir et recouvrer un impôt qui est reversé à des collectivités locales. Il serait cependant possible de simplifier l'évaluation du montant de la patente dû en mettant en place pour les forfaitaires une patente indiciaire (dans ce cas on évaluerait

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<sup>1</sup> Dans le cas de Taïba-Ndiaye nous n'avons pas disposé des données nécessaires pour connaître le montant de TRIMF qui pourrait être perçu par la communauté rurale ; cependant ce montant est important compte tenu des nombreux résidents de cette communauté rurale travaillant pour les mines de Taïba.

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l'importance de l'activité en fonction d'indice objectif et non plus d'un chiffre d'affaires ; en fait, cela reviendrait à légaliser en la codifiant la pratique<sup>1</sup>. De plus il serait utile de chercher les modalités d'une implication plus forte des services administratifs (remise, prélèvements pour fournir des moyens supplémentaires au receveur de la communauté rurale ...).

2.2.3 Les actifs immobiliers constituent un excellent indicateur de la capacité contributive des contribuables. Surtout dans le cas des communautés rurales situées dans des zones périurbaines (communauté rurale de Sangalcam) de nombreux bâtiments ayant une valeur vénale importante échappent à toute taxation. Une taxation au titre de la contribution foncière sur les propriétés bâties permettrait à ces communautés rurales de disposer de ressources supplémentaires et aussi d'introduire un élément d'équité dans la fiscalité locale puisque l'assiette de la taxation foncière constitue un bon indice de capacité contributive. Afin de disposer de ressources plus substantielles et d'éviter d'asseoir l'impôt sur une base excessivement étroite, il serait certainement utile au terme d'une période d'application limitée à l'assiette actuelle de l'impôt d'abaisser la limite d'exonération excessivement élevée<sup>2</sup>. De plus et ceci n'est pas contradictoire avec la précédente proposition, afin de permettre une meilleure acceptation de l'impôt foncier sur les propriétés bâties, il serait certainement souhaitable de revoir à la baisse les taux actuels qui sont probablement trop importants (ce point n'a pu être approfondi).

Les terres faisant partie du territoire des communautés rurales appartiennent juridiquement à l'État (loi 64-46 du 17 juin 1964 relative au domaine national) et ont fait l'objet d'attribution par les conseils ruraux. Dans la région périurbaine de Ndiaye et aussi dans la région du Fleuve, il est possible de constater qu'une part importante du terroir des communautés rurales a fait l'objet d'une quasi appropriation privée (vergers ou exploitations maraîchères closes de murs, présence d'aménagements importants) ; la consultation de documents d'attribution a permis de constater que ces parcelles sont dans les faits parfaitement délimitées et

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<sup>1</sup> La codification de cette pratique qui consiste à estimer le chiffre d'affaires en fonction d'indice aurait pour principal avantage de réduire la diversité d'interprétation de la part de l'administration fiscale. A situation similaire le poids de l'impôt devrait être uniformisé. Les pratiques douteuses nées de la négociation seraient rendues plus difficiles.

<sup>2</sup> Actuellement les bâtiments d'une valeur locative inférieure à 900 000 F CFA par an sont exonérés. De plus les bâtiments nouveaux sont exonérés pendant 10 ans ce qui est certainement excessif.

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connues. Dans de telles communautés rurales une taxation des terres<sup>1</sup> permettrait certainement de mobiliser des ressources substantielles et de lutter contre la thésaurisation de certaines terres. Des initiatives qu'il conviendrait de codifier et de rationaliser ont pu être constatées. On doit cependant souligner la difficulté d'une telle entreprise : il serait nécessaire d'étudier le manière approfondie les modalités d'application d'une telle taxation et de disposer au moins d'un cadastre simplifié. Une action progressive aux objectifs initiaux modestes, une information adaptée des contribuables, une charge fiscale légère seraient certainement les conditions préalables pour cette taxation. Une attention particulière serait à accorder aux détenteurs de petites parcelles disposant de faibles revenus. A défaut de telles précautions, l'expérience de divers pays en Afrique ferait craindre l'échec d'une telle taxation qui, pourtant, pourrait être à l'origine d'un prélèvement équitable et dépourvu d'effets économique anti-incitateurs.

Dans certaines communautés rurales, les terres ont été attribuées pour une part parfois très importante à des entreprises (CSS, Phosphatés de Taïba). Compte tenu de la pression démographique, la gestion du terroir restant disponible s'est avérée parfois très difficile et les communautés rurales ont eu à faire face à des besoins plus importants du fait de l'afflux de population qu'implique l'activité de ces entreprises. Cela justifie la disposition légale jusqu'ici non respectée de reversement de la TRIMF à la communauté rurale de résidence. Cela pourrait aussi justifier le versement d'une taxe foncière pour dédommager la communauté rurale du terroir ainsi exploité.

2.2.4 Depuis la 2<sup>ème</sup> phase de la réforme, beaucoup de communautés rurales se sont engagées ou s'engagent actuellement dans une politique de redevance et de recouvrement des coûts. A l'évidence, ainsi que le montre l'exemple de Taïba-Ndiaye (Cf. supra) même si le cas de cette communauté rurale est quelque peu atypique, des ressources importantes peuvent être mobilisées dans la mesure où les sommes demandées sont la contrepartie directe de l'accès à certains services ou infrastructures (approvisionnement en eau, accès à l'éducation, à la santé, à une infrastructure de marché). La condition de la pérennité de telles ressources est une gestion rigoureuse des opérations de recouvrement. A

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<sup>1</sup> La contribution foncière sur les propriétés non bâties dont l'assiette est la valeur vénale des terrains vise essentiellement les terrains constructibles. Sont exclues du champ d'application de cet impôt notamment les terres agricoles puisqu'il s'applique exclusivement en zone urbaine.

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cet effet des actions de formation répétées sont indispensables<sup>1</sup>. De plus l'État à travers ses services financiers doit continuer à offrir un appui indispensable en facilitant le contrôle comptable (par exemple contrôle des recettes de marché).

### 2.3 Des actions complémentaires.

2.3.1 Les communautés rurales où l'élevage constitue une activité importante, dans la mesure où elle ne sont pas le lieu d'activités artisanales ou commerciales notables, ne peuvent disposer compte tenu du système fiscal existant et des propositions formulées plus haut de ressources suffisantes. En particulier, une taxation foncière ne peut être mise en œuvre dans des zones où les activités de culture et d'élevage sont extensives ce qui est le cas de la majeure partie des zones d'élevage.

Afin de pallier cet inconvénient, il pourrait être envisagé d'établir ou plus exactement de rétablir<sup>2</sup> une taxe sur le bétail qui pourrait alors être recouvrée en même temps que la taxe rurale. Les obstacles à une telle imposition sont importants : les revenus de beaucoup d'éleveurs ont été gravement atteints par des sécheresses répétées, le bétail constitue une assiette mobile difficile à saisir surtout dans les zones à fort déplacement de troupeaux ; enfin rétablir un impôt ancien n'est jamais aisé. Cependant divers avantages peuvent être dégagés. Souvent, le bétail constitue une épargne accumulée par les populations rurales : on taxerait ainsi plutôt des couches relativement plus favorisées de la population. De plus, on utiliserait mieux les structures de recouvrement de la taxe rurale dont il a été indiqué plus haut le coût de collecte excessif. Enfin, un tel impôt inciterait les populations à pratiquer un élevage moins extensif et paraît de nature à aider à la lutte contre le surpâturage.

A partir de l'étude de terrain effectuée il n'a pas été possible d'apprécier le degré de faisabilité d'une telle imposition, ni la pertinence des arguments ci-dessus. Cependant, aucun des responsables des communautés rurales

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<sup>1</sup> Nous avons constaté la demande d'une information sur les diverses possibilités de tarification de certains services (approvisionnement en eau notamment) : à défaut de connaître le résultat d'autres expériences, les responsables des comités hésitent sur les modalités de tarification à adopter.

<sup>2</sup> Au Sénégal comme dans d'autres pays sahariens (Niger ...) la taxe sur le bétail avait été abolie à l'occasion de la sécheresse de 1973.

visitées n'a rejeté une telle éventualité ; plusieurs d'entre eux ont simplement insisté sur la nécessité de prévoir des taux de taxation relativement faibles.

2.3.2 Avec quelques aménagements la législation sénégalaise dans la mesure où elle serait appliquée permettrait à de nombreuses communautés rurales des ressources plus adaptées à leurs besoins. Cependant, à l'évidence certaines communautés disposent d'un potentiel fiscal extrêmement faible et ne sont pas susceptibles de dégager des ressources en rapport avec les besoins collectifs de populations déjà fortement défavorisées. Des subventions ou une péréquation en faveur de cette catégorie de communautés rurales seraient nécessaires. Actuellement, seul le Fonds d'Équipement des Collectivités Locales pourrait jouer ce rôle. En fait, les communautés rurales les plus défavorisées ont une faible probabilité de bénéficier des fonds de concours du FECL en raison du critère d'accès retenu (recouvrement à 100 % de la taxe rurale) et aussi du montant réduit des ressources mises à la disposition des communautés rurales sur ce fonds. Les difficultés financières considérables de l'État central ne permettent guère de préconiser une forte augmentation des fonds de concours du FECL mais il serait certainement utile d'assouplir le critère d'accès et de s'efforcer de cibler l'action du FECL sur les communautés rurales les plus défavorisées.

Il est à noter qu'un projet de fonds de péréquation entre communautés rurales alimenté par un prélèvement de 25 % sur le produit de la taxe rurale avait été élaboré en 1976 sans être appliqué : la procédure à mettre en œuvre était relativement complexe alors que la péréquation aurait porté sur des montants de ressources faibles.

2.2.3 Pour certaines communautés rurales faisant preuve de capacités de gestion exceptionnelles, il serait probablement souhaitable d'organiser sous des conditions strictes un début d'accès à des crédits d'équipement. Par exemple, il est dommageable que le Comité d'eau de la communauté rurale de Taïba-Ndiaye ne puisse acheter des compteurs d'eau qui en évitant des gaspillages dégageraient une rentabilité suffisante pour permettre le remboursement d'un emprunt. On pourrait ainsi apprendre progressivement aux gestionnaires des communautés rurales à utiliser avec discernement le crédit. Un renforcement des capacités de gestion des communautés rurales constitue la condition préalable d'une telle orientation.

## Conclusion.

Les communautés rurales sénégalaises actuelles sont le résultat d'une longue gestation : la réforme de 1972 avait mis en place progressivement entre 1972 et 1984 des collectivités locales dont l'État assurait une tutelle étroite. La réforme de 1990 en consentant une large autonomie aux communautés rurales a réduit une des causes fondamentales du mécontentement des populations à l'égard de ces collectivités locales. Cependant, la faiblesse persistante des ressources des communautés rurales limite de manière considérable leur action en faveur du développement.

La taxe rurale impôt per capita constitue actuellement la ressource essentielle des communautés rurales. La taxe rurale présente divers inconvénients (rendement limité, rigidité par rapport à l'évolution des revenus et de l'activité, fragilité des taux de recouvrement, coût de collecte important).

Cependant, ses avantages paraissent l'emporter sur ses inconvénients : il serait difficile de lui substituer surtout pour les communautés rurales les plus pauvres d'autres catégories de recettes, elle contribue à forger l'identité des communautés rurales, entités encore mal établies et son recouvrement est l'occasion d'échanges d'informations précieux entre les responsables de la communauté rurale et les populations. De surcroît, il paraît possible d'améliorer le rendement et les conditions du recouvrement de la taxe rurale : en particulier il serait probablement souhaitable de permettre aux communautés rurales de retenir un taux de taxation plus élevé à l'intérieur d'une fourchette.

Moyennant quelques aménagements (imposition du foncier bâti), en appliquant les textes en vigueur (reversement de la TRIMF à la collectivité

de résidence des salariés, mise en œuvre de taxes de marché, de taxes de bornage, de redevances pour la délivrance d'actes d'état civil ...) la diversité des ressources de nombreuses communautés rurales pourrait être accrue en même temps que le montant global de ses ressources. Une fiscalité foncière appliquée dans un premier temps aux terres agricoles les plus productives et les mieux équipées (essentiellement dans les zones périurbaines) exercerait un effet favorable similaire ; elle permettrait aussi un prélèvement fiscal local plus équitable.

Parmi les actions complémentaires qui seraient susceptibles de renforcer les ressources insuffisantes des communautés rurales, figure notamment le rétablissement en zone d'élevage d'une taxe sur le bétail à taux modéré : cette taxe pourrait être recouvrée en même temps et selon les mêmes modalités que la taxe rurale et exercer un effet incitatif en faveur d'une intensification de l'élevage et donc de la réduction du surpâturage. Des transferts sous forme de subventions bien ciblés restent certainement indispensables pour les communautés rurales les plus pauvres tandis qu'il serait souhaitable d'amorcer sous des conditions strictes l'accès au crédit pour les communautés rurales démontrant une capacité de gestion particulièrement développée.

La plus grande autonomie des communautés rurales apparaît à l'issue de l'enquête menée sur le terrain favorable à un renforcement et à une diversification des ressources des communautés rurales : de nombreuses initiatives postérieures à la réforme de 1990 sont prises en ce sens. De plus, parallèlement à la mobilisation des ressources propres aux communautés rurales, des ressources substantielles sont également réunies au niveau local dans divers cadres (associations diverses, comités ...). Cependant, un appui soutenu de l'État à travers ses différentes administrations apparaît indispensable car la capacité de gestion de la plupart des communautés rurales est encore faible et car les services administratifs sénégalais sont susceptibles d'aider de manière considérable ces collectivités notamment dans leur tâche de mobilisation des ressources.

**La mobilisation des ressources par les  
communautés rurales sénégalaises**

**Gérard CHAMBAS  
Chargé de recherches  
CNRS**

**Mai 1992**

Annexe 1

Tableau n° 1 Ressources recouvrées par les communautés rurales ;  
comparaison avec les communes urbaines.

Unité : FCFA par habitant  
% des ressources totales

	Ressources par habitant 1990-1991	Apport de la taxe rurale 1990-1991	Taux de recouvrement de la taxe rurale 1990-1991
<b>Communautés rurales</b>			
Gaé	194	71,1 %	36,8 %
Gandon	239	29,7 %	18,7 %
Mbane	259	87,3 %	58,1 %
Mpal	355	59,1 %	55,4 %
Ross Bethio	355	22,2 %	20,1 %
Rosso Sénégal	536	81,6 %	109,4 %
Sangalcam	972	11,0 %*	28,2 %
<b>Communes urbaines</b>			
Dagana	1305		
Dakar	6560		
Richard-Toll	4330		
Saint-Louis	1550		
Thies	1020		
<b>Pour mémoire</b>			
Prélèvement de l'État Central	36500		

Source Calculs à partir de

- Service du Trésor du département de Dagana
- Comptes administratifs de la communauté rurale de Sangalcam
- Service des Collectivités Locales du Ministère de l'Intérieur.

\* 67,4 % des ressources de la communauté rurale de Sangalcam proviennent des produits des amendes.

Tableau n° 2 : L'évolution par région des taux de recouvrement de la taxe rurale.

Région	Année de création des communautés rurales	1982 -83	1985 - 86	1990 - 91
Diourbel	1976	79	49	64
Fatick	1974	86	82	89
Kaolak	1974	92	91	87
Kolda	1980	86	90	51
Louga	1978	68	57	40
Saint-Louis	1982	56	56	45
Tambacounda	1984	-	76	70
Thies	1972	85	79	54
Ziguinchor	1980	77	69	82

Source : Données calculées à partir de Direction Générale du Trésor - Agence Comptable Centrale.  
Pour 1985-86 Research Triangle Institute, *Promoting Economic Development and Employment Generation through Decentralization in Senegal*. USAID Dakar 1989.

Tableau n° 3 La taxe rurale dans le département de Dagana (1983-1991).

Unité : 100 F CFA  
et % des émissions

	Montant de la taxe rurale émise									Taux de recouvrement de la taxe rurale								
	83	84	85	86	87	88	89	90	91*	83	84	85	86	87	88	89	90	91*
Préfecture de Rao																		
CR** de Gandon	-	-	15911	16011	16011	16409	15120	15085	15085	-	-	12,7	29,6	49,4	77,7	53,5	2,9	9,4
CR de Mpal			7894	7394	7394	7557	6528	6306	6306			35,9	45,7	51,3	84,2	67,3	0,1	12,9
Préfecture de Ross Bethio																		
CR de Ross Bethio			17756	17756	10179	17000	16487	16487	16487	-	-	67,9	60,6	46,4	38,0	49,2	4,0	21,7
CR de Rosso Sénégal			7154	7154	7055	7000	6644	6644	6644			65,1	64,8	57,9	57,6	46,4	5,9	100
Préfecture de Mbane																		
CR de Mbane	9665	10405	15425	14643	13690	14690	12367	9440	9682	98,2	93,7	100	95,7	92,9	77,9	57,0	52,0	50,0
CR de Gaé	6246	6551	9527	9038	8556	8958	8432	6661	6832	99,9	77,0	93,9	100	97,6	89,4	74,6	74,6	59,4

\* Pour 1991, il s'agit du taux de recouvrement constaté en janvier 1992.

\*\* CR = communauté rurale

Source D'après Trésor Public de Dagana.

**Tableau n° 4 L'évolution du taux de recouvrement de la taxe rurale dans les communautés rurales de Gaé et Mbane.**

	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89
<b>Communauté rurale de Gaé</b>									
Population totale	15478	16096	18700	18782	19485	18786	18457	18710	17739
Hauteur d'eau (mm)	216	319	189	83	80	161	360	168	217
Taux de recouvrement %	-	-	99,9	77,0	93,9	100,0	97,6	89,4	74,6
<b>Communauté rurale de Mbane</b>									
Population totale	21786	22864	28127	27847	29850	27493	27413	27140	24222
Hauteur d'eau (mm)	216	319	189	83	80	161	360	168	217
Taux de recouvrement %	-	-	98,2	93,7	100,0	95,7	92,9	77,9	57,0

Source Trésor Public du département de Dagana et Monographie du CER de Dagana.

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## Annexe n° 2 Note sur l'utilisation des ressources des communautés rurales le cas de Gaé , Mbane et Sangalcam.\*

Les règles de fonctionnement des communautés rurales entraînent l'affectation de la majeure partie des ressources mobilisées à des opérations d'investissement ou d'entretien des investissements. En effet, à l'exception de certains assouplissements (financement du carburant nécessaire à l'exhaure de l'eau des forages, de médicaments pour la dotation de centre de santé) les textes régissant les communautés rurales autorisent seulement des dépenses d'investissement et excluent en particulier les dépenses de personnel. Ces règles ont pour objectif d'éviter des abus qui n'auraient pas manqué de se produire. Cependant elle sont à l'origine de difficultés de fonctionnement des communautés rurales. En particulier, les secrétaires de communautés rurales dont le rôle important implique une grande disponibilité voient leur motivation amoindrie par l'absence de rémunération ; le risque est un service de secrétariat médiocre et aussi la pratique de compensations occultes. L'expérience a montré aussi la réticence des Présidents de communautés rurales à bénéficier du concours d'agents de l'État détachés ; ils tiennent à choisir des collaborateurs en qui ils ont confiance.

### 1 Les prévisions de dépenses.

L'ensemble des dépenses envisagées par le Conseil Rural figurent dans le budget. Les budgets consultés mettent en évidence une surestimation générale des recettes attendues et donc de celui des dépenses : dans le cas des communautés rurales de Gaé et de Mbane les taux de réalisation des recettes s'élevaient pour l'exercice 1990-1991 respectivement à 35 % et 46 %. pour la communauté rurale de Sangalcam ce taux s'élève à près de 91 % pour 1990-1991 en raison d'un phénomène de compensation : les recettes avaient été fortement surestimées (le taux de réalisation n'aurait pas dû atteindre 50 %) mais les amendes reversées se sont élevées à 10,368 millions de F CFA contre un produit prévu de 0,8 millions de F CFA. Dans ces conditions, les dépenses inscrites au budget apparaissent largement comme la liste des réalisations escomptées si les

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\* L'analyse des dépenses des communautés rurales ne figurait pas dans les termes de référence de notre mission. Cependant, il a paru intéressant de rassembler des informations qui ont pu être recueillies à l'occasion de l'analyse de la mobilisation des ressources par les communautés rurales.

ressources augmentaient de manière spectaculaire. Cette liste de dépenses constitue un document de base pour les arbitrages ultérieurs.

## 2. Les réalisations de dépenses.

Parmi les dépenses envisagées lors de l'élaboration du budget dont le sous-préfet s'assure de la régularité vis-à-vis des textes, le conseil rural opère des arbitrages d'autant plus sévères que la surestimation des recettes a été forte. Parmi les critères de rejet de certaines réalisations figure le faible taux de recouvrement de la taxe dans des villages qui seraient amenés à profiter de cette réalisations.

La réalisation de la dépense s'opère avec l'appui technique et comptable de l'administration. L'ordonnateur de la communauté rurale pour effectuer un investissement (construction d'une école, d'un dispensaire ...) sollicite un service de l'administration concernée qui donne un accord de principe en fonction de critères nationaux de planification (nombre d'élèves, effectif de population à desservir) : l'objectif poursuivi est d'éviter une mauvaise répartition des équipements. Ensuite le service technique de l'administration élabore un dossier comprenant notamment un devis estimatif et un descriptif des travaux ; ce dossier doit être approuvé par le Président de la communauté rurale et est visé par le préfet. Si le montant des travaux dépasse 5 millions de FCFA et par le gouverneur au-delà de 10 millions de F CFA la procédure d'appel d'offre est obligatoire. Les services du Trésor en tant que receveur de la communauté rurale s'assurent de la régularité comptable des opérations et règlent les travaux : dans aucune des communautés rurales il n'a été constaté de retard de paiement pour une dépense régulière d'un point de vue comptable.

Certes l'intervention de l'administration implique des procédures lourdes dont se plaignent les responsables des communautés rurales. Cependant elles permettent d'assurer une qualité minimum des dépenses de collectivités dont la capacité de gestion est le plus souvent très faible.

L'examen de l'affectation des ressources par les communautés rurales (Cf. tableau infra) met en évidence la priorité accordée par les trois communautés rurales examinées en faveur de l'éducation et aussi à un moindre degré de la santé. Un accent important est aussi accordé à l'équipement hydraulique. Dans le cas des communautés rurales de Gaé et de Mbane, les ressources sont

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consacrées à la promotion des activités agricoles et d'élevage ; la construction de fourrières répond aux besoins des agriculteurs de se prémunir contre les dégâts imputables à la divagation des animaux.

On constate aussi pour les communautés rurales de Gaé et Mbane une diminution forte des dépenses<sup>1</sup> consécutive à la dégradation des ressources de ces deux communautés rurales.

Tableau n° 1 Les dépenses effectives de la communauté rurale de Gaé.

Unité : F CFA.

	1987-88	1988-89	1989-90	1990-91
Traitement phytosanitaire	199850	199850		
Lutte contre les feux de brousse	199850	105000	299950	199850
Diversification culture				199500
Reboisement	199850		299810	199850
Lutte contre les épizooties	199920	199850	274750	199500
Construction dispensaire	4140000			
Construction de classe	512281		775880	566275
Réparation de classe	3600000	3040000	3360000	
Réparation maison commune	500000		299520	
Réparation puits	500000		289500	193040
Equipement sportif	499920		500000	540000
Groupement féminin	497250			495000
Construction fourrières	1020000	680000		
Divers	300000			
Total	12368921	6224700	6099410	2593015

Source Trésor Public de Dagana.

<sup>1</sup> L'origine de la chute des dépenses de la communauté rurale de Gaé au titre de l'exercice 1990-91 n'a pas été recherchée lors de la mission sur place : ce phénomène a été constaté seulement lors du dépouillement des documents.

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Tableau n° 2 Les dépenses effectives de la communauté rurale de Mbane.

Unité : F CFA.

	1987-88	1988-89	1989-90
Traitement phytosanitaire	299950	499800	---
Lutte contre les feux de brousse	299950		299950
Carburant forage			496650
Divers			
Reboisement	299950	1305500	
Lutte contre les épizooties	199920	319900	
Construction dispensaire			
Réparation dispensaire	1000000		
Remises chefs de village	679319		874790
Construction de classe	5587000	2690514	
Réparation de classe			
Construction magasin céréalier		3784500	
Forage de puits		1129000	
Réparation puits	2000000	1837194	1224796
Equipement sportif			499995
Groupement féminin			
Construction fourrières	2132640	1421760	
Parc vaccination			2084168
Total	12498729	12988168	5480349

Source Trésor Public de Dagana.

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## **APPENDICES**

**APPENDIX A**

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