

**TENURE AND RESOURCE MANAGEMENT
IN THE GAMBIA:
A CASE STUDY OF UPPER BADDIBU DISTRICT**

prepared by

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All views, interpretations, recommendations, and conclusions expressed in this paper are those of the authors and not necessarily those of the supporting or cooperating organizations.

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EXECUTIVE SUMMARY

This paper presents the findings of field research conducted between May 28th and June 26th, 1993, in the Upper Baddibu District of The Gambia. This case study, and a similar one conducted concurrently in the Kiang West District, are part of a series of case studies financed by US Agency for International Development (USAID)/The Gambia and implemented jointly by the Land Tenure Center (LTC) of the University of Wisconsin-Madison and the Working Group on Resource Tenure and Land Use Planning of the Government of The Gambia (GOTG).

RESEARCH OBJECTIVES AND METHODOLOGIES

The central purpose of these case studies is to investigate the relationship between customary tenure relations, statutory law, and natural resource-management practices in various locations around The Gambia. The descriptive information provided by these case studies will be incorporated into a policy paper that will assess the tenure situations found throughout the country, and will indicate various policy options for the government and donors.

The Working Group on Resource Tenure and Land Use Planning met in Madison, Wisconsin, in April 1993 to discuss the research objectives of this study and to select case study sites. The Upper Baddibu District and the villages of Maka Farafeni and Dutabulu were selected by the working group for a number of reasons. The team wished to explore the influence of urban growth on tenure regimes of villages surrounding the rapidly expanding midcountry trading center of Farafenni. There was also interest in assessing the importance of the Pakala Forest Park to surrounding villages with severe land shortage claims.

The information collected for this case study was generated through the use of the Rapid Rural Appraisal (RRA), a qualitative research methodology which emphasizes the importance of incorporating indigenous knowledge as an integral part of the research process. RRA relies on a multidisciplinary research team that spends a limited but intensive time at the study site using a range of techniques designed to promote the active involvement of the local population in the collection and analysis of information.

The study team consisted of members from the Ministry of Natural Resources and the Environment, the Ministry of Local Government and Lands, the Ministry of Agriculture, USAID, and a consultant for LTC.

The time allotted for field research was limited to fourteen days and thus this did not allow for an in-depth exploration of all the issues that emerged. This investigation must be considered a preliminary step in the research process and not a definitive statement on the social and economic situation of the Upper Baddibu District. Moreover, the villages visited gave their perceptions of their specific locality, with Maka Farafenni as the central point of the fieldwork. Care must be taken to avoid generalizing the findings from the Maka Farafenni area with other parts of the District or the country. However, certain issues emerged during the case study that are believed by the team to be applicable to a wider area.

RESEARCH FINDINGS

Throughout the study area residents cited a shortage of land available for agricultural production as their greatest constraint. The exact extent of the land shortage is not accurately known, for that would require a land survey and precise demographic data to assess the land-to-labor ratio. However, it is the perception of the villagers interviewed in Maka Farafenni and Dutabulu that land available to them is not sufficient to meet their subsistence needs. The village of Dutabulu seems to be in the most precarious position, since land speculation in Farafenni dissuades landholders there from lending land to residents of Dutabulu. The women of Dutabulu are the most negatively affected by the land shortages. There is no longer enough land available in that village to allow women to cultivate personal fields, so they must assist their husbands on family fields.

In addition, women, who are responsible for firewood collection, described how the degraded woodland areas no longer fulfill the domestic fuel-wood needs. This provokes confrontations between the women and the Forestry Department over the exploitation of forested areas.

A few key variables were identified which influence the accessibility of natural resources to user groups:

- ▶ village settlement patterns;
- ▶ family lineage within villages; and
- ▶ availability of labor within the family.

The settlement history of villages in the study area is the most influential factor in determining rights to land and other natural resources. Families who initially clear land acquire the most secure rights to that land. Such families are generally known as "founders," with subsequent migrants known as "late settlers." Founders actually demarcate the boundaries of the village and lay first claims to the land within the village area. Late settlers may also acquire land through initial clearing, if land is still available when they arrive. However, they would be given that land through a founding family, who acts as a host to the new family.

In the study area, late settlers are usually land borrowers. They are not necessarily allocated the same fields every year. The team believes that this may influence the level of investment land borrowers are willing to make on fields over which they do not have secure rights. In Dutabulu, for example, women stated that they would be willing to plant trees to help meet domestic fuel-wood demands, but that their status as land borrowers precludes that type of investment in the land.

In addition, the state-owned Pakala Forest Park is perceived by villagers as the major impediment to the exploitation and expansion of agricultural lands in the villages surrounding the park. The steady growth of Farafenni may be negatively influencing the tenure arrangements between Dutabulu and Farafenni. Land speculation in Farafenni seems to be accelerating, with an increasing amount of settlement area now under leasehold. This effect is strongly felt in Dutabulu.

CONCLUSIONS AND RECOMMENDATIONS

Traditional tenure arrangements appear to be adequately flexible in responding to the needs of the populations of the Upper Baddibu District. An indication of this in Maka Farafenni is that most land disputes are resolved at the household level, with relatively few reaching the *alkalo*. This illustrates the flexibility of the tenure system in accommodating villagers' needs. There are specific cases,

however, where the regimes are not appropriate and do not respond to the requirements of the population, with Dutabulu as a prominent example.

There are differences in the ways in which user groups perceive and utilize natural resources. Government policy and development interventions in the study area must take account of these differences in any policy reform or development project. Participants in the case study had very strong ideas about how they would resolve the problems affecting their livelihood strategies. Villagers also revealed to the team, however, a lack of knowledge of rights to natural resources and technical information concerning resource management. This highlights the need for environmental education and extension programs on all levels.

The team concludes that further research on tenure issues and the development of workable solutions to the resource-management problems facing the study population is imperative. The close collaboration of communities and government in determining resource-management plans is a critical element in the process.

1. INTRODUCTION

1.1 PURPOSE OF RESEARCH

The Agricultural and Natural Resources program of the Ministry of Natural Resources and the Environment, financed by the USAID/The Gambia, consists of a component designed to promote a national dialogue on resource tenure policy. This case study, and a similar one conducted concurrently in the Kiang West District, are part of series of case studies coordinated and implemented jointly by the Land Tenure Center (LTC) of the University of Wisconsin-Madison and the Working Group on Resource Tenure and Land Use Planning of the Government of The Gambia (GOTG).

The central purpose of this case study and others financed by the project is to describe the situation of tenure and natural resources in various locations around The Gambia. The descriptive information provided by these case studies will be incorporated into an analytical paper assessing the tenure situation in the entire country and spelling out various policy options to government and donors.

The Working Group on Resource Tenure and Land Use Planning met in Madison, Wisconsin, in April 1993 to discuss the research objectives of this study and to select case study sites. The Upper Baddibu District and the villages of Maka Farafeni, Dutabulu, and Beretto were initially selected by the working group for a number of reasons. The team wished to explore the influence of urban growth on tenure regimes of villages surrounding the rapidly expanding midcountry trading center of Farafenni. In order to compliment both the Foni Jarrol District¹ and Kiang West District study, villages composed of one predominant ethnic group were sought to allow for an in-depth analysis of tenure relations within particular ethnic groups. Maka Farafenni is essentially Wolof; Dutabulu is entirely Fula.

1.2 RESEARCH METHODOLOGY

The information collected for this case study was generated through the use of the Rapid Rural Appraisal (RRA), a qualitative research methodology that puts particular emphasis on incorporating the knowledge of local people into the research process (K. Freudenberger and Gueye 1990; FAO 1993). It relies on a multidisciplinary research team which spends a limited but intensive time at the study site using a range of techniques designed to promote the active involvement of the local population in the collection and analysis of information.

1. A study conducted by the Land Tenure Center. See M. Freudenberger (1993).

Throughout the study, a variety of innovative techniques were employed to gather information. These included a transect of the village with several village participants, territory-mapping exercises done by villagers, Venn diagrams of institutional relations, semistructured interviews with groups and individuals, and ranking matrices to explore the frequency of resource conflicts and to examine sources of income. To estimate relative proportions of resources, conflicts, income, or migration, the participants were asked to use beans or seeds provided by the team to represent the various proportions. The beans were used to show relative quantities, not the exact numbers of the items concerned. The proportions allocated for various activities were derived, discussed, and analyzed by the participants and team members. This information was then crosschecked through semi-structured interviews and focus group discussions with different participants.

The initial ten-day field visit was concentrated in Maka Farafenni, with periodic trips taken to Dutabulu and Ngeyen Sanjal. The scope of work during the second four-day phase of research was enlarged to include the villages of Chamen, Yallal, and Farafenni. The village of Beretto was dropped from the research itinerary. A preliminary visit revealed that the village is less affected by the growth of Farafenni and the constriction of Pakala Forest Park than was previously believed. It was then decided to focus efforts on villages that are affected more severely by urban sprawl and that share a commons area, such as the Pakala Forest Reserve.

1.3 RESEARCH OBJECTIVES

The objectives used by LTC in the case study of the Foni Jarrol District were modified by the Working Group on Resource Tenure and Land Use Planning to serve as the framework for the Upper Baddibu study (see figure 1).

The purpose of this study was:

- ▶ to identify the range of resource management practices employed by the rural population;
- ▶ to describe the tenure arrangements around the various resources;
- ▶ to note if there have been any changes in tenure relations;
- ▶ to posit reasons for these changes; and
- ▶ to consider policy options for the improved management of natural resources.

1.4 RESEARCH TEAM

The interministerial team consisted of the following members:

- | | |
|------------------|--|
| Tamsir Bobb: | Ministry of Agriculture, Department of Livestock Services, Senior Animal Husbandry Officer; |
| Foday Bojang: | Ministry of Natural Resources, Department of Forestry, Director; |
| Christine Elias: | United States Agency for International Development, Agricultural and Natural Resource Management Project, Project Manager; |

FIGURE 1 RESEARCH OBJECTIVES**Objective 1: Identification of resource-management practices**

1. Describe the uses of the natural resources—Who uses what resources where?
2. Identify the tenure arrangements to natural resources in microecological zones by resource user group and social category
3. Describe the evolution of natural-resource tenure regimes in microecological zones by resource user group and social category
4. Interpret the influence of social and ecological factors on the evolution of tenure systems

Objective 2: Identification of resource-management institutions

1. Describe the settlement history of the case study sites
2. Identify social structures and the role of local institutions in natural resource management
3. Assess the adequacy of tenure regimes for meeting resource needs of resource user groups and social categories
4. Determine the knowledge of current laws on land and other natural resources by case study community
5. Assess the influence of development projects on resource tenure arrangements

Objective 3: Identification of resource disputes and conflict-resolution mechanisms

1. Categorize resource-use conflicts at village and district level
2. Identify informal and formal conflict resolution mechanisms
3. Identify the types of natural resource disputes that are considered by the District Tribunal
4. Interpret how conflict resolution practices may/may not be leading to new resource tenure arrangements

Objective 4: Policy recommendations

1. List tenure and natural resource policy recommendations of rural resource user groups
2. Identify tenure issues that affect the use and management of natural resources in case study site
3. Consider how village-level policy recommendations can be incorporated into national policy and legislative reforms and improved administrative practices

- Susan Gannon: Land Tenure Center, University of Wisconsin, Consultant, RRA team leader;
- Tijan Jallow: Ministry of Natural Resources, Policy Analysis and Planning Unit, Planner; and
- Abdoulie Manneh: Ministry of Local Government and Lands, Department of Lands and Surveys, Senior Surveyor.

1.5 LIMITATIONS OF STUDY

The entire team participated in both group activities and individual interviews. However, the time available was limited and did not allow for a complete exploration of all the issues that emerged. This study must be considered a preliminary step in the research process and not a definitive statement on the social and economic situation of the Upper Baddibu District. Moreover, the villagers visited gave their perceptions of their specific locality, with Maka Farafenni as the central point of the fieldwork. Therefore, care must be taken not to generalize findings based on Maka Farafenni and neighboring villages to the district as a whole.

2. THE UPPER BADDIBU DISTRICT

2.1 SETTLEMENT HISTORY OF THE UPPER BADDIBU DISTRICT

The Upper Baddibu District is part of the North Bank Division and extends from No Kunda to Polodi. The agricultural population of the North Bank Division is estimated to be 133,245, divided between men (49.3%) and women (50.7%). The ethnic composition is Mandinka (51.1%), Wolof (23.7%), Fula (12.2%), and sundry other groups (11.4%). In addition, there is a seasonal influx of migrant workers (strange farmers) composed of Jola (0.9%) and Serahule (0.7%).

The Upper Baddibu area was once predominantly populated by Mandinkas, as early as the mid-thirteenth century (Sonko-Godwin 1988). The movement of Fulas and Wolofs into the area began in the sixteenth and nineteenth centuries, respectively. The Fula merely passed through Baddibu on their way to the Senegal River Valley, known as the Fouta Toro, where they established the Denaianke dynasty. The Fulas did not actually settle in the region until the 1800s, moving to The Gambia from the Fouta Toro under the guidance of Maka Ceesay. The legendary Maba Jahou was born in Baddibu to a migrant who came during this wave settlers (Quinn 1972).

The Wolof of the Baddibu area migrated from the Saloum region of Senegal during the mid-1800s due to difficulties with the king of Saloum. There was a tremendous influx of migrants, with most of the Wolof villages being founded between 1860 and 1865 in heavily wooded terrain (Pélissier 1966). Wolof settlements tended to be small, often located along the periphery of Mandinka settlements. As these settlements developed they were divided into *wasus*, similar to *kabilos*² in the Mandinka system (Quinn 1972). The *wasus* eventually became independent villages, moving away from the original settlement due to rivalries within the community or the need for more land.

There were periodic conflicts between the Mandinka and the Wolof along the north bank as pressure increased from the large Wolof-Serer state of Saloum. The king of Saloum managed to preserve a corridor of land extending from Saloum to the river bank in the Pakala District. The central town in the corridor was Kaur. It was segregated into Wolof and Mandinka quarters, which are still present today (Quinn 1972).

2. In Mandinka, the term *kabilo* refers to a group of compounds, either contiguous or spread throughout the village, which are descended from the same founder or share another relation. The *kabilo* head refers to the eldest male of the group. A compound is a collection of homes including one or more nuclear families, usually from the same lineage.

FIGURE 2 MAP OF THE GAMBIA

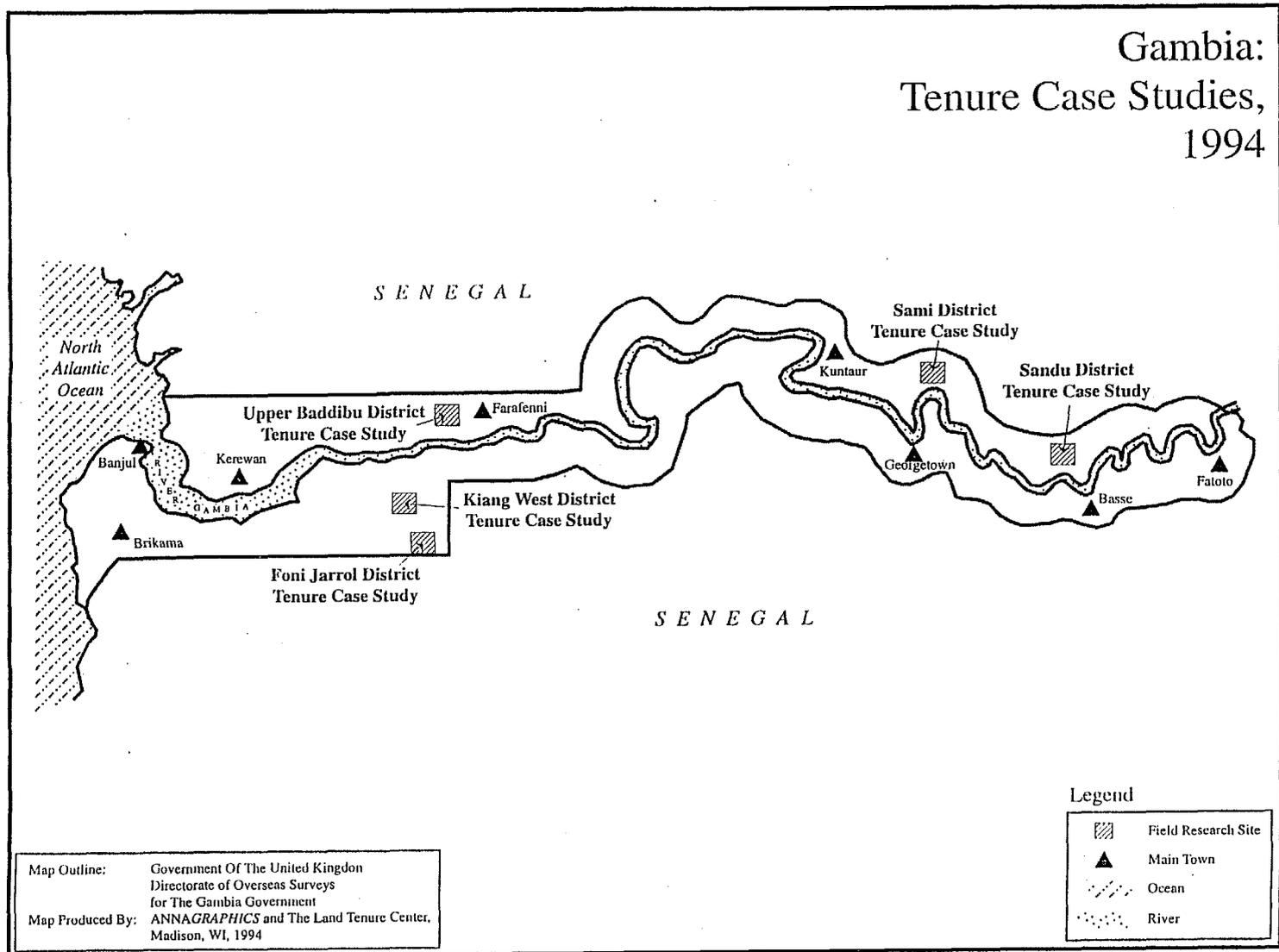
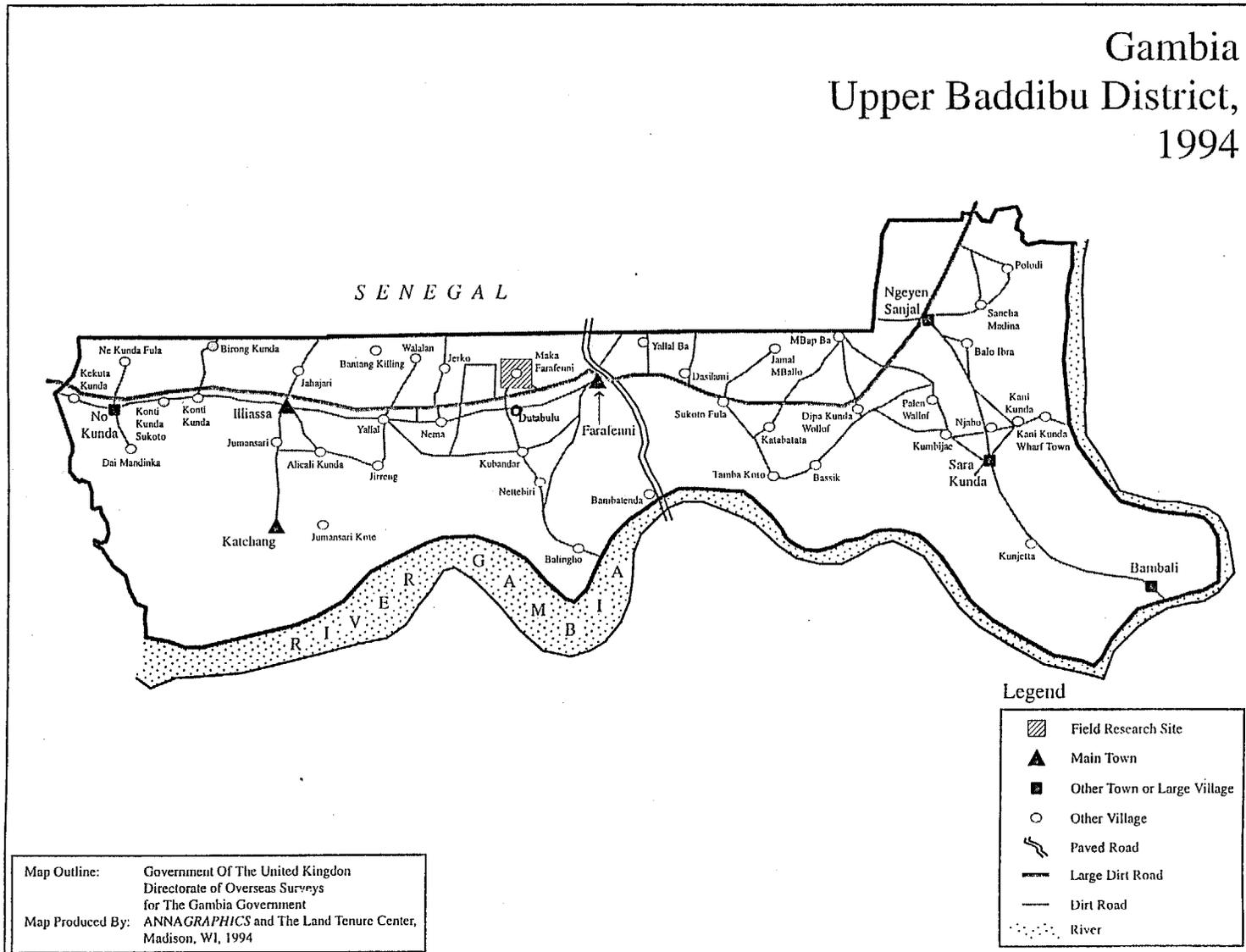


FIGURE 3 MAP OF UPPER BADDIBU DISTRICT



2.1.1 ISLAM IN BADDIBU AND THE BADDIBU WAR

The Baddibu was considered to be the most productive groundnut-cultivating area in the region and remained under Soninke control well into the 1800s. The term Soninke refers to various non-Islamic peoples, not necessarily to the French term for the Serahuli ethnic group. Islamic religious leaders (marabouts) were allocated very little land, and usually on the less productive soils. The chief Soninke towns of Illiasa and India were completely surrounded by the main marabout towns Suwarekunda, Saba, Kerewan, Ker Maba, and Nokunda (Quinn 1972).

Throughout the 1840s, Baddibu battled with Saloum for control over the population and access to the river. There was considerable social chaos as one Mansa (Mandinka paramount chief) fought with another and the marabouts began to gain influence in the region. In 1860, faced with difficulty accessing the port of Suwarekunda, a marabout capital near Kerewan, traders called on the British governor for support. A blockade of the port was attempted but failed, forcing all traders back to Bathurst. The port was subsequently bombed by the British and a land battle followed. The Islamic maraboutic resistance to the British invasion was far superior to the efforts of the Soninke. The villages of Saba, Kerewan, and Kinteh Kunda were completely devastated. The British refrained from moving further upstream to spare the fertile groundnut-growing area of the Upper Baddibu (Quinn 1972).

The Baddibu War left a weakened and resentful non-Islamic population and a very turbulent economy. The marabouts were clearly stronger than the Soninke, yet they refused to contribute to reparations. The British eventually gave indemnity payments to the Soninke and began to oppose all aspects of the Islamic reform movement then gaining momentum in the Baddibu. The British began to align themselves with the Soninke in the name of protecting trade. However, the protection of free trade was the reason given for the British assault on the Soninke a few months earlier.

Maba Jahou had now become a powerful Islamic revivalist. He called on all Baddibu Muslims to join the movement against the Soninke. His united front successfully drove out large numbers of Soninke from Baddibu, sending them to the Kiangs. Once across the river, the Soninke began to arm themselves and plan their strategy to reclaim the Baddibu. In 1863, they approached the Burr Saloum and the French colonial governor to design a retaliatory strike against Maba's forces in Baddibu. However, before they could even launch their attack, hundreds of marabouts crossed the river from Baddibu to Kiang. Several villages near Tendaba were destroyed. The marabouts were later supported by Maba himself but were ultimately defeated in a battle at Kwinella.

Maba began to expand his ground to include a greater part of the Saloum area. After losing at Kwinella, he enlisted the support of marabouts from each of the ethnic groups found in Baddibu. The Mandinka marabouts were led by Jatta Jagne of Njabakunda, who was actually given administrative control over Baddibu in Maba's absence. Although born in Baddibu, Maba was considered by many Mandinka as a stranger from the north. Not all marabout towns in Baddibu accepted his authority. A small uprising was organized by Usman

Touray of eastern Baddibu and joined by Sheku Jobe and Manjai Horeja. They followed Maba into Saloum, where they were eventually defeated. Their followers returned to Baddibu, and Maba was killed in battle in Sine in 1887.

According to the chief of Upper Baddibu, the concept of districts began during the colonial period, replacing the system of kingdoms headed by the Mansas. The present Upper Baddibu District formerly consisted of three kingdoms; Farang Sabah, Farang Sangal, and Burr Rip. The last of the kings were Sait Kany Touray of Kataba and Gumbo Gaye of Kumbijar, who were followers of Maba Jahou. The two fought bitterly after Maba's death, and Sait Kany Touray consequently killed Gumbo Gaye. Sait Kany Touray eventually fell to Maba's son, Sait Mati Bah, the king of Nioro, in a battle at Sabi.

The first chief of Baddibu District was Jatta Seleng Jammeh of Illiasa. The district was later divided into two, with Biram Jammeh replacing Seleng Jammeh at Illiasa and Mamadou Chaku Sabally presiding over the Kataba area. Sabally's rule did not last long. He was removed from the chieftaincy and the districts were combined under Biram Wuday Jammeh. After several years, Mama Tamba replaced Biram Wuday Jammeh. Mama Tamba was then succeeded by Kebba Jammeh. The present chief, Matarr Gaye, took over from Kebba Jammeh in 1983.

The case study area, including Farafenni, was settled at least 500 years ago.³ In Farafenni, there were four founding *kabilos*; Foday Kunda, Sansan Kono, Fofana Kunda, and Duto Koto. The exact origins of the *kabilos* are not known. These families claimed ownership over virgin forestland extending north of Farafenni to slightly above the present boundary with Senegal, south to the Gambia River, east about 5 kilometers, and west as far as Yallal. Today, there are more than twenty villages falling within this boundary, many claiming the rights of first occupation to the land. Only Dutabulu was reported to borrow nearly all of its land, including the settlement area, from Farafenni. The exact reason for the present borrowing of Dutabulu is not known, but may be attributed to the Fula tradition of herding and the frequent movement of village settlements. The Baddibu wars also affected movement within the area which impacted on the settlement pattern of the entire district.

2.2 MAKA FARAFENNI

2.2.1 SOCIAL HISTORY

Maka Farafenni is located about 4 kilometres to the west of Farafenni. The village map shown in figure 3 was drawn by a group of villagers and represents their perception of the layout of the village. There are two versions of the settlement history of Maka Farafenni.

3. Family records of the Mackeh Kunda compound of Foday Kunda *kabilo* of Farafenni. Our interviewee claimed to be the thirteenth *kabilo* head since the arrival of this Mandinka family.

The first states that the village of Maka Farafenni was actually settled on three separate occasions. According to one elderly resident, the first settler was Mam Sait Touray, who migrated from the Saloum village of Kerr Gumbo around 1884. He cleared land and claimed primary use rights to that land. Mam Sait Touray is considered to be the founder⁴ of the village. The village remained at that site for nearly thirty years.

Mam Sait Touray died about ten years after he founded the village. Maka Farafenni remained settled for another twenty years before being abandoned in 1914 due to wild animals' destroying crops and livestock. The second settlement was headed by Musa Jainaba Touray, son of Mam Sait Touray, who came in 1944. However, the settlers lasted only five years before moving to Kataba, east of Farafenni. In 1952, Seringe Katim Touray, another son of Mam Sait Touray and half brother of Musa Jainaba Touray, resettled Maka Farafenni and their families remain there today. The third child of Mam Sait Touray, Hawa Yassin Touray, also resettled with her half brother, Serigne Katim, at this time. Upon the death of Serigne Katim Touray, her son, Amadou Tijan Touray was given *alkalo*-ship and is still the present *alkalo*. The family tree of Mam Sait Touray is shown in figure 6.

The village area initially cleared by Maka Farafenni extended as far north as the current boarder with Senegal. Subsequently, the village lands shifted somewhat to the southwest. Villagers stated that the neighboring village of Ngueur Anglais appropriated a portion of the northern section of land during the period of abandonment between the first and second settlement of the village. Although Maka Farafenni resettled on the same site, the original rights to that land were relinquished when the village was vacated. As noted above, founders gain secure use rights to land through initial clearing. However, residence in the village is also necessary to maintain those rights. If a village changes sites, it may not claim rights to the land from which it moved, even though it originally cleared that area. In addition, if the village returns to the area and finds another village has settled there, it cannot reclaim the land. The chief of Upper Baddibu explained, "When a village moves, it takes all that belongs to it—animals, foodstuffs, furnishings, and people. The village does not take the land because it does not belong to it; the land belongs to God."

The land on the southwest side of the village is bordered by the Pakala Forest Park, which has become a source of tension between the Department of Forestry and Maka Farafenni. This is discussed in greater detail in the following sections.

There are four Bambara compounds in the village, each of which migrated separately from the same village in Mali. They are the most recent arrivals to the village, settling after

4. For the purpose of this study, "founders" are defined as those families and their descendants who actually cleared virgin land and obtained first use rights to that land. The term "late settler" refers to those families and their descendants who migrated to the village after the founders had already settled. The late settlers were then given land by the founders to clear for themselves for habitation and cultivation or they were given land already cleared by the founders.

FIGURE 5 MAP OF VILLAGE TERRITORY

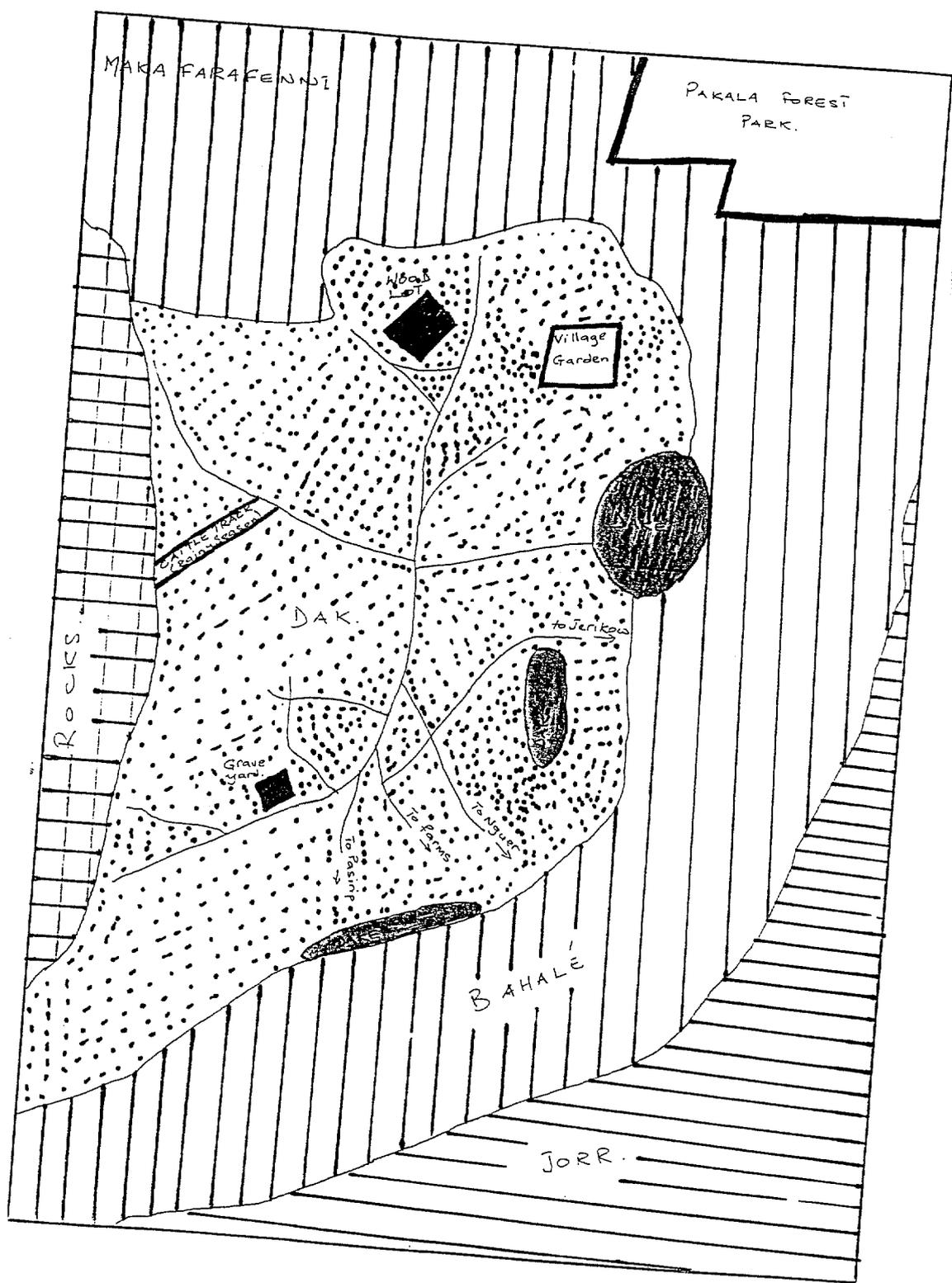
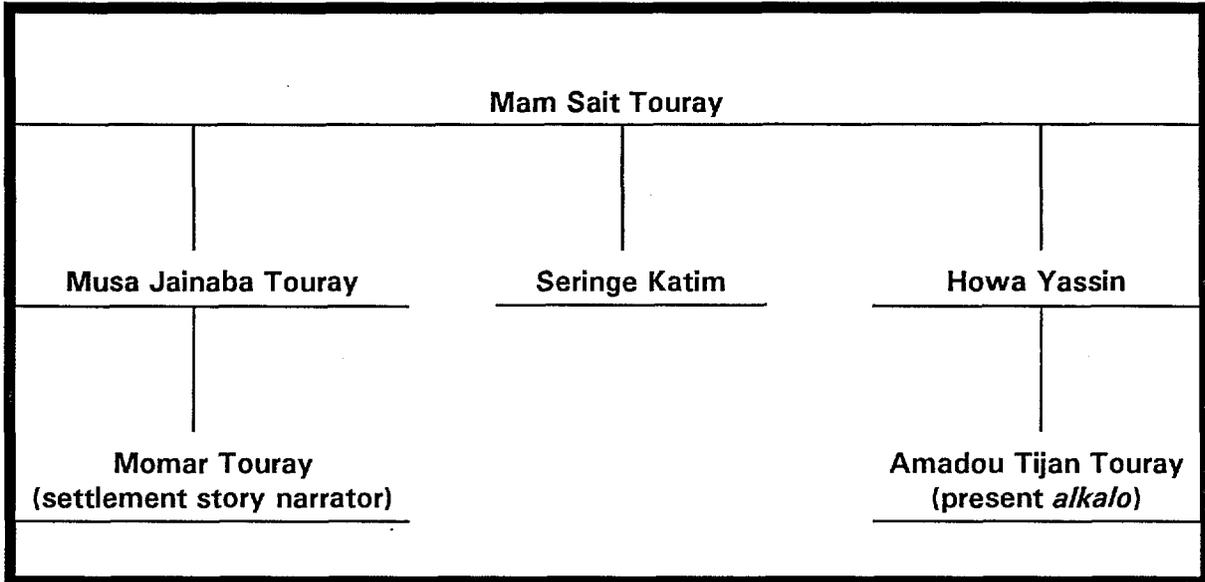


FIGURE 6 FAMILY TREE OF MAM SAIT TOURAY



- ▶ Mam Sait Touray led first settlement from 1884 until 1914, when it was abandoned;
- ▶ Musa Jainaba Touray, son of Mam Sait Touray, led second settlement from 1944 until 1949, when it was again abandoned;
- ▶ Seringe Katim Touray, son of Mam Sait Touray, led the third settlement in 1952;
- ▶ Howa Yassin Touray also settled with her half brother, Seringe Katim Touray, in 1952;
- ▶ Amadou Tijan Touray, son of Howa Yassin Touray, is the present *alkalo*.

the third Wolof settlement was established, about twenty years ago. Only two of these families are landholders while two are permanent land borrowers. The first two families arrived when land was still available to clear. These families were given land by the founding families to clear and to use on a permanent basis. The two other families first settled in Jerikow, a few kilometers away, and moved to Maka Farafenni three years after the first two Bambara families. They arrived after all of the uncleared land had been allocated and cleared and, as a result, are land borrowers. The territory of Maka Farafenni was settled very quickly. Land was cleared and use rights established by both founders and late settlers during the first ten to fifteen years of the third settlement.

2.2.2 SOCIAL STRUCTURE

The Maka Farafenni community is predominantly agricultural and comprised of Wolof and Bambara ethnic groups. There are 49 compounds in the village, of which 45 are Wolof and 4 are Bambara. There is no social stratification based on occupational groups, as is characteristic of other Wolof villages, and the reason for this is unknown. The village is not consistent with its neighbor, Ngueur Anglais, which is composed entirely of the blacksmith class.

Social status is manifested in values attached to the position individuals hold within the village such as *alkalo*, imam, village committee leader, or household head. Decision-making is vested in the *alkalo*, who calls upon the imam and a council of elders for advice. There are several village groups, or *compins*⁵ as they are known in Wolof, based on age and gender. Each group has a representative who participates in a larger village committee. These groups are active in development projects and they organize social functions. They also play an important role in village decision-making.

Education

The only school in the village is Koranic and is open six months out of the year. The school instructs students in the basic tenets of Islam, most importantly daily prayer rituals. The school is well attended by village children, especially girls. However, attendance is not for an extended period of time. There is a parallel informal Koranic school which operates on a tutorial basis between the student and the Koranic teacher. The informal system may be followed from childhood into adulthood, depending on the student. This route is entirely undertaken by male students. Villagers explained that the time commitment required of the students precludes the participation of female students; their household obligations always take precedence over studies.

No children in Maka Farafenni attend Gambian public schools. There has been tremendous resistance of the elders to permitting children to attend school. Out-migration of

5. *Compins* are village groups somewhat equivalent to the *kafo* groups found in Mandinka society.

young men is seasonal, and the majority of them return to farm during the rainy season. The elders of the village seem to have a high level of control over the youth.

2.2.3 VILLAGE INSTITUTIONS

The Venn diagram (figure 7) revealed that villagers overwhelmingly considered the positions of *alkalo* and imam to be the most important institutions in the village. The *alkalo*'s duties include land allocation, law enforcement, and village planning. Villagers described the role of the *alkalo* as that of village leader and steward. He is instrumental in maintaining harmony in the village as well as setting certain village standards. For example, it is the *alkalo*'s wish that no children attend Gambian public schools. Residents of Maka Farafenni also stated that the *alkalo* did not permit radios in the village until fairly recently.

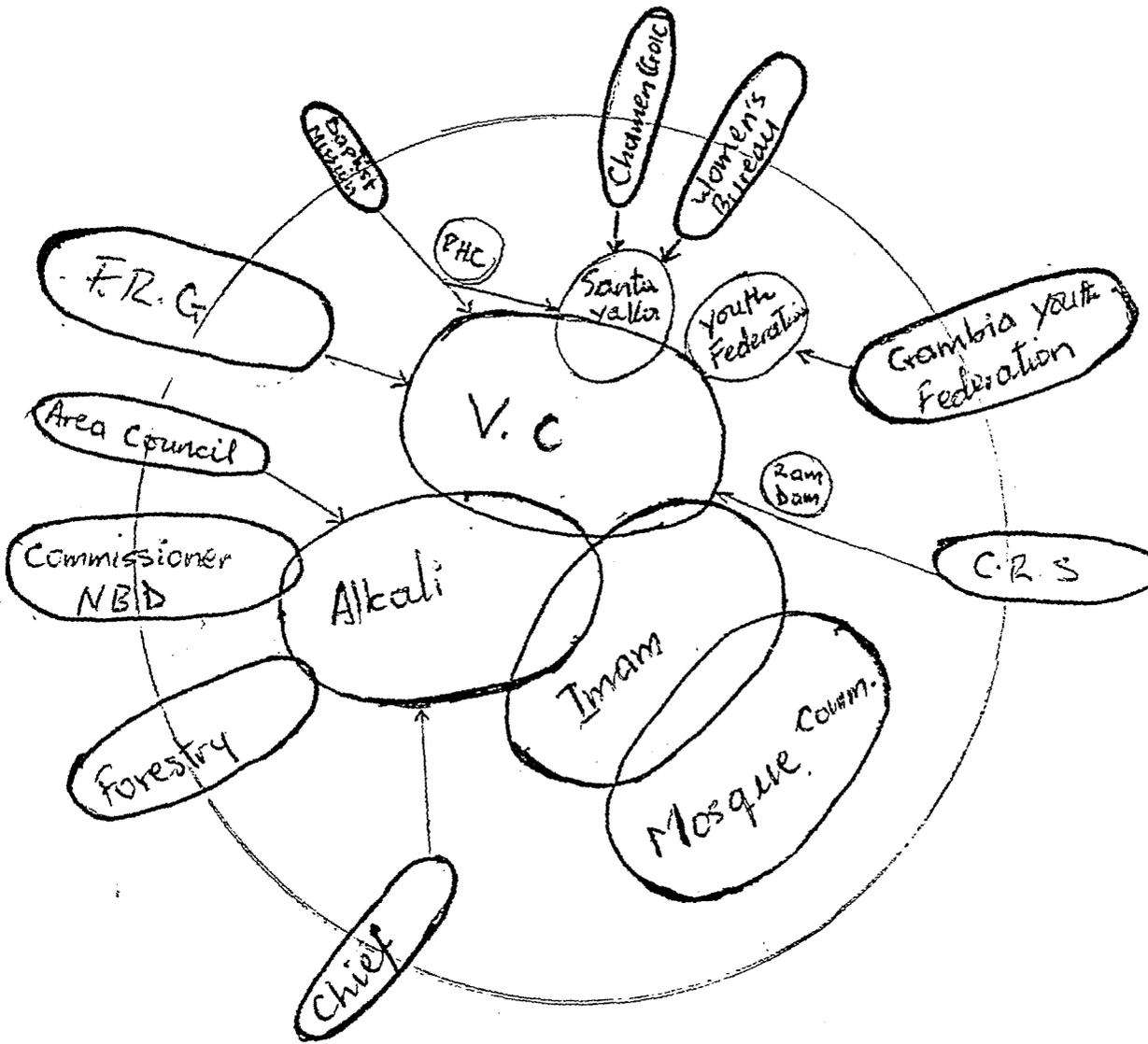
Several village-based institutions are instrumental in the management of natural resources in the study community. According to the Upper Badibbu *seyfo* (chief), the *alkalolu* of all villages in the study area play a central role in regulating use of community-owned resources. If overuse or abuse is detected, the *alkalo* may intervene. The *alkalolu* of the district are given the power to approve or disapprove timber-collection permits given by the Forestry Department. The *alkalo* is critical in resolving disputes over resources at the village level. If a conflict arises between two villages, the *alkalo*'s power is limited to his own village. If the two *alkalolu* cannot agree on a solution, the matter is referred to the chief. The *alkalo* cannot restrict grazing within the village or between villages.

The *seyfo* holds a very special role in natural-resource management in the district. He is granted judicial power to settle resource-related conflicts, which are discussed below, and he controls the allocation of permits for fruit, timber, and firewood collection for commercial purposes. The chief collaborates with the divisional forest committee to decide the number of firewood permits to be allotted to the division for the entire year, currently set at fifteen. Timber-collection permits are not limited, but, if approved by the *alkalo*, they must pass by the chief for final recommendation to the Forestry Department, which may then give authorization for the cutting of the trees. The chief may override a decision taken by an *alkalo* if he believes the latter is acting without reason. Even if the tree to be cut is one of the "protected species," he may recommend that it be cut if he deems it is for a valid reason. The chief is also the authority over grazing within a district.

The chief of the district was mentioned by the residents of Maka Farafenni as an important figure in village affairs, though he is conferred with only for problems arising between two villages or between Maka Farafenni and the government.

The imam holds the second-most-prominent position in Maka Farafenni, sharing the role of village harmonizer with the *alkalo*. The imam is the *alkalo*'s key advisor on planning

FIGURE 7 VENN DIAGRAM OF MAKA FARAFENNI



Venn diagrams are drawn with villagers to show institutional relations. Larger circles represent more important institutions, groups, or individuals.

and other village development issues. There is also a council of elders, usually comprised of compound heads, which serves as advisor to the *alkalo* and may be called upon to settle disputes or to plan development activities.

The village committee was deemed the third-most-important institution. It is a council which includes the leaders of every other group in the village. The village committee is essentially a village development organization which coordinates all development and community-based activities. This committee serves as the initial contact point for outside institutions coming into the village. It also coordinates activities with the various groups in the village through meetings with various subgroup representatives.

There are three village groups divided by age and subdivided by gender:

- ▶ the Santa Yalla *compin*, with separate subgroups for men and women;
- ▶ the Maka Farafenni Youth Federation, with a subgroup of young, of married women, and another of young men;
- ▶ the Ram Dam *compin*, for adolescents, divided into groups of girls and boys.

The mosque committee is another important organization which deals with the maintenance of the mosque and preparation for religious events such as *gamous*.⁶

There are several external organizations working in Maka Farafenni, including Catholic Relief Services (CRS), Gambia Youth Federation, Baptist Mission, Gambia Islamic Council, Gambian Opportunities Investment Center (GOIC), Chamen, Indigenous Business Advisory Service (IBAS), and Women's Bureau. Donor-funded infrastructure in the village includes one pump well installed by the Federal Republic of Germany (FRG) pump-well project, a Ministry of Agriculture (MOA) milling machine, and a sesame-oil expeller sponsored by a Belgian nongovernmental organization (NGO) through the Gambia Youth Federation.

Subcommittees of the large village committee oversee the running of the sesame press, the milling machine, and the women's garden. A village wood lot is presently managed by the men's group. While the committee is successful in regulating and controlling access to the woodlot, it has been ineffectual in management and upkeep, as discussed in further detail below.

One outside agency perceived to have significant negative influence on the village is the Department of Forestry. This is largely due to its demarcation of the Pakala Forest Park and the resultant limited access of the community to the area, which was once open to the village. This is explained in greater detail in section 3.

6. A *gamou* is a religious event during which prayers and verses of the Koran are sung throughout the night, usually beginning around midnight and ending at daybreak.

2.3 DUTABULU

2.3.1 SOCIAL HISTORY

Dutabulu residents are descendants of itinerant Fula herders from Senegal. The *alkalo* of the village estimated the age of Dutabulu to be about 487 years and professed to be the eighth *alkalo* of the village since the third resettlement. The first resident of the village was Ndibari Juta Bah. The land on which he and his family settled was lent to them by the Makeh Kunda compound, a member the Foday Kunda *kabilo* of Farafenni in about 1506. However, the settlement was eventually abandoned when the villagers had to flee slave raiders. Dutabulu was settled for a second time by Demba Bah, son of the original settler. The second settlement did not last long and was deserted for the same reason as the first. The village was settled for a third time by Biram Debo Bah, grandson of the original settler, Ndibari Juta Bah. The *alkalo* is uncertain of the exact dates of this third resettlement, but it is estimated to have been in the late 1500s.

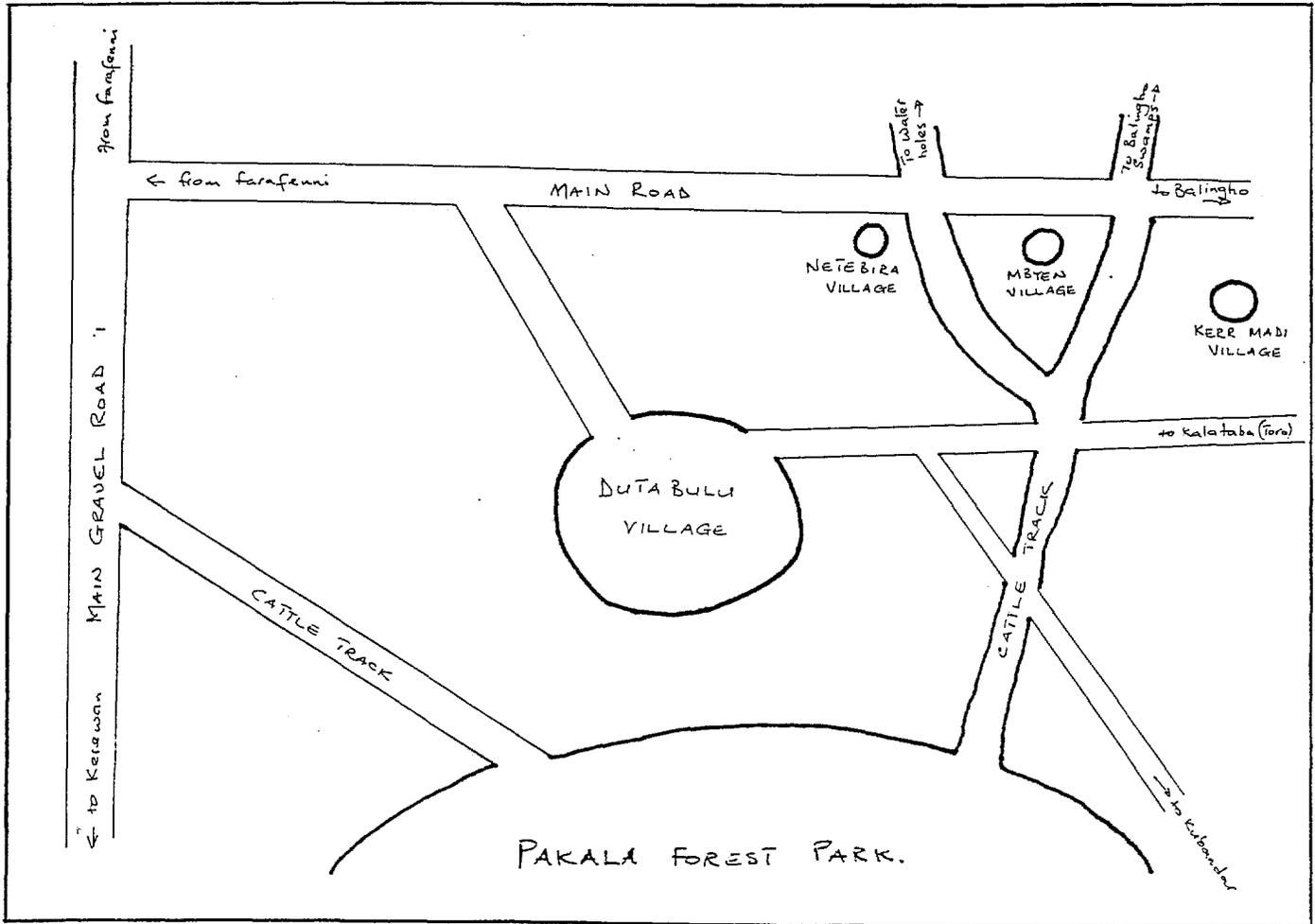
Fula tradition dictates that the village change location or at least shift settlement with every new in *alkalo*. The movement may be great, relocating the village entirely or slightly shifting village infrastructure, such as the *bantabas* and a few central buildings. Dutabulu is reported to have moved on six occasions, but the displacement was always within close proximity to the present site. The last two *alkalolu* actually broke with tradition and did not alter the current settlement. Dutabulu's present land shortage may be attributed to its movement within the same area and the fact that it did not remain in one spot throughout its settlement history. The shortage may also derive from the historical fact that its residents once derived their subsistence entirely from herding and did not need agricultural land, whereas now their livelihood strategy is a mix of livestock and agricultural production and they need agricultural land.

2.3.2 SOCIAL STRUCTURE

The social structure of Dutabulu is typical of Fula villages found elsewhere in The Gambia, with men and women engaged in a mixture of livestock husbandry and agriculture (Shipton 1993). The village is headed by an *alkalo*, who is advised by the imam and a council of elders. The *alkalo* of Dutabulu also allocates land for settlement and cultivation. He may allocate settlement land to a family without the permission of the landholder and need only inform them of his action. The distribution of land for agricultural purposes, however, must first be approved by the landholder.

Dutabulu differs from Maka Farafenni in that nearly 85 percent of the village children attend school. Furthermore, there is a higher incidence of migration from the village. Village youth appear to be more independent than the youth in Maka Farafenni. For example, a number of young people have changed religions. Some eleven youths have converted to Christianity and others have changed from the Tijan sect, dominant in Dutabulu, to the Ahamadiya. The young are permitted by their elders to worship as they wish.

FIGURE 8 VILLAGE MAP OF DUTABULU



This map was drawn by villagers to show major cattle tracks, roads, and paths in the vicinity of Dutabulu.

2.3.3 VILLAGE INSTITUTIONS

The Venn diagram of Dutabulu (figure 9) was completed by a group of village men. The *alkalo* and the imam are central figures in Dutabulu. There are two main village groups, the women's Ndenden Peven *compin*, and the men's *kafo*, Kamben *kafo*. Like the groups in Maka Farafenni, they are charged with a variety of functions. Both of these *kafos* cultivate communal fields for income generation and organize their members for community events such as *gamous* and circumcisions. In addition, there is the Gainako *kafo* organized to survey and protect the health of the cattle, and the Christadel and Ahmodia *kafos*, which are religious organizations serving a role similar to the mosque committee in Maka Farafenni.

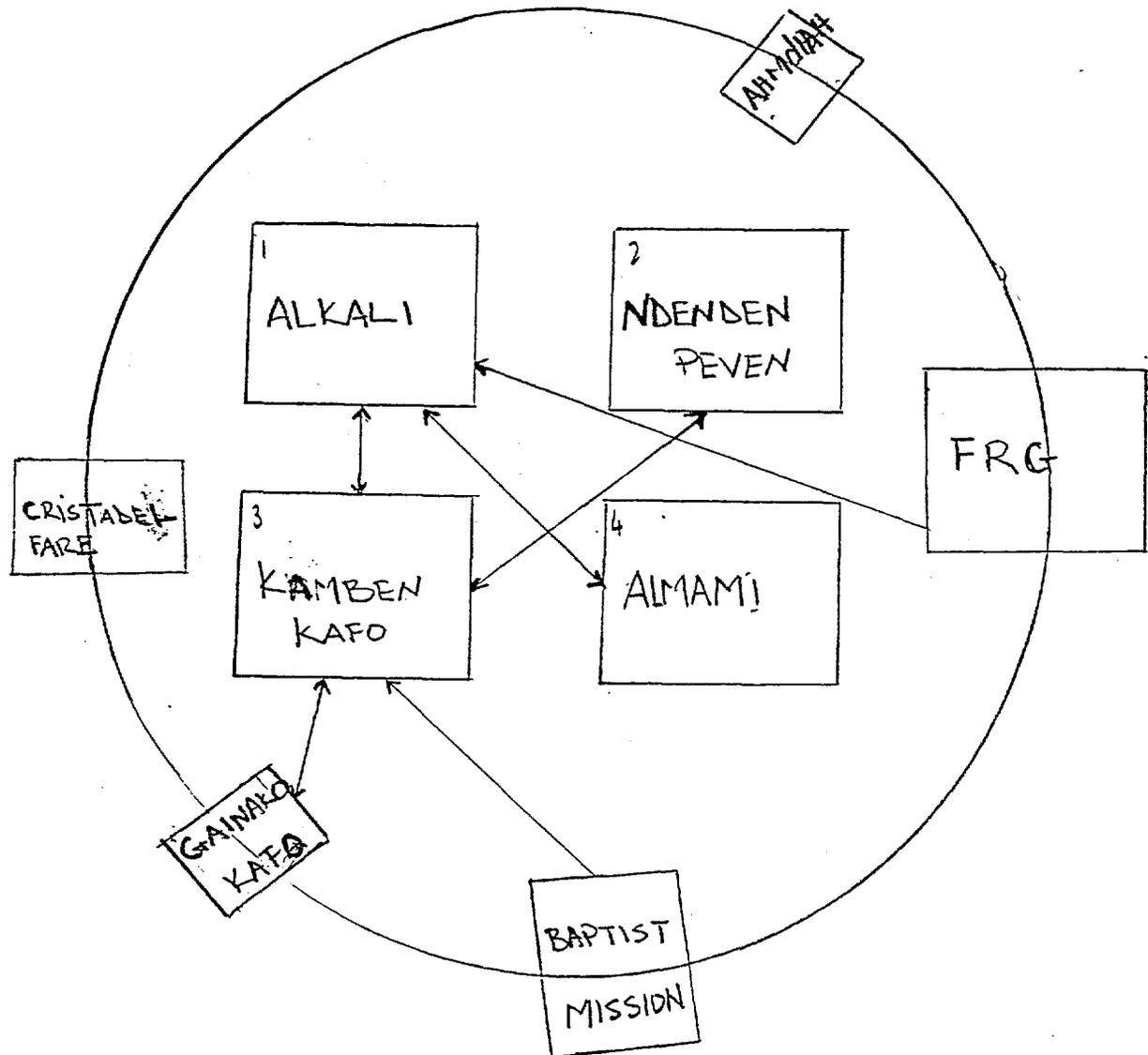
The women's *kafo* aids women in their various income-generating activities. These activities include the cultivation of a communal field. The harvest from the field is usually sold and the proceeds are contributed to a group fund. The money is deposited in a bank in Farafenni. As mentioned earlier, the land crisis in Dutabulu is affecting women's access to an important source of income and to the only agricultural land they can exploit.

There are two outside donors which have visible influence on the citizens of Dutabulu, the FRG and the Baptist Mission. The FRG recently provided the village with a well and the Baptist Mission helped to establish a village garden/orchard.

Villages within the case study were found to have committees that manage the use of particular resources. One example is the Dutabulu Pump Well Committee, established when the pump was installed. The entire village has agreed to a set of regulations regarding pump use. These regulations include waiting in turn for pump access as well as gentle pumping for water. The committee enforces these regulations and penalizes those found misusing the pump.

There is also a communal orchard in the village which was built with assistance from the Baptist Mission. The land was given to the community by a landholder in Farafenni. The women interviewed explained that an agreement was signed by the *alkalo*, with the landholder stating that the land now belonged to the community for the establishment of the orchard. These women also expressed a sense of doubt, however, over the commitment of the landholder to his promise and the validity of the signed agreement. The women currently use the site as a garden and plan to continue this until the area is eventually overshadowed by tree canopies. When the trees are mature, the fruit will be collected and sold by the villagers. The proceeds will be put into a village fund for community use.

FIGURE 9 VENN DIAGRAM OF DUTABULU



Ndenden Peven

A women's *kafo*

Kamben kafo

A men's *kafo*

Gainako kafo

A cattle health *kafo*

Ahmadia

A religious *kafo*

Christadel

A religious *kafo*

This Venn diagram of institutional relationships reflects the relative importance of different groups and individuals. The boxes represent different sizes of colored paper affixed to a piece of flip-chart paper during the exercise.

3. PATTERNS OF NATURAL RESOURCE USE IN UPPER BADDIBU

3.1 RESOURCE USE AND TENURE ARRANGEMENTS BY MICROECOLOGICAL ZONE

The majority of land falling within the boundaries of Maka Farafenni territory is used for agricultural purposes. As the transect indicates, these agricultural lands are classified into three distinct soil types: *jorr*, *bahaleh* (or *dek-dior* in Senegal), and *dak*. There is a fourth type of soil found in the village, *dake* (the Wolof word for lake), which is more of a locational name than a soil classification. The nonagricultural land in the village consists of mainly *dak* soil, where the settlement area and the two *dakes* are located. In addition, the village is bordered on two sides by two woodlands each, one of which is state owned, and the other, community controlled. The state-owned and -supervised Pakala Forest Park is a mixture of *bahaleh* and *dak* soils, with some sections of rocky outcrop. It is believed to have good agricultural potential. The four soil types found in the village are listed below, and the approximate percentage of land per soil type as estimated by villagers is as follows:

<u>SOIL TYPE</u>	<u>%</u>
<i>Jorr</i>	12
<i>Bahaleh</i>	62
<i>Dak</i>	22
<i>Dake</i>	4

The microecologies and their uses are described below.

3.1.1 JORR

This reddish, sandy soil forms a crescent around the other fields. It is considered excellent soil for groundnuts, if fertilizer is available, and also very good for millet. Farmers described how the sandy soil yields fuller, more robust groundnuts than the more fertile, yet firmer soils found closer to the village. Farmers appreciate this soil because it is easier to cultivate and harvest than the *bahaleh*, though it is believed to be less fertile. This section of *jorr* is the beginning of a wide band of sandy soil extending deep into the groundnut basin of Senegal. Due to the settlement pattern of Maka Farafenni, the village owns relatively little land on these soils. It is estimated that only one-quarter of all families in the village actually retain primary land rights to the fields on the *jorr*. Families wishing to cultivate this soil type are able to borrow fields from neighboring Ngueur Anglais. The Ngueur's ample availability of *jorr* land may be attributed to male much greater out-migration from that village than in Maka Farafenni, thus leaving a general land surplus in the village.

PHOTOGRAPH 1 **MAKA FARAFENI LANDSCAPE, BAHALEH SOILS**



Bahaleh soils encircled by sandy *jorr* soils on the northern boarder of the Maka Farafeni village territory. This *jorr* belt is the beginning of a large groundnut producing region extending into northern Senegal.

The *jorr* is most commonly planted in groundnut-millet rotation, though sesame may also be grown. All fields are cultivated each year. Due to land scarcity, land fallowing is no longer incorporated into the farming regime. One farmer stated that he has not left a field fallow in nearly twenty years. Farmers believe that this contributes to declining soil fertility and to their dependence on imported fertilizer.

There are various trees and grasses found on the *jorr*, though they are not distinct from those found on the *bahaleh*. (Refer to the transect for a complete listing.)

The *jorr* is used predominantly by the founding families, both male and female, and seldom lent outside of this group except to "strange" farmers. Strange farmers (*navatanes* in French) come to cultivate seasonally in The Gambia, usually from neighboring countries.⁷ This land is exploited by strange farmers in cooperation with their hosts but also on an individual basis. Even though the supply of *jorr* is limited and there are members of the founding families who do not have access to this land, strange farmers are given pieces of *jorr* to cultivate as an enticement.⁸

3.1.2 BAHALEH

A sandy, clay loam, the *bahaleh* makes up a transitional zone between the *jorr* and the *dek*. It is generally more fertile than *jorr*, but its higher clay content makes this soil more difficult to cultivate. *Bahaleh* is also valued for groundnut cultivation. Farmers actually prefer the *bahaleh* to the *jorr* if they cannot fertilize the latter's soils. Farmers plant mainly a mix of groundnut and millet, with some sesame and corn. The women's garden is located on *bahaleh* soil. The garden is cultivated most intensively during the rainy season because the deep water table (approximately 40 m) makes dry-season gardening very difficult. Women gardeners plant a combination of hot pepper, eggplant, bitter tomato, corn, okra, tomato, pumpkin, and sorrel.

The founding families hold the most secure use rights to approximately three quarters of the *bahaleh* land. The remaining one quarter is divided among the late settler families.

7. For a full description, see David (1980).

8. Strange farmers are present in Maka Farafenni, but the exact number in the village was not known. It was difficult to ascertain why strange farmers are needed in a village where land is reported to be scarce, and labor, plentiful. The team was told that strange farmers are brought in to assist with mechanical land preparation and weeding in exchange for a parcel of land, food, and lodging. The strange farmers are generally expected to work three days a week on their host's fields and the remaining days for themselves.

PHOTOGRAPH 2 MAKA FARAFENNI TERRITORY, *DAKE* SOILS



The hard clay soils of this *dake* in Maka Farafenni are unsuitable for agricultural production. This area is used as a watering point for draft animals during the rainy season and for the collection of medicinal plant products throughout the year.

3.1.3 DAK

Dak appears to be a silty clay and is the least preferred agricultural land. Perhaps the village settlement was placed on these soils for this reason. There is some cultivation on *dak*, mainly by those unable to obtain fields elsewhere. The crops planted are millet, groundnuts, sesame, corn, and assorted vegetables grown near the compounds. Founders have acquired secure use rights over three-quarters of the *dak* soils, with the remaining one-quarter occupied by late settlers.

Land for settlement is allocated by the *alkalo* and reverts to him when families leave. Land for expansion of compounds is limited and negotiated both within and between families. The *alkalo* must always be notified when compounds expand, and his approval is required when families or individuals wish to reallocate their land. Land sale is prohibited in Maka Farafenni.

3.1.4 DAKE

These are small depressions of clay soils on which water collects into natural pools during the rainy season. These depressions are used by both men and women primarily for watering animals and for the collection of leaves, especially *kinkiliba* (*Combretium spp.*). Women gather firewood in the *dakes* as well, but the wood available from this source is not considered to be a very high quality.

During the rainy season, only those farmers who own fields within the *dake* (or who own adjacent fields) can use this area. Access to the *dakes* during the rainy season must be negotiated between the field owners and those seeking access.

3.2 AGRICULTURAL AND LIVESTOCK PRODUCTION

3.2.1 MAKA FARAFENNI

Land for agricultural production among the Wolof is allocated to family members by compound head for both personal and communal production. Men and women cultivate separate fields usually of the same crop mixture. Landholdings within the family are parceled among the male members. If land is available, fathers give land to sons on a permanent basis and cannot rescind on this transfer. The land over which Maka Farafenni has secure use rights is fixed, excluding borrowing from other villages. The parcellation of land within the family constrains individual production capability because the family members cannot easily expand their farm sizes. Men wishing to cultivate larger areas than available from their fathers must borrow land from within or outside of the village. When families need additional fields, the compound head negotiates with other landholders on behalf of the household.

Land is allocated to women through their husbands or the compound head. Women cultivate individual fields on land given to them by their husbands or their family. In the case

FIGURE 10 TRANSECT OF MAKA FARAFENNI

ZONE	OUTER FIELDS		INNER FIELDS		HABITAT	INNER FIELDS		FOREST
SOIL	<i>Jorr</i>	<i>Bahaleh</i>	<i>Dake</i>	<i>Dak</i>	<i>Dak</i>	<i>Dak</i>	<i>Bahaleh</i>	<i>Bahaleh</i>
LAND USE	Agriculture - groundnuts - millet - sesame	Agriculture - groundnuts - millet - sesame	Grazing Livestock watering Wood and plant collection	Agriculture Horticulture Grazing Woodlot	Settlement Agriculture Grazing (wet season) Horticulture Tree planting Animal husbandry	Settlement Agriculture Grazing (wet season) Horticulture Tree planting Animal husbandry	Settlement Agriculture Grazing (wet season) Horticulture Tree planting Animal husbandry	Grazing Wood collection Plant products (medicinal and food)
TREES AND SHRUBS	<i>Khaya sen.</i> <i>Cordyla afr.</i> <i>Sclerocarya bir.</i> <i>Ziziphus mur.</i> <i>Ficus spp.</i> <i>Guiera sen.</i>	<i>Khaya sen.</i> <i>Cordyla afr.</i> <i>Sclerocarya bir.</i> <i>Ziziphus mur.</i> <i>Ficus spp.</i> <i>Guiera sen.</i> <i>Bobox</i> <i>Combretum</i> <i>Parkia big.</i> <i>Baobab</i> <i>Lannea</i>	<i>Combretum</i> <i>Bridelia</i> <i>Guiera sen.</i>	<i>Cordyla afr.</i> <i>Sclerocarya</i> <i>Ziziphus mur.</i> <i>Ficus spp.</i> <i>Bombax</i> <i>Combretum</i> <i>Parkia big.</i> <i>Pterocarpus eri.</i> <i>Baobab</i> <i>Guiera sen.</i> <i>Lannea</i>	<i>Mango</i> <i>Tamarindus indica</i> <i>Gmelina</i> <i>Cola cordifolia</i> <i>Orange</i> <i>Neem</i> <i>Rhun palm</i> <i>Adansonia dig.</i>	<i>Cordyla afr.</i> <i>Sclerocarya</i> <i>Ziziphus mur.</i> <i>Ficus spp.</i> <i>Bombax</i> <i>Combretum</i> <i>Parkia big.</i> <i>Pterocarpus eri.</i> <i>Adansonia dig.</i> <i>Guiera sen.</i> <i>Lannea</i>	<i>Khaya sen.</i> <i>Cordyla afr.</i> <i>Sclerocarya bir.</i> <i>Ziziphus mur.</i> <i>Ficus spp.</i> <i>Guiera sen.</i> <i>Bobox</i> <i>Combretum</i> <i>Parkia big.</i> <i>Adansonia dig.</i> <i>Lannea</i>	
ANIMALS	Monkeys Hyenas Bush pigs Foxes Skunks Squirrels Rats	Monkeys Hyenas Bush pigs Foxes Skunks Squirrels Rats	Monkeys Hyenas Bush pigs Foxes Skunks Squirrels Rats	Monkeys Hyenas Bush pigs Foxes Skunks Squirrels Rats	Goats Horses Donkeys Rats Cats Dogs Chickens Sheep Cattle	Monkeys Hyenas Bush pigs Foxes Skunks Squirrels Rats	Monkeys Hyenas Bush pigs Foxes Skunks Squirrels Rats	Monkeys Hyenas Bush pigs Foxes Skunks Squirrels Rats
TENURE RELATIONS	Founding families hold most secure use rights; <i>Jorr</i> land used almost exclu- sively by these families	Founder families have most secure use rights to about 75% of these fields; Late settlers use about 25%	Majority of land considered as com- mon property; Approximately 25% used by individuals	Founder families have most secure use rights to about 75% of these fields; Late settlers use about 25%	Trees may be indivi- dually or commu- nally owned; Horitc- ultural plots may be individually owned	Founder families have most secure use rights to about 75% of these fields; Late settlers use about 25%	Founding families have most secure use rights to about 75% of these fields; Late settlers use about 25%	State owned

of divorce from or death of the husband, the women return to their families where a male relative or compound head is responsible for allocating land to them. Women explained that in such cases, the divorced females are usually allocated fields of equal or larger size than those which they cultivated during marriage for fear of embarrassment by the husband's family to see the women made worse off after their divorce.

The division of labor between men and women for agricultural production is clear and varies only slightly for each crop. Men handle all animal-traction equipment and as such are responsible for all land clearing, mechanical preparation, including seeding, and usually one weeding on both their own and the women's fields. The tasks are further divided by crop, as shown for a Wolof family in figure 11.

Individual farmers are responsible for procurement of agricultural inputs. Women are often given their first seeds by their mothers or other relatives at the time of marriage. Ideally, farmers put aside about one-third of their harvest as seed for the following year. If cash reserves and food stocks are low, however, the family may be forced to consume their seed before the growing season. If a woman does not have enough seed for the coming season, her husband is ultimately responsible for providing it.

Decision making

The choice of crops to be planted seems to be decided jointly by men and women, but responses differed among both men and women interviewed and depended on the crop. Some women decide what to plant for a given season based on the cropping mix of the family and the women's personal needs. These women are free to decide how to divide their fields, but they seek final approval from their husbands. Other women indicated that men determine the cropping mix for the traditional millet/groundnut rotation, but that they decide on the horticultural crops to be grown.

The produce from the individual fields is also individually managed, though respondents varied somewhat in their explanations of this system. In general, men and women may sell any portion of their crops throughout the year. Women, however, first give approximately 10 percent of their harvest to their husbands. Women stated explicitly that this is not given as compensation for the land preparation and weeding carried out by the men, but as charity. Women must also ask permission from or inform their husbands when selling groundnuts or grain. One woman stated that permission is asked as a courtesy but that women make the final decision. Another added that she gives her harvest to her husband and he decides what portion to sell. The money from the sale is kept with the husband but she may ask for it as needed.

The organization of agricultural production in the four Bambara compounds differs from the structure found with the Wolof compounds. Bambara sons share their fathers, fields and are not given separate land to cultivate. The crop mix is millet, groundnuts, corn, and vegetables. Women grow groundnuts as their main source of income and are obliged to give 10 percent of their harvest to their husbands before selling it.

Livestock production

An estimated two-thirds of Maka Farafenni residents own draft animals. The remaining one-third borrows animals as needed. Those who do not own animals keep at least one for an animal owner. This system ensures that all families have access to animal traction and manure. The preferred draft animal is the horse, followed by oxen and donkeys.

Small ruminants are abundant in Maka Farafenni, with at least half of all compounds owning an animal. At least one-quarter of all women owns at least one small ruminant, and another one-quarter owns livestock (horses, oxen, or donkeys). Maka Farafenni has a very organized system of tethering sheep and goats during the rainy season. A herder is hired to take all village sheep and goats to a designated point outside of the village farming area. A bell is rung in the morning signaling that all animals should be brought and tethered outside the mosque. When the herder is ready, he guides the animals to the tethering point outside the village. The animals are returned to the village in the evening.

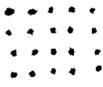
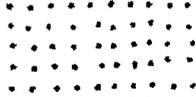
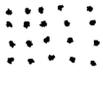
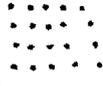
Income generation

The dependence of the community on agriculture is shown in the matrices of figures 12 and 13, which were prepared by groups of Wolof and Bambara women on separate occasions in Maka Farafenni. The Wolof women compared "bad" years with "good" years. They defined good years as those periods with plentiful, timely, and well-distributed rains. Bad years were those with inadequate rainfall or poorly distributed rains. These women give a particular importance to remittances and cash from relatives during bad years which they did not mention when describing strategies during good years. This does not necessarily indicate that no remittances are received during good years, but that they are relatively less important.

Women assigned equal significance to off-farm enterprises as a steady source of income in both good and bad years. Craft production has been encouraged by the Chamen training center, which opened about two years ago. The proximity of the village to the Farafenni *lumo* ensures an outlet for items produced. No craft activities were mentioned by the Bambara women, and this needs further investigation. It may be that their involvement in *netto* processing⁹ impedes their craft activities.

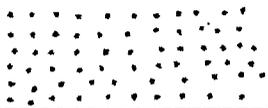
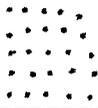
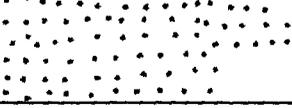
9. *Netto* processing entails harvesting the pods of the locust bean tree (*Parkia biglobosa*) and transforming them into a condiment used in many local dishes.

FIGURE 12 REVENUE MATRIX OF WOLOF WOMEN

SOURCE	BAD YEAR	GOOD YEAR
Farming	20 	50 
Remittances/loans	20 	0
Batik	20 	18 
Sewing	20 	15 
Soap, pomade, jam	20 	17 

This matrix was completed by a group of five Wolof women in Maka Farafenni working with two of the team members. The women compared their sources of revenue in what they defined as good years (years with plentiful and well-distributed rains) and bad years (years with inadequate or poorly distributed rains). They started by listing the sources of income for bad years. The women were given a pile of 100 beans and then began placing relative amounts of beans for each source of income. Next they discussed good years and allocated beans for each source of revenue during those years. The beans and corresponding numbers should therefore be read vertically for each column. A ranking of revenue was then done for each type of year. The women compared good years with bad years and discussed various coping strategies. Issues pertinent to women's access to natural resources were discussed by the group and have been incorporated into the text of this paper.

FIGURE 13 REVENUE MATRIX OF BAMBARA WOMEN

SOURCE	PRESENT	PAST
Groundnuts	65 	25 
Netto processing	25 	75 
Bitter tomato	5 	
Maize/millet	3 	
Beans	2 	

Wolof women indicated that they derive as much as 50 percent of their income from agriculture (see figure 12). Bambara women derive 100 percent of their income from natural resource-based activities, the majority of which are agricultural. The locust beans or *netto* seeds, as they are known locally, are not available in adequate supply from the village *netto* trees (*Parkia biglobosa*). Women buy beans from traders and then process them for sale in the village and Farafenni. Both Bambara and Wolof women are highly dependent on the availability of agricultural lands for their subsistence. They are reliant on their husbands or other male family members to make land available to them. Neither the Wolof nor the Bambara women raised this concern for their individual production, but it was expressed as a potential problem for the women's group involved in the cultivation of a communal field. Due to the general land shortages in Maka Farafenni, the women's group was not allocated land until all individual villagers' needs were met. It was not certain that they would be given land for their communal field this year until just prior to the commencement of the rains. The women noted that the field they were eventually given is smaller than ones they have cultivated in past years.

A similar ranking exercise was tried with a group of Bambara women (see figure 13), except that they compared past sources of income (10 to 15 years ago) with current sources.

3.2.2 DUTABULU

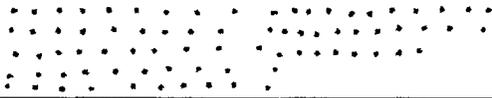
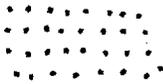
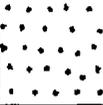
The village's economy is based on herding, with approximately 2,000 cattle kept in 22 herds. The settlement pattern of the village and its proximity to the rapidly expanding town of Farafenni has resulted in land shortages for Dutabulu. The cropping mix is similar to that of Maka Farafenni, predominated by a groundnut/millet rotation. The division of labor for agricultural production varies somewhat, with men responsible for land clearing and all mechanized activities. Women weed, harvest, and perform all postharvest processing throughout the year.

Cattle from several of the surrounding villages comprise the herds kept in Dutabulu. It was estimated that 65 percent of those cattle are owned by outsiders, and 35 percent, by village residents. Of the 35 percent owned within the village, approximately 20 percent are owned by women. The arrangements for herding are generally such that the herder takes all of the products from the animal in exchange for the caretaking. If an animal dies or is lost while under the care of a herder, the owner may demand recompense. In the case of death, the herder must show the carcass of the animal to the owner for verification. Owners also maintain the right to remove or sell any of their livestock as they wish.

The herder may appropriate all products of the cattle. Manure may be collected and sold. Animals may be kraaled on fields for the herder's family or contracted out to other farmers. Milk is collected by men and marketed by women. Residents of Dutabulu ranked milk as the greatest source of income for the family. The herder would allocate enough milk for the household's needs before giving it to the women to sell in Farafenni. The women take proceeds from the sale of milk to buy fish, meat, and condiments for the daily meals. Any surplus milk or cash is then kept by the women. Women interviewed said that this is also their greatest source of income (see figure 14).

Dutabulu is also endowed with roughly 2,000 small ruminants. Ownership of these animals is divided between men and women, with men owning two-thirds, and women, one-third. Herding small ruminants is done by both men and women. It provides the second most important source of income for women and was ranked as the third most important source for men. Herders are compensated by retaining every second birth of the animal. Women are also responsible for providing water to all small ruminants in the dry season and for tethering them outside the village during the rainy season.

FIGURE 14 REVENUE MATRIX OF FULA WOMEN

SOURCE	RELATIVE AMOUNT
Milk sales	78 
Ruminants	32 
Husband	27 
<i>Kafo</i> farm	16 
Garden	8 

The land crisis in Dutabulu has affected women the most negatively. When land was more plentiful, women cultivated their own millet and groundnut fields. Now, due to land shortages, women are no longer able to cultivate individual fields. Women contribute labor to their husband's fields, with remuneration given at their spouse's discretion. The women's *kafo* group usually cultivates a communal field of groundnuts, millet, or sesame, if a field is available to them. As described earlier for the women's group of Maka Farafenni, the Dutabulu women's *kafo* must also wait for individual and family land requirements to be met before being given a piece of land. Here, too, women claimed that the field they were allocated is much smaller than in previous years. The women plan to grow early millet.

3.3 TENURE ARRANGEMENTS BY RESOURCE

3.3.1 TREES

There are many species of trees found throughout the Upper Baddibu District, but participants in the study area described how both numbers and varieties have diminished over the years. Outer and inner fields are sparsely planted with trees, with those present being older and well established. There appears to be little natural regeneration of trees in village fields. This may be attributed to depredation by animals and mechanical plowing.

Trees on the settlement lands are both communally and individually owned. Trees can also be given as gifts. Fruit trees both inside and outside the settlement area are generally open access for home consumption and are managed under the *tongo* system in Maka Farafenni. The *tongo* is a ban on the harvesting of fruit until the fruit is considered ripe enough for consumption. It is enforced to prevent pilferage by children. It also demonstrates a sense of responsibility for the trees. The children or their families can be fined if caught breaking the *tongo*.¹⁰ This system is not enforced in Dutabulu.

Naturally occurring trees outside of the compound area, such as baobabs (*Adansonia digitata*) and *netto* (*Parkia bigliobosa*), or fodder trees such as *keno* (*Pterocarpus erinaceus*), are perceived by the community as open-access resources for domestic use and limited sale. These trees have an economic value and are well maintained and protected. Other tree species with food value, such as *Cordyla africana*, *Sclerocarya birrea*, and *Khaya senegalensis*, are left on farmlands for individual and community use. The community recognizes that the *Pterocarpus erinaceus* tree is good for animal fodder, though these trees do not seem to be protected in the village. Perhaps this is because other sources of fodder, such as grasses and crop residues, are available in adequate supply. Farmers may not want the trees competing with crops in their fields.

The district chief (*seyfo*) described how planted trees clearly belong to the individual who plants them. He cited an example where a member of a compound planted mango trees in his bathing area. For reasons unrelated to the tree planting, relations between the compound head and this particular member deteriorated, and the member was asked to leave the compound. Upon leaving, he demanded compensation for his trees. The case went before the district tribunal, which brought in professional tree appraisers to assign a value to the trees. The district tribunal ruled in favour of the compound head for the expulsion of the member from the compound but in favor of the member for compensation for his trees. However, the compound member decided that he did not want to sell the trees and asked the court to place a restriction on other compound members from picking fruit from the trees. The effort required to enforce such a restriction was beyond the capacities of the district tribunal. The court advised the tree owner to share use rights with the landlord, much to his dismay.

10. The *tongo* system is prevalent in many parts of The Gambia and it is recorded in the Kiang West and the Foni Jarrol District case studies.

The cutting of live trees is prohibited throughout the country unless permission is given by the Forestry Department. (The process by which this happens is explained below, in section 4.) Women have been accused of cutting live trees for firewood instead of dead wood, which is generally permitted anywhere outside of designated forest parks. Villagers explained that there is not an adequate supply of the preferred dead firewood near the village and that women's time constraints precluded them for gathering wood far from the village. Women stated they have no choice but to cut live wood and leave it to dry. Further exploration revealed that women often cut live wood because it requires less labor than dry wood. The amount of time women can save by cutting live wood offsets any risks they incur by this illegal act. There was a recent arrest of a Maka Farafenni woman caught cutting live wood in a community owned area. She was heavily fined.

The Forestry Department sponsored a woodlot in Maka Farafenni about eight years ago. It was established to provide a sustainable source of fuel-wood and construction materials for the community. It is planted entirely with *Gmelina*, which is considered to be a fast-growing, multiple-use tree. The woodlot was originally intended for Illiassa, but there was no land available there. It was then decided to bring it to Maka Farafenni. The woodlot is located on the edge of the village fields, bordered by farms and the main village road. It is fenced with barbed wire and has one permanent well.

PHOTOGRAPH 3 MAKA FARAFENI TREE CUTTING

The lack of easily available wood for construction and energy leads to inappropriate resource-management practices. In Maka Farafenni, a live tree is felled for fence posts and fuel-wood purposes.

3.3.2 FORESTS

There are two wooded areas in Maka Farafenni. One, the woodlot, extends from the village to Farafenni, and the other, the Pakala Forest Park, borders the southwest corner of the village and extends as far as Chamen. Neither of these areas is very heavily wooded and both appear to be severely deforested. The Pakala Forest Park, demarcated in 1952 or about the same time as the third settlement of Maka Farafenni, has a denser cover but is still only lightly wooded.

The woodlot

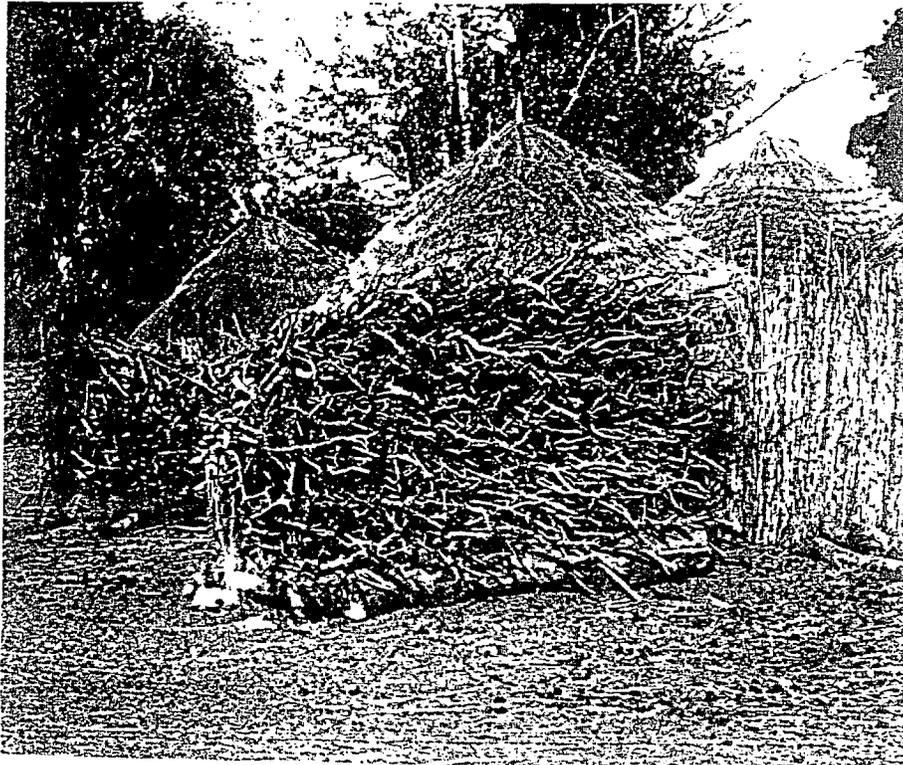
The state of the woodlot is not impressive and it appears to be poorly maintained. Technical advice from the Forestry Department has been given to the woodlot committee, but the recommendations have not been implemented. Villagers claim that the woodlot is inadequate to meet the fuel-wood needs of the entire village. For this reason, the woodlot is left unused, with individual exploitation prohibited. The village has harvested trees for community use, such as the fence posts of the women's garden.

Men and women exploit forest resources differently. Men harvest timber for house and fence construction. Women gather firewood for daily use. Women explained that the woodlot committee is made up of men, who have less of a need for the resource than women. The women believe that this is a factor in the committee's lack of maintenance of the woodlot. They assert that the woodlot would be better conserved under the direction of the women's group, which has a greater incentive to maximize its production.

The woodlot is fairly sizeable, covering approximately 1.5 hectares, but it is located on poor soils. Consequently, yields are poor and regeneration of harvested trees is slow. If the woodlot were established on better soils, it would certainly be more productive and possibly meet a significant portion of Maka Farafenni's fuel-wood requirements. However, land shortages in the village limit the chance of changing the site to one with more fertile soil.

The issue of firewood shortages was discussed throughout the study. Alternatives to cutting timber from the forest park and in live-wood community areas were explored by the villagers. By the end of the fieldwork in Maka Farafenni, the women's group expressed its interest in rehabilitating the woodlot, but it would first have to gain some influence in decisions concerning the area. Women said they would start to invest their own resources in the woodlot this year, which would give them a stronger voice in its management. They will need technical assistance from the Forestry Department.

PHOTOGRAPH 4 MAKA FARAFENI FIREWOOD COLLECTION



Firewood is collected by women throughout the year, but is done most intensively during the weeks preceding the rains. It is stacked in compound areas and used throughout the rainy season. Time commitments to agriculture preclude firewood collection during the rainy season.

The Pakala Forest Park

Forest parks are generally restricted to woodcutting, grazing, and agriculture, though exceptions to these rules can be made. According to forestry officials, villagers surrounding Pakala were allowed to collect dead wood and to graze their animals in the park until the privilege was abused. The villagers' collection of wood included wet wood as well as dry, which is strictly forbidden. The Forestry Department maintains that villagers employ destructive techniques to cut live wood, rather than using techniques that promote regeneration, further contributing to the degradation of the park. This prompted the Forestry Department to ban the cutting of all trees within the Forest Park unless express permission was given by a forestry official.

While the Forestry Department claims that villagers were not removed from their land when the park was established, the residents of Chamen tell a different story. They claim that land was taken away from them without their consent and given to the Pakala Forest Park. The *alkalo* cites the example of a well located within the park boundaries as testament to the presence of a village. There remains a sense of resentment in Chamen over the current boundary of the park, and the Forestry Department reports unauthorized use by the village for agricultural purposes.

The area adjacent to the park, on the southwest side of Maka Farafenni, was not under cultivation at the time of demarcation. In subsequent years villagers have encroached into the park. On at least one occasion the village actually petitioned the Forestry Department for permission to use the park for agricultural purposes. The Forestry Department agreed in that instance, but now claims that the area is too degraded to permit further usage, even on a limited basis.

Throughout the study, the team was told of the profound paucity of dead wood for firewood collection. Women repeatedly stated that this was a difficult dilemma. In both Dutabulu and Maka Farafenni, women said they must steal firewood to meet their daily requirements. The term "steal" may refer to their unauthorized use of the forest park, but the women did not elaborate. There is ambiguity surrounding the use rights to nongovernment-owned forests. Both wooded areas of Maka Farafenni are used for timber and firewood collection, leaf and root gathering, and grazing, but villagers are uncertain as to their rights to these areas. The community is aware of the restrictions placed on the Pakala Forest Park and seems to believe that all forest areas have tantamount limitations. It is not clear why villagers would have this impression and it highlights the need for community education of natural-resource regulations.

3.3.3 GRAZING AREAS

Rangelands outside the forest park system are, by custom, communally owned, with no village claiming ownership. As such, these rangelands do not fall under the management of any one village. The rangelands serve as grazing grounds and sources of wood and other plant products, including those of medicinal value. Despite the apparent utility of these areas,

fires are frequent and trees are excessively exploited. It may be that ownership of the area is not clear, and therefore no one village in particular sees itself as responsible for protecting it. In addition, the Forestry Department enforces forestry regulations in the open areas, which may further confuse the villagers' sense of ownership. This emphasizes the urgency for better understanding by the communities of their rights to natural resources and of forestry regulations.

Few cattle are owned in Maka Farafenni. Even fewer people keep their cattle there. Some cattle owners of Maka Farafenni give their animals to herders in Dutabulu. Grazing in Maka Farafenni is unencumbered by any restrictions in the dry season, but it is limited to delineated cattle tracks and forest areas during the rains. Access to watering holes is also becoming increasingly difficult. Land pressures force farmers to encroach on the cattle tracks and to restrict passage to the watering holes. There is one pump well in Dutabulu, which has eased the water problem somewhat, but this well is also used by residents for domestic needs.

Herders in Dutabulu explained that encroachment by farmers from Farafenni on the cattle tracks between Dutabulu and the Pakala Forest Park (see Dutabulu village map, figure 8, p. 19) is an annual problem. The tracks were established many years ago, when there was less pressure on the land surrounding Dutabulu. As Farafenni residents expand their cultivated lands into Dutabulu territory, they inevitably encroach on the cattle tracks. These disputes between herders and farmers are usually resolved at the village level. However, herders said that occasionally they are made to compensate a farmer for damage done by cattle in the designated cattle tracks. Herders also explained that many of the cattle accused of damaging the Farafenni crops are actually owned by Farafenni residents, and only herded by Dutabulu residents. The herders claim that they are made to compensate the Farafenni farmers for crop damage by animals belonging to Farafenni farmers. This heightens tension between Dutabulu and Farafenni.

The quality of these pasture areas is also declining. Bush fires are the main impetus for herders to change grazing sites due to poor range quality, though there are few areas left to graze. As land under cultivation increases, land available for grazing is reduced.

A fenced-off, protected rangelands site is currently being constructed about 2 kilometres from Dutabulu on land historically used for grazing. The land is currently considered a commons, belonging to the surrounding villages and Farafenni. These villages agree to allocate this land as a permanent grazing site. At present, cattle within a district may graze anywhere throughout that district. The Rangelands Project, financed by the European Development Fund (EDF), will allocate certain areas within the district to villagers willing to participate in the project. Villagers not participating in the project would then be prevented from using these rangelands because the parcel will be fenced off. Therefore, the rangelands available to nonparticipating villagers would be reduced. The implications of this project for the case-study areas are not clear and the project should be carefully monitored.

3.4 FACTORS AFFECTING THE TRANSFORMATION OF TENURE REGIMES

The settlement history of villages in the study area is the most influential factor in determining the rights to land and other resources. The village of Maka Farafenni was settled, and nearly all the land was cleared during the initial years of the settlement. There has been little subsequent land distribution. Within the village, land-use rights are dependent on lineage affiliation. Founders and their descendants enjoy the most secure rights to land that they have cleared. Later arrivals to the village may also be given land to clear, over which they, too, would have secure rights. Alternatively, they may borrow land for various lengths of time from those who initially cleared it. As land shortages accelerate in Maka Farafenni and Dutabulu, there does not seem to be any transformation of the founder—late settler tenure pattern of acquiring rights. However, villagers described an increased incidence of founders having to borrow land outside the village. As such, these landed founders may become less willing to lend land to landless, later settlers. This possibility could not be adequately assessed during the study.

3.4.1 DEVELOPMENT PROJECTS

There are few donor-funded development projects in the case-study area, with the notable exception of the new Rangelands Project mentioned above (see p. 42). This new project may change tenure arrangements within the Maka Farafenni area, though it is too early to determine if this is the case.

3.4.2 PAKALA FOREST PARK

The impact of the Pakala Forest Park is perceived as negative throughout the area, and the park is regarded by villagers as the major impediment to the exploitation and expansion of agricultural lands in the villages surrounding the park. The fencing of the Pakala Forest Park is scheduled to begin soon, thus further restricting access.

The precise effect on tenure regimes is less clear. The land shortage in Maka Farafenni and the system of land parcellation in the Wolof community is leading to increased borrowing outside the village. There is considerable borrowing already taking place between Maka Farafenni and its neighbors. The conditions attached to these transactions were reported as minimal, with no recent changes noted.

The Pakala Forest Park is simultaneously affecting village development on the western side of the park near Chamen. Villagers described how they would de-reserve and redistribute about 35 percent of the park. They contend that the reallocation would be equitable, with each of the five surrounding villages given land. Other villages, however, express a greater concern for declining soil fertility and consequent lower productivity than for needing more agricultural land. In fact, villagers with sufficient land readily offered to give up existing farm areas in exchange for better soil within the park. This type of arrangement, however, would not be possible for Maka Farafenni.

3.4.3 FARAFENNI URBAN GROWTH

The greatest development influence in the case study area is Farafenni. The government has introduced a program of physical planning in Farafenni to shape the course of the rapid physical development. This planning may be negatively influencing the tenure arrangements between Dutabulu and Farafenni. Land speculation in Farafenni is accelerating, with an increasing amount of settlement area now under leasehold. Landholders in Farafenni may view their land as becoming more valuable and, in turn, may reinforce their ownership of land in and around Dutabulu.

The expansion of Farafenni has a differential impact on Maka Farafenni and Dutabulu. On the one hand, land tenure relations are changing and the strain on Dutabulu is palpable. On the other hand, Maka Farafenni benefits from Farafenni's growing market center. The urge to expand farm sizes affects the tenure regime, since farmers become reluctant to lend land when they could put it into productive use. This is beginning to take place in Maka Farafenni. For example, the women's group in Maka Farafenni, as described above (p. 33), is encountering difficulties in obtaining adequate amounts of land this year.

Given the limited availability of land, the tenure regime for the time being seems adequate for farming needs in Maka Farafenni. This deduction is based on two pieces of evidence:

- ▶ most land disputes are resolved at the household level, with relatively few reaching the *alkalo*; and
- ▶ land is borrowed among Maka Farafenni residents as well as between Maka Farafenni residents and other villages, such as Ngueur Anglais.

Land borrowers are confident that land will always be available to them. One Bambara compound has been borrowing fields from various families for the last twenty years. The compound head is not allocated the same parcel every year and is almost certainly given land on *dak* soils. This particular family also borrows land from Ngueur Anglais. Landowners and borrowers alike expressed concern for future land allocation within the families as family sizes increase. As indicated above, the larger family continues to farm the same area, with individuals allocated smaller parcels of land to cultivate (see p. 27).

Due the historical background of Dutabulu, the village has a land deficit. Dutabulu residents consider the present tenure relations between Dutabulu and Farafenni to be inadequate for satisfying their present needs. The influence of urbanization in Farafenni results in a reduction of land made available to Dutabulu. Residents claim that Farafenni landowners could actually displace them from the settlement area if that land were needed by Farafenni. This puts Dutabulu in a precarious position as land borrower in an area where land speculation is on the rise. Farmers in Dutabulu are required every year to give cash and kola nuts to secure a field. The amount of cash required ranges from one to several hundred dalasis per season. The herders can no longer migrate to new areas.

4. RESOURCE USE DISPUTES AND CONFLICT RESOLUTION

4.1 VILLAGE AND DISTRICT-LEVEL CONFLICTS

4.1.1 VILLAGE LEVEL

In the study area, the most common resource-related dispute between villagers concerned land. Some participants in Maka Farafenni claimed that farm-boundary disputes were the most numerous, while others said that there had been no boundary disputes in recent memory. Livestock damage to crops was another prominent dispute, followed by incidences between strange farmers and hosts over contractual arrangements.

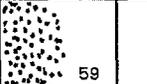
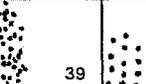
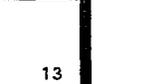
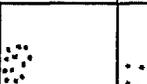
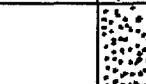
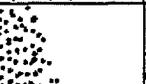
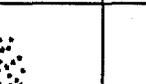
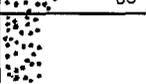
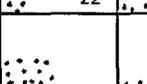
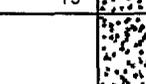
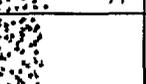
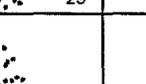
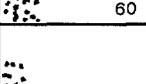
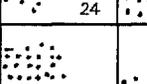
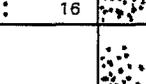
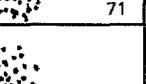
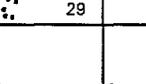
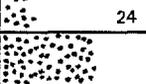
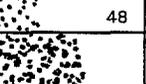
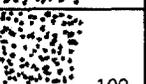
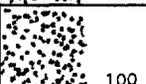
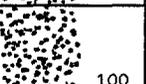
Men and women gave slightly different views over which disputes were more numerous, but land disputes were consistently at the top of the list for both groups. There was also consensus that most village disputes are resolved at the household level.

Figure 15, produced by several men and two women at the *bantaba*, represents past (defined to be more than fifteen years ago) and present disputes in the village and their level of resolution. The ranking was done relative to the level of resolution for each type of dispute, and thus the matrix should be read across for both past and present situations. The numbers shown indicate the number of beans placed next to each type of dispute (they do not represent the actual number of conflicts in the village and are meant only as rough guidelines to the relative proportions of disputes).

4.1.2 DISTRICT LEVEL

The most numerous cases heard by the district tribunal concern land. These are either border disputes, cattle-track discrepancies, or settlement-area conflicts. Forestry cases appear to be on the rise, however; from January through June 1993, tribunal records show that seven out of fourteen cases presented were related to forestry while only four of the fourteen pertained to land. The team was unable to view court records for the previous year to make a comparison or to confirm what the tribunal had said. The district tribunal tends to hear more land disputes just before the rainy season, when fields are being allocated, than during the dry season. It is known that more trees are felled and firewood gathered during the dry season, which could also explain the higher number of forestry cases heard between January and June.

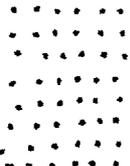
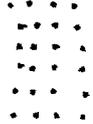
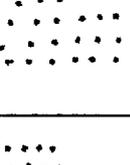
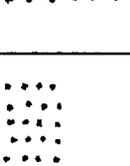
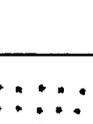
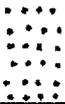
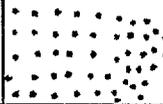
FIGURE 15 DISPUTES MATRIX, MAKA FARAFENNI

TYPE OF DISPUTE	LEVEL OF RESOLUTION					
	Present			Past		
	Household	<i>Alkalo</i>	Chief	Household	<i>Alkalo</i>	Chief
Boundary (farms)	 61	 59		 58	 39	 13
Settlement	 100			 100		
Marriage	 65	 22	 13	 71	 29	
Strange farmer	 60	 24	 16	 71	 29	
Livestock from other villages*	 24	 58	 18	 48	 20	 24
Breaking of <i>tongo</i>	 100			 100		
Water at the well	 100			 100		
Livestock from village*	 100			 100		

* Refers to livestock damaging crops.

This matrix was completed by a group of men and two women at the Maka Farafenni *bantaba*. The group ranked disputes relative to the level of resolution for each type of dispute in the present and in the past (defined as more than fifteen years ago). The numbers shown indicate the number of beans placed next to each type of dispute; they do not represent the actual number of conflicts in the village.

FIGURE 16 DISPUTES MATRIX, UPPER BADDIBU DISTRICT

	PRESENT	PAST
Land Disputes: Settlement	48	24
Farms		
Uplands		
Rice fields		
Marriage	24	48
		
Loans	12	
		
Fighting	5	
		
Theft	4	
		
Inheritance Cash	2	
		
Children	4	
		

This matrix was derived during a meeting with the chief and district tribunal. The tribunal was asked to rank all disputes in order of the most frequently heard at the district level. Tribunal members defined "past" as fifteen or more years ago, and "present" as the last fifteen years. Again the numbers given represent beans used to indicate relative importance; the numbers do not represent the actual cases heard.

4.2 CONFLICT RESOLUTION MECHANISMS

Conflicts are resolved on various levels, beginning with the household and ending in the appellate court. In the study site, the household was seen as the most likely level on which most conflicts are resolved. This may be attributed to settlement patterns and familial relations. One of the most remarkable features of Maka Farafenni is that most of its residents are related. The village is truly one extended family sharing its territory with a few long-term guests, who have been well integrated into the community. The greatest testament to the closeness of this village is evidenced in the disputes matrix of figure 15 (p. 46). A high proportion of disputes are resolved at the household level. Both men and women are active in the resolution process, with women solving domestic complaints, and men, intercompound problems.

The imam is also a central figure in conflict resolution in both Maka Farafenni and Dutabulu. He serves as an intermediary step between parties who are bringing a dispute to the *alkalo*.

On the district level, the *seyfo* and the district tribunal formally hear cases. The district tribunals hear all cases concerning customary and Islamic law (even criminal cases). The Upper Baddibu District Tribunal consists of four men and the chief. The tribunal meets about twice a month or as needed. Its members also act as local representatives of the tribunal. When the *seyfo* is informed of a dispute, he sends a message to the tribunal representative for that particular area and asks him to intervene on the *seyfo*'s behalf. If the tribunal representative cannot resolve the dispute, it is then brought before the entire district tribunal. The *seyfo* explained that the district tribunal members are well-respected citizens who have a knowledge and understanding of their particular areas that the other district tribunal members do not. Therefore, these individual members usually are important figures in dispute resolution on the district level.

Cases formally heard by the tribunal are recorded and sent to the commissioner for review. The commissioner may refute a decision taken by the tribunal and demand a retrial. In the Upper Baddibu District this has occurred only once in the last ten years.

There is also a group tribunal which is comprised of three chiefs from the district. The group tribunal is a legally constituted court which can rehear cases heard by the district tribunal. However, the chief explained that this court usually refers cases back to the district level.

4.3 TENURE ISSUES AFFECTING NATURAL RESOURCE MANAGEMENT

Four main tenure issues were identified during the course of the study:

- 1) **Insecurity of tenure for land borrowers affects their use and management of borrowed land.**

There seemed to be a lack of incentives to invest in borrowed land as opposed to land over which one had very secure use rights. One example cited by villagers is the inability for Dutabulu residents to plant trees in fields borrowed from Farafenni. Women were cognizant of the need to increase their firewood supply, yet claimed that they could not plant firewood species on borrowed land.

2) Uncertainty of ownership of common lands between villages affects involvement of communities in the management of these areas.

The area of wooded land between Maka Farafenni and Farafenni is fairly degraded. When villagers were asked why they do not invest in making the area more productive, especially for firewood production, they said that they did not know whose land it was. The ambiguity surrounding the actual ownership of this area has also resulted in a lack of incentive to reverse the degradation.

3) Noncommunity ownership of Pakala Forest Park results in lack of concern for or misuse of the forest park.

The communities near the Pakala Forest Park have absolutely no sense of ownership or stewardship for the area. The park is perceived as state-owned and state-managed. The villagers are aware of misuse within the park, but do not try to stop it because they believe that such responsibility lies with the Forestry Department. Examples range from forest fires to overexploitation of trees.

4) For clearly communally owned resources, traditional management systems have been created.

There were several examples of community-owned and community-managed resources. In addition, the *tongo* system was seen to be functioning in Maka Farafenni. This demonstrates that communities have the capacity and willingness to properly manage resources they perceive as their own and from which they derive a benefit.

5) Different user groups perceive different uses for the same resource.

Resource-use conflicts or conflicting uses of natural resources needs further exploration. Such conflicts may occur within the same user group or between different groups concerning present and future uses of a particular resource. For example, the Pakala Forest Park is a possible grazing area for Dutabulu, while it is a reserve of farmland and firewood for Maka Farafenni and a conservation area for the Forestry Department. Future settlement areas for Farafenni are the agricultural and grazing lands for Dutabulu. Any community-management plan for such resources would require that all user groups agree on the exact terms of usage by each group.

5. POLICY OPTIONS

This section presents recommendations voiced by the communities studied and, therefore, reflects their perceptions. The team also added its own observations.

5.1 PUBLIC POLICY OPTIONS OF RESOURCE USER GROUPS IN CASE STUDY SITES

The recommendations herein were given by members of the study area. Different user groups highlight the perceived resource shortages or tenure pressure points affecting them. The different user groups have different concerns. As discussed earlier, the Pakala Forest Park is a central concern for all villages studied, but each village would exploit it differently. Maka Farafenni would convert the park to farmland, while Dutabulu would preserve it as a grazing area.

Farmers expressed the need for higher agricultural productivity and stated how difficult it is to procure fertilizer. Stories were told of how fertilizer distributed through the Private Dealers Network or other merchants is often sold to re-exporters before the local population has an opportunity to purchase it. Villagers recommend fertilizer subsidies and a distribution network that would ensure a supply of fertilizer at the village level.¹¹

The village of Farafenni and its rapid growth and development have an impact on local resource use and affect the surrounding villages differently. Residents of Dutabulu are concerned with the expansion of Farafenni farmlands and the encroachment of farmers into existing cattle tracks. This obstructs herders from bringing their cattle to the watering holes and increases the risk of crop damage by cattle and thus the risk of fines for the herders. In addition, the residents of Dutabulu voiced their apprehension that residents of Farafenni could actually take over the village settlement land, leaving Dutabulu without land.

The district authorities have their priorities as well, as stated by the chief or *seyfo*. These comments reflect an uncertainty of the implications of the 1990 State Lands Act for the rural populations. The chief articulated his concern that land speculation in Farafenni dissuades landholders from lending land for agricultural purposes. He fears landholders are no longer lending as much land as in the past. These landholders presumably prefer to use the land themselves or exert their strong use-right privileges. The chief is a proponent of empowering district authorities to limit farm sizes held by individuals to only that amount of land which the individual can cultivate. He believes that this would eliminate the possibility

11. While the team recognizes that fertilizer subsidies are not consistent with government policy, the possibility is mentioned here because it is a concern of the study population.

of large tracts of land being left unused while families scramble to find enough land for subsistence farming.

The following is a list of recommendations (and their source) given to the team by the study participants throughout the course of the study:

- 1) de-reserve Pakala Forest Park for farming (Maka Farafenni);
- 2) remove grazing restrictions but maintain park reserve status (Dutabulu);
- 3) convert portions of Pakala Forest Park to plantations (GOIC);
- 4) trade existing farmland for land within the forest reserves and establish plantations on other farmlands (GOIC);
- 5) de-reserve 35 percent of Pakala Forest Park and divide it evenly among the five surrounding villages; fence remaining 65 percent of Pakala Forest Park and turn over management of this reserve to the five surrounding village *alkalolu* (Chamen);
- 6) employ village forest scouts (Chamen);
- 7) create rural employment opportunities (all villages);
- 8) educate rural population on natural resource management (Chamen);
- 9) subsidize fertilizer prices (Maka Farafenni);
- 10) de-privatize fertilizer distribution (Maka Farafenni);
- 11) limit area landowners (customary) to owning only as much land as they need to subsist (*seyfo*);
- 12) place all land not being cultivated under custody of *alkalo* or chief; (*seyfo*);
- 13) ban farmland lending for cash (*seyfo*);
- 14) restrict Divisional Planning Committee membership to citizens of the division (*seyfo*);
- 15) educate population on 1990 State Lands Act (*seyfo*);
- 16) revise present laws of local district tribunal which are not commensurate with current economic situation to reflect value of resources (*seyfo*);
- 17) improve water supply for horticulture and tree planting (Maka Farafenni);
- 18) improve agricultural production techniques (Maka Farafenni);
- 19) revive old cattle tracks (Dutabulu);
- 20) protect natural cattle watering points (Dutabulu); and
- 21) ban sale or ownership of trees by nonvillage citizens, transferring ownership of trees within the village to residents of the village (Dutabulu).

5.2 IMPLICATIONS FOR NATIONAL POLICY OPTIONS

Following is a list of implications for national policy options as perceived and compiled by the team after an initial analysis of the field research. These policy reflections were born out of numerous discussions with villagers and observations made in the field. They are based on a short-term study within a relatively small sample of villages. Therefore, not all of these implications can be interpreted for a wider area. Several of the items below are particular to the study site, but others have national implications.

- 1) encourage multiple use of Pakala Forest Park, except the clearing for agricultural purposes;
- 2) revise forest regulations to involve communities surrounding Pakala Forest Park in the management of the park, including the decision-making process affecting their use rights;
- 3) revise forest regulations to reflect punishments that are commensurate with the magnitude of the offenses;
- 4) increase public education efforts for better awareness and understanding of laws on land and natural resources;
- 5) increase the availability of extension agents in those departments working with natural resources, such as Forestry, Agricultural Service, Livestock Services, and Water Resources;
- 6) train extension agents in these departments in natural resource-policies and regulations, management techniques, and communication skills;
- 7) provide environmental education to all villagers, including children who do not attend school;
- 8) ensure secure access to fertilizer—lower prices, limit re-export;
- 9) create rural employment opportunities;
- 10) expand the Rangelands Development Project;
- 11) increase power of district tribunals to impose fines which reflect present resource values; and
- 12) continue research and debate on tenure issues.

5.3 CONCLUDING REMARKS

5.3.1 GENDER CONSIDERATIONS AND USER GROUP DIFFERENCES IN NATURAL RESOURCE MANAGEMENT

As this case study has shown, men and women have different patterns of use for natural resources. There is a need for further research on the gender differences in usage as well as access to natural resources. For example, Dutabulu women have lost their ability to cultivate personal fields due to the shortage of land available to the community. The women must find alternative sources of income to replace farming. In Maka Farafenni, the woodlot management was charged to the men, who have less of an interest in its productivity than the women, who are responsible for firewood collection. Subsequent assistance to the woodlot should perhaps be channeled through the women rather than the men.

There is also variance in the perspectives and practices of resource use between other user groups, such as herders, land borrowers (male and female), land holders (founding families and late settlers, both male and female), and strange farmers. Any program designed to improve natural-resource management must take account of such variation and design program strategies to meet the requirements of the diverse user groups.

5.3.2 COMMUNITY MANAGEMENT OF NATURAL RESOURCES

The importance of community involvement in natural-resource management is believed to be paramount to the success of any resource-related development intervention. Community participation includes active involvement in decisions affecting the use of state-controlled resources such as the Pakala Forest Park. Ideally, villagers would manage the parks nearest to them. However, communities in a land-scarce and firewood-depleted area may not be able to take over the management of a forest park very easily. There are many conflicting interests over park use, and a well-thought-out system of checks and balances to monitor park usage would be imperative. Such a system might include management by a committee comprised of *alkalolu* from the surrounding villages as well as members of the Forestry Service. The committee could meet to discuss issues and make decisions, with each member casting an equal vote. The committee could be guided by the Forestry Department members on technical matters. Community management of Pakala Forest Park could be possible. A gradual approach, replete with educational outreach, should be undertaken.

5.3.3 TREE PLANTING AND TECHNICAL ASSISTANCE

The need to halt and reverse the environmental degradation in the communities studied is evident. Villagers, especially women, are cognizant of the need for sources of firewood near the village. In Maka Farafenni, the woodlot could be a partial solution to this problem, but it is poorly managed. This may be attributed more to a lack of knowledge on how to manage a woodlot than to a lack of motivation or concern for the trees. There is a clear need for technical assistance and education on environmental management. Some villagers would also be willing to plant trees in their fields if they knew which species to plant and how to obtain them.

5.3.4 TREE PLANTING AND TENURE

Since land borrowing is quite extensive in Maka Farafenni and it is unacceptable for land borrowers to plant trees, special arrangements for land borrowers wishing to plant trees are needed. Such arrangements could include designated areas or plots within the Pakala Forest Park assigned to individuals for tree planting. Perhaps contracts between landholders and borrowers could be designed to promote tree planting and permit borrowers to plant trees in borrowed fields. The arrangements could be such that the land borrower plants two trees for himself and one for the landholder, or some variation of this idea.

5.3.5 STATE LANDS ACT OF 1990

The implications of implementing a leasehold system in the rural areas would be detrimental to the flexible customary tenure system. The effect of Farafenni's expansion on Dutabulu is briefly examined in this study. Dutabulu is in a precarious position as a land-deficient village in close proximity to a growing urban center. Residents of Dutabulu

openly acknowledged their plight in light of increasing land speculation in Farafenni. Large landholders seem to be less willing to lend land to Dutabulu residents for farming purposes than they were in the past. In addition, farmers stated that the amount of money given by land borrowers to landowners as a courtesy, often referred to as "kola money," is clearly on the rise. Further research is required to assess the potential impact in these villages as well as other villages surrounding growing centers, such as Basse.

5.3.6 AWARENESS OF NATURAL RESOURCE LAWS

There is an apparent lack of understanding of regulations on natural-resource use throughout the study area. Women professed to steal firewood from the nongovernment-owned forested areas. This implies either that villagers perceive that the area belongs to the state or that they believe all trees belong to the Forestry Department. There is a need for community-level education on regulations concerning natural-resource use.

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