

SETTLEMENT IN FOREST RESERVES,
GAME RESERVES & NATIONAL
PARKS IN UGANDA

A STUDY OF SOCIAL, ECONOMIC & TENURE
FACTORS AFFECTING LAND USE AND
DEFORESTATION IN MABIRA FOREST
RESERVE, KIBALE FOREST RESERVE, AND
KIBALE GAME RESERVE - CORRIDOR

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**Settlement in Forest Reserves, Game Reserves, and
National Parks in Uganda**

**A Study of Social, Economic, and Tenure Factors
Affecting Land Use and Deforestation
in Mabira Forest Reserve, Kibale Forest Reserve,
and Kibale Game Reserve/Corridor**

**Makerere Institute of Social Research
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Mr. George Magawa, cartographer, prepared the maps. Mr. Joseph Tumushabe, teaching assistant in the Department of Geography, prepared the annex on Uganda's experience with resettlement schemes.

Study team members hope sincerely that this study makes a positive contribution to discussions on how Uganda's natural resources can best contribute to national development.

Any shortcomings of the report are the responsibility of the researchers.

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TERMS OF REFERENCE

The Land Tenure Center and Makerere Institute for Social Research shall:

1. Study the extent of deforestation in selected forest reserves, game reserves and/or national parks, and identify the social, economic, and, tenurial factors contributing to unsustainable loss of forest cover.
2. In the course of the study, carry out socio-economic surveys in and near at least two reserve areas. The areas will be selected for the representative character of the social, economic, and tenure factors affecting land-use in the forests. Among other things, data will be collected on the approximate size of the population settled within or utilizing the reserves, the kinds of agriculture being practiced (commercial or subsistence), the origin of the settlers or agriculturalists, the factors contributing to settlement within the reserves (such as land shortage in areas of origin), the economic uses made of tree and forest resources, and the social organization and social and economic infrastructure of settlements within the reserves.
3. Collect information on the recent history of settlement in the reserves, including recent policies which may have sanctioned settlement and encroachment. Determine the terms and conditions (including land tenure rights and 'permits') under which people settled in the reserves, and assess their perceptions of tenure security.
4. Suggest administrative, tenurial, and other control and conservation measures to arrest deforestation. Assess the social and economic impacts of alternative measures, including those which may involve resettlement of persons and families currently resident in the reserves.

EXECUTIVE SUMMARY

Settlement in Forest Reserves, Game Reserves and National Parks in Uganda

This study examines social, economic and tenurial causes of agricultural encroachment and human settlement in Uganda's forest reserves, game reserves, national parks and other public lands reserved for various public projects. Field data collection was carried out in three areas particularly affected by encroachment: Kibale Forest Reserve and Game Reserve/Corridor in Kabarole District, Mabira Forest Reserve in Mukono District, and Queen Elizabeth National Park in Kasesse and Kabarole Districts. The report offers recommendations for addressing the particular problems of the areas studied, and for dealing with some of the general causes of encroachment and deforestation nationally.

The study was commissioned by the Agricultural Secretariat of the Bank of Uganda, and was carried out by the Makerere Institute for Social Research (MISR) and the Land Tenure Center (LTC) of the University of Wisconsin-Madison, U.S.A. The research was funded with assistance from the U. S. Agency for International Development and the Uganda Ministry of Planning.

Research Findings

Survey work in the Kibale Forest Reserve and the Kibale Game Reserve/Corridor found that approximately 60,000 persons had settled within the reserves. The great majority of persons (42-57,000) are settled in the game reserve/corridor. Large-scale settlement began in the corridor in the late 1950s. Settlers have replicated their customary land tenure institutions within the reserves, although the areas remain state land. Customary tenure institutions provide rules and procedures for land allocation, use and inheritance. Virtually all of the land in the corridor has been allocated to families for agricultural purposes. The corridor ceased functioning as an avenue for the migration of large mammals between the Kibale forest reserve and Queen Elizabeth National Park in the 1960s. Between 3,000 and 3,500 persons are resident in the Kibale forest reserve.

Virtually all of the people settled in the game corridor and the forest reserve are Bakiga, and originated from Kigezi District (now Kabale). Their principal motive for leaving their home areas was land shortage. People settled in reserves because of prohibitions in customary tenure systems prevailing elsewhere in the region to granting land to persons not belonging to the local ethnic group. No such restrictions applied in the reserves. Until recently, there had been little or no official resistance to settlement in the game corridor, despite the fact that large-scale settlement began in the corridor in the late-1950s.

Settlement in the Mabira Forest Reserve is a more recent phenomenon, beginning in the mid-1970s. Encroachment was due to a combination of factors, but principally government policies in the mid-1970s which encouraged agriculture in unsettled areas, including reserves (the 'double production' and 'freedom to settle anywhere' policies). Most settlers in Mabira did not own land, or own sufficient land elsewhere to support their families. Settlers in Mabira originate from 22 of Uganda's 33 districts. The great majority of farmers are small-scale producers, and not large-scale, urban based operators as is sometimes reported.

The study program permitted the team to carry out only a quick reconnaissance of Queen Elizabeth National Park. Most resource management problems in the park are due to an overflow of population from fishing villages within the park, which predate its establishment in 1952. Government granted the fishermen permanent tenure rights at the time the park was established. The team's reconnaissance report of the park is presented in Section 3.4 of this study. At this time, the study team is not making recommendations on appropriate government action for Queen Elizabeth National Park, as other studies collecting detailed socio-economic information are currently underway in and around the park.

The team identified various public lands other than the Forests, Game Reserves and National Parks. They were earmarked for public projects under the jurisdiction of various government departments and institutions. There are no accurate records and many of them remain unutilized and thus suffer from encroachment.

Recommendations

Government wishes to return areas affected by settlement and agricultural encroachment to their intended uses as forest reserves, game reserves and national parks. In Government's view, current levels of settlement in reserves conflict with sound forestry and wildlife management practices. Settlement in reserves and parks is illegal, and reestablishing administrative control over these areas is a high government priority. Government's position is that settlers should be evicted. Evictions began in Mabira Forest Reserve in September 1988.

As a general policy, Government's position that encroachers in reserves and parks be evicted is endorsed by the study team. The study team also recognizes the merits of a uniform policy toward eviction, as exceptions made in some areas may lead to resistance to eviction in other areas. This general view notwithstanding, the circumstances surrounding encroachment in some areas will advise in favor of flexible application of the eviction policy. Exceptions to the general policy on eviction should be considered where one or more of the following conditions apply: (1) the most suitable form of land use for the

area is agriculture or mixed agriculture/forestry land uses; (2) it is clearly established that settlers would be unable to secure adequate land elsewhere, and/or; (3) the social and other costs associated with eviction and resettlement would be significantly higher than the benefits likely to result from eviction.

1. Kibale Game Reserve/Corridor. The study team believes that the general policy toward eviction should not be applied in the case of the Kibale Game Reserve/Corridor, for the following reasons: the majority of those settled in the corridor do not have customary tenure rights to land elsewhere in the region; the corridor is well-suited for agriculture, and has not functioned as a game corridor for nearly 30 years; there has been no official objection to settlement there until very recently; and large-scale displacement of the resident population might lead to degradation of more fragile environments elsewhere in the region.

2. Kibale Forest Reserve. The Kibale Forest Reserve is best suited for forestry, and the persons currently residing there should be required to vacate their farms and settle elsewhere. The number of persons affected is relatively small: 3,000-3,500 people. Encroachment in the forest reserve is fairly recent, and those residing and farming there have been aware that their settlements were illegal.

3. Mabira Forest Reserve. The study group concurs with current Forest Department policy that those resident in Mabira Forest Reserve be required to vacate the reserve. However, the group feels that past official policies were largely responsible for encroachment in the reserve. For reasons cited below, the study team does not recommend a special resettlement program to assist settlers to relocate elsewhere. However, the team does recommend that Government help those requiring assistance identify potential areas of available land outside of the reserve. The Forest Department should begin replanting immediately those areas affected by encroachment, to demonstrate to settlers it is taking steps to rehabilitate the forest.

4. Resettlement. The team does not recommend government implement a special program to resettle persons living in reserves. The team reached this conclusion because: costs of resettlement would be high; other sections of the population have more urgent resettlement needs; subsidized resettlement of encroachers gives rise to problems of legal precedence; and past resettlement schemes have generally failed to meet their intended goals. In many cases, encroachers will be able to return to lands still held at their homes of origin.

However, where it is clearly established that settlers would face severe hardship in securing suitable land outside of reserve areas, government should identify and secure land where those evicted can reestablish themselves. Basic infrastructure to ensure access and the public's health and safety should also be provided. Most settlers in Kibale Game Reserve/Corridor do not have access to adequate land in their areas of origin, and thus Government would need to identify areas for relocation if the decision were taken that they be evicted.

5. Other Public Lands. The team believes that many departmental claims of ownership of areas of public land have not in fact been properly surveyed and registered. Many areas have not been developed. The status of these lands needs to be assessed.

6. Legislation. With respect to legislation governing reserves and parks, the study team concludes that existing law provides adequate legal provisions for the efficient control and administration of land use. The major problem to date has been lack of effective administration and enforcement of the law.

7. Relieving the Root Causes of Encroachment. The report concludes by making recommendations for action to alleviate the root causes of encroachment in reserves and parks. Encroachment results from a national imbalance between land use and land capability. Extensive areas poorly suited for agriculture, such as reserves or parks, are under pressure from farmers pushed out of land-short areas of the country, while large areas of cultivable land elsewhere appear to be under-utilized. These imbalances are caused by a number of factors, including customary tenure rules which inhibit population mobility, inefficient land markets, and the absence of land policies which would encourage investment in agriculture.

Further research is needed on how tenure affects population distribution. Research would assess the social and economic feasibility of tenure reforms and other changes to accommodate easier movement of population in relation to available land and other resources.

8. Public Education. Finally, the study team strongly recommends that government promote greater public awareness of the socio-economic and environmental benefits of forest reserves, game reserves and national parks.

CHAPTER ONE

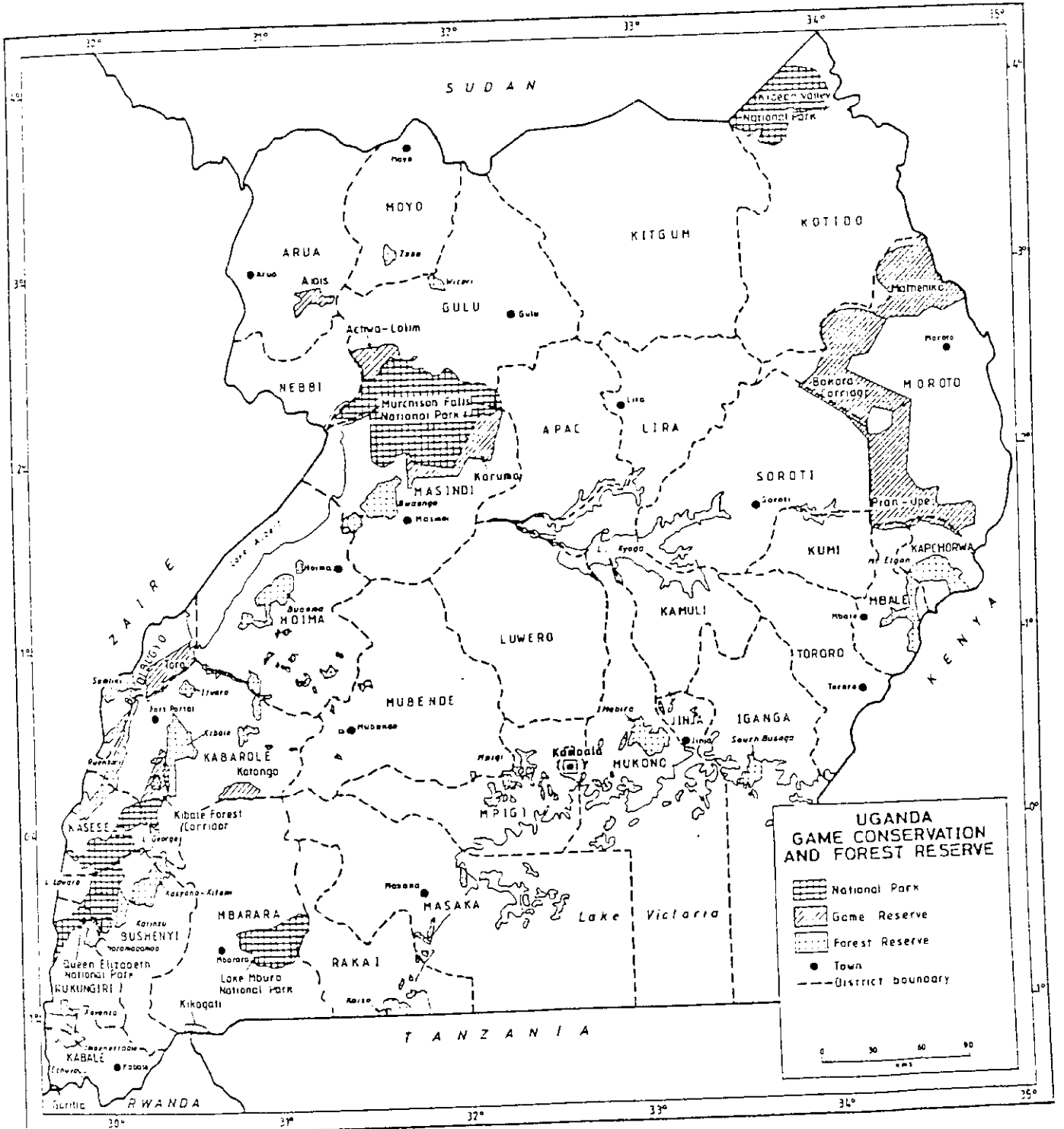
A REVIEW OF POLICY AND RESEARCH ISSUESIntroduction

Uganda's forest reserves consist of approximately 1,6 million hectares of forest estate. The total area of national parks and game reserves is about 1,5 million hectares. Forest reserves are managed by the Forest Department, an agency within the Ministry of Environmental Protection, and national parks and game reserves are managed by the Ministry of Tourism and Wildlife. Forest reserves, game reserves and national parks together constitute about 16 percent of the total dry land area of Uganda.

Until the early 1970s, forest estates were successfully managed consistent with a multiple goal forestry policy, which balanced economic utilization with conservation of wildlife, maintenance of biological diversity and other values. Since the early 1970s forest resources within gazetted forest reserves have been depleted at a rapid rate, so that between 1970 and 1986 the area of actual forest cover has been reduced by about 40%. Hamilton (1984) estimates that approximately 2% (110 square kilometers) of Uganda's highland tropical forests are lost every year.

Loss of forest cover has been caused by unregulated commercial exploitation and widespread encroachment of human settlement and agriculture into the forest reserve areas and public lands earmarked for various public projects. The current

Figure 1



state of affairs is the result of a number of factors. Population pressure in some parts of the country, particularly the southwest, and civil disorder in other areas, has led to a out-migration of farmers into natural forest areas. In some cases, government policies of the day, including the 'double production' and the 'freedom to settle anywhere' policies of the 1970s, were taken by many farmers as official sanction for settlement in forest reserves. The Forest Department, under-funded and under-staffed, was unable to control illegal settlement and encroachment in reserves. The Department's own programs for managed economic exploitation of reserves had come to a standstill.

Deforestation has also resulted from unregulated mechanical sawing and pit-sawing, and from the growing demand for fuelwood for local brick kilns. In general, Uganda is heavily reliant upon wood to meet its basic domestic energy requirements for cooking and heating and for small-scale manufacturing. Fuelwood and charcoal provide about 95% of the total energy consumed in the country. Economic difficulties over the last fifteen years have reduced the availability or slowed the growth of supply of alternative sources of energy, such as electricity, gas, and paraffin, further increasing reliance on fuelwood.

The government is trying to correct the problems which have contributed to the degradation of Uganda's forest and game resources. With assistance from the World Bank, European Economic Community, and other donors, the Forest Department has

embarked on a program of forest rehabilitation, involving staff development, vigorous enforcement of forest regulations, implementation of plans for nature conservation in forest reserves, and intensified economic management of timber and natural forest resources. A key Forest Department objective is to return forest reserves to their intended uses. To do so, crop production and illegal encroachment must be stopped. This will require eviction of encroachers and effective control of land use in the future.

Experience has shown that successful eviction and permanent relocation of encroachers elsewhere can be difficult to implement. Many settled in forest reserves because of land shortage in their areas of origin. Without the prospects of alternative land, it will be difficult to implement eviction in some areas; and land shortage will remain a problem once settlers are evicted.

Most research in Uganda on deforestation to date has focused on physical and ecological impacts of encroachment, and little work has been done on the social and economic factors which contributed to encroachment in the first place. In order to reverse the process of deforestation, the encroachment process itself must be understood. This study aims to provide an understanding of the social, economic and tenurial factors which have caused agricultural encroachment and human settlement in reserves and parks. Some of the questions which need to be answered before formulation of policy are:

--To what extent is encroachment caused by land shortage and lack of income earning opportunities in places of origin?;

--Why did settlers secure land in reserves and parks and not elsewhere in the country? Are there aspects of Uganda's land tenure systems which inhibit the movement of population in relation to available land?;

--To what extent do encroachers have land elsewhere (or could secure land elsewhere) or have other income earning opportunities, but weak rule enforcement presented opportunities for low-cost expansion of agricultural production into reserves and parks?;

--Taking account of the different social, economic, and tenurial factors contributing to migration to reserves and parks, what practical options are available to encroachers for resettling elsewhere?

--What will be the social costs of resettlement, and how might these costs be minimized through effective government action?

CHAPTER TWO

OBJECTIVES AND RESEARCH METHODOLOGY

2.1 Objectives of the Research Program

The principal objective of this study is to provide Government with relevant information on social, economic, and tenurial factors causing settlement and encroachment in forest reserves and national parks. Specific objectives of the study are to:

1. Identify the social, economic, and tenurial factors which have contributed to encroachment, settlement and deforestation in the forest reserves, national parks and/or game reserves selected for study. Also identify how government policies and management practices have directly or indirectly contributed to encroachment and deforestation in reserve areas.
2. Assess the potential social and economic impacts of eviction and resettlement upon encroachers and others who might be affected by relocation of encroachers to areas outside of reserves.
3. Recommend policies for future forest management and resettlement that facilitate the utilization of reserves for their intended purposes, while addressing the long-term land and settlement needs of settlers in areas outside of reserves.

2.2 Data Collection and Research Methodology

2.2.1 Research Sites

Constraints of time and resources required the team to select a few sites for intensive field data collection. Research

was carried out in Kibale Forest Reserve and the Kibale Game Reserve/Corridor, Mabira Forest Reserve, and Queen Elizabeth National Park. The Kibale reserves and Mabira forest were selected because both have been subject to heavy encroachment over the last several years, and because Government is taking steps to evict settlers from these reserves. The resettlement issues there are urgent.

Queen Elizabeth National Park was selected because of current Government concern over the growth of fishing settlements located within the park, which predate its establishment in 1952.

2.2.2 Types of Data Collected

In the course of the research, data and information was collected on the following subjects:

- The social and economic characteristics of encroachers;
- Tenure and economic factors in places of origin which may have contributed to migration and settlement in reserves;
- Agricultural practices and land use in the reserves;
- Past government policies and official and unofficial practices which may have encouraged encroachment, and settler expectations of tenure rights;
- Social and economic implications of eviction and resettlement.

To a limited extent, the research examined the options available to encroachers to successfully reestablish themselves outside of reserve areas. Past experience with resettlement

policies was reviewed, and is summarized in Appendix II.

2.2.3 Data Collection Techniques

Three principal research techniques were used to collect data:

1. Rapid rural appraisal techniques were used to collect background information on the general extent and nature of encroachment in the reserves and park, on principal agricultural systems, and on the recent history of settlement. A check list of a questions was addressed to local officials, traditional leaders, and other knowledgeable local persons. Rapid rural appraisals were carried out in all three research areas.
2. A sample survey of settler households was carried out in the Kibale reserves and Mabira forest. Eighty randomly selected households were interviewed in the Kibale reserves; 58 were interviewed in Mabira. The survey questionnaire collected data on the demographic and economic characteristics of encroaching households, on land holdings and income and employment and at places of origin and within the reserves, on the specific circumstances by which persons became settled in the reserve, and on agriculture and land use practices within reserves.

A sample survey was not carried out in Queen Elizabeth National Park. The United Nations Environmental Programme is carrying out an extensive study of the park, and is collecting survey data similar to that which would have been collected by the LTC/MISR survey.

3. Government officials, researchers, and other persons with knowledge of the research issues were consulted. Government departments, and particularly the Forest Department, provided useful information. The Forest Department made available the results of a recent census of settlers in Mabira Forest. The research team also took cognizance of Government's current forest and environmental policy goals when formulating its own recommendations.

CHAPTER THREE

DATA ANALYSIS3.1 Introduction

The following sections report on data collected in the Mabira Forest Reserve, and in the Kibale Forest Reserve and game corridor connecting the forest reserve with Queen Elizabeth National Park. Data were collected using two techniques: administration of a questionnaire to a sample of population in each area, and collection of information through 'rapid rural appraisals', which normally consisted of group discussions with local officials and knowledgeable residents. The following data analyses provide:

- (1) an assessment of the existing situation within the study areas, including (a) population size and household characteristics, (b) economic activities, and agriculture and land use, and (c) land tenure and social organization.
- (2) an assessment of the factors causing people to settle in the reserves in the first place. These relate to 'push' factors, or conditions in areas of origin which may have led people to leave their homes and settle in reserves, and 'pull' factors, or factors which led people to settle in the reserves and not elsewhere.

3.2 Kibale Forest Reserve and Game Reserve/Corridor3.2.1 The Existing Situation

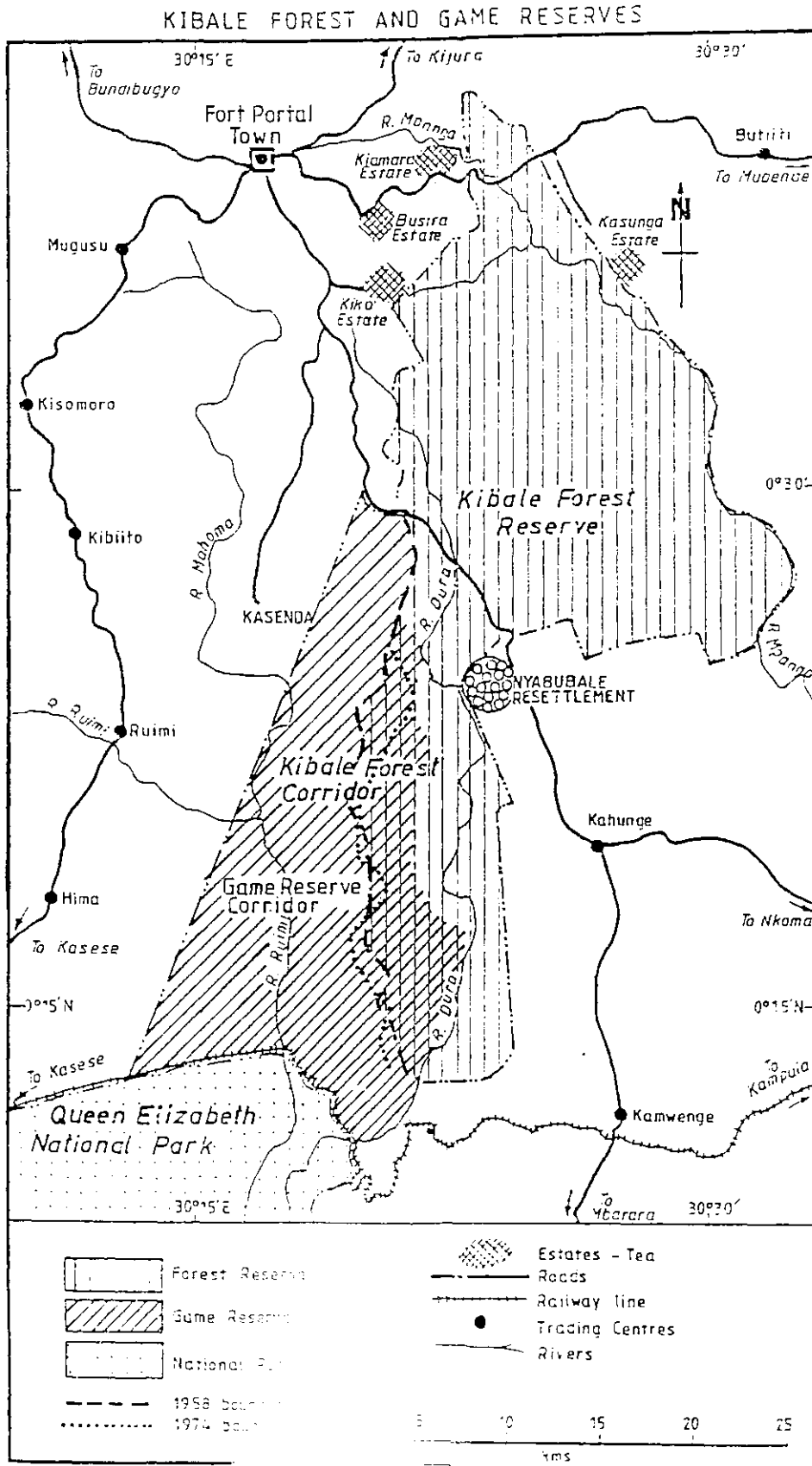
Kibale Forest Reserve and the Kibale Game Reserve/Corridor are situated in Kabale District. The Kibale Forest Reserve was

established in 1932. It covers an area of 39,866 hectares. The present-day game reserve/corridor was first gazetted as a controlled hunting area in 1926, but its boundaries and status in the parks and reserves system have changed over the years. The total area of the game reserve/corridor is 33,915 hectares. (The forest reserve and the game reserve share an overlapping area of approximately 13,400 hectares, on the western and southern flank of the forest reserve.) The principal function of the game reserve/corridor (hereafter referred to as the 'game corridor' or the 'corridor') is to provide an undisturbed link for seasonal wildlife migrations between the Kibale Forest and adjacent areas in the north of Kabarole District and Queen Elizabeth National Park in the south (a map of the region is provided in figure 2). A single large area of settlement extends from the southwestern portion of the forest reserve into the game corridor, with most of the population resident in the corridor. It is estimated that about ten percent of the area of the forest reserve and nearly 100 percent of the game corridor have been converted to settlement and agricultural land uses since settlement first began in the game corridor in the late 1950s. Settlement in the forest reserve and game corridor constitute a single and largely homogeneous settlement unit and data presented below are, in most cases, amalgamated into a single measure for both reserves.

3.2.2 Population and Household Characteristics

Current population estimates for Kibale forest reserve/game corridor area are derived from the 1980 Census and data provided

Figure 2



by the Kabarole District Administrator and officials at the sub-county and parish levels. Each of the sources used was subject to bias and estimation errors. Because of limitations in the reliability of dates, the study team provides an estimated population range, instead of a single population estimate.

It is estimated that the population of the Kibale forest reserve and game corridor is between 45,000 and 60,000 persons. Between 3,000 and 3,500 persons are estimated to reside in the forest reserve, and between 42,000 and 57,000 people are estimated to reside in the game corridor. Presented below are discussions of the data sources and methodology used to arrive at population estimates.

3.2.3 Estimates Based Upon 1980 Census Projections

There are six parishes more or less completely within the forest and game reserve area: Mpokya, Kanyabutagi, Kyabandara, Dura, Rurama and Kyembogo. Table 3.1 below presents the 1980 census figure for each parish, and the estimated population in 1988. The 1988 estimates are derived from a projection of the 1980 population at an annual growth rate of 3.8 percent. This assumes a rate of natural increase of 2.8 percent, the national growth rate, and growth due to in-migration of one percent per year.

Table 3.1
 Estimated Population in Kibale Forest
 Reserve and Game Corridor, 1980 (census) and 1988 (projected),
 by Parish

<u>Parish</u>	<u>1980 (census)</u>	<u>1988 (projected*)</u>
Mpokya	5,061	6,820
Kanyabutagi	3,492	4,707
Kyabandara	4,417	5,592
Dura	3,541	4,772
Rurama	5,577	7,516
Kyembogo	7,387	9,952
Total	29,466	39,722

* Growth projected at 3.9% per annum.

A 3.8 percent annual growth rate yields a 1988 estimated population of about 40,000. There is reason to believe that this is a conservative growth rate. According to the 1980 census, Kabarole District experienced an average annual growth rate of 4.6 percent between the 1969 and 1980 census years: much of it attributable to in-migration from land-short districts such as Kabale, where the annual growth rate over the inter-censal period was 1.2 percent. Projecting the growth of the forest reserve/game corridor at 4.6 percent per annum from 1980 to 1988, the estimated 1988 population would be about 43,000. (The national growth rate during the 1969 to 1980 period was 2.3 percent per annum. Kabarole District's growth rate was the third highest in the country, after Kasese (5.2%) and Hoima (4.7%).)

3.2.4 Estimates Provided by Local Officials

The District Administrator of Kabarole District provided the study team with 1988 population estimates of the forest reserve/game corridor area based upon ethnic group associations,

divided among: Bakiga, 27,000; Banyankole, 23,000; and Batoro/Bakonjo, 11,000. The total of 61,000 is considerably higher than the population estimate yielded by method for projecting the 1980 census population, used above.

A former chief of Mpokya sub-county also provided 1988 population estimates of the forest reserve/game corridor area. The chief had been directly responsible for maintaining records of households and family size in Mpokya sub-county, which encompasses three parishes: Mpokya, Kanyabutagi, and Kyabandara. The chief provided the study team with detailed summaries of population within these parishes, as well as the three other parishes within the reserve areas (Dura is in Kamwenge sub-county, and Rurama and Kyembogo are in Rutete sub-county). Detailed population records are reproduced in Appendix III. According to these records, the total population of the reserves is 71,023 divided among: Mpokya (15,069), Kanyabutagi (10,999), Kyabandara (12,589), Rurama (8,230) and Kyembogo (12,603).

3.2.5 Discussion

Great differences in total population exist among the population estimates available to the study team: from a low of about 40,000 based on projection of the 1980 census to a high of 71,000 provided by records of local authorities. The study team believes that the census projection yields a low population estimate. As is believed to be the case elsewhere in the country, the 1980 census may have under-counted population in the area. As noted above, the projected growth rate used to project

the 1980 population to 1988 (3.8%), is conservative. Thus, the census-based projection is increased to 45,000 to provide the lower range estimate of population in the Kibale forest reserve/game corridor.

While the population estimate provided by the sub-county chief is considerably higher than the projected census population, it has been the experience of staff in the Department of Statistics and Applied Economics that data provided by local chiefs elsewhere in Uganda have proven reliable, when checked against other estimates of population. On the other hand, there is likely a tendency for local authorities to inflate population estimates somewhat, as these estimates are used to determine local supplies of essential commodities. Furthermore, there is some uncertainty about the precise boundaries of three of the parishes in relation to the boundaries of the game corridor. Parts of Dura, Rurama, and Kyembogo may in fact fall outside of the corridor. In light of the above, the team has deflated the chief's estimate of 71,023 to 60,000, which is used to provide the upper range estimate of population in the Kibale forest reserve/game corridor area.

On the basis of the methodology described above, the team estimates the population within the Kibale forest reserve and game reserve corridor to be between 45,000 to 60,000.

The vast majority of persons are resident in the corridor. The corridor is almost completely settled, whereas settlement in the forest reserve is limited to an area along the western

boundary with the corridor. Only Mpokya parish encompasses portions of both the forest reserve and game reserve. There are 23 RC 1 areas within Mpokya parish. Of these, three RC 1 areas with an estimated total population of 2,000 (source: sub-county chief) lie completely within the forest reserve. Three other RC 1 areas in Mpokya with a total population of about 1,900 encompass parts of the forest reserve and the game corridor. Based on these figures, the total number of persons resident in the forest reserve probably does not exceed 3,000 to 3,500 persons. Thus, the population of the corridor is estimated to be between 42,000 and 57,000 persons.

About ten percent of the land area of the forest reserve and nearly 100 percent of the game corridor have been converted to settlement and agricultural land uses. Assuming the total population of the corridor is between 42,000 and 57,000 persons, the population density of the corridor would be between 122 and 166 persons per square kilometer. (The total area of the corridor is 340 km².) This range of densities is considerably lower than those estimated for Ndoorwa county in Kabale District, an area of origin for many of those now resident in the corridor. Turyagyenda (1964) estimated population density in Ndoorwa at 350 person/km². Okerio and Hoekstra (1988) estimate that the average population density of cultivated land in three counties in southern Kabale District is 620 persons/km².

Current population densities in the corridor are still considerably lower than those in some other areas of Kabale

District, within which the corridor lies. In a study of population in Kabarole District, Langlands (1971), working with 1960 census data, identified three agricultural counties near Fort Portal with densities between 700 and 1,000 persons/km². He identified 28 other counties in Kabarole District with population densities greater than 200 persons/km², higher than the current densities in the corridor. While virtually all land suitable for agriculture has been claimed in the game corridor, not all holdings are fully developed for agricultural purposes. The population estimate for the corridor appears reasonable in relation to these figures.

Findings of the Questionnaire Survey

The LTC/MISR team carried out sample survey work in Mpokya and Rurama parishes during the period 25th September to 12th October 1988. Sixty randomly selected households were interviewed in Mpokya parish; 20 were interviewed in Rurama.

Large-scale settlement in the game corridor began in the late 1950s. In administering the questionnaire, the study team solicited detailed migration histories from respondents. Twenty five percent of the sample population reported moving to the area before 1960, 50 percent had settled there by 1966 and, 75 percent had settled by 1969.

The average household size in the Kibale forest/game corridor area is nine persons. On average, about one half of household members are 15 years of age or younger (the largest household recorded had 12 members; the smallest households

consisted of widows or widowers living alone). The average age of household heads in the Kibale area is 44 (the median age is 40). About 83 percent of households are headed by men; the remaining 17 percent of households are headed by women, mainly widows. About two-thirds of school age children were attending schools either within the forest or corridor or in areas nearby. Virtually no single men without resident families were encountered in the reserve/corridor area. Residents were 'permanently' settled and did not have principal or alternative homesteads elsewhere.

The study team found a wide range of public services and facilities operating within the game reserve, including: 8 primary schools, 12 sub-grade schools, 15 Catholic churches, 17 Protestant churches, 4 mosques, 4 Seventh Day Adventist churches, 1 clinic, and 3 weekly market centers as shown in Appendix III.

3.2.6 Agriculture and Land Use

Agriculture is the principal source of household income. Eighty-three percent of respondents cited agriculture as the primary source of household cash income. Only 6.5 percent cited wages or remittances as primary cash income sources. (Nine percent of households said 'brewing' was their primary cash income source. Nearly 44 percent of households cited brewing as a secondary source of cash income.) A great variety of crops are produced. Table 3.2 below provides data on the percentage of households producing and selling various types of crops.

Table 3.2

Crops Reported Planted in 1988 in Kibale Forest Reserve and Game Corridor and Percentage of Households Producing and Selling Each Crop.
(n=80)

<u>Crop</u>	<u>% Producing</u>	<u>% Marketing</u>
Groundnuts	91,1	86,1
Irish potatoes	55,0	10,1
Sweet potatoes	48,1	7,6
Maize	41,8	24,1
Beans	89,9	49,4
Sorghum	45,6	12,7
Millet	54,4	17,7
Matoke (bananas)	10,1	3,8
Coffee	22,8	22,8
Tea	1,3	1,3
Soya	25,3	20,3

Note: Bananas, which are not an annual crop, are produced by virtually all households.

Source: LTC/MISR Sample Survey, October, 1988.

Informants in the Kibale area reported very little illegal unlicensed pit-sawing taking place in the forest reserve. Encroachers in the forest reserve discourage members of their community from participating in illegal pit-sawing, because of fear that it would be used by authorities as an additional reason to press for their eviction.

Relative permanence of settlement is indicated by the type and levels of agricultural investments found on local farms. Farmers in the corridor were more likely to make investments in permanent crops and infrastructure than were farmers in the forest reserve. About 70 percent of farmers in the corridor had planted fruit trees on their holdings, as compared to 55 percent in the forest reserve, or a comparable percentage. Nearly one

half of farmers in the corridor had either conserved or planted trees as windbreaks. About one-third of holdings in the corridor were terraced.

Farmers engaged in a number of farming practices associated with permanent agriculture. Most farmers practiced row, as opposed to broadcast, planting. About 95 percent of farmers in the reserve and 90 percent in the corridor rotated crops. About 55 percent of farmers in the reserve mulched fields, as compared to 33 percent in the corridor (where banana production is less common). About one-quarter of farmers in the reserve and one-third in the corridor hired farm labor during periods of peak labor demand. With the exception of a few areas of 'slash-and-burn' agriculture in the forest reserve, all holdings are permanently occupied, and allowing for fallow, cultivated on a continuous basis. Average reported size of holdings was 4,63 hectares.

Housing is constructed to a higher and more permanent standard in the corridor than in the forest reserve. For instance, 90 percent of walls in houses in the corridor were constructed of reasonably durable mud composites. In the forest reserve, only 30 percent of walls were constructed of mud, while 45 percent were made from grass and 20 percent were small A-frame structures made of banana leaves. About 50 percent of houses in the corridor had purchased manufactured doors and door frames and 32 percent had purchased window frames. In contrast, about 32 percent of houses in the forest reserve had purchased doors and

door frames, and only 5 percent had purchased window frames. As measured in terms of housing standards, persons resident in the corridor have made investments of a more permanent character than those resident in the forest reserve. As will be discussed subsequently, this is due to less certain expectations of long-term land rights among those resident in the forest reserve.

Agriculture is the dominant land use in the corridor today. As will be noted in the following discussion of land tenure, virtually all arable land in the corridor has been allocated or claimed by residents for farming purposes. The game reserve no longer functions as a game 'corridor' or 'reserve' in any meaningful sense of the terms.

3.2.7 Land Tenure and Social Organization

A distinctive feature of settlement in the Kibale forest reserve/game corridor area is the social homogeneity of the population. Virtually all of those settled in the area are Bakiga, and originate from Kabale District (or the southern portion of formerly Kigezi District). Kabale District is approximately 200 km to the south of the game reserve/forest reserve settlement area.

In settling in the Kibale area, people transferred familiar social institutions, including land tenure institutions, with them. Only a small percentage (3.8%) of the first agricultural holdings obtained by households surveyed in the forest and reserve were 'self-allocated'. Most of the early Bakiga settlers to the corridor were allocated land by Batoro chiefs. Land

allocation was taken over by local Bakiga chiefs in 1976. Survey data reveal that about one-third (32,6%) of all first holdings were allocated by chiefs, and 37,5 percent were inherited. (8,8% were purchased, 6,3% were received as gifts or grants from neighbors or relatives, and 3,8% were received through marriage arrangements.) Today, the principal mechanism for securing land in the corridor area is inheritance. New settlers to the area purchase land from those already settled. Although not all cultivable land in the corridor is utilized, nearly all of it is recognized as claimed or 'owned' by individual residents in terms of customary land tenure principles.

What is striking about settlement in the game corridor, and to a slightly lesser extent in the forest reserve, is that family and social organization and agricultural and land use practices differ little from what would be expected in typical well-established rural settlements anywhere else in Uganda. Settlements are permanent in character, as indicated by such measures as length of settlement, family size and composition, and levels of investment in housing and infrastructure. Less permanent settlement would be indicated by a high proportion of settlers without family members, and by agricultural and land use practices oriented to 'extractive' as opposed to 'sustained' use. Levels of permanent investments in housing and agriculture are lower on holdings within the forest reserve than on those in the game reserve. This is due to the fact that settlement in

the forest reserve is more recent. But more importantly, settlers in the forest reserve have much lower expectations that they will be able to remain in the forest over the long-term.

3.2.8 Causes of Settlement in the Kibale Forest Reserve and Game Corridor.

The process of settlement in this area was driven by two factors: land shortage in the home area, and the availability of land unclaimed or not under the jurisdiction of other groups in the forest reserve/game corridor area.

'Push' Factors: Land Shortage in Kigezi

Large-scale movement of Bakiga into the game reserve began in the late 1950s. Migration to the area was driven by severe land shortage in Kigezi District (now Kabale and Rukungiri), in the southwest of Uganda. Land shortage is a well-known and well-documented problem in Kabale. In 1980, there were an estimated 194 persons per square kilometer of arable land in Kabale, as compared to a national average of 75 persons per square kilometer (Muwanga-Zake n.d.). Localities within Kabale are known to have considerably higher population densities. For instance, Turyagyenda (1964) estimated that portions of Ndoorwa county in southern Kabale had population densities of over 800 persons per square mile in the early 1960s. Land shortage, plus inheritance rules which sub-divide family land among all surviving adult sons, has resulted in severe land fragmentation. Average holdings amount to only 1.1 hectares per family, which are typically sub-divided among a number of small, dispersed plots.

Population growth rates in Kabale have remained at between

2% and 2,5% per annum since the 1960s. Rapid population growth and severe land shortage have contributed to a steady out-migration of population. For instance, the 1969 census estimated a net out-migration of 100,000 persons from Kigezi to other parts of Uganda between 1959 and 1968.

The role of absolute land shortage in causing out-migration from Kabale was confirmed by responses to questions in the sample survey. Thirty-eight percent of respondents held land in Kabale before moving to the game reserve or forest reserve. All of these respondents cited the small size of their holdings as the principal reason for leaving Kabale; no respondent reported having a holding larger than 0,5 hectares.

Holdings in Kabale were cultivated intensively. Eighty-seven percent of respondents said that they had cultivated the entire area of their holding every year, allowing no land for fallow. Only 6,5 percent of respondents said they were able to feed their families 'all' years with crops produced on their holdings in Kabale. About 16 percent said they could feed their families in 'some' years, and 77 percent said they could only feed their families in 'few' years. In contrast to the past situation in Kabale, only 7 percent of respondents now farming in the game or forest reserves said that they cultivate 'all' of their holdings every year. (Fifty-one percent said they cultivate only a 'little' of their land every year, consistent with findings by Kabera (1988).) Migrants into unsettled areas tend to claim large expanses of land beyond their immediate

requirements, but which would be farmed more extensively as the family grew and passed on to their children when they reach adulthood.) Eighty percent said that they are able now to feed their families 'all' years. While a commonly cited problem in Kabale is extensive land fragmentation, with individual farmers cultivating up to 20 small, dispersed plots, 75 percent of farmers resident in the game reserve reported owning only one plot, 20 percent owned two, and five percent owned three.

'Pull' Factors: Resettlement Schemes in Kabarole District and Employment.

While it is clear that the principal 'push' factor in the exodus of Bakiga from Kabale was land shortage, why did large numbers of people settle in the area of the Kibale game reserve and forest reserve, and not elsewhere in Uganda? Informants have related a history of settlement in the area which we summarize below.

Kabarole District (formerly Toro District) has been an area of Bakiga migration since the mid-1940s. Migrants came to the area through government sponsored resettlement schemes, as workers on tea plantations in the Ft. Portal area and in Kasese District, and as workers in local industries, such as Kilembe Mines and the Hima Cement Factory.

Between 1946 and 1976, Government implemented a number of resettlement schemes around Uganda. Kabera (1983) estimates that 100,000 Ugandans were settled on organized resettlement schemes during this period, and about 70,000 of these were persons from Kigezi. Between 1958 and 1976, several hundred Bakiga were

resettled in Ruimi, Kibito and Kasenda, areas on the edges of the game reserve. Another development contributing to Bakiga migration to the area, and reported by some of those interviewed, was an agreement reached between a Bakiga chief and the Batoro king in the mid-1940s, by which large numbers of Bakiga were permitted to settle at Nyabubale, about 40 km southeast of Fort Portal and near the eastern border of the game reserve. Large numbers of Bakiga were drawn to the area, by the resettlement schemes and by opportunities for wage employment on the tea plantations.

In due course, the land available in the resettlement areas was fully allocated, and new settlers and second generation householders began looking for areas for agricultural expansion nearby. Bakiga soon identified extensive areas of unsettled and unutilized land in the game corridor. Local Batoro chiefs considered the area as the royal hunting preserve of the Batoro king. Batoro land needs were being met within already settled areas, and Batoro chiefs proved willing to allocate land for agriculture to Bakiga in the 'royal hunting area'/game corridor. Many Batoro felt that Bakiga settlements on the outskirts of their own settled agricultural area would serve as a buffer from crop damage by wildlife (Kabera 1983). This practice was not resisted at the time by wildlife and parks officials or local government authorities.

The opening up of these new, extensive areas of settlement contributed to further Bakiga migration from Kigezi. By 1976,

the local Bakiga population had reached a level where government recognized the authority of Bakiga chiefs, who took over from Batoro chiefs land allocation and other administrative duties in the Bakiga area.

The natural vegetation of the game corridor is predominantly grassland and not forest. Unlike forest soils, the soils in the game corridor are high in organic matter and able to sustain continuous cultivation. As a result, most new residents to the area choose to establish farms in the game corridor rather than the forest reserve. By 1970 virtually all cultivable land in the game corridor had been allocated, and some new settlers were establishing farms inside the western boundary of the forest reserve. Settlement in the forest reserve probably accelerated with the collapse of local industries, including the Kilembe Mines and the Hima Cement Factory, in the mid-1970s.

3.2.9 Customary Tenure as a Constraint to Settlement Elsewhere in the Region

While the growing Bakiga population resident within the reserves became a magnet for further migration of Bakiga from Kigezi, Bakiga would have faced constraints in settling in large numbers elsewhere in western and southwestern Uganda. Prior to 1975 and the imposition of the Land Reform Decree, most of the land in western Uganda was public land, and was administered under customary rules of tenure peculiar to the various ethnic groups occupying various areas. (Most land in Toro and Bunyoro was held under freehold titles, which were granted in 1900 to

the Toro and Bunyoro royalty under the Buganda Agreement which established mailo land in Buganda.) The 1975 Land Reform Decree had the effect of converting all land holdings in Uganda, including mailo and freeholds, to leaseholds, under the administration of the Uganda Public Lands Commission. But for all intents and purposes, customary tenure rules continue to operate in most parts of western and southwestern Uganda, including Kabale, Rukungiri, Kasese, Hoima, Mbarara, Bushenyi districts, and non-freehold areas of Kabarole district.

Under customary tenure, an individual's rights to land derive from their membership in the ethnic group. For instance, when a young man marries and establishes a household, he would be entitled under customary tenure to a free allocation of land within the group's territory, assuming land were available. Attempts by outsiders to purchase land or otherwise secure land would often be resisted, as this would contribute to a reduction in the patrimony of land available for eventual use by the group's children. Sometimes, small numbers of outsiders are permitted to hold land, especially if they have married into the community. Informants told us that land may even be sold to outsiders, but usually only to persons who are known and trusted by residents. Such sales would normally require the approval of neighbors and local leaders, on a case-by-case basis. Large-scale movements of outsiders into an area are usually resisted by the dominant group. Large-scale immigration could result in loss of local political control over land and other resources, and

greater competition for land generally. Experience in Uganda suggests that outsider groups are accommodated in areas dominated by other ethnic groups only where government has taken the lead in securing large tracts of land for resettlement purposes. (See Chapter IV. for a review of the experience with resettlement schemes in Uganda.) In the absence of government intervention, local controls exercised through customary tenures may impede inter-regional adjustments of population in relation to available land.

Large-scale settlement in the game reserve was possible due to the absence of group-based territorial rights to the corridor.

Local Batoro asserted that the game corridor was a royal hunting territory; it was not considered necessary for Batoro settlement and agriculture, at least not in the early days of Bakiga settlement, when land was not in short supply.

3.2.10 Government Responses to Encroachment in Kibale Forest and Game Corridor

While extensive settlement was taking place in the game corridor in the late-1950s, government took no steps against encroachment until 1972, after settlement had begun to spill into the forest reserve. The Forest Department, which has jurisdiction over the forest reserve, has taken the lead in pursuing evictions from the forest reserve only. The Ministry of Tourism and Wildlife, which has jurisdiction over the game corridor, did not resist settlement in the area before 1983, when it first asserted the illegality of their settlements and for a brief time pushed for evictions of settlers. The result is that

persons resident in the forest reserve have relatively low expectations of their long-term land rights, while those in the game reserve, who have met little or no resistance from government to their settlement in the reserve over 35 years, feel that their claims to permanent land rights are just and legitimate.

The first official action against encroachers in the area was taken in early 1972 by the District Forest Officer (DFO) of Toro District (now Kabarole), who wrote to settlers in the forest reserve and instructed them to leave. On June 28th, 1972, the DFO requested the Chiefs of Ruteta, Kahunge, and Kamwenge counties to evict encroachers residing within their jurisdictions. This was not done, and in January 1973, local leaders petitioned the President for relief from the eviction order. However, the President's office, acting through the District Commissioner, confirmed the eviction order, although it appears that no physical action was taken against encroachers at this time.

Many of those appealing eviction orders had argued that because the forest reserve boundary was not clearly demarcated, it was unfair to evict persons who may have settled there out of ignorance. Thus, a compromise was struck, in which the Forest Department redrew the forest boundary to place most encroachers outside of the forest reserve.

During 1976, 30 settlers were taken to court for refusing to observe eviction orders. They were sentenced to 30 days

imprisonment each by the Chief Magistrate in Fort Portal, and were given 30 days notice to evacuate the reserve after completing their sentences. There is no evidence that people actually left the area as a result of eviction orders.

No action was taken against encroachers between 1977 and 1980. In 1980, the question of settlement in forest reserves became a national political issue, with candidates in land-hungry districts arguing in favor of settler rights. This had the effect of demoralizing Forest Department staff and rendering the position of the new government toward encroachment unclear.

However, in August, 1982, the Minister of Agriculture visited the forest reserve, and subsequently advised cabinet that encroachers should be evicted. This was agreed by cabinet, and orders were ordered to vacate the forest by December 31st,

Eviction orders were carried out in the course of 1983, and by early 1984 most encroachers had left the forest reserve, schools were closed, and units of local administration had been

closed. However, in April, 1984, the Minister of Culture and Development wrote to the District Commissioner of the District requesting him to halt evictions. Forest Department staff were demoralized, and many of those already evicted returned back to the forest.

The District was an important base of operations for the Resistance Army during the 1985 war. Settlers were told by the NRA that they should remain in the game and that those with no interest in the forest reserve should leave.

Shortly after the NRM assumed power in January, 1986, the Forest Department briefed government on the problem of encroachment in forests in the country. Cabinet issued an order that all encroachers were to vacate the nation's forest reserves by December 31st, 1986. However, the Prime Minister's office granted an extension of the eviction date to settlers in Luunga forest reserve, in Mubende District, to April 4th, 1987. This extension cast into doubt the ability of the Forest Department to effect eviction elsewhere in the country. The April 4th deadline passed and no action was taken.

The transfer of the Forest Department to the new Ministry of Environmental Protection in 1987 further delayed implementation of the department's eviction policies. In March, 1988, government ordered all encroachers illegally settled in forest reserves evicted by July 30. Almost all enforcement activity has focused on Mabira Forest.

In April, 1988, the Ministers of Environmental Protection, Tourism and Wildlife, and Lands and Surveys visited Kibale Forest Reserve and Queen Elizabeth National Park. The Minister of Environment Protection confirmed government's intention to evict persons residing within the forest reserve. The Minister of Tourism and Wildlife stated it was his intention that people also be evicted from the game corridor. In response to the Minister's statement, a committee of residents in the game corridor wrote to the President, in May 1988. The latter reviewed their long

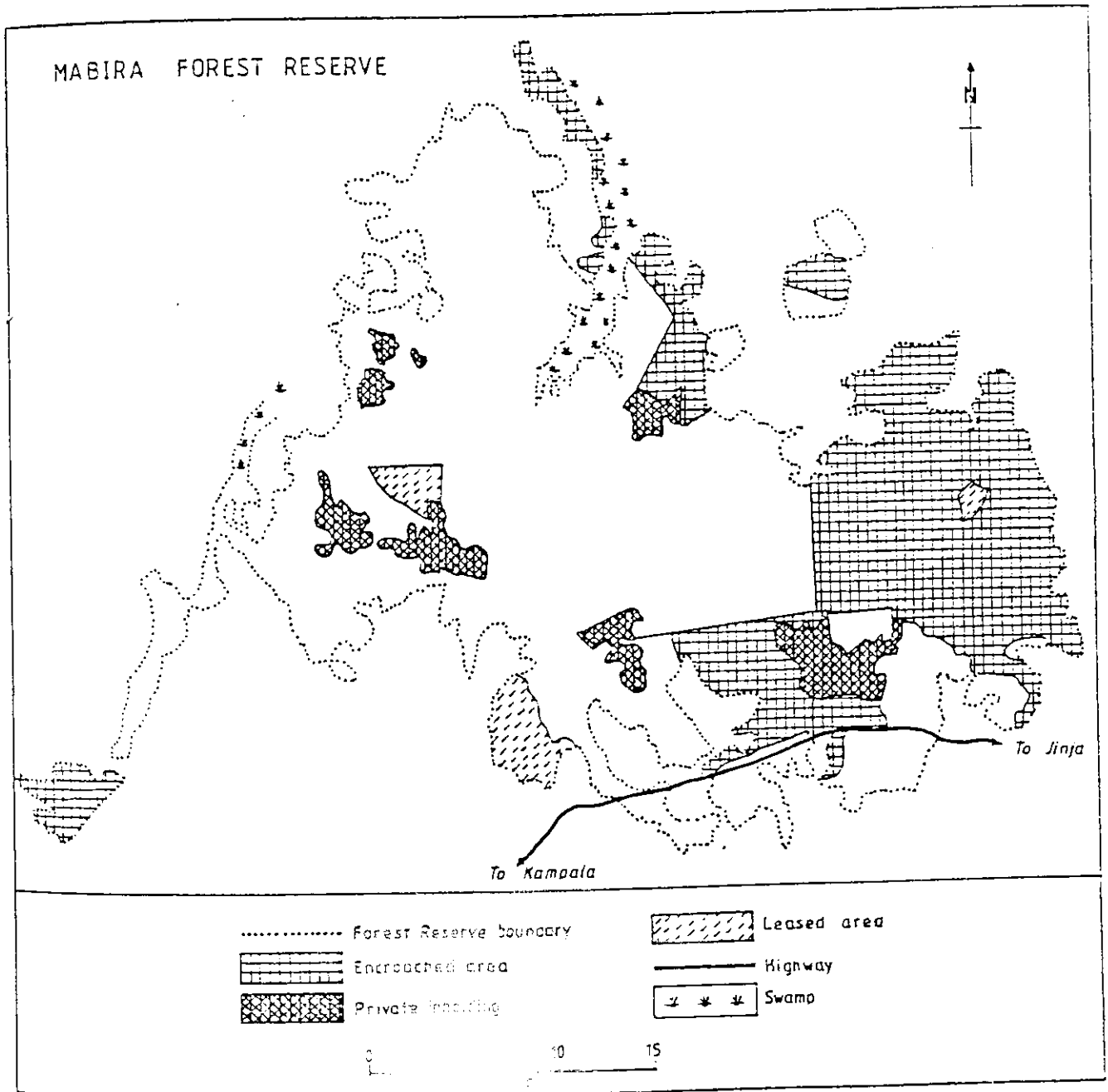
history of settlement in the corridor, and emphasized the great social costs to themselves and the nation that would result from eviction. The committee assured the President that they would be willing and able to absorb the population to be evicted from the forest reserve if their own permanent land rights in the corridor were to be recognized.

3.3 Mabira Forest Reserve

3.3.1 The Existing Situation

Mabira Forest Reserve is situated in Mukono District along the main road between Kampala and Jinja. It consists of 29,964 hectares, and was first gazetted as a forest reserve in 1932 (see figure 3 for a map of Mabira reserve). In comparison to the Kibale reserves, encroachment in the Mabira forest reserve is a relatively recent phenomenon, with the first significant settlement occurring in the mid-1970s. The Mabira forest reserve has been the principal focus of current efforts by the Forest Department to evict settlers from forest reserve areas. A general eviction order has been in effect since late-1987. Few settlers had vacated the forest at the time of the study, and the Forest Department had set various deadlines for leaving, all of which passed in favor of new deadlines. The Forest Department has held several meetings in the reserve, instructing people to leave, and forestry officials have on two occasions selectively destroyed settler crops. As we were compiling this report, the department intensified the eviction drive.

Figure 3



The Forest Department estimates that as of mid-1987, 4,498 hectares of the forest reserve had been converted to crop production. This constitutes about 15 percent of the total area of the forest reserve. Encroachment is concentrated in the eastern area of the forest (see figure 3). In twelve forest compartments constituting a total area of 6,281 hectares (or about 20% of the total area of the reserve) at least 50 percent of the surface area has been converted to cultivation.

3.3.2 Population and Household Characteristics

In September, 1987, the Forest Department carried out a census of settlers and encroachers, which provides the basis for the following discussion of the characteristics of the general population.

Table 3.3 Census of Encroachers in Mabira Forest 24/9/87-2/10/87

District of Origin	1970/74	75/79	80/83	84/85	86/87	Total
Arua/Moyo	10	8	13	3	-	34
Bushenyi	-	2	-	1	-	3
Hoima	-	-	2	-	-	2
Iganga	5	151	466	29	20	671
Jinja	2	45	80	3	6	136
Kabale	2	8	27	5	2	44
Kabarole	-	2	2	-	-	4
Kampala	-	20	58	10	3	91
Kamuli	2	52	121	8	-	193
Lira	-	-	2	-	-	2
Luwero	2	31	82	6	4	125
Masaka	3	10	37	8	-	58
Masindi	-	1	1	-	-	2
Mbale	3	44	75	15	2	139
Mbarara	-	-	3	2	1	6
Mubende	-	6	16	6	2	30
Mukono	18	425	813	91	48	1395
Mpigi	-	24	67	8	7	106
Nebbi	-	2	-	-	-	2
Rakai	-	1	2	1	-	4
Rukungiri	-	2	4	-	-	6
Soroti	-	2	4	3	-	9
Tororo	5	66	153	6	4	234
Sub-total	52	902	2028	205	109	3296
BURUNDI	3	7	23	5	2	40
KENYA	-	-	-	-	2	2
RWANDA	2	13	21	9	3	48
SUDAN	3	2	12	1	-	18
TANZANIA	2	3	10	2	2	19
ZAIRE	11	22	27	17	6	83
Sub-total	21	47	93	34	15	210
GRAND TOTAL	73	949	2121	239	124	3506

The Forestry Department census enumerated 3506 families with permits either resident in the reserve or operating farms in the reserve but residing on the edge of the forest. 1,408 families, or 40 percent of the total, were within the latter category of non-resident encroachers in addition to resident farming

families, 3,804 farm workers were enumerated in the census. The total population of encroachers enumerated--adults plus dependents plus farm workers--was 24,168. According to the Forest Department census data, the average family size in the area was seven. Encroachers originated from 23 of the total 33 districts in Uganda. A total of 210 families came from six foreign countries: Burundi (40 families), Kenya (2), Rwanda (48), Sudan (18), Tanzania (19), and Zaire (83). Most encroachers (42%) were previously resident outside of the reserve in other parts of Mukono District. Of these, 24 percent originated from districts other than Mukono. Another 24 percent reported moving frequently within Mukono District, in search of employment. The second largest group of encroachers came from Iganga (20,4%), followed by Tororo (7,1%), Kamuli (5,9%), Mbale (4,2%), Jinja (4,1%), Luwero (3,8%), Mpigi (3,2%), and Kampala (2,8%).

Table 3.4 presents data on population and encroachment from the Forest Department census.

Table 3.4

Number of Encroachers, Area of Compartments, Area of Cultivation, and Percentage Cultivated with each Compartment in Mabira Forest

<u>Compartment</u>	<u>Area (ha)</u>	<u>Number of residents</u>	<u>Area of Cultivation</u>	<u>Percentage Cultivated</u>
181/183	760	340	578.15	76%
172	307	310	214.25	70%
171	601	293	336.30	56%
174	502	245	366.00	73%
185	661	259	278.90	42%
173	475	240	279.75	59%
180	439	230	301.00	69%
190	566	176	354.00	53%
235	488	174	223.95	46%
184	595	170	223.80	38%
196	431	169	259.25	60%
Nimmianyi/ Namananaga	456	116	271.50	60%
179	413	112	135.10	33%
189	332	91	75.10	23%
197	706	88	118.65	17%
191	431	67	79.50	18%
204	525	62	81.00	15%
175	371	62	76.00	20%
Kalagala Falls	104	59	70.00	19%
203	402	55	107.90	27%
178	649	29	31.25	5%
188	460	23	23.95	5%
176	325	3	2.00	
187	362	3	4.00	1%
177	453	2	0.50	
194	431	1	0.50	
198	391	1	2.00	
199	329	1	1.00	
202	635	1	0.60	
205	428	1	3.20	

=====
 Total: 14,028 ha. 3,383 4,499 ha. 32%

Source: Forest Department Census, 1987.

The LTC/MISR study team carried out a sample survey in Mabira forest during the periods 10-14th September and 19-27th October 1988. The same questionnaire used in the Kibale reserves

was applied in the Mabira reserve. Interviews were conducted in three villages: Kalangala and Namavundu villages in Konko parish, Wakisi sub-county, and Kyabana A village in Kyabana parish, Buikwe sub-county. All villages are within Buikwe county, Mukono district. Fifty-eight randomly selected households were interviewed.

Average family size in the sample population was 10. The largest household in the sample had 30 persons; the smallest had one. Like Kibale, on average one half of household members were 15 years of age or younger. About 74 percent of households were headed by men; a surprisingly large percentage of households, 25 percent, were headed by widows. The average age of household heads was 42. The youngest head interviewed was 25; the oldest was 70. About 58 percent of school age children were attending school.

Farmers in the forest have been served by the Kanani Mixed Farmers Cooperative, which was formed in Jinja in 1975. The cooperative organizes bulk purchase of inputs and transport for marketing. The cooperative has also acted as the principal organization through which farmers have appealed to government for relief from eviction.

3.3.3 Agriculture and Land Use

Ninety-six percent of respondents cited crop production as their principal source of cash income. Over 82 percent of households reported no secondary source of cash income, underscoring near complete reliance upon agricultural income

among the sample population.

Matoke is the principal cash crop in the area, with Jinja and Kampala the major marketing centers. Crops produced and marketed are presented in table 3.5 below.

Table 3.5 Crops Reported Produced in Mabira Forest Reserve, and Percentage Households Producing and Marketing Each Crop, 1988. (n=58)

Crop	% Producing	% Marketing
Beans	100,0	84,2
Matoke	89,5	87,7
Maize	80,7	70,2
Coffee	66,7	66,7
Soya	45,6	24,6
Groundnuts	40,4	11,0
Sweet potato	22,8	1,8
Irish potato	3,5	0,0
Sorghum	3,5	1,8
Millet	1,8	0,0
Tobacco	1,8	1,8

Source: LTC/MISR Sample Survey, Sept.-Oct. 1988.

In terms of investments in permanent crops and farm improvements, 93 percent of farmers had planted fruit trees (mainly papaya) and 96 percent reported planting other trees (mainly Maesopsis eminii, known locally as musizi, given to farmers to plant by the Forest Department). About 32 percent of farmers had planted windbreaks. Sixty percent of farmers mulched, a common practice with matoke, and 62 percent rotated crops. Thirty-two percent used pesticides.

About 61 percent of respondents reported holding only one field; 32 percent had two, and seven percent had three. The average size of reported fields was 2,32 hectares. However,

according to the census, the land area allocated to the encroachers is as shown in Table 3.6

Table 3.6 Land Allocated to Encroachers in Mabira Forest*

<u>Ha./Person</u>	<u>No. of persons</u>	<u>%</u>	<u>Total Ha.**</u>
0.5	621	18.43	310
1	1874	55.61	1874
1.5	200	5.93	300
2	399	11.84	798
3	144	4.27	342
4	78	2.31	234
5	9	0.27	45
6	10	0.30	60
7	8	0.24	56
8	6	0.18	48
9	1	0.03	9
10	8	0.24	80
11	3	0.09	33
14	1	0.03	14
15	2	0.06	30
16	2	0.06	32
17	2	0.06	34
24	1	0.03	24
25	1	0.03	25
	<u>3370</u>	<u>100</u>	<u>4348</u>

* Only those with areas indicated in their permits at the time of entry.

** The area may not be as at the time of the census.

The smallest holding was 0,5 ha. and the largest was 13 ha., although holdings of up to 30 ha. are known to exist in the reserve. Sixty-five percent of all holdings in the sample were between 1 and 3 hectares. The Forest Department census found that 92 percent of all holdings were 3 ha. or smaller. The conventional wisdom has been that farms in Mabira are large, and operated by "big men" resident in Kampala and Jinja. Although it is likely that some farms in fact fit that description, it is clear that most farms in the reserve are held by small farmers

without bases of income or employment outside of the reserve. However, the majority of such workers were under the control of the executive of Kanani Mixed Farmer's Cooperative Society.

Before settling in the reserve 75 percent of respondents claimed to have owned no land. Of those holding land, the average sized holding was 1,67 hectares, or about 72 percent of the average size of holdings in the forest reserve.

3.3.4 Causes of Settlement in Mabira Forest Reserve

Large-scale settlement began in Mabira forest in the mid-1970s, and very little new settlement has occurred since 1983. Forest Department census data show that 3,070 families, or 87 percent of the total, established farms in the forest between 1975 and 1983. Only 73 families (or 2% of the total) reported moving into the forest area before 1975.

What explains this pattern of intensive settlement between 1975 and 1983? In the mid-1970s, the Amin government promoted a policy of 'double production', particularly of export crops such as cotton. Farmers were encouraged by official government pronouncements to settle and farm 'unused' land. The collapse of industries in Kampala and Jinja, including coffee, tea and sugar estates in the region resulted in loss of employment. Unemployed persons found in cities were harassed by police and told to take up farming. Government was also promoting a 'freedom to settle anywhere' policy, and many people took this to mean they could settle in forest reserves. Several respondents to the LTC/MISR sample survey in Mabira, were asked how they first learned that

land was available for farming in Mabira, said they heard it through official government channels. A sample of farmer accounts are presented below.

"It was announced on the radio during Amin's time that those who do not have land and are able to buy land in Mabira should do so."

"The government at that time announced that those who have no jobs should go back to villages and dig. Many forested areas were henceforth opened for settlement."

"The government made an appeal that people should not loiter in towns, that they should look for land especially in forested areas like Mabira."

"Government announced that there was a mixed farmers society which was getting permits from the Forest Department for those who did not have land."

During this period, government actually degazetted two reserves, Echuya (300 ha.) and Bukaleba (4,000 ha.), and turned them over to the Ministries of Agriculture and Animal Production respectively, to be used for agricultural purposes.

The political abuses and instability of the Amin period led to a general reduction in the authority and effectiveness of the civil service, including the Forest Department. The ability of the Department to manage the forest resource was severely diminished during this period, due to lack of funds, lack of support for its policies, and low staff morale.

A strategy adopted by the Forest Department to attempt to cope with the rush of settlers in the forest was to issue permits to cultivate to farmers. Permits were issued in terms of the Forest Act regulations, which allow the Department to grant permission to farmers to cultivate or graze livestock in

a central [government] forest reserve" consistent with certain conditions set out in the permit. Permits are valid for five years. The department was hoping that the political situation would improve with the passage of time, and action to evict could be taken against those whose permits would eventually expire. According to Forest Department records, 917 farmers were issued with permits to farm in the reserve, mainly between 1975 and 1981. This represents about 25 percent of all farmers resident in the forest.

Documents secured from the records of the Kanani Mixed Farmers Cooperative illustrate the position adopted by the Forest Department in dealing with encroachment during this period. Two documents are quoted at length below.

1. From a letter to The Chairman, N.R.M. Headquarter, Kampala, from officers of the Kanani Mixed Farmers Co-op, Re: Notice of dismissal of illegal cultivators from Mabira Forest Reserve. 8th October, 1986.

"HOW WE CAME IN HERE

"The Government of Uganda in 1975 called upon landless persons to look for fertile land in which to settle and cultivate. It was the Government Policy.

"On the basis of that policy, we found the land at Kalagala [in the forest]. After that we approached the local chiefs of the district...and the District Commissioner Mukono. The District Commissioner and the Saza chief...together with the Senior Forest Guard...came and visited our area after which they approved us...

"However, later in 1976 the Chief Conservator of Forests informed us that our occupation in that area was illegal. We, therefore, wrote to him apologizing for staying on the land without permission and then applied for permission to let us reside, cultivate and graze livestock. In our application, we explained clearly that we were landless; have nowhere to go and

that he should allow us to stay permanently in the area.

"After our application, we made several representations to the Chief Forest Officer through our leaders and he also sent his officials to investigate the truth. On establishing the facts he granted us permission to reside, cultivate and graze livestock.

"According to the powers conferred on him by section 30 of the Forest Act Statutory Instrument 246-2 in the Second Schedule, he further allowed us to plant any crops we require but [we] have to look after the trees which are planted at wide spacings [so as] not to harm the crops in our plots...We were allocated 10 compartments from 1975 to 1981 and we were stopped from making further encroachments. Since 1981, we have not entered even an inch of the remaining forest.

"Each farmer is residing in his plot with his family with a house of his own choice, i.e. permanent or semi-permanent. The dead are buried in the plots."

2. The proceeding account of events is borne out by a letter, excerpted below, from the Principal Senior Forest Officer, Entebbe, to the Farmers Cooperative, dated 8th February, 1977.

"You have made several representations to me through your leaders pleading that you were misled by wrong information and that you came to the forest reserve in good faith and that most of you are now penniless having spent all your savings in developing the area. You further claim that you have nowhere to go.

"It is rather difficult to believe all your submissions but considering the fact that you have all been very cooperative in stopping all further destruction in the forest I have decided to give you the benefit of the doubt. I have at the same time noted that a few of the families near here are obviously living in straitened circumstances and might find it difficult to establish themselves in another place in the near future.

"Therefore under the powers conferred on me by Section 30 of the Forests Act, Statutory Instrument 246-2 in the Second Schedule, I am going to issue Permits to cultivate and reside in this forest reserve to those of you who have spent a great deal of your time and money in developing your encroachments.

"These permits will be renewable every five years and you will note in the conditions attached that you will

be free to plant any crops you require provided that you look after the trees we will be planting at wide spacings in your plots."

The LTC/MISR team also received reports that some forest guards demanded payment for permits, and that some Forest Department staff illegally "allocated" land within the reserve to settlers, also in exchange for payment.

3.4 Survey of Queen Elizabeth National Park

3.4.1 Background

Uganda has four national parks: Murchison Falls National Park, Queen Elizabeth National Park, Kidepo Valley National Park, and Lake Mburo National Park. A national park enjoys full protection over its plant and animal populations, geological formations, landscapes, soils, and all that contributes to its scenic beauty. Collection of plants, living or dead, is strictly prohibited, as well as hunting and mining activities that may disturb the ecological stability of the park. Thus gazetting an area as a national park confers maximum protection upon it.

Queen Elizabeth National Park

Queen Elizabeth National Park, gazetted in 1952, lies in southwestern Uganda, covering an 1,978 square kilometers. The western and northeastern borders of the park are formed by the shores of Lake Edward and Lake George respectively. Kazinga Channel, connecting the two lakes, flows through the heart of the park. Queen Elizabeth National Park is known for its diverse landscapes, encompassing open plains, forests, rivers,

swamps, and lakes. In the 1970s the park contained the highest biomass in the world, as well as the largest number of species per area in Africa (personal communication, Dr. Edroma, chief research officer, Uganda Institute of Ecology).

Within the boundaries of the park, there is continuing competition between man and animal for land. Several villages are located within the park, mainly devoted to fishing and salt-extraction. The majority of these villages existed prior to creation of the park, and were allowed to remain populated and functioning enclaves within the new park. The people in the villages have made repeated attempts to expand them, and to build additional villages.

There are eleven fishing villages of varying size in both area and population:

Rwenshama	4,000 people
Kahendero	3,000
Kashenyi	1,000
Kalinguri (Kabarole)	1,300
Kalunguri (Kasese)	479
Kayanja	500
Kazinga	673
Katwe	5,000
Kishenyi	346
Hamukunga	3,000
Mukungu	1,000

Total population	20,198

source: Communication from Dr. Edroma and R.C. officials.

When this area began to attract people remains unknown, but Ugandans from the entire country have been drawn to the villages, mainly due to the prosperity of the fishing and salt industries within the park. The population within each village is very

diverse, although the majority of people are originally from the surrounding districts. Recent increase in the populations of the villages has been due to natural increase, as opposed to immigration.

3.4.2 Community Organization

Chiefs have been appointed, and the R.C. system has been instituted in the villages, in order to maintain law and order, as well as provide social services. Schools, churches, and trading centers are present in each village, yet services remain poor. The relevant ministries staff their respective social service.

3.4.3 Economic Activities

Fishing is the most important economic activity in the majority of the villages. Most depend on fishing, for both subsistence and commercial purposes. Because fishing was an important industry in the area prior to it receiving national park status, the activity was permitted to continue, and has in fact grown.

Fishing, and the preparation and smoking of the fish, has exerted pressure on the forest resources of the park. Wood is needed for smoking and cooking of fish in order to preserve it prior to selling. In addition, wood is needed for common household use, such as for firewood, charcoal, and building poles. The cutting of trees has led to serious soil erosion in some parts of the park.

Salt mining is the main economic activity in Katwe, located on Lake Katwe. Salt has been mined from the lake for centuries, using traditional extraction technology. Salt is sold from the local market. Those engaged in salt-mining require trees to build the floats used for transport on the lake, leading to additional deforestation within the park.

The northern part of the park is underlain with some valuable minerals, including lime and gypsum. Although the quantities of each mineral present are not known, it is believed that these mineral deposits are vast, and could be mined for considerable profit.

3.4.4 Agricultural Practices

Small-scale, subsistence agriculture is practiced in all villages. Crops grown include groundnuts, potatoes, cassava, bananas, and a variety of vegetables. Most foodstuffs are imported from neighboring regions.

In and around each fishing village people keep cattle and goats, resulting in some areas in soil erosion due to overgrazing.

3.4.5 Social and Economic Causes of Encroachment

Encroachment in Queen Elizabeth National Park originates from within, as opposed to the other cases we have investigated, where encroachment has begun at the edges of the reserved land and worked inside. Use of park resources by those resident in the villages has increased as the size of the population grows.

The European Economic Community is currently carrying on a social survey of the population in the villages, exploring the possibility of combining some of the smaller villages, while providing services (schools and medical facilities for example) to the new villages. With the intention of improving the living conditions in the villages, the EEC hopes to discourage use of the parks resources by making the villages dependent on outside sources for wood and food.

3.5 Other Public Lands

3.5.1 The Existing Situation

The term public land is used here to refer to land parcels owned and managed by the various government ministries, departments and institutions as separate from the forest reserves, game reserves and national parks discussed in the preceding sections. It should be stated at the outset that accurate and up to date data on public lands does not exist either at the land registry or other government offices. Whatever is available leaves much to be desired. The reasons for this situation have been identified as follows:

3.5.2 Procedure

- i. A government institution applies for the land from the Ministry of Lands and Survey/Uganda Land Commission.
- ii. The parcel of land is granted to the applicant
- iii. The applicant provides funds for undertaking the survey. It has been found that where funds are lacking, no surveying is done and no accurate record is registered.

iv. Alternatively land is not necessarily registered in the names of the institution but entrusted with the Uganda Land Commission.

3.5.3 Change of Government Policy

It has been found that either change of government or policy may result in change of status of some public lands including being abandoned or unregistered. Therefore, both the identity and ownership of such lands may be lost to the authorities. A number of land parcels are not actually registered in the names of the concerned institution but the ownership is entrusted with the Land Commission. However, the institution continues to utilize the land without a title.

With that background, the scanty information obtained from accessible available records gave the data presented in Table 3.7
Table 3.7 Public Lands Belonging to Government Institutions.

<u>Institution/Purpose</u>	<u>Units</u>	<u>Total Area (Acres)*</u>
1. Ministry of Agriculture:-		
Farms/Research	16	12,160
Variety Trial Institutes	21	429
District Farm Institutes	22	5,622
Agricultural Colleges	3	2,000
2. Ministry of Animal Industry:-		
Existing Ranches	207	662,376
Proposed Ranches	235	673,114
(Private Ranches)	318	-
3. Ministry of cooperatives & Marketing:-		
Kigumba cooperative college	1	-

4. Ministry of Culture, Youth & Sports :-

NUYO Camps	31	58,716
Disabled Centres	2	-
Remand Homes	1	-
Youth Training Centre	1	100
Destitute Homes	1	7
Cultural Centres	2	-
Refugee Camps	11	250,240

5. Ministry of Defence:-

Barracks	N/A	N/A
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6. Ministry of Education:-

Schools, Farms, Houses	36	9,524
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7. Ministry of Internal Affairs:-

Prisons farms	42	83,210
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8. Ministry of Local Government

Farm/Ranch	1	1,255
Mining	1	247

9. President's Office:-

Farms	2	272
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10. Ministry of Urban Development:-

Housing Estates	4	789
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11. Ministry of Water and Minerals:-

Office/camps/survey projects	7	24
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Source: Files & Annual Reports of the respective Institutions.

* Only those with areas given.

3.5.4 Status

From the same reports, it was clear that apart from schools, colleges, refugee camps and few other units, large parts of the lands have not yet been developed or utilized. Some only exist

on paper and have not even been demarcated. Consequently, undetermined encroachment in some lands exists depending on the activities of the institutions concerned.

3.5.5 Conclusions

Despite the brief notes above, the following conclusions can be drawn.

- a) The Land Registry does not have accurate and up to date data on various categories of parcels of land earmarked or applied for various public projects.
- b) Land ownership by government institutions remains a responsibility of either the Uganda Land Commission or the institution itself.
- c) There is ineffective utilization of lands allocated to public institutions and this may therefore not justify the original size granted.

3.5.6 Recommendations

The following general recommendations can be made:

- a) Both the land registry office, ministries and departments should produce an up to date record of various categories of land and their associated uses as a matter of urgency.
 - i) This will greatly contribute towards the land capability studies also recommended in this report.
 - ii) Some of the underutilized lands could be used for other public projects since government will not have to pay for them.

b) There is an urgent need for the government to come out with a well defined land use, tenure, or ownership policy and law, that should be enforced strictly.

CHAPTER FOUR

A REVIEW OF RESETTLEMENT SCHEMES IN UGANDA4.1 Background

The study team has been asked to consider various issues which might arise in resettling persons resident currently in forest reserves, game reserves, and national parks elsewhere. The chapter considers past experience with government-sponsored resettlement schemes as a basis for assessing the potential role of resettlement in relieving population pressure on reserves and parks.

A resettlement scheme is a planned and controlled movement of people from one area to another. In Uganda the need for population resettlement has arisen from a number of related aspects of the country's economy:

(a) the existence of potentially rich agricultural land which lagged behind in development because of low population densities.

(b) the desire to prevent the incursion of the Tsetse fly which spreads bovine and sleeping sickness into new lands, and where it has been cleared, to prevent the flies resurgence.

(c) in areas of rural over-population, resettlement policy aims at reducing population pressure through force or persuasion to areas where development would be advantageous.

(d) in some parts of the country where plantations were established resettlement policy had a secondary aim to provide labor for the plantations and the increase in output through outgrowers schemes manned by the settlers.

(e) in recent years something akin to the post-World War II resettlement policy has come out of the need to resettle the people displaced by the civil wars in Uganda in the last ten years.

It should be pointed out that activities which only alter the pattern of land-use or extend the area of cultivation without causing a planned relocation in population falls outside the scope of the study of resettlement schemes. But when considering the problem of resettlement, consideration should also be given to spontaneous uncontrolled movement of people to find new homelands, which has been and still is the most common solution to the problems of population increase in densely settled area (Belshaw, 1968).

The study of resettlement schemes in Uganda is problematic. The first problem in this study has to do with the demarcation as far as the economic interrelationships of resettlement policy with other land-using activities especially agricultural and livestock production policies, and the claims of forestry and game to land.

Secondly, in Uganda, resettlement policy has been the concern of several decision-making bodies, including Agriculture,

Veterinary Services, Tsetse Control, and Water Development Departments, and the Ministry of Local Government. These bodies have influenced policies to varying degrees at different times. In more recent years some Non-Governmental Organizations like the United Nations High Commission for Refugees and the Red Cross have also been involved in resettlement programmes.

The third problem in studying resettlement arises out of the fact that there is little previous research and official documentation of resettlement schemes. Data which are available are often inconsistent. For instance, there is a conflict in the figures of the numbers of government assisted settlers and where they were resettled. Complications arise because some settlers, having been resettled, decide to return to their places of origin, or went elsewhere due to problems in the established schemes. Little study has also been made of the unassisted migrants who were 'not discouraged' by government in this process.

Likewise there is a problem of the resettled population, who, after realizing the difficulties in their new areas of occupancy, either allocated to themselves better land outside the scheme but retained their plots in the officially recognized schemes, or migrated totally to these 'empty' and less difficult areas.

To resolve these problems Belshaw divided the study of resettlement schemes in Uganda into three periods. The first was the period between 1945 and 1959, in which resettlement policy

was aimed at transforming the system of agricultural production and relieve the densely populated areas, especially south Kigezi (Kabale). The second period, 1955-1961, was aimed at increasing agricultural productivity and providing barriers to prevent the Tsetse re-infestation of areas cleared previously.

The failure of resettlement schemes to achieve their intended aims led to a re-examination and shift in emphasis of official policy towards these schemes after 1962 (Belshaw, p. 3-16).

4.2 The Tsetse fly and it's impact on resettlement schemes

A major biotic factor which led to the creation of under populated and unpopulated areas was the spread of Trypanosomiasis which started toward the end of the nineteenth century and continued up to the first quarter of this century (Kabera, 1982).

Trypanosomiasis is a tropical disease that affects man and his domestic animals but not wild game. Tsetse flies occupy various habitats ranging from tropical moist forest to wooded savanna and thickets, conditions prevalent in most parts of Uganda.

Outbreaks of Trypanosomiasis to cattle and sleeping sickness to man of epidemic proportions not only decimate people but also lead to large areas being abandoned to Tsetse. Various estimates of Tsetse victims have been made ranging from 200,000 (Cook, 1934) to 600,000 (Fiske, 1987). Up to as late as the mid-1950s replacement of population by a natural increase in the tsetse

infested areas was not forthcoming. Such areas included the dry Ankole-Masaka corridor, extensive parts of Toro, Bunyoro, Mubende, Busoga and north Mengo. Government had earlier on removed people from the areas affected badly. This encouraged a consolidation of the tsetse's hold and its further spreading; while areas which received the remaining population increased in density. At its maximum extent in the 1940s, about one third of Uganda was infested with tsetse flies (Kabera, 1983).

Since 1947 when the tsetse control division was established, about 40,000 square kilometers had been reclaimed, but by 1973 48,000 square kilometers still remain infested (Kangwagye, 1975). As the tsetse fly was the major hindrance to settlement in these areas, it implied that eradication of tsetse would encourage people seeking land for settlement to re-colonize and settle in the areas freed of the fly.

Between 1955 and 1961 a total of 6,000 persons from Kigezi (Kabale) were resettled in the consolidation areas or resettlement schemes established to prevent tsetse re-infestation in South Ankole. These schemes were at Rushozi and Bugamba in Rwampara County, and at Chezo and Oruchinga Valley in Isingiro County. A further 7,000 persons were resettled in northern Ankole consolidation zone of Kakinga, Nyansimbo, and Bigyera. In Toro 14,000 persons were resettled from Kigezi (Kabale) in the 1949-1961 tsetse eradication and resettlement period (Kabera, 1983). The resettlement schemes established in Toro as

consolidation barriers against tsetse flies were at Rigodi, Bisozi, Nsinde, and Nyaatonzi.

In 1956, a resettlement scheme was established at Kigumba in Bunyoro District, 20 miles northeast of Masindi along the main road to Gulu. In spite of the attempts by government to attract settlers into the area through poll-tax exemption offers, free rations and building materials, few nationals from Kigezi or the 'land-plenty' Bunyoro were willing to enter the scheme. However, by 1963, 119 migrants from the overpopulated Nyanza Province of Kenya had managed to settle in the area. But some of these left the scheme to settle in other areas of Bunyoro and by 1964 were making half of the number of settlers out of the scheme (Illingworth, 1964).

It would seem, therefore, that many of the settlers in these consolidation barriers or schemes, after losing the privileges offered by the state like tax-exemption, decided to abandon the schemes. This was due to the availability of better "free" land outside of the scheme. Also, the restrictions imposed by the scheme administration on, for example, the size of the lands each settler could possess or the limitation on cattle keeping were factors inducing the re-emigration of the settlers to other lands.

4.3 Resettlement in Kabale District: The Need to Reduce Land Pressure

Administration and agricultural officers stationed in Kigezi had detected the deterioration of land in the 1930s. In 1943-

1944 the drought in the area brought to light the urgency for action to reduce the problem of population pressure on land. A committee to find out possible areas that would accommodate surplus population from South Kigezi (Kabale) was set up in the Department of Agriculture in 1944 (Kabera, 1983).

By 1930, it was observed, per capita acreage in the four southern counties of the then Kigezi District was about four acres. By 1948 acreage per capita had dropped to about two acres and government had already started organizing resettlement schemes for the people from South Kigezi to North Kigezi where there was more open land (Kabera, 1983). Despite an increase of forty-six percent in the number of migrants during the period 1948-1959 whereby they reached 73,154, the acreage per head in the counties of Bufumbira, and Ndorwa, in South Kigezi had dropped to less than two acres.

Of these 73,154 migrants from southern Kigezi, 72,880 were living outside of Kigezi district and 42,905 (59%) were males. Most of these were living in western and southwestern Ankole especially in the resettlement areas of Bitereko and Kyamuhunga where a number were employed in the Igara Tea plantations.

Mutuba II (or Bitereko) sub-county alone registered 9,000 Bakiga settlers who at the time formed almost seventy-five percent of the total gombolola (sub-county) population. More resettlement of Bakiga was in Rwampara County (11,000 people) while 3,193 persons were settled in Isingiro (Illingworth, 1964).

Prior to these resettlement schemes in Ankole, 16,500 persons had been resettled from south Kigezi into north Kigezi focusing on Kihhi, Rwanga, Bugangari, and Bwambara. The low indigenous population in these areas was due to tsetse infestation, drier climate, and forest cover in some parts (Kabera, 1985).

Together with the aim of providing consolidation barriers, 12,000 persons from Kigezi were resettled in Toro and Bunyoro. But 3,000 more persons from other districts moved into these schemes, while 2,000 persons came from Kenya (Kabera, 1982). Each resettlement area was first surveyed and divided into blocks which were in turn divided into ten-acre strips of land. Each settler was allocated one strip of land. Settlers were directed to one block first, then the next one until all of the blocks were filled.

Apart from receiving land, settlers were provided with transport and timber for construction. Free food for six months and seed for planting were also provided. In addition, game guards were posted to the settlement to control game and provide meat. Other privileges included exemptions from poll-tax for two years. It is estimated that during the period 1946-1976 100,000 Ugandans were settled on organized resettlement schemes. The majority, about 80,000 persons, were from Kigezi (Kabera, 1983).

4.4 Problems of Resettlement Schemes

From what we have so far seen, it would seem that the plan of

resettling the surplus population from south Kigezi was a success. But in reality a number of problems were encountered and the overall strategy of reducing population pressure from south Kigezi seems to have eluded the planners. It seems even more people migrated out of south Kigezi voluntarily and without government assistance or resettlement programs, than those given state help.

This voluntary migration and the lack of close monitoring by the government of the settlers in the resettlement schemes have created new problems.

... there are indications that the means of securing land (by settlers) are in some cases contrary to government laws and policy. In certain cases even gazetted lands have been infiltrated long after the lands had been declared government reserves. The game reserve in Isingiro county, Ankole, has been infiltrated. The forest reserve of Kibale in Toro has over 1,000 infiltrators. The forest reserve on Mt. Elgon and gorilla sanctuary on volcanic mountains of Bufumbira in Kigezi have been infiltrated... (Kabera, 1983, p. 73).

However, encroachment on gazetted land in western Uganda cannot be blamed on the settlement schemes or the Bakiga migrants alone. In Igara, it has been observed that people from Nyabubaare, Kyamuhunga, and Biteroko sub-counties of western Ankole (Bushenyi) have encroached on eastern fringes of the Kalinzu Forest. Most of the illegal cultivators were not even in the forest proper but owned land adjacent to the reserve.

The high cost of running resettlement schemes intended to stop the spread of tsetse flies has forced government to close many of them. For example, the Valley Resettlement Scheme in

Bunyoro, which started in May 1959' as a continuation of a tsetse barrier, closed in May, 1961 (Illingworth, 1964).

The lack of proper infrastructure and social services discourages many from moving to government resettlement schemes. However, the costs of providing adequate land and infrastructure are often prohibitively high.

CHAPTER FIVE

SUMMARY AND RECOMMENDATIONS5.1 Introduction

Before setting out the specific recommendations of the study team, it will be useful to review the main findings of the field research.

Survey work in the Kibale Forest Reserve and the Kibale Game Reserve/Corridor found that 45,000 and 60,000 persons had settled within the reserves. The great majority of persons (42,000-57,000) are settled in the game reserve/corridor. Large-scale settlement began in the corridor in the late 1950s. Virtually all of the land in the corridor is claimed for agricultural purposes under customary tenure arrangements. The corridor ceased functioning as an avenue for the migration of large mammals between the Kibale forest reserve and Queen Elizabeth National Park many years ago. (Unfortunately, no current studies are available on elephant or other animal populations in the region of the Kibale forest.) Between 3,000 and 3,500 persons are resident in the forest reserve. Virtually all of the people settled in the game corridor and the forest reserve are Bakiga, and originated from Kigezi District (now Kabale). The principal reason for leaving the area was land shortage. Until the late-1970s, there had been little or no official resistance to settlement in the game corridor, bearing in mind that large-scale settlement began in the corridor in the late-1950s, or thirty years ago.

Settlement in the Mabira Forest Reserve is a much more recent phenomenon, beginning in the mid-1970s. Encroachment was due to a combination of factors, but principally government policies in the mid-1970s which encouraged settlement (the 'double production' and 'freedom to settle anywhere policies'). Like those settling in Kibale, most settlers in Mabira did not own land, or own sufficient land elsewhere to support their families. In Mabira, the great majority of farmers are small-scale producers, and not large-scale, urban based operators as is sometimes believed.

It is Government's policy to return these and other affected areas to their intended uses as forest reserves, game reserves and national parks. Implementation of this policy will require that those currently settled in the reserves be evicted. The study team agrees that, in most cases, extensive agricultural settlement is destructive of the important values reserves and parks were created to protect. In light of current Government policy, the Forest Department, and the Game and Park Departments, have historic opportunities to reestablish control over reserve and park areas. Eviction should proceed, especially in those areas where encroachment was principally the result of the breakdown of administrative control beginning in the mid-1970s. However, situations will arise where application of the present policy will, for a number of reasons, be inappropriate. The study team recommends that Government maintains flexibility in application of the policy so that appropriate action can be

taken where exceptional circumstances are present. Factors which may militate against eviction include one or more of the following.

(1) The area affected by encroachment may be highly suitable for agriculture, in comparison with forestry or wildlife and tourism uses.

(2) Large numbers of those subject to eviction may not be able to secure adequate land elsewhere.

(3) The likely social and other costs associated with eviction may exceed, to a significant degree, the likely benefits which will result from eviction.

Settlement in forest reserves and national parks has been the result of national imbalances in demands for agricultural land in relation to land availability. These pressures will continue to be factors after steps are taken to correct the settlement problems in the areas under study. Resolution of the problems causing population/land imbalances will reduce pressures on reserves and national parks, and will contribute to more efficient utilization of Uganda's land resources generally. The report offers recommendations for action to address these national resource management issues.

5.2 Recommendations for Kibale Forest Reserve and Game Reserve/Corridor

1. Kibale Game Reserve/Corridor. The study team has serious reservations about eviction of settlers from the Kibale game reserve/corridor.

- a. The corridor has been extensively settled for over 30 years. Settlement predates recent political disruptions which contributed to encroachment in forest reserves elsewhere in the country. The Ministry of Tourism and Wildlife has only recently demonstrated interest in establishing control over the corridor, despite the long history of settlement in the area.
- b. The corridor is particularly well-suited for agriculture. Soils are high quality. The terrain is relatively undulating and is not highly susceptible to erosion. Given the general unavailability of good cultivable land in the region, it is likely that many of those displaced would reestablish themselves in areas of lower productivity or more vulnerable to degradation, such as the Rwenzori mountains.
- c. The area has not functioned as a game corridor for many years, probably not since the early 1960s. Elephants have adjusted their migration patterns accordingly. The utility of the corridor to maintenance of current levels of wildlife is not at issue.

If eviction from the game corridor were to proceed, it will be essential that suitable alternative land be identified for those evicted. It has been well-established that settlers in the corridor originate from Kabale, and that returning to land at home is not an option. Large areas of land would be required to accommodate the evicted population. Currently, settlement

encompasses nearly all of the area of the game corridor, 340 square kilometers.

2. With respect to the Kibale Forest Reserve, all persons resident in the forest reserve and/or farming there should be required to vacate their houses and fields and leave the forest. The forest reserve boundary should be surveyed and clearly demarcated.

The recommendations regarding Kibale Forest Reserve are based upon the following considerations.

- a. The scale of settlement in the forest is still relatively small (the LTC/MISR survey estimates that only 3,000 to 3,500 persons reside in the forest reserve). Action taken now, before the settled population becomes significantly larger, could ensure that those limited areas of the reserve affected by encroachment could be returned to forest cover at reasonable cost.
- b. Encroachment in the forest reserve is fairly recent. Settlers had been aware that encroachment was illegal. This is indicated by the temporary nature of housing in the forest reserve, especially in relation to that found in the game reserve/corridor.
- c. There is land available within the game reserve/corridor area to accommodate those evicted from the forest reserve. Resettlement would be carried out at no cost to the government, and at a minimal cost to those directly affected. Local land within the game reserve/corridor

indicated to the LTC/MISR survey team their willingness to find land in the corridor area for persons evicted from the forest reserve.

d. Maintenance of the forest reserve will result in long-term ecological benefits to the whole country such as provision of forest products on sustained basis, serve as habitat for wildlife and play a vital role in the hydrological cycle generating rainfall and overall environmental protection.

5.3 Recommendations for Mabira Forest Reserve

With respect to the Mabira Forest Reserve, the study team makes the following recommendations.

1. Consistent with current government policy, persons resident in the Mabira Forest Reserve should be required to move out of the reserve. The Mabira forest is an important national asset, and if managed properly can yield significant economic and ecologic benefits for the nation.
2. The study team believes that past governments and Forest Department administrations were directly responsible for encroachment in the forest reserve. Most of those who settled there were without land in their areas of origin. Many in Mabira are now able to support themselves at levels that will not be attainable once evicted. In light of these factors, the study team believes that the following steps should be taken in conjunction with eviction proceedings.

i. Government should identify areas of possible resettlement. This should be the principal responsibility of the Ministry of Local Administration. Persons evicted from Mabira should be eligible for resettlement in established government resettlement schemes, such as those at Kagadi in Hoima District and Kigumba in Masindi District. However, the study team feels that government should be under no obligation to permit people to remain in the forest until such time as they make satisfactory arrangements outside the reserve. Rather, government should be obliged to make a good faith effort to inform encroachers of opportunities elsewhere.

ii. Government should continue to rely on persuasion and indirect pressures to encourage encroachers to leave the forest reserve. There is evidence that many people were leaving the reserve as remaining crops are harvested. The rehabilitation of local tea estates will draw many residents into employment outside of the reserve.

iii. Government should explain to those facing eviction the reasons behind changes in government policy.

3. The Forest Department should begin replanting operations in the areas affected by encroachment, immediately upon abandonment of sufficient areas of encroached land. The Forest Department should be seen by the public to be actively rehabilitating Mabira forest. Steps should be taken to clearly demarcate the boundaries of Mabira forest reserve.

5.4 General Recommendations on Resettlement

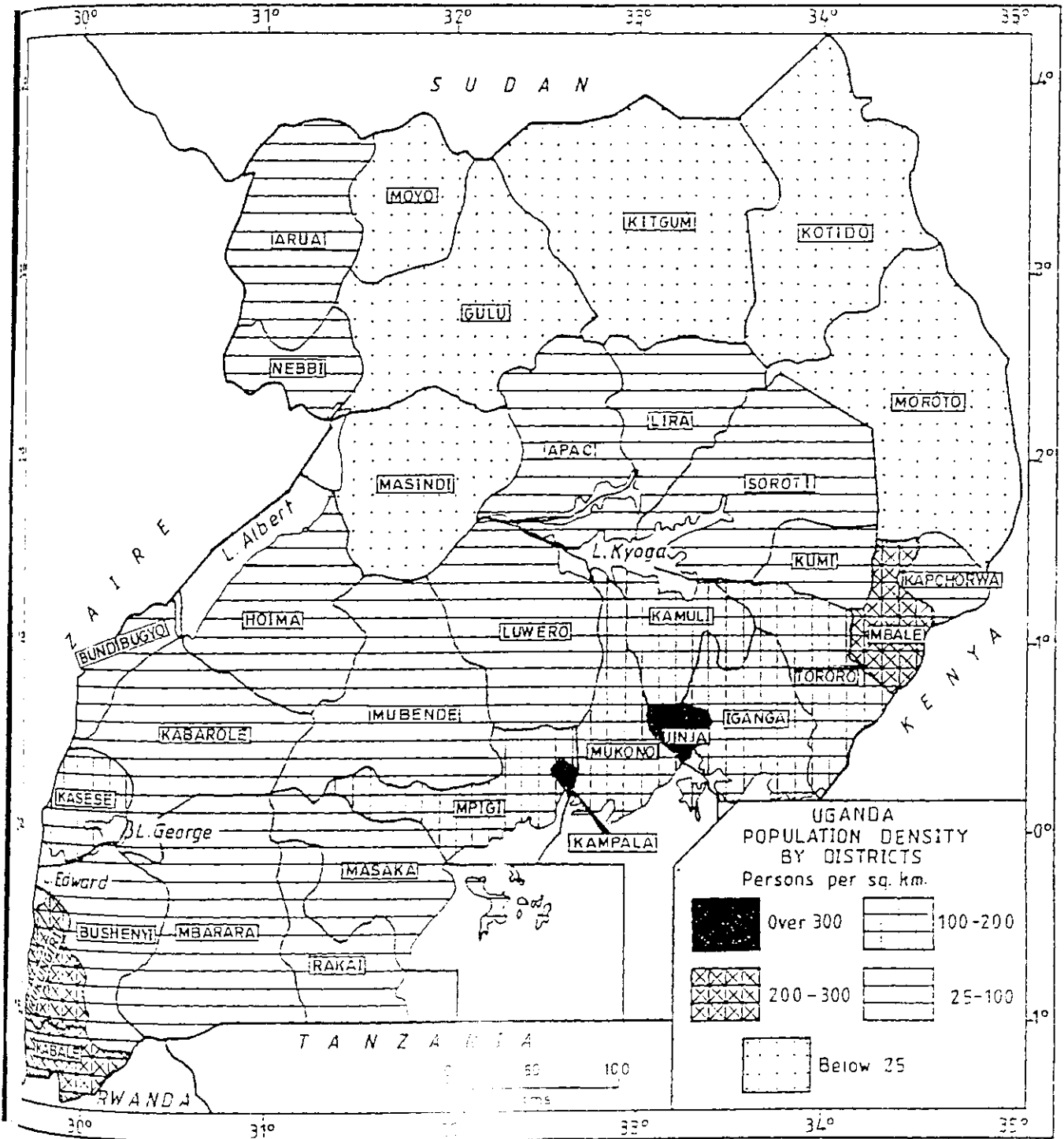
The team does not at this time recommend government to implement a special program to resettle persons living in reserves elsewhere. In the case of Mabira reserve, we recommended above that persons settled in Mabira be eligible to participate in resettlement schemes elsewhere in the country, which may have been established for other purposes. Although the team recognizes that a government resettlement program may accelerate the process of forest rehabilitation, there are several factors which militate against embarking on a resettlement program at this time. These include: (1) high costs of resettlement, particularly for infrastructure development; (2) more urgent resettlement needs of persons displaced by civil strife; (3) failure of past resettlement schemes to meet their intended goals.

Where those subject to eviction clearly lack alternative land elsewhere, as is the case with the majority of settlers in the Kibale Game Corridor, Government should undertake to identify suitable land elsewhere, and provide the minimum infrastructure necessary to ensure access and protect the public's health and safety.

5.5 General Conclusions on Existing Legislation Governing Forest Reserves, Game Reserves and National Parks

A review of existing legislation is provided in Appendix II. It is the team's conclusion that existing legislation is adequate to regulate settlement and land use in reserves and parks. The Forest Act (chapter 241) and the Wildlife Act relating to forest control

Figure 4



and administration. The Act is sufficiently flexible to accommodate controlled settlement and agricultural land use in reserves when this is technically advisable, through issuance of permits.

5.6 Addressing Basic Causes of Resource Degradation

The study team believes that problems of encroachment in reserves and national parks are symptomatic of more fundamental problems affecting land use and resource management in Uganda. The team would like to raise two of these issues for discussion at the National Workshop on Land Tenure, Conservation and Resource Management, to be held in Jinja on the 18th and 19th of May, 1989.

5.6.1 National Imbalances Between Land Use and Land Capability

The conventional wisdom one often hears stated in Kampala is "there is plenty of land in Uganda". As a generalization, it may be true that there exists sufficient cultivable land to provide an adequate living for all those seeking a livelihood in farming. But we know by the very fact that thousands of farmers have sought land in reserves and parks--areas in which settlement is illegal--that obstacles stand in the way of a balanced distribution of population in relation to agricultural land. Data show large differences among districts in population density, controlling for land quality. (Figure 4 illustrates wide variation in population density among regions.) There is significant anecdotal evidence that large areas of land, held under mailo and leasehold, are not being farmed at all.

In other words, there appear to be significant national imbalances between land capability and land utilization. Extensive areas of land suitable for agriculture are not being used for productive purposes. Other areas less suitable for agriculture and susceptible to degradation, including forest reserves, parks, swamplands, and other fragile areas, are under severe pressure from cultivation. The result is that agriculture is not making as great a contribution to national wealth, and to the generation of income and employment, that it is capable of making.

Constraints are principally institutional and economic in character. Certain tenure arrangements and rules may not provide sufficient inducements or economic incentives for optimum utilization. Large holdings may be under-utilized because of diseconomies of scale. Customary tenures, based upon group or ethnic rights, may limit the ability of persons coming from areas of land shortage to move to areas of land surplus. Land markets may not function efficiently, or where not sanctioned by law, as in customary areas, may not function openly. There are a variety of policy options available to help correct these problems, including tenure reforms, development requirements in leases, and land taxation. Each of these have their own potential costs and benefits. Many, but not all, of these issues are being addressed in the LTC/MISR study on land tenure.

The study team proposes that policy research be carried out to identify institutional, economic and other constraints to the

more efficient utilization of land resources in Uganda.

The study might consist of the following components.

1. A national land use survey, which relates land capability to current land use. The survey would identify areas where land is being used below its potential, areas where because of population pressure and inappropriate husbandry practices problems of land degradation are evident, and areas where land is being used optimally. To the extent possible, this aspect of the research program would rely on data available from existing sources. For example, the 1989 Agricultural Census will probably provide sufficient data on land use, population density and cropping patterns by district. Use would also be made of aerial survey and other data currently being compiled by other projects. However, some additional data collection would be necessary.
2. The study would identify the social, economic and tenurial factors affecting population distribution and land use in Uganda. It would identify constraints to the mobility of population in relation to land suitable for agriculture, including market constraints and tenure constraints. The study would consider the feasibility of alternative policy interventions for alleviating land use problems.

5.7 Increasing the Social Benefits of Reserves and National Parks

Uganda's total dry land area more or less suitable for agriculture--crop production, forestry and grazing--is 197,000 square kilometers, of which 31,000 sq. km, or 16 percent, is gazetted as forest reserves, game reserves, or national parks.

After its people, land is Uganda's most important economic asset. Those responsible for the management of Uganda's reserves and parks are aware that, in a nation with a rapidly growing rural population, these areas must make a significant contribution to national income and wealth.

Between 45,000 and 60,000 people are supporting themselves through intensive crop production in the Kibale game reserve/corridor. Could the corridor provide comparable levels of wealth if utilized as it was intended, as a game reserve devoid of human population? Similarly, 24,000 people are supporting themselves through crop production on 15 percent of the area of the Mabira forest reserve. When that area is returned to forest, will it make a comparable contribution to national income? In theory, the answer in both cases could be 'yes'. In the past, tourism based on national parks and game reserves made a significant contribution to gross national product. Efficiently managed forests can produce high levels of commercial timber output, as well as provide important benefits to the watershed and to 'downstream' agricultural systems. However, it is doubtful that today reserves and parks are in fact making a significant contribution to national wealth, comparable to the wealth that could be realized through alternative, mainly agricultural uses.

The study team is not arguing that reserves and parks be degazetted and turned over to agricultural uses. Potentially, these areas have important biological, economic and cultural

<u>Moyo</u>		mostly savanna woodlands
Zoka	6,089	productive - intact
Otzi	19,182	
Era	7,389	encroached 400 ha. to
Others	1,872	individual
	<hr/>	
	34,532	
<hr/>		
<u>Moroto-Kotido</u>		Savanna woodlands suffering
Moroto	48,210	from fires and some
Napak	20,316	encroachment
Kadam	39,917	encroached
Otukei	824	
Alerek	7,433	
Akuru	6,434	
Kano	8,293	
Aling	1,318	
Morongole	15,063	
Lopeichubei	1,090	
Nangolibwel	20,210	
Nyongera-Napere	27,677	
Lotimputa	1,958	
Timu	11,751	
Lwala	5,884	
Zulia	102,892	part of Kidepo National Park
Napono	1,709	
Others	801	
	<hr/>	
	321,780	
<hr/>		
<u>Meigi</u>		Productive forests with many
Buvuma	1,096	heavily cut especially by
Gangu	1,054	pit sawyers
Katabalalu	1,225	
Lwamunda	4,696	
Navugulu	2,714	
Nawandigi	3,766	
Mugoma	725	
Kalombi	3,836	
Nsowe	5,097	
Others	12,714	
	<hr/>	
	36,923	
<hr/>		
Sese Islands	17,173	Productive forests
<hr/>		

<u>Tororo</u>		
West Bugwe	3,054	almost depleted
<u>Mukono</u>		
Namugoya	389	Productive forests
Bajo	3,373	encroached
Kiula	2,142	
Wamale	1,950	encroached
Kifu	1,419	encroached
Nakolonga	1,598	
Nakiya	673	
Zirimiti	935	
Nationko	1,435	
Namatiwa	1,611	
Mabira	29,964	heavily encroached 10,000 ha.
Others	13,102	
	<u>59,591</u>	
<u>Mubende</u>		
Bwezigolo-Gunya	5,263	Heavily wooded savanna forests
Goyera	992	heavily encroached and settled
Kibando	1,474	
Kinangulo	2,642	
Kasa	1,121	
Kasana-Kasambya	5,141	
Kesolo	3,244	
Kaweri	1,235	
Kisombya	2,946	
Kyampiri	1,258	
Luwunga	9,718	
Mpinve	1,810	heavily encroached and settled
Nfua-Magobwa	1,619	
Namwasa	8,104	
Tola	9,150	heavily encroached and settled
Others	6,456	
	<u>62,173</u>	
<u>Iganga-Kamuli-Jinja</u>		
Bukaleba	4,686	Productive forests
South Busoga	16,382	heavily cut and encroached
Irimbi	1,090	heavily encroached 8000 ha.
Namavundu	704	heavily encroached
Iziru	613	
Ngereka	1,240	heavily encroached
Others	1,170	Walulumbu and Nile encroached
	<u>25,890</u>	
Grand Total	1,488,000	ha.

Source: United Nations Environment Programme, Forests, Vol. III, 88

Appendix IV

Kibale Forest Reserve and Game Corridor
Population and Social Services (September, 1988)

<u>Parish --></u>	<u>Mpocya</u>	<u>Dura</u>	<u>Rurama</u>	<u>Kyembogo</u>
tax payers	1109	808	701	1030
wives	2011	1613	940	1815
widows	87	76	105	90
children:				
primary school	523	565	---	362
sub-grade	4623	3592	2041	3092
secondary sch.	5	1	2	8
other children	6667	4852	4422	6170
non-tax paying adults	44	26	19	36
TOTALS	15,069	11,533	8,230	12,603

primary schools	2	2	---	1
sub-grade schools	3	2	1	1
Catholic churches	3	2	2	3
C.O.U. churches	5	3	1	2
Mosques	1	1	---	---
7th Day Adventist	1	---	1	---
Health Clinics	1	---	---	---
FMB/Stock mkts.	1	---	---	1

<u>Parish --></u>	<u>Kanyabutagyi</u>	<u>Kyabandura</u>	<u>TOTALS</u>
tax payers	1013	889	5,550
wives	2031	1801	10,211
widows	92	80	530
children:			
primary school	300	292	2,042 5+ year
sub-grade	1,541	3,613	18,502 3-4 yr.
secondary sch.	3	2	21 13+ yr.
other children	5,994	5,872	33,977 1-3 yr.
non-tax paying adults	25	40	190 60+yr.
TOTALS	10,999	12,589	71,023

primary schools	1	2	8
sub-grade schools	2	3	12
Catholic churches	2	3	15
C.O.U. churches	2	4	17
Mosques	1	1	4
7th Day Adventist	1	1	4
Health Clinics	---	---	1
FMB/Stock mkts.	---	1	3

Source: Resistance, 1988 Chairman-Mpocya

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