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RESERVE

SOCIAL AND ECONOMIC IMPACTS OF LAND REFORM IN MBEERE

By

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By

Nyaga Mwaniki

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ABSTRACT.

In this paper I look, first, in general at the tenure reform programme and its social and economic effects in Mbeere, and then pay particular attention to the increasing shift in emphasis from the agro-pastoral production system to crop cultivation and the changes in household organization. Thus the central theme of the paper is to discuss the dynamic process of Mbeere social/economic change in terms of a shift of equilibrium in production system following the change of the tenure system.

The paper also raises some questions relating to the implications of these changes on the development process in Mbeere.

SOCIAL AND ECONOMIC IMPACTS OF LAND REFORM IN MBEERE

The Study Area.

Mbeere, the area in which this study of the Social and economic effects of land reform was carried out is a semi-arid area located on the lower slopes and plains of the south side of Mt. Kenya. This whole area occupied by Mbeere people was, until recently known administratively as Mbeere Division but it has now been split into two separate Divisions, namely Siakago and Gachoka (See Map 1). In this paper I will, for the sake of convenience, adopt the more common name "Mbeere" to refer to the whole area and "the Mbeere" to refer to the people inhabiting the area.

Mbeere can conveniently be divided into two broad ecological zones. The zone lying above 1200 metres having an annual average rainfall of about 500 mm (20 inches) and fairly fertile to less fertile sandy soils. This zone, usually described as "middle potential" is good for cotton and some parts of it are good for tobacco. The second zone lies below 1200 metres and has an average annual rainfall of 300 mm (12 inches). Soils are less fertile and rocky in many parts thus making cultivation a very tedious job. This zone, commonly referred to as "low potential" is very suitable for ranching. Bulrush millet, finger millet, sorghum (the exotic and native types), cotton, cow peas, pigeon peas, green grams and maize (mainly Katumani) are common in both zones. While beans, bananas and tobacco are found mainly in the middle potential zone. The two ecological zones are shown on Map 2.

The Mbeere, who constitute a culturally homogeneous society, therefore, also can conveniently be divided into two regional groups, the Mbeere of the Upper Region (Middle potential zone) and those of the Lower Region (Low potential zone). The people of the Upper Region live in a land which is favourable for the production of crops, and although some cattle and small ruminants (Sheep and goats) are raised people make their living primarily through cultivation of crops. The people in the Lower Region live in a land which is very favourable for the raising of cattle, sheep and goats, but less suitable for agriculture since the average annual rainfall is very low.

This, although the entire Mbeere is categorised as a semi-arid area the lower part of it is obviously more arid than the upper part and this is manifested not only in erratic, low and unevenly distributed rainfall as described above, but also in more frequent periodic droughts and famines. This partly explains the differences in population densities between the two regions. In the Upper Region population density is higher, about 100/km<sup>2</sup>, compared to the sparse population distribution of roughly 30/km<sup>2</sup> in the Lower Region (Brokensha and Glazier, 1973: 203). These densities have since gone up because since the 1969 population census on which the calculation of these densities was based the population in Mbeere has increased by 35% as indicated by the 1979 population census figures.

The people of Mbeere are agro-pastoralists, that is, they practice crop cultivation as well as raising livestock, the most important animals being cattle and goats. Traditionally people of Mbeere have attempted to maintain the balance between crop cultivation and livestock raising because both activities were regarded as equally important and complementary under the harsh semi-arid conditions of their area. Thus the two activities were completely integrated to constitute one rather than two different production systems.

Originally the study was to be confined to the more arid lower Region but plans were adjusted to include the Upper Region as well. The change was prompted mainly by one reason; that is, the need for a comparative study of the two regions which, I was convinced, would best illustrate the impact of land reform in Mbeere. Thus the attempt in this research is to show the social/economic effects of land reform by means of a comparative study of the two regions of Mbeere both of which are inhabited by a culturally homogeneous society but who, because of the climatic, environmental and population density differences between the two regions, are likely to respond and to adjust differently to the new land tenure system.

Mbeere and the National Development Policies

Like other people in arid and semi-arid areas of Kenya, Mbeere people are still lagging behind in economic development and to a certain extent in social change. Development policies for the arid and semi-arid areas vis-a-vis those for the high potential agricultural areas have been marked by a lack of strong commitment and consistency. This bias has meant that high rainfall agricultural regions have received more attention in terms of resource allocation; i.e., capital, technology, trained manpower as well as research priorities.

This development bias is understandable given the fact that the agricultural sector is the mainstay of Kenya's economy. Since development has always been equated with increases in output, more capital and technical assistance have been channelled to the high potential areas which promise the highest economic returns and less resource allocation to the low potential areas which are considered to have very low economic returns. It is from the point of view of this economic rationale that the development policies in Kenya appear to lay more emphasis on the development of high potential areas and less on the low potential marginal areas.

The result of this development bias has been that the social/economic conditions of the pastoral and agro-pastoral people living in the marginal areas have stagnated. However, while the primary objective of the Government remains that of attaining a rapid economic development in order to assure higher living standard for all Kenya citizens, special attention to marginal areas, by stepping up resource allocation for development, is in order.

It is only recently that the Kenya Government has sought to correct this development bias, as stipulated in the 1979/83 Development Plan (Republic of Kenya, 1979) by putting more emphasis on the development of marginal areas. The recognition of these areas stems from the realisation of their contribution to the national economy, mainly in form of livestock products (See Senga 1976: 104) and their economic potential

following the decrease of arable land in high potential areas because of rising population densities. "As population grows", points out Von Kaufmann (1976:255) "the low rainfall areas may become major producers of non-fish animal protein because livestock in high rainfall areas will be facing direct competition from crops".

The choice of Mbeere by the Special Rural Development Programme (S.R.D.P.) for development experiments which, if successful, would be replicated in regions with similar semi-arid conditions (I.D.S. 1975), was clearly an effort to correct the development bias in marginal lands. The S.R.D.P. was, in the time it existed, able to initiate some very important development projects in Mbeere, for example, the construction of cattle dips (although many of them are still unfinished and others don't function), water projects, and the construction of roads which have opened up areas otherwise inaccessible previously.

The programme also encouraged the cultivation of foodcrops, e.g. Katurari maize and Mexican 42 beans, using modern agricultural methods such as use of organic manure or chemical fertilizers, crop rotation, early planting and weeding, and planting in rows. Besides food crops, the cultivation of cash crops, i.e. tobacco and cotton, was also encouraged. These two cash crops have, so far, not been extensively adopted because of their heavy demand on labour and capital inputs, and low market price in the case of cotton.

In order to facilitate the agricultural transformation in Mbeere, which was necessary in order to achieve a higher agricultural output and a rise in income, it was deemed necessary to individualise the traditional tenure system. This was in strict adherence to the arguments contained in the Swynnerton Plan (1954) and later adopted by the Kenya Government, as clearly emphasized in the 1970/74 Development Plan (Republic of Kenya, 1969:210), that the individualisation of the tenure system is a prerequisite for agricultural development in Kenya. Thus, being viewed as such, land reform based on individual title has continued as an important strategy for rural development, and it is on the basis on this point of view that the strategy was extended to Mbeere.

The Socio-economic effects of land reform in Mbeere cannot be understood clearly without looking first at the traditional system of land ownership among the Mbeere and the institutions associated with or founded on land control. This is important also in that it provides the basis against which the philosophical (ideological) rationalization behind the individuation of the land tenure system can be discussed.

#### The Social Structure and the Traditional Tenure System

Mbeere society is divided into two moieties; viz; Thagana and Irumbi ( or Ndamata). Thagana moiety is the most popular with about eighteen clans while Irumbi moiety has about twelve clans. Each of these clans is subdivided into various sub-clans, and these are further subdivided into numerous lineages. Intermarrying is allowed between the doietis and between clans of the same moiety, but not within clans in both moieties. Clan exogamy was the rule in all clans. However, the Mbeere do not have an exogamous arrangement resembling anything like the "Wife-giver, Wife-taker" system.

Mbeere society was an egalitarian society, that is, they did not have a hierarchical social structure. But this does not mean that there were no inequalities in property ownership. There were individuals with big lands but were not land-lords. There were individuals with little or no land but they did not lack a place to cultivate and were not serfs either. There were individuals with large livestock herds and by the standards of their time these were wealthy people, but this wealth eventually found its way to the poor individuals by way of bridewealth payments. Mbeere people talk of livestock as "wealth in circulation", and specifically say that "livestock do not belong to one person, but food crops do". Livestock were the only most important form of property people had and which they used as a measure of wealth and source of prestige.

Mbeere clans are not localised or territorial units. They are scattered all over Mbeere in form of sub-clans (which also bear the name of major clan, e.g. if the major clan is known as Mbuya, its sub-clans are also called Mbuya). In vernacular the major clan and sub-clans are known by the same



name, *muviriga* (pl. *miviriga*). Each sub-clan, as was pointed out earlier, is further subdivided into lineages (*nyomba*). It was the lineage rather than the clan or sub-clan which was the most important land owning unit. So when an individual in Mbeere talks of some land owned by, say, Mbuya clan, what he actually means is that that particular land is owned by members of a Mbuya sub-clan but who belong to different lineages. Each lineage thus controls a separate portion of that land. It was this lineage controlled land that was divided among lineage members during the land tenure reform programme.

The sub - clans constituting a clan were loosely knit and, to a large extent, independent of each other in almost all the aspects of social and economic life. Thus contrary to the common say clan solidarity did not practically exist in Mbeere. Co - operation, particularly with respect to land control and protection, existed only within the lineage. This co-operation was clearly demonstrated during the land reform process whereby lineage members formerly organized themselves (having a Chairman, Secretary, Treasurer and Committee members) mainly for the purpose of collecting funds for expending on land litigations and for the purpose of planning strategies for acquiring more land.

The Mbeere had two very distinct land ownership systems known in Kimbeere as *ruuno* and *nguro*. *Ruuno* was the lineage land commonly referred to as "Communal Land". *Ruuno* land was the land founded by the lineage ancestor (mythical) and passed on to his generations. It was founded by claiming an area that had not been settled before, and to legitimise the claim, the founder had to mark the boundaries, settle and cultivate on that land.

*Nguro* land, on the other hand, means land that has been acquired through purchase. In other words, *nguro* land was land bought and owned by an individual. Thus there was individual land ownership system as well as the communal land ownership system. However some *nguro* land eventually became lineage (or communal) land through being occupied for generations by the descendants of the lineage founder who had bought the land. But even at the time of the implementation of the land reform programme, the two tenure systems existed distinctly side by side. Contrary to the impression which one gets from the literature that has-

been written on land reform in Mbeere, the individual ownership of land is not a new thing among the Mbeere. What is new is the individuation of the lineage or communally held lands and the legal structure relating to land ownership. Under the new legal structure a piece of land has to be registered and a title deed issued to the rightful owner of that land, property rights are also clearly specified.

The selling and buying of land is also not a new practice among the Mbeere. The practice had been there for a long time. Land was bought by individuals either from a lineage or from other individuals who also had either bought enough land or had inherited a lot of land from their fathers. Land was bought mainly with goats, goat skins, iron axes and knives, and occasionally young females were exchanged for land if a family was extremely poor. Land sales were absolute and not redeemable.

Every male member of a lineage, whether he had his own individual land had the right to utilize the lineage land and also had the right of ownership to that lineage land. But no individual had the right to sell lineage land or part of it. Sale of lineage land was the responsibility of lineage leaders or elders. Women did not traditionally own land (just as they did not own livestock because "one kind of property cannot own another"), but they had the usufructuary rights over the use of their husbands' land and the land belonging to their husbands' lineages.

The main reason for denying women the right to own land, I was told, was in order to avoid the disputes which would arise as a result of transfers of land from the woman's consanguineal lineage to her affinal lineage, and also as a result of retransfers of land in case the woman was divorced. There is a general argument among the Mbeere that women do not permanently belong to any lineage or clan. An unmarried (single) woman belongs to her father's lineage while a married one is a member of the husband's lineage. If she is divorced she goes back to her father's lineage. It was largely on the basis of this social mobility of women, so it appears, that they were denied the right to own land and only given the temporary usufructuary rights.

The system of land inheritance was such that only the male children, as would be expected in a society where women do not have -

land ownership rights, inherited land from their father if he had owned an individual land which he had bought or had also inherited from his father or grandfather. The Mbeere inheritance system emphasized equality rather than favouring either the first born son (primogeniture) as is the case in many societies. Land, if possible, was distributed equally among all sons and if it was not enough the father would try to buy for those who did not get a share. Lineage land was heritable only in the sense that it was left by one generation to the next generation.

At this point the most important question to ask is; why was the Mbeere traditional system of land tenure to be reformed, or in other words, what was the philosophical (ideological) rationalization behind the land reform programme in Mbeere? To fully understand this it entails that the tenure reform programme be placed in its historical perspective by looking first at the origins of tenure reform in Kenya and then the adoption by the Post - colonial government of a plan to carry out land reform programmes in various parts of Kenya.

#### Land Reform in Kenya.

The origins of tenure reform in Kenya go back to the time of the establishment of the colonial economy following the European settlement and the alienation of much of the land "suitable for European settlement" from African societies. It was the establishment of a colonial economy and the demands it placed upon African society that, according to Okoth Ogendo (1976:154). "were to prove an important element in the dislocation of tenure arrangements and the deterioration of land use in the African areas of Kenya".

Although the effects of European settlement were felt more by those societies from whom land had been alienated, the effects of this alienation later started spilling over to the adjacent areas. Alienation of land was followed by the establishment of African reserves in 1915 (Sorrenson 1968) which were obviously not enough for settlement, farming and grazing by African populations.

The continued population growth (of both people and livestock) in the reserves without any room for expansion, and the continued neglect of the development of African agriculture (until after the World War II) resulted in the deterioration of land use, fragmentation, over stocking, soil exhaustion and erosion, low crop yields and diminishing livestock herds, low income, frequent famines and increasing discontent among Africans. Land use and soil erosion were so bad in Mbeere Division that Maher (1938) recommended the removal of the entire Mbeere population from the area and to be settled elsewhere to allow the area vegetation and soil to recover.

In addition to these consequences there was "the rapid disintegration of those aspects of social and cultural institutions relating to land use control that could be mobilized to cure the general malaise and, ----- the increasing outmigration by those who could no longer find enough land to subsist on" (Okoth - Ogendo, *ibid.* p. 157).

Confronted by these problems, the Colonial Government seemed set to respond to "improve" the African reserves at least to avert any major political crisis that could destroy the established settler economy (but this didn't stop the outbreak of the Mau Mau rebellion). Some of the measures taken to preserve and recondition African lands included settlement schemes, irrigation schemes, farm terracing and destocking. These measures were followed by the famous Swynnerton Plan (Swynnerton, 1954) which contained arguments on how to intensify the development of African agriculture.

The plan recommended a reform of the African traditional tenure system through the process of adjudication, consolidation and registration of the individual title. The rationale (which actually had more political than agronomic weight) behind this tenure reform was that: consolidation would reduce fragmentation by creating landholdings of economic size; it would make farm labour more efficient by reducing the distances one had to walk to the dispersed pieces of land; it would make the application of manure and farm planning possible; the registration of the title would provide a land security that would be an incentive to long - term capital investment by a farmer to develop his land; it would bring to an end -

costly litigations and thus save the farmers much income and time which would then be expended in more productive agricultural activities; and that the title would be used as a collateral for obtaining loans from financial institutions for farm development.

This rationale has been extended (mainly by some ecologists and government officials) to semi - arid pastoral and agro - pastoral areas to support their argument for livestock development schemes and range conservation programmes. Their view, based on Swynnerton's plan, is that with an individually registered land title one would be induced to take care of his grazing land, i.e., practice better range conservation methods by reducing the size of the herd in order to avoid overgrazing and fencing, to protect the animals, and to keep a few healthy animals intended for the market. Communal land ownership is thus viewed as a disincentive to destocking, to long - term capital investment and to the development of a market - oriented pastoral economy (See Talbot, 1972; Pratt & Gwynne, 1977).

The idea of an individualised tenure system, good as it appears, has not been easy to sell to the pastoral and agro - pastoral societies. Their resistance to the individuation of the tenure system up to the present, stems from a lack of conviction of the practicability of the stated rationale. To many of them the reform is more of a threat to their socio - economic system than a help. This is a problem the development planners have to wrestle with but the outcome will depend very much on the approach employed. The reasons for resisting not only the tenure reform programme but also other development strategies must be carefully examined because these people are also experts in their own ways. It is by carefully evaluating and accommodating the expertise of both development planners and the pastoral and agro - pastoralists that a more viable and appropriate development strategy can be worked out.

The Swynnerton Plan, it was pointed out, was adopted by the Kenya Government and was emphasized in the Development Plans as a prerequisite for agricultural development in Kenya. Individualisation of land has ever since been viewed as an important strategy for rural development. This strategy was extended to Mbeere, one of the important reasons -

being, it appears, in order to facilitate the S.R.D.P. development programmes.

Opposition and Acceptance of the Land Reform Programme.

My investigation reveals that the land tenure reform programme was very unpopular among the Mbeere when it was first proposed by agricultural officers early after independence.

The people did not, in the first place, see what was wrong with the traditional tenure system, and did not also understand why the lineage held lands had to be divided among lineage members since there had not been land shortage or disputes over land among the members. They had also seen what had happened to their Embu neighbours when land reform was carried out there and, therefore, feared that they, like the Embu, would suffer great losses in property and experience intense social animosity

Land reform in Embu had been carried out under the "Land Adjudication Act." This meant that if an individual owned several and scattered pieces of land, they were, during demarcation, combined and registered as one land unit. Thus through consolidation some people found themselves being shifted away from their pieces of land which they had developed and had planted crops such as coffee, bananas, yams, fruit trees, etc. to places with nothing but mere bush. Rather than leave all these crops to another individual with no compensation at all, the owners destroyed or uprooted them before they vacated the land. Land reform in Embu was also immediately followed by an acute scarcity of grazing areas, the consequence of which was the drastic reduction in the number of livestock.

It was the possible loss to someone else of one's "iganjo" or an old homestead (the site where one had lived for a long time and had planted important trees such as mukau and mango trees) and the loss of grazing areas for the livestock which the Mbeere valued highly that, more than anything else, were the main reasons for much dislike of the proposed land reform programme.

The differences in climatic and environmental conditions as well as differences in population density between the Upper and Lower Regions explain the differential acceptance of the land reform programme in the two regions. While the people of the Upper Region readily accepted the reform programme, people of the Lower Region resisted it openly but their resistance did not stop the implementation of the programme. The dislike for land reform is still much alive in the Lower Region. For example, in Kiiri (also spelt Kerie), one of the largest sub-locations in Lower Region, the adjudication process has taken several years to complete. This delay, besides being caused partly by wild animals (elephants and rhinos) has been largely blamed, by officials, on "the laziness and backwardness of the people who do not understand the value of an individual freehold title".

At present the benefits of a tenure system based on individual ownership of land are not present in the Lower Region as well as in many parts of the Upper Region and are not likely to be available in the near future. It is this fact and the realization that tenure reform destroys the conditions which make their production system (agro - pastoralism) and, therefore, their survival possible, rather than their "laziness and backwardness", that is the main reason for slowing down the reform process.

However, although the Mbeere were aware of much of the consequences of the land reform programmes they eventually accepted it. A number of reasons explain why land reform was accepted reluctantly at first, but later with much enthusiasm, particularly in the Upper Region.

1. Government Campaign through the local administration officials, agricultural officers and extension agents and the elected representatives both in the National Parliament and Local Government Councils. The campaign stressed the importance, especially to a farmer, of an individually registered landholding because the possession of an individual title would facilitate the availability of agricultural development loans which, accompanied by the security provided by the title, would induce the farmers to develop their lands, to adopt better farming methods, and to raise their income. Some of these benefits of the tenure reform have, so far, not been realised by the majority of -

land holders in Mbeere.

2. Land Market. The ease with which a piece of land could be sold once it was individually registered made land reform a very attractive idea particularly in the Upper Region. This idea filtered into Mbeere from the areas where land reform programme had been carried out before, viz; Central Province, Meru and Embu. Some individuals, usually the educated and influential leaders, as I gathered from the interviews, encouraged the acceptance of the programme with an eye to benefiting from the lucrative land market that would ensue after the reform.

After the reform programme in Kikuyuland and Embu, some landless individuals started coming to Upper Region to buy land from the Mbeere who had their own individual lands which they too may have bought or inherited. This buying of land by the landless Kikuyu and Embu at prices much higher than the traditional prices convinced many Mbeere people of the imminent profitable land market after the implementation of the reform programme. The eagerness with which this expected land market was awaited was demonstrated by the massive land sales which followed shortly after the commencement of adjudication and registration of individual plots.

3. S.R.D.P. Implementation. It is clear that the implementation of the land reform programme in Mbeere was accelerated soon after Mbeere was designated one of the six Divisions in the S.R.D.P. The reform, therefore, must have considered an integral part of the whole S.R.D.P., if not a necessary condition for the implementation of S.R.D.P. Thus the urgency with which the reform programme was implemented did not allow time for a pre - implementation study which would have looked into the long - term socio-cultural, economic and ecological effects of land reform in Semi - Arid Mbeere and how these effects would affect the objectives of the S.R.D.P.

Evaluation reports on S.R.D.P. (See I.D.S. 1975 and Okoth - Ogendo, 1972) reveal, besides disagreements among the S.R.D.P. personnel over the programme implementation plans, the confrontation between S.R.D.P. personnel and the local people over the kind land tenure to be implemented; i.e., whether a tenure system based on individual title or group title.



Local people in some parts of Lower Region, and even a few in the Upper Region, preferred, because of their livestock, group titles as provided by the 1968 "Group Representatives" Act. But the programme personnel ignored their preference and went ahead with the individual registration. The people had no other alternative but to accept what had been imposed on them.

Thus the imposition on the people of a land reform programme that had been poorly planned and implemented in a hurry allowing little or no time for a feasibility study, and ignoring the opinions of the local people explains to a large extent why the S.R.D.P. achieved so little a success.

#### The Implementation of the Reform Programme.

The land reform process in Mbeere which started in 1970 is based on the "Land Adjudication Act, Chapter 284". This is in contrast to the "Land Consolidation Act, Chapter 283" applied in high rainfall areas such as Embu, Meru, Taita, Kisii, Central Province, etc. Land Adjudication Act allows the people to do the land demarcation themselves on lineage or household basis and then invite land adjudication officers to map the demarcations, to adjudicate any land disputes arising from the demarcation process, and then to give the demarcated plots official numbers. Registration is the final stage in the adjudication process after which the land holder is issued with a title deed and knows exactly the size, or acreage, of his piece of land.

In Mbeere people flatly refused land reform based on Land Consolidation Act in favour of Land Adjudication Act, although some had actually favoured the Group Representatives Act. The acceptance and application of the Adjudication Act in Mbeere was based largely on two reasons, viz; (1) To avoid destruction of property, (2) To permit access to multiple micro - ecological zones.

Unlike the Consolidation Act, Adjudication Act permits landholders to retain separately all the pieces of land which were recognized as his -

in addition to which he would acquire from the sub-division of the lineage land. This way one would not suffer any loss of property or capital invested in land, as would have been the case under the Consolidation Act.

As regards access to multiple micro-ecological zones, the fear haunting almost all the people in Mbeere was that after the individuation of the tenure system extensive grazing and shifting (extensive) cultivation, as well as the cultivation of several scattered gardens, would become extremely restricted. This is already happening in many parts of the Upper Region.

However, the adoption of the Land Adjudication Act partly for the purpose of permitting access to multiple ecological zones has turned out, in some respects, to be meaningless and has in fact led to some unexpected results. Some pieces of land, belonging to an individual, are either all in one ecological zone or are so widely scattered (some range from 5 to 20 Kilometres apart) that their utilization becomes impossible. In fact very few individuals have pieces of land that are ideally dispersed so that he has the advantages of micro-ecological differences.

On the other hand the Land Adjudication Act, by permitting the registration of several pieces of land regardless of size, has two unexpected major effects. First, it has indirectly encouraged land sales. One of the regulations enforced by the Land Control Boards in Mbeere (there are two of them, one for each Division) stipulates that no individual shall be allowed to sell a piece of land unless he has another or other pieces, and also, if one wishes to subdivide his piece of land in order to sell one portion, that land must be large enough so that the remaining portion is of economic size. Thus many people who have sold land appear to be those who had several pieces of land or several acres of land in one piece. This then defeats the very purpose for which the Adjudication Act was adopted.

Secondly, the Land Adjudication Act directly led to the creation of landholdings which are too small (some are as small as  $\frac{1}{2}$  of an acre, or 0.10 ha.) to be of any economic value especially if located on very -

poor grounds. Such small pieces are difficult to utilize efficiently. It is even more difficult if they are scattered very far from each other.

Consolidation of these small pieces of land would have been much more sensible than the underlying reason for retaining them separately, that is, in order to allow accessibility to various micro-ecological zones. Such consolidation can, however, be done only if requested by a land owner. But even if the request to consolidate was made it may not be possible without the cooperation of the neighbouring land owners because by consolidating one's land holdings means pushing out another or other individuals from their landholdings.

Some people, especially the progressive farmers have attempted to overcome this consolidation problem through 'land exchange method' but without much success. In order to consolidate his pieces to create a viable landholding, a farmer arranges with his neighbours to swap landholdings, so that he (the farmer) possesses the neighbours pieces of land adjacent to his while the neighbours take the farmer's other pieces of land located elsewhere. However, the neighbour must be satisfied that the piece of land he is getting from the farmer is just as good, if not better, and of equal size, if not bigger, as the one he is surrendering in exchange, if otherwise, the exchange deal flops.

The more pieces of land one owns the more difficult the consolidation would be through the exchange method. If one exchange deal succeeds, it does not necessarily follow that other exchange arrangements will also be successful. However, in order for consolidation through the land exchange method to be possible, three conditions must prevail; 1) that the farmers exchanging lands have their lands adjacent to each other, 2) that the lands being exchanged are, if possible, equally good and of equal size, although the farmer wanting to consolidate his pieces may offer a bigger piece of land to the neighbour to induce him to accept the exchange, 3) that the two parties are mutually willing to exchange.

The irony in this consolidation effort is that it undermines the rationale for the application of the Land Adjudication Act. But the fact that this consolidation is being attempted by progressive farmers -

(mainly in the Upper Region) should not be a surprise because, perhaps with more capital, labour and a higher income plus all the attention he gets from the extension agents and agricultural officer, such a farmer does not necessarily require accessibility to multiple micro-ecological zones as the risks which make this a crucial farming strategy are minimized.

The Problem.

This study was carried out on the basis of two but interrelated assumptions that:

1. People of Mbeere have increasingly shifted away their emphasis on agro-pastoral system of production to crop cultivation because of the individuation of the tenure system.
2. Where a production system is precarious and labour intensive people tend to maintain extensive household structures, and only when these conditions change do people start favouring the unclearisation of the family

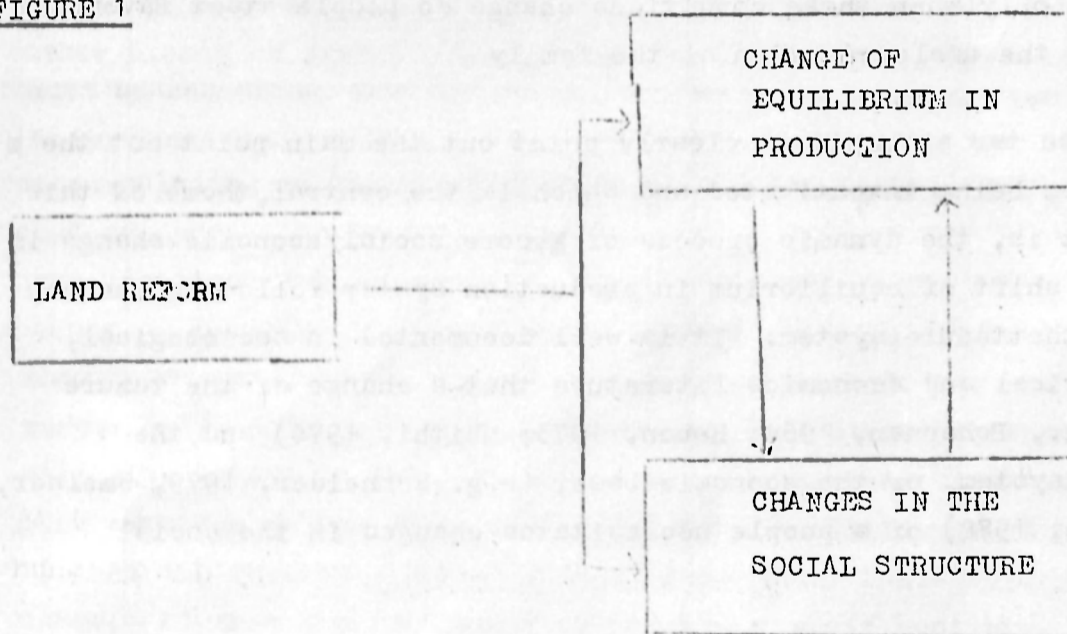
These two assumptions clearly point out the main point out the main problem being investigated and which is the central theme of this study; that is, the dynamic process of Mbeere social/economic change in terms of a shift of equilibrium in production system following the change of the tenure system. It is well documented in sociological, anthropological and economics literature that a change of the tenure system (e.g., Bohannan, 1964; Hoben, 1973; Mbithi, 1974) and the production system, or the economic base, (e.g. Schneider, 1979, Smelser, 1971; Poewe, 1978) of a people necessitates changes in the social structure.

I want to follow these arguments to show in general the social and economic changes that have occurred and that might occur in Mbeere society as a result of tenure reform, but focussing more sharply on the shift in production system and household organisation. Thus the primary objective is not only to show the socio-economic changes that have taken place but also to raise questions relating to the implications of these changes on the development of Mbeere. For example; the viability of the -

emerging household structure as a production unit in terms of its ability to adopt new production techniques. Questions will also be raised relating to the individuation of the tenure system as a strategy for development in marginal (arid and semi - arid) areas of Kenya. These questions will be raised from the point of view of the prevailing absence or inadequacy of resource inputs in Mbeere and also in other marginal areas.

The change in the traditional system of land ownership is treated here as a parametric shift that has touched off a series of changes in the Mbeere social organization and relationships as well as encouraging a shift of the economic base. To use an illustration, the figure below shows land reform causing a change of equilibrium in social structure; the change of equilibrium in the production system then has effects on the social structure, while changes in the latter also have effects on the production system.

FIGURE 1



i. ECONOMIC IMPACT.

A. SHIFT IN EMPHASIS AND EFFECTS ON LIVESTOCK.

The most important economic effect of land reform in Mbeere has been the shift in emphasis from the agro - pastoral production system to a production system based more on crop (grain and cash crops) cultivation. The livestock population census figures for 1976 and 1980 show a decline of 2% for cattle and 3% for goats, but indicate an increase in the number of sheep and probably be explained by the unpopularity of sheep among the Mbeere for three main reasons; first, mutton is generally disliked by the majority of people; second, sheep do not fetch good prices in the market compared to goats; third, people complain that sheep have low resistance to diseases and therefore die more easily and more often compared to other types of stock, and besides that they also get lost more easily. The unpopularity of sheep (mutton) is clearly demonstrated in the following table.

Table 1.

Animal slaughter figures for Jan - June 1981: Mbeere Division.

Month	Bovine	Goat	Sheep
Jan	43	713	25
Feb	60	649	30
March	56	723	45
April	14	110	7
May	42	663	19
June	62	543	19
TOTAL	277	3401	145

Source: Annual Report. Siakago Division Livestock Development: 1981

The market prices for the three different types of stock as given by the Livestock Development Office for Siakago Division (Annual Report 1981) further demonstrate the unpopularity of sheep because of their low market prices. The prices are as follows:- Bovine, range from KShs. 1,000/= to 1,500/=; Goat, from 150/= to 200/=; Sheep, from 100/= to 150/=. People also pointed out that at the local hides and skins stores they were paid 10/= for a goat skin and 5/= for sheep skin.

However, the figures for the two livestock population censuses do not tell us whether there has been a steady decline as in the case of cattle and goats since the land reform programme started in 1970. Efforts to obtain the 1970 census figures for livestock population in Mbeere were fruitless. But there are strong reasons to believe that there has been a general decline in livestock population in Mbeere following the implementation of the land reform programme.

The indication by questionnaire surveys and the oral interviews I conducted is that the livestock herds of the majority of the people have decreased rather than more people have increased the acreage under cultivation. There is also the indication that increased. Asked whether, since land reform they would rather invest their income in land or livestock more people responded in favour of investing in land. The main reasons given for this choice being that; land is no longer a free good as it used to be before the reform; land has become very valuable and it is therefore a commodity that one should try to accumulate or develop; and that crop cultivation has now become more important for both subsistence and for sale given the deteriorating conditions for raising livestock economically.

However, the decrease in livestock population and the increase in acreage under cultivation are more apparent in the Upper Region than in the Lower Region. While people in the upper region have tilted more towards crop production, in the lower region people are still trying to maintain the agro - pastoral balance. This is demonstrated by the fact that on the basis of the 1980 livestock population census there are more livestock in the Lower Region than in the Upper Region. The ratio of people to livestock for the two regions are; Lower Region about 1:0.5 (or 2 animals for 1 person); Upper Region about 1:2.

Reasons For Decrease.

A number of factors account for this general decline in livestock population in Mbeere. One is the land reform. Although the shortage of grazing areas is at present not a critical problem, it is nevertheless being felt especially in the upper region where people are beginning to fence their plots to keep off livestock belonging to other people. Such restrictions resulting from the individuation of the tenure have hampered the extensive grazing on open range which is a necessary condition for raising livestock economically in a marginal area. This has been particularly the case with the group ranches which were operated on range lands under the 1968 Group Representatives Act. After the subdivision of these range lands among their individual owners the group ranching schemes, as Livingstone (1976) also reports, collapsed and have not been able to reorganise themselves ever since.

Second is the population growth and population density factor. Again this is a constraint felt more in the Upper Region than in the Lower Region. The higher population density in the Upper Region has resulted in competition for land for crop cultivation, settlement and for pasture. Less land is being allocated for pasture and this has meant a general reduction of the size of livestock herds. Those who have large tracts of land may be in a position to raise more livestock but this is not necessarily the case as they may be involved in other activities which may not allow them to do so.

The third factor and closely related to the second is the bias towards crop cultivation especially in the Upper Region. Raising a large herd has become difficult because, in the first place the animals will not get enough pasture, and secondly it requires more labour commitment because the animals demand continuous attendance so that they do not break into another person's garden and destroy his crops. Compensation cases and the consequent animosity as a result of crop destruction by livestock are on the rise in the Upper Region. So in order to avoid financial losses and quarrels with the neighbours, and also in order to avoid loss of livestock for lack of pasture, some people have decided to take their animals to the areas, mainly in the Lower Region, where there is enough pasture and open range.



These people, mainly elderly men, leave their families in the densely and heavily cultivated areas and go with their animals to the less populated and sparsely cultivated areas.

In order to find out the differences in livestock ownership per household between the two regions of Mbeere, a random survey of 60 households was carried out. Thirty households were in Kirii, an area in the Lower Region with a population density of about 15/Km<sup>2</sup>, and the remaining 30 in Nguthi in the Upper Region with a density of about 114/Km<sup>2</sup>. At Kirii people still practice shifting cultivation to a large extent while at Nguthi more people are beginning to practice intensive cultivation. The results of the survey are as follows.

Table 2. Household Livestock Ownership Differences Between Lower and Upper Regions.

	Kirii	%	Nguthi	%
Average number of Livestock/household	24	80	7	23
" " Cattle/household	5	17	2	7
" " Shoats/household	19	63	6	20
Households with Shoats 20 and Over	12	40	3	10
" " 10 - 19	7	23	3	10
" " less than 10	11	37	16	53
Households with cattle 15 and Over	2	7	Nil	0
" " Less than 15	18	60	16	53
" Without any cattle	10	33	14	47
Households without any type of stock	2	7	8	27

The fourth factor is labour. As more labour is increasingly being committed to crop cultivation fewer animals are being kept. In areas where crops and livestock raising are both treated as equally important, my record indicates an almost equal commitment of labour to both, but when crops, especially with the inclusion of cash crops (tobacco and cotton), become more important then labour commitment shifts in favour of crop cultivation. As less and less labour is committed to livestock raising there is change not only in the number of animals kept but also in composition, that is, the tendency to raise only one type of stock.

A comparison between Kanyuambora and Ishiara with regards to labour commitment to crop cultivation and herding, and the herd composition shows that; in Kanyuambora the majority of the people give preference to crop cultivation when labour for crop and herding compete, and most of the households with all the three types of stock or cattle and <sup>goats</sup> say that they give preference to neither crops nor animals; i.e., they are both treated equally. In Ishiara where there are more livestock than Kanyuambora but also where lack of grazing areas is becoming a critical problem, the majority of the people give preference to crop cultivation when there is not enough labour for crops and for herding.

The fifth factor that has led to the decrease in livestock population is livestock sales. Most livestock are sold for slaughter by the local as well as outside butchers. A report by the Livestock Development Office at Siakago (Oct. 1980) indicates that more livestock are leaving Mbeere than they are coming in. For example, the report shows that in the month of October 326 heads of cattle were exported to the neighbouring Districts while only 30 heads of cattle were imported into Mbeere; and 242 goats were exported while only 9 goats were imported.

The agricultural societies in the high potential areas, mainly the Emou and Kikuyu, have, for a long time, been the main buyers of the Mbeere livestock. This trade between the Mbeere and these agricultural societies is, no doubt, going to deteriorate as the population of livestock in Mbeere continues to decline.

Livestock are sold more often now than it was the practice traditionally. People sell livestock in order to meet household expenses on such items as clothes, food, farm tools, utensils, etc. A lot of animals are also sold in order to raise money for education purposes, e.g. school fees, uniforms, and the school building fund contributions. There are also numerous harambee fund contributions for various development projects such as self - help secondary schools, nursery schools, health clinics and cattle dips. Land disputes have been a major cause of the increased and frequent land sales in order to raise money for litigation expenses.

Lastly but not least, livestock population in Mbeere is lowered by the frequent outbreak of various animal diseases in the area. The control of these diseases in Mbeere is very ineffective due to various problems: such as lack of medicine, and lack of enough personnel and mobility to facilitate immediate action to combat the diseases. Livestock owners sometimes do not report their sick animals until they start dying off. Some farmers decide to buy medicine and treat their animals themselves—a practice that can be dangerous to their animals especially if they do not know the required dosage.

Therefore, it appears that it is largely in order to compensate for the loss of livestock that the people of Mbeere have shifted their emphasis to crop cultivation. But in spite of this shift, livestock (mainly cattle and goats) still play a crucial role in the social/economic system of Mbeere people. The role they play today, although much reduced, is not very different from the role they played in the traditional set up.

#### The Role of Livestock in Traditional Setting.

Traditionally livestock were raised, most importantly, as store of value, as medium of exchange, and for bridewealth, and less significantly for clothes, manure, and as direct source of food. They are particularly important as repositories of value because of their self-reproduction capability. In the Lower Region where there is still very little socio-economic change, they are equated with the "Commercial Banks" where people deposit their savings to earn some interest. Money from the sale of crops and from other sources is, if not urgently needed, reinvested in livestock. Excess grain is also converted into livestock especially in the time of shortage when the value of grain is higher relative to that of livestock.

However, as regards reinvestment in livestock, Mbeere people were, in every respect, profit maximizers. Their investment in livestock was done in order to build a large composite herd not merely for the sake of it or for love of these animals, but as a profit maximizing strategy. First, by converting grain into livestock one created more wealth for himself. Grain, unlike livestock, does not reproduce when stored. Secondly, a wealthy man, i.e. one with a lot of-

animals, was in many occasions requested, mainly by his clansmen, to assist in bridewealth payment. If he loaned out a cow for this purpose he was sure of getting back more cows in repayment - an equivalent of bankloan repayment with interest. Again, according to the Mbeere custom, a man who helps another one with bridewealth in order to get a wife is given a portion of bridewealth when the latter's daughter gets married. A wealthy man also duly used his prestige and influence to acquire more wealth.

Livestock paid as bridewealth was also considered an investment in two ways; first, through the reproductive capability of a woman a husband expected, if nature was in his favour, to get daughters who, when they married, would bring him more livestock; secondly, by means of bridewealth a man acquired extra labour (in form of a wife or wives) which could be employed to cultivate more grain with which more livestock could be acquired.

There was in Mbeere an exchange practice involving cattle and goats which approached what is referred today in the commercial deals as the "hire purchase" where by one pays for an item by instalments. Through this arrangement one ends up paying more for the item than he would have paid if he could raise all the money required for the cash price. Among the Mbeere one type of stock could be exchanged with another type or with a similar type but of different sex. The standard exchange for a cow (there was no distinction in value between a heifer and a cow that had calved) was three bulls and one female goat. This exchange was considered absolute but if one could not afford the standard exchange price all at once there was an alternative exchange arrangement - just like the "hire purchase" alternative. This was the payment of one bull (instead of three) and one female goat, but the exchange was not considered complete.

A cow purchased this way (i.e., with 1 bull and 1 goat) was, after it bore a female calf returned to the previous owner and the buyer retained the calf. When this calf matured and bore a calf, this calf, whether male or female, was also returned to the first owner and the exchange was considered final. On the other hand, if the cow purchased with one bull and one goat bore a male calf, the calf was taken by the first owner (the seller) and the mother was retained by its second owner (the buyer) until it gave birth to a female calf which the buyer retained-

Thus the wiser farmer did not exchange his millet for goats when there was plenty of food and when, therefore, the exchange rate for goats was high, but during the time of food shortage when the exchange rate for millet was higher relative to that of goats.

However, in all this exchange practice there was no time in Mbeere when an individual felt that he had accumulated enough livestock and therefore could stop cultivating grain and devote all his time and labour to raising livestock. Food crop cultivation was all the time considered necessary; just as livestock were kept as insurance against crop failure due to drought so were the crops cultivated as a hedge against any calamity that might strike the livestock, e.g. an outbreak of an epidemic.

Lastly livestock were raised as source of food and clothes. But their importance as a direct source of food was minimal. Their importance as source of food rested mainly on their convertibility into grain through exchange practices. While goat meat was eaten occasionally, beef was rare as cattle were rarely slaughtered. Milk from cows and goats was also an important source of food. It was taken while fresh, mainly by children, and when sour. To make it sour it was put in a gourd and left to ferment for several days. From the fermented milk fat and butter were extracted and used in various ways including food preparation. Some were even sold. Hides were treated in such a way that they could be used as clothes. Cattle hides were also used for sleeping on.

#### The Changing Role of Livestock.

The role of livestock in the socio-economic system of the people of Mbeere has not changed drastically, but there is in this respect, important differences between the two regions of Mbeere. The degree to which the role of livestock has changed following the change of the tenure system and as a result of the changes in the economic system is indicated by the responses of 193 farmers on the question of the importance of raising livestock. The responses were as follows:-

As store of value	- 57%
For sale	- 16%
For bridewealth	- 13%
For food	- 9%
For Manure	- 5%

It is rather interesting to note that in spite of the adoption of a money based economic system the importance of livestock as repositories of value still remains the most important reason for raising livestock. This perhaps can be explained by the low level of agricultural development in Mbeere which makes a heavy reliance on it very dangerous.

Again because of the low market prices for their crops, and as long as these crops remain exposed to the harsh environment conditions that are beyond their control, many people in Mbeere prefer to reinvest some of their savings into livestock.

It is also important to note that there seems to be a stronger emphasis on the importance of livestock as store of value in the Upper Region where the herds are particularly smaller and where also alot of people do not have any type of stock. I think this emphasis, which unfortunately is not accompanied by raising more livestock because of the constraints on land for grazing, is also as a result of the vulnerability the people feel for relying too heavily on crop cultivation.

Besides the highly placed importance of livestock as store of value, there is, in the Lower Region, a stronger emphasis on the value of livestock for bridewealth purposes than in the Upper Region. This is not surprising given the fact that the socio - cultural system in the Lower Region is less affected than in the Upper Region. However, the general rise in importance of livestock for sale is significant in that it implies an increasing demand for cash among the Mbeere and the monetarisation of the economy.

Livestock are now frequently sold in order to raise money to meet educational, household and developmental expenses, and also for emergency cases. They are also an important source of income in as far as milk, manure, hides and skins are sold. Milk is not sold in large quantities not because people don't like the idea or because they need the milk to put in the gourds to ferment. It is because the Zebu type of cows raised by the Mbeere are poor milk producers. The little milk that is produced is consumed in the household, but when there is enough the tendency is to sell the surplus.

Now that factory made clothes are more easily available, though more expensive, almost all skins and hides are sold. However, there are some homes where hides are still being used for sleeping on. The sale of manure is a recent development and it is not widespread. It is practiced by the people in the extreme upper parts of the Upper Region and is sold mainly to the coffee farmers from the adjacent high potential areas. Prices vary according to different places. In some places the charge is KSh. 80/ per one lorry (3 tons) and in other places it is KShs. 30/ per ox - cart (1 ton).

Although the livestock are now more frequently sold than before because of the increasing demand for cash they are, however, not the most important source of income. In a random survey of 90 farmers 65 of them (72%) ranked agriculture first as their most important source of income while 20 people (22%) placed employment in the first position. The same number of people (20) placed agriculture in the second position. Only 8 people (9%) ranked livestock number one as their most important source of income, 28 (31%) put it in the second position, and 50 (56%) place it in the third position compared to only 5 people (6%) who placed agriculture in the third position.

Thus agriculture is the most important source of income for the majority of the people of Mbeere. Employment (which includes casual labour) appears to come next in importance and livestock raising taking the third position. Other sources of income which follow, but not in order of importance, include charcoal burning, small businesses (e.g. kiosks, teashops, trade in livestock, etc), and honey. However,

one should notice that while livestock are the most important as the store of value they appear less important as a source of income. This is because they are, in many cases, only sold when there is a need for a large amount of money. So in the final analysis they might even turn out to be most important source of income for a household.

Livestock still maintain their importance in bridewealth payment, but this is more true in the case of the Lower Region where the traditional socio - economic system is less affected than in the Upper Region. The general trend, however, is towards the abandonment of the payment of bridewealth in livestock to payment in money. In a case where money is requested in bridewealth payment what is normally done is to compute, based on the current market prices for goats and cattle, the amount of money to demand. There are reasons underlying this preference for money to livestock as bridewealth, the most important being, first, the increasing problem of the availability of pasture in an open range, and second, the increasing shift to crop production to which more and more labour is being committed.

The importance of livestock as a direct source of food remains minimal. As pointed out earlier, meat is rarely eaten in the majority of Mbeere households. Only once in a while can a goat be slaughtered at home purposely for meat. Cattle are almost never slaughtered purposely for meat. They are the most valuable as repository of value.

Being essentially slash - and - burn - cultivators, the people of Mbeere did not raise livestock with the purpose of getting manure. This kind of farming practice did not allow extensive use of manure in the fields and the only gardens that were occasionally manured were those near the homestead. Manure is still not considered a very important reason for raising livestock and this is because intensive agriculture has still not been widely adopted. In the Lower Region where slash - and - burn cultivation is still widely practiced manure is rarely used in the fields. One can still see large heaps of manure standing undisturbed on what were once homesteads.

In the Upper Region slash - and - burn cultivation has almost ceased, but as one might expect that people are now practicing intensive-



farming (i.e more application of livestock manure) that, in fact, is not the case. Many people still don't use manure in their fields (or chemical fertilizers) although they keep a few animals. I found out in one part of the Upper Region that some people preferred to sell manure rather than use it in their fields. However, more people in the Upper Region are using manure in their farms than in the Lower Region.

Again, more people in the Upper Region have adopted the use of the Ox - plough than in the Lower Region. Tractor - ploughs though very few are more readily available in the Upper Region than in the Lower Region. An investigation in a small area of Gachoka sub - location (in Upper Region) showed the ratio of households to ox - ploughs to be 1:3 while in Kirii, one of the largest sub - locations in the lower region with a population of 2,400 people, there was only one and the first ox - plough available in the Oct/Dec 1981 season.

Thus as people shift more towards crop cultivation oxen become more important as drought animals especially where fuel driven farm machines are not available or adequate. In the Upper Region where more people are expanding the size of their fields, but not necessarily improving them, ox - ploughs are becoming very important. The oxen and the ploughs are also becoming an important source of income to the people who own them. When hired to plough a field, one acre is charged KSh. 140/ if it is an "old garden" (i.e one that had been cultivated before), and KSh. 260/ if it is a virgin ground not broken before. The cost of a plough is now between KSh. 400 - 600/- and requires very low operating costs. When the oxen are not drawing a plough they could be used to pull a cart to transport things of various types from one place to another. When hired for this purpose they bring to the owner an additional cash income. The oxen which become too old to work effectively are sold for slaughter and then replaced by the more energetic younger oxen.

The decreasing population of livestock in Ibeere must therefore, be viewed with much concern because, in the first place, it is depriving the people of an important source of income <sup>in an area where other sources of income</sup> are not well developed and, thus, unreliable. Secondly, it is depriving people of an important -

means of acquiring grain during the periods of food shortages. Mbeere people expect a mild famine at least after every three years, and a serious one after every seven to ten years.

In a marginal area like Mbeere heavy reliance on food crops as the major source of income and sustenance is dangerous unless food yields and market prices are greatly improved. Again, owing to erratic, low and unevenly distributed rainfall there is frequently insufficient surplus food for sale, not to mention surplus for storing.

#### LAND COMMODITIZATION.

Land transfer through sales has been perhaps the most important economic effect of land reform in Mbeere. Land gained much in value in 1971, soon after the reform programme started in 1970. But massive land sales occurred between 1975 and 1977. There has not been a standard cost per acre or hectare as the price depends on the negotiation between the buyer and the seller, the purpose or the seriousness of the problem for which the land is being sold, and on the quality of the land. However, the price per acre/hectare has been increasing very rapidly; for example the average price per acre in 1975 was KSh. 300/-, in 1981 the average price was KShs. 2,500/-. This is a difference of KSh. 2,200/- in a period of six years which means an average rise of KSh. 367/- per annum.

The most common reasons why people sell land are:-

1. To raise money for education (mostly-secondary) expenses. A lot of people I interviewed mentioned the high cost of secondary education as the main reason that drove them to sell land. This reason, or any other, should not be accepted at face value given the secrecy that shrouds land sales in Mbeere. Brokensha and Glazier (1973) also mention that clan members sold land in order to send promising young men abroad to study.

2. Possession of several pieces of land or a very large piece of land. People owning several or large pieces of land tend to sell land more frequently than those with little land.

3. To raise money to meet land litigation expenses. If lineage members cannot contribute enough money required for litigation expenses, some of the lineage land, if large enough, is sold in order to raise the necessary amount. The rationale behind is that better sell a smaller piece of land to get money to finance the defence of a larger piece. People try to avoid doing this as much as they can because if they lose the case they also lose the money, the land that was under dispute, and the land that was sold to obtain the money.

4. Some other people, especially young people, sell land to get money just for pleasure. Such money is mostly squandered in buying luxury goods and alcoholic drinks.

On the other hand there are the buyers and they too, like the sellers have reasons for buying land. Land buyers are mostly non - Mbeere people the majority of whom are the Embu and the Kikuyu. The Mbeere, besides being the main sellers, also participate but to a smaller extent, as buyers. The following are the major reasons for buying land:

1. Genuine need for land for settlement and cultivation. Landlessness and the possession of very small plots of land of uneconomic size is a very serious problem among the Embu and the Kikuyu and some of these people who could afford to buy land in Mbeere have done so and settled in them. Some landless Mbeere people have also bought land for settlement and cultivation purposes.

2. Some other people, both the Mbeere and non - Mbeere, have bought (and are still buying) land for the purpose of speculation. In other words they are hoarding land. They have amassed several acres of land in expectation that in the near future land prices are going to sky rocket as has been the case in some other parts of Kenya. A good number of these people (non - Mbeere) are absentee landlords, some of whom have permitted the local people to still continue utilizing the lands while others have fenced off their lands to restrict any grazing or cultivation on them.

3. There are people who have bought alot of land as security for the members of their families. This is on realisation, as in the case of speculation, that in future land is going to be very expensive to buy. Since there will be no lineage land available for distribution to those who were born (and are being born) after the reform, some capable - parents bought land for this purpose.

4. There are others, usually wealthy individuals who have accumulated a lot of land to increase their loan borrowing capabilities. These fall into the general trend which, as Okoth - Ogendo (1976:175) points out, "now seems to be that those businesses which sink part of their profits in the purchase of agricultural land to a significant degree, do so to raise their aggregate holdings so as to qualify for higher loans". But the loans acquired are not, in many cases, used for the development of those lands. They are reinvested in non - farm businesses.

The secrecy that shrouds land deals in Mbeere makes it extremely difficult to obtain substantial and reliable information relating to land sales, reasons for selling, and how the money was spent. Why all this secrecy?

In the first place every Mbeere person believes that selling land, even if in dire need for money, without first having exhausted all other means of raising money, is a foolish thing to do (also see Njeru, 1976). People always speak ill of one who has sold land. Most often when somebody is selling land he wants the deal to be done in utter secrecy because he does not want to expose himself to public ridicule. But as soon as he starts spending the money, especially in bars and buying fancy things the secret is known.

Secondly, Mbeere people tend to be individualistic and besides, don't trust people outside the immediate family or a small circle of close friends. Therefore, by publicly letting it be known that he is selling land he is not only exposing himself to public ridicule but also to the jealousy of other people who might plan to do him some harm or rob him of his money. Also by carrying out the land deal secretly he avoids the flocking of relatives and friends to him to ask for help. He well knows that by denying these people the help they want he is exposing himself to more ridicule and more danger. The fear of being bewitched or poisoned is overwhelming among the Mbeere.

Thirdly, there is a marked dishonesty in some land deals in Mbeere. Some people have sold one piece of land to several unsuspecting buyers. Others (especially lineage leaders) have sold land that was said-

to be reserved for lineage members. Others still have sold, to unsuspecting buyers land which is completely useless and all the time the buyers were being shown different pieces of land on very good ground or location. Such land deals must be done in complete secrecy to avoid the deal from flopping; and the sellers also want to avoid exposure as swindlers.

On the other hand some land buyers have taken advantage of the preference by Mbeere people to have the land deal affair be done in secret. Some land owners have been paid in worthless cheques, others have signed the receipt of money they never saw at all. Others have undersold their lands, some have been paid for their lands with old and useless items, e.g. grain grinding machines, and some others can only remember the beer that was bought for them and land was gone. The list of such fraudulent land purchases is endless. What makes these cases most pathetic is that the individuals swindled of their lands could have been helped if only they had enlisted the advice of some more knowledgeable people.

Because of this secrecy under which the selling and buying of land is conducted, collection of adequate and reliable information on land transfers has not been very successful. The Land Control Board minute files provided with supplementary information, but even this source is deficient in that the minutes do not specify, most importantly, the reasons for selling and for buying land. The LCB seems to be mostly concerned with ensuring that a reckless man does not sell all the family land and leave the members either landless or with a small piece of land that is of no economic value. Otherwise the rest of the affair is largely left to the parties concerned.

One of the results of land commoditization has been the emergence of landlessness among the Mbeere. Some people have become landless as a result of selling all their pieces of land. Some other people did not get a portion of the lineage land during the subdivision because lineage leaders had sold most of the land, or because they had grabbed so much of the lineage land for themselves and left very little for the rest of the members. In cases where lineage lands have been involved in disputes-

thus requiring lineage members to contribute money to expend on litigation expenses, those who could not contribute anything were usually left out without a share of the land.

Again, when such a contribution of money was necessary and the lineage members could not contribute the required amount two other means of raising money were resorted to; (1) the sale of some of the lineage land (mentioned earlier) and, (2) the invitation of non-lineage members to contribute with the promise of getting a share of the land for the amount of money they contributed. The larger the contribution the larger the share of land and, no contribution no share of land. These methods obviously led to landlessness and land shortages. It also resulted in the accumulation of more land by those who could contribute more money thus further widening the gap between the landed (the rich) and the landless (the poor).

While landlessness and land use restrictions hardly existed in the traditional tenure system, they are problems that are increasingly being felt since the land reform programme was implemented. Land shortage and land use restrictions are more pronounced in those areas with high population density. The lands restricted from utilization by other people, e.g. grazing livestock and cultivating crops, are not necessarily being utilized by their owners and are, therefore, lying idle and unproductive.

Brokensha and Riley (1979:15) mention that land reform in Mbeere has led to "an unmistakable awareness of individual rights and property" and the result of this has been a "limitation of accessibility on previously free goods" and therefore the commercialisation of such goods as grass for thatch, building poles and rafters, and grazing grounds.

In addition to commercialisation of the goods which were before the reform free there have been restrictions on burning of charcoal on somebody else's land. In order to do so one has first to buy the trees. The trees for making beehives which were once (i.e. before the reform) given free of charge are now being sold. Those who cannot afford to buy them won't be able to practice apiculture - which, together with charcoal burning are important off-farm sources of income for many -

Mbeere households. There are even a few cases of some farmers who have been stopped by some other farmers from placing their beehives in the latter's lands. If widespread, this restriction would have far reaching socio - cultural effects as honey features significantly in important rituals and social activities.

Land disputes are numerous, some of which are very complicated and take too long to settle, thus making them very expensive. To have a land dispute heard before a local committee the fee is Ksh. 15/-, and 30/- before the Arbitration Board. If it is an objection case (i.e. before the Land Adjudication Officer) the fee is 50/-, and if an appeal is made to the Minister one pays 105/-. Besides the fee paid for any one of these hearings there may be an additional cost resulting from travelling expenses and allowances for lineage representatives (or leaders) if the case involves lineage land. This additional cost may even be higher if the witnesses are included because they have to be induced and the objector has to pay for their other expenses in order to get their maximum support. If lawyers are hired, as some people have done (Njeru 1976:123), land dispute costs are likely to be enormous.

It is not therefore surprising that people have sold a lot of livestock and lands in order to raise money to finance these dispute expenses. However, we may not know clearly how expensive these land disputes have been in terms of land and livestock losses, but in terms of cash revenue collected from these disputes we get a very clear picture. For example, in a ten year period, from 1972 to 1981 the total amount of revenue collected from Committee cases was KSh. 270,960/- Arbitration Board cases 299,073/-, objection cases 772,420/-, Appeals to Minister 268,615/- and the miscellaneous expenses related to land disputes 63,369.45. The grand total for the ten years comes to KSh. 1,674,437.45. This is not at all a small amount of money coming from the pockets of people the majority of whom have very low income and the flow very irregular.

## II. SOCIAL IMPACT.

### A. SOCIAL CONFLICTS.

The immediate effect of land reform in Mbeere was that the society was plagued with social conflicts. The conflicts were mostly found between lineages of different sub-clans, and within lineages, i.e. among individuals within a lineage. Glazier (1976) found in Nguthi sub-location, a high potential and densely populated area in the Upper Region, that land has become a focal point of strife and as a result various changes in lineage solidarity have ensued. He (ibid, p.49) divides the social conflicts resulting from land reform into four categories; (1) Family quarrels, (2) Interpersonal, (3) Interclan confrontation, (4) Various rivalries.

One of the major causes of these conflicts between lineages of different sub-clans was land stealing. There are three main reasons why one lineage would want to take land belonging to another. First, if the lineage did not have enough land for all its members. Second, some lineage leaders who supervised the distribution of land among lineage members wanted some extra land for themselves which they could sell later and pocket the money. Third, lack of clear boundaries between lands held by different lineages led to one lineage claiming land belonging to the other.

Conflicts within a lineage (i.e among members of a lineage) arose mainly as a result of; (a) unequal distribution of land among lineage members, and (b) sale of some of lineage land by some lineage leaders. Inequality in the distribution of land came about as a result of a number of factors.

1. Besides selling some of the lineage land, some lineage leaders (usually educated and/or well versed in lineage history and land affairs, and also gifted in oratory and articulate in casing) allocated to themselves larger portions of lineage land—an act which they justified by arguing that it was compensation for the services they rendered to the lineage.

2. Nepotism. Some lineage leaders, in addition to allocating themselves larger pieces of land, favoured their close kinsmen by also -



allocating to them larger pieces of land than the rest of the lineage members. This angered those who received small plots and they held a lot of grudge against those who received more.

3. Money contributions for litigation expenses. It was mentioned earlier that if a lineage had a dispute with another lineage over some land, members of each lineage were sometimes asked to contribute money to meet the dispute expenses. After winning the case land was then distributed according to how much each individual had contributed, that is, those who contributed more received larger shares of land than those who contributed less, and those who did not contribute any money did not get any land. This left the poor members of the lineage disgruntled and in a pathetic situation. Distribution of land by this means is still going in various parts of Mbeere where the reform process is not yet completed.

4. Sale of lineage land. The selling of some of the lineage land was another means of raising money to expend on land disputes. This means was resorted to if lineage members could not raise, through contributions, the required amount. In such a case, whether the dispute was lost or won the lineage still lost some land; i.e. the land that was sold. These sales cause land shortage among members of a lineage which, in the first place, did not have enough land.

5. Manipulation of lineage membership. This practice by certain individuals led to three categories of conflicts; (1) the conflict between the manipulating individual (or the manipulator) and the lineage being manipulated; (ii) the conflict among the members of the lineage being manipulated; (iii) the conflict between the manipulator's own lineage and the lineage to which membership is being sought. It must be pointed out, at first that these manipulators are not just ordinary individuals. They are intelligent people who have done some research on descent lines linking their lineages to the lineages which have more land. Thus, these individuals are often armed with long lists of names, supposedly of their ancestors, to legitimize their claims of membership to lineages from which they are seeking some land.

This manipulation of lineage membership is done for two main reasons; (i) because of inadequacy of land in the lineage to which the manipulator is a member, (ii) because the manipulator wants to accumulate land as security for his family members against the expected land shortage in future and/or for speculation purposes. Therefore, in order to get the land he wants it is very necessary that he gets some members of the lineage to which he is seeking land to support his claim of membership to that lineage. If he is wealthy, getting supporters is not a problem. By doing so he has already caused a rift between the members of the lineage to which he is claiming membership. In order to make his claim even stronger he also seeks the support of the members of his own lineage, and this brings two lineages into a confrontation. There follows accusations and counter-accusations between members of the two lineages and between manipulator and the lineage being manipulated. These accusations very often lead to long, complex and expensive land litigations.

All these conflicts resulted in quarrels, intense hatred, killings, fights and a general breakdown of law and order. Brokensha and Njeru (1977) point out the various means employed by the disputing parties to defeat each other as, bribery, threats, poison, giving false witness, oath, witchcraft, physical violence, collaborating with another clan, and using lawyers. These means worsened rather than improving the relationship between the disputing parties. In general, land reform has left the people of Kibee torn apart, bitter enemies, scattered, and pursuing, as Brokensha and Njeru (ibid) point out, 'aggressive individualism'

B. Transformation of Corporate Groups

The individuation of the lineage lands has seriously undermined the importance of sub-clans and lineages as the land owning units. These corporate groups have no authority whatsoever over the individual lands. The individually owned lands are now under the control of the Land Control Boards. But in areas, largely in the Lower Region, where the reform process is not yet complete lineage lands are still under the control of the lineages concerned.

However, the loss of control over land by these corporate groups does not necessarily mean that they are now completely useless and forgotten. Membership to a lineage or clan is still important in the social context and is invoked in various social situations or occasions. For example, in marriages and witchcraft accusations clan membership becomes very important. Clan membership is also said to have some influence on political elections, but I have no evidence of this. But I did see at Siakago members of one clan buying things only from a retail shop owned by their clan member. However, in general land reform encouraged individualism and not kinship corporation.

Out of the conflicts resulting from the land reform programme an important development in social relationship has emerged among the Mbeera. Whereby traditionally every man, by virtue of being a natal member of a lineage, had naturally the right of ownership and use of his lineage land, this is no longer necessarily the case particularly if his lineage land is being claimed by another lineage. In such a case, and there are several of them it is not the natal membership to a lineage that necessarily matters, or guarantees one a portion of the lineage land, but one's contribution towards the fund required for spending on the land dispute. Earlier it was pointed out that if lineage members cannot raise the required amount, or some of the members cannot contribute any money, non-lineage members are invited to join the contribution drive on the same condition that the more the contribution the larger the share of land one will receive. It therefore seems that money rather than filial or blood relationship has become more important with respect to land distribution.

Land disputes have also led to an emergence of some individuals who specialise in representing their lineages in all land disputes, and are locally referred to as "clan advocates". Most of these individuals were, because of their astuteness in dealing with land disputes, lineage leaders. At first they received very little or no allowance at all for their services to their lineages. But as land gained in value some of these people have started to demand payment for their services either in cash or in form of land. Through this kind of payment, some of these individuals, especially the most popular ones, have been able to accumulate a lot of land, and it is these individuals who, in Mbeere, have been involved in massive land sales.

#### C. Individualism and family nuclearisation

The implementation of land reform based on individual ownership of plots has contributed significantly to the changing of both social and economic relationships in the family structure. Although individual ownership of land existed under the traditional system, the land reform programme has been instrumental in enhancing the individualistic outlook to property among the Mbeere. Because of this strong emphasis on individualistic outlook to property, which is one of the tenets of the capitalistic mode of production, the family structure is tending towards nuclearisation. The extended family is slowly becoming a thing of the past, and this change is being felt more in the Upper Region than in the Lower Region. In the Lower Region, extensive households seem to be still very intact and, I contend, that this is for reasons to do with the low labour situation, adverse environmental conditions, and the general lack of economic development.

In Mbeere society it was patrilocality rather than neolocality that was emphasized. Now it is becoming a common thing, or commonly expected, that when a young man marries he moves (or should move) from his father's household and settles on his piece of land (neolocality), if he has one. Before this development it used to be that, upon marriage the young couple continued to live as members of the husband's father's household (patrilocality) until they had one or two children. Even when the young family later moved away to establish a separate household, it settled close by so that there was still some inter-dependence between the two households.

Before the establishment of their separate household, the young wife (unless a had woman) worked together with the mother-in-law in the latter's fields, cooked the same pot (i.e., prepared food together) and also had one granary in which they stored their grain. The son, in the meantime continued to herd his father's livestock or helping his father in enlarging the family gardens and other activities. This practice ensured the young family of maximum support from the parent household (patrilineal side) while in its early stages of development. It also ensured the aging parent household, which is about to disintegrate, of support and care by the progeny's household which is now strong enough.

This developmental cycle of domestic groups (see Fortes, 1948) has been seriously disrupted as a result of the strong emphasis on individualism and nuclearisation of the family. Land reform together with the changing economic life have emphasised individualistic outlook to property, dependence on individual efforts, and neolocal and independent residence. The traditional cooperative labour groups, which had both social and economic significance, no longer exist. They have been replaced by hired labour.

The traditional settlement pattern of clustered homesteads of close relatives or members of the extensive family (See Mwaniki, 1973, & Brokensha and Glazier 1973) has now almost disappeared, and what one sees, particularly in the Upper Region, are scattered homesteads. In the Lower Region these scattered individual homesteads are not very conspicuous although the process is starting. Relatives are still trying to live as close to each other as much as possible, but given the trend towards neolocal residence and nuclear family, this is not going to be possible in the near future.

In general nuclear families seem to be increasing while extensive households are decreasing. This is what a random survey of 210 households revealed. The survey was carried out in seven sub-locations also chosen randomly, and in each sub-location 30 households were interviewed. Out of a total of 210 households, 134 were single households with an average of 6.1 people per household, and 76 were extensive households with an average of 12.0 people per household. There seems also to be more extensive households in the lower parts than in the upper parts of Mbeere, some of the extensive households having as many as 20 people and above. One such household had 54 members.

In the Upper Region members of extensive households tend to live together for two main reasons, (i) because of lack of enough land, (ii) because some members of the family have been given land in areas not yet inhabited by people. In contrast, in the Lower Region, members of many extensive households live together because "they don't feel the need to separate". Again, while the nuclear families in the Upper Region maintain a high degree of independence, in the Lower Region many single families maintain close inter-dependence with other families to which they are closely related. It is not uncommon to find, in the Lower Region, closely related single families all residing in one particular place.

It is very clear that many young people (men) are leaving their parents' households much earlier than it was the case before the implementation of the land reform programme. While this cannot be blamed solely on land reform, the most frequent answer to the question why young men are leaving their parents' household so early is so that they could develop their individual pieces of land and to build permanent houses. Another reason frequently mentioned is that of domestic quarrels, most of which appear to originate from the scarcity of resources for the members of the extended household. When asked about the things or factors that would help in retaining their grown up male children in the household many household heads say that, first, there has to be enough resources, especially land, and then good relationship among the members of the household. Thus the scarcity of resources that has come about largely as a result of land reform has had a significant influence on the size and composition of the Mbeere household.

#### D. Land tenancy

Land tenancy is not a new development in Mbeere although, of course, the number of tenants has increased significantly since the implementation of the land reform programme. There are five types of tenants in Mbeere. (1) Those who do not own any land at all. (2) Those who have some land but it is not cultivable because it is either on top of a rocky hill, rocky ground, swampy clayey area, or on any other type of ground completely unsuitable for cultivation. (3) Those who have land but in areas which are not yet inhabited by people, or are

too far from where their relatives live. (4) Those who have land but have continued to live and to cultivate on the land on which they were still settling before the reform because the new owner has not asked them to move out of it. (5) Those who have land but it is not enough because it is too small.

The third and fourth types<sup>of</sup> tenancy can be considered temporary and the tenants cannot be said to be insecure in case they are evicted from the lands they occupy. The tenants falling in the first, second and fifth types of tenancy are the most insecure in Mbeere. When the land owners start evicting them from their lands, landlessness is going to become a very serious problem in Mbeere. Incidentally eviction of tenants is reaching a critical stage in some parts of the Upper Region.

### III. IMPLICATIONS OF THE SHIFT

The purpose of this section is to synthesize the economic and the social effects of land reform to emphasize, as the main objective, the precariousness of agriculture in Mbeere and the vulnerability to which the people of Mbeere are being exposed as they continue to rely more heavily on crop production and as they shift away from the extensive household structures. Thus there were two aims in this emphasis, viz; (i) to assess the viability of a crop based production system in a marginal area given the prevailing environmental capital, labour and technological constraints, and (ii) to assess the viability of a single household (or nuclear family) as a production unit in terms of its ability to adopt new production techniques. The latter was assessed on the basis of the assumption that, where a production system is precarious and labour intensive people tend to maintain extensive household structures (i.e. to constitute a viable economic unit), and only when these conditions change do they start favouring the nuclearisation of a family.

#### Precariousness of agriculture

One of the central arguments in the Swynnerton Plan was that the tenurial reform would be followed by an agrarian reform. Many scholars, e.g., Barber (1970), Barrows (1973), Mbithi (1974), who have researched on the impact of land reform on agricultural development conclude that a mere ownership of an individual landholding does not necessarily lead to agricultural

development. A strong argument is then made (see Mosher 1969) that in order for land reform to have much impact on agricultural development it (must be accompanied by a) number of other development activities such as efficient agricultural extension services, improved marketing and transportation facilities for farm produce, less expensive appropriate technology, credit availability on attractive terms, and price incentives.

If the land reform programme in Mbeere was implemented with the view to accelerating agricultural transformation that would result in higher production output per unit of land and a rise in income, this has not been very successful so far. This failure is largely due to the fact that land reform was not closely accompanied by other development activities such as those mentioned above. Some of these development activities are totally absent and those that can be found there have little or no effect. Thus, as a result agriculture in Mbeere has still remained very much in the traditional setting.

Agriculture (food and cash crop cultivation) in Mbeere faces various and serious constraints all of which, if possible, must be removed if it is to become a dependable and viable economic base for the people of Mbeere. Extension service is very inefficient mainly because of the small number of extension agents who have to cover very large areas of rough terrain and scorching heat either on foot or on a bicycle. This shortage of the extension agents and the consequent inefficiency is aggravated further by a well known practice of concentrating a lot of extension service on the progressive farmers, and also by giving more priority to cash crops than food crops. Very few farmers interviewed said they had been visited by an agricultural officer (or extension agent) in the past two years, and for those who were visited, the purpose of the visit had more to do with cash crops (cotton and tobacco) than food crops. There are also more extension agents in the Upper Region than in the Lower Region.

In addition to this inefficiency of the extension service is a host of other problems (see District Work Programme 1982/83). Increasing pressure on land is being felt in the Upper Region but



this is not being adequately followed by an intensification of land use through improved management. Most farmers do not use chemical fertilizers simply because they do not have money to buy them or because they know very little about them. As we saw, livestock manure is rarely used and although it is on the increase, especially in the Upper Region where unfortunately the family herd is declining fast, the raising of livestock for the purpose of obtaining manure remains the least important. Also farmers do not use improved seed varieties not because they do not like these superior seeds which would give them higher yields but because, first they cost money, second, in order to get maximum yield from them certain conditions have to be followed, and many farmers are either unable or reluctant to follow these conditions. For example the improved seed varieties require improved husbandry practices like spacing (specified), frequent weeding, early planting, use fertilizers during planting and use of chemicals as scheduled to control pests.

Because of the inability or reluctance by many farmers to adopt these practices the result has been a low production output per hectare. Higher demands for labour and capital inputs as well as low market prices for the crops are the root cause of the inability and reluctance by many farmers to innovate. Loans are not easy to come by for the majority of Mbeere farmers. About 95% of a total of 200 farmers interviewed had not received any agricultural loan and were not expecting any. Even when available, mainly to the few progressive farmers, credit facilities are not given in time and this hinders the farmers from planning and carrying out agricultural activities in correct time.

The market prices for various crops cultivated by the Mbeere are low and the marketing system is not well organized. These factors do not induce the farmers to increase the acreage for these crops and to adopt better farming methods. Bulrush millet and sorghum, the most important drought-resistant grain crops in Mbeere are labour intensive and fetch very poor market prices. The common legumes include cowpeas, green grams and pigeon peas. They are less labour intensive, easy to grow and also drought resistant. Green grams although grown mainly for the market, do not fetch good prices,

and they and cowpeas spoil very easily if not properly stored. Cowpeas are the main source of protein for the majority of Mbeere households and, although not frequently sold, they too do not have attractive market price. The pigeon pea plant is a very resistant shrub to both drought and heat but the variety which the Mbeere have been cultivating for ages has very low yields and is harvested only once a year - just like the native sorghum which is still very popular in many parts of Mbeere. Pigeon peas fetch good prices but the production output per hectare is so low that people harvest (almost always when they are green) enough only for home consumption.

Maize is very popular in Mbeere, just like in any other part of Kenya, because of its food and market value. The type of maize that grows and produces well in Mbeere is the Katumani variety - a strain that has been developed for medium and low potential areas. In order to continue getting high yields from Katumani maize the farmer must plant, every season, the recommended seeds which can be purchased from authorized shops. Use of manure, early planting, frequent weeding and spacing are highly recommended. Most farmers cannot afford to buy these seeds every season and to follow closely the recommended husbandry practices, and the result is a low production output which is currently put at 1.8 tons/hectare.

There is also the tendency by farmers, mostly in the Upper Region, to plant the maize variety recommended for the high rainfall areas because of its bigger size. When they do so and there is not enough rainfall the yield is obviously very low and food shortage acute. Similarly there is the tendency to plant beans which require a lot of rainfall instead of planting the drought resistant legumes or the recommended beans such as Mexican - M2 variety. The reason for this tendency is that beans have a higher market price than cowpeas or green grams. People are, therefore, trying to plant the crops which will bring them more money but the area is not suitable for those crops. The cultivation of grains such as millet and sorghum are being revived, under Government pressure, because they had been neglected in order to cultivate the more marketable food crops which, unfortunately, do not do well in Mbeere. The

had devised, like many marginal peoples, strategies by which to protect themselves. These strategies include, (i) scattering fields far from one another and locating them on different micro-ecological zones, (ii) cultivating the drought-resistant crops (i.e. crops that are adapted to environmental conditions of their locality), (iii) practicing both crop cultivation and livestock raising, (iv) interplanting of crops in the fields, and (v) taking great care in the timing of agricultural activities, e.g. knowing when to sow the seeds so that the plants take maximum advantage of the scarce rainfall (cf. Porter, *ibid* pp 131-132). Most of these adaptive strategies have been disrupted in Mbeere and many people therefore are left very vulnerable to droughts and famines.

Thus being restricted to one area or one piece of land, some individual farmers are attempting intensive cultivation but without much success because of the insufficiency and/or lack of the availability of the necessary inputs and other factors to encourage agricultural intensification. What many farmers are doing is to bring one's landholding, if large enough, under extensive rather than intensive cultivation. Some are even practising slash - and - burn shifting cultivation on their landholdings but since most of the plots are small (some may be large but not all the land may be suitable for cultivation), fallow periods are fairly short and therefore the yields are very low. Although an increase in acreage under cultivation does not necessarily mean an increase in yields, there is some evidence that farmers who cultivate their fields most extensively obtain higher returns to labour in crop production than those who cultivate their fields intensively (Hurt, 1974: 25).. The problem is that some of those farmers who attempt intensive cultivation do not have all the necessary inputs and do not or are not able to follow the appropriate husbandry methods.

The grain crops cultivated by the people of Mbeere are highly labour-intensive because of weeding, guarding them against destruction by birds and wild animals, and threshing after harvest. A model of production costs of various productions as they progress from highest to lowest in terms of labour would be as follows (cf, Schneider, 1981:63);

↑ maize  
| millet  
| sorghum (native)  
| legumes  
| livestock

Because of this high labour cost of crop production the agricultural practices of the Mbeere were geared to economising on labour, e.g., slash - and - burn and inter cropping. So the cultivation of these labour intensive crops on a decreasing land availability would mean the employment of more intensive cultivation methods which would further raise the labour costs. In addition to this, as Heyer (1967) clearly points out, in marginal areas the ground must be prepared immediately or be kept prepared to allow the immediate sowing of seeds as soon as rain falls in order for the crops to take maximum advantage of erratic rainfall. In Mbeere, if possible, all the grain-crop seeds (maize, sorghum, millet) are sowed at least one week before rain falls, and legumes (beans, cowpeas, pigeon peas, green grams) are sowed immediately the rain falls.

Weeding must also be done immediately (two or three times) to avoid competition for the little amount of moisture available in the soil. Any delay in sowing and weeding would therefore result in low crop yields or failure altogether. In his emphasis on the importance of the care farmers take in the timing of agricultural activities as a key element in agriculture, Porter (1976:131) points out that it has been shown that at Kilungu, Machakos District (which has similar climatic and environmental conditions with Mbeere), to plant even a week late results in losses of potential harvest of 30-40 percent. Thus in order to meet the necessary labour demand, and in order to avoid harvest losses, there is need for a large pool of labour that can be easily mobilised. But this condition seems to have been destroyed and makes agriculture in Mbeere even more precarious and less reliable.

A shift in emphasis to crop cultivation is, therefore, a shift to a more labour (and also capital) intensive production system at a time when aggressive individualism is on the rise, and at a time when the decreasing availability of labour is becoming more serious. The land disputes and the methods resorted to by disputants in order

to defeat each other have made mutual assistance and cooperation in certain projects more difficult. Mostly affected by land disputes is the cooperation among men than women, and this may explain, among many other reasons, why there aren't men in income generating groups in Mbeere. Women groups in Mbeere, formed for the purpose of generating income, have become, in spite of the numerous and complex problems, a very important source of farm labour for those who can afford to hire them, and an extremely important source of security for many individual women and their households. In this respect they can be seen as having taken the role of extensive households and lineage based corporate groups. They are enabling women to attempt innovations that otherwise would have been impossible on individual basis.

However, it should be pointed out that although these adaptive strategies have generally been disrupted in the whole of Mbeere, the degree of disruption is being higher in the Upper Region than in the Lower Region. For example, a survey on the number of gardens possessed by a household and their spacing shows that the number of households with one garden and close at home is larger in the Upper Region than in the Lower Region where the majority of households have more than one garden, usually ranging between two and five gardens. Also the average size of a garden per household appears to be higher in the Upper Region than in the Lower Region. This is not surprising considering the availability of tractors (though few) and ox-ploughs, higher agricultural potential, and great emphasis on crop cultivation in the Upper Region.

#### Household re-organization

Particular attention was paid to the organization of a household unit in Mbeere because of <sup>the</sup> crucial role it plays in the transformation process of a means of production; in this case, the shift in emphasis from agro-pastoralism to crop cultivation. The importance of a household lies on a number of factors, viz; it is within a household that most production and consumption occurs, it is the household that has rights over the most important forms of capital and land, it is a person's household that is the only sure source of labour, and it is within it that important production decisions are

made (Karp, 1978: 161; Mbithi 1974: 21).

Thus, the household, as a locus of decision making is particularly important because its decision to engage or not to engage in a new economic opportunity is made largely on the basis of its ability to do so (especially in terms of labour) and whether or not that commitment enhances its viability. The emphasis on the availability of labour is made on the basis that, except the adverse climatic conditions, labour is the most important limiting constraint to agricultural production (Cf. Hunt, 1974:8).

When the viability of a household is threatened resistance to innovation, e.g. resistance to technological change, or the adoption of new farming methods, occurs. But this does not necessarily mean that a household has to remain rigid or unresponsive to innovation in order to maintain its viability. It is for the same purpose, that is, of maintaining its viability and, if possible, enhance it, that a household is open to changes. It will, for example, adopt new agricultural techniques which maximise its viability and will adjust itself organizationally in order to achieve this goal. A change, therefore, in the production or economic system, such as the change from subsistence agriculture to commercial or market oriented agriculture, necessitates new organizational requirements of a household in terms of its size, division of labour, and property relations.

In the case of Mbeere it must be made clear that it is the reform of the land tenure system that is the root cause of the shift in emphasis from agro-pastoralism to crop cultivation as well as changes in household organization. It was pointed out that the traditional extensive household units are changing to <sup>single</sup> household units, and that this change is more apparent in the Upper Region than in the lower Region. The two regions, it should be remembered, have different climatic and environmental conditions, the U. Region being a medium potential area and the L. Region being low potential area. Population densities for the two regions also differ, being higher in the U. Region than in the L. Region. And while the reform programme was carried out much earlier in the U. Region it is relatively new in the L. Region.

Because of these differences it was expected that changes in the household organization would differ in the two regions. In the case of the L. Region where agriculture is more precarious due to the more sphere climatic and environmental conditions and an almost total lack of technological change and other important factors, it was expected that people would retain extensive household units as an adaptive strategy as well as a means of ensuring the availability of a large pool of labour which can be mobilised easily.

As expected extended households appear, so far, to have been less affected by the individuation of the tenure system. But this should not imply that the extreme individualism fostered by land reform is not being felt. Conflicts, for example, resulting from land disputes have caused a lot of damage to the unity and cooperation of various families. However, although this extreme individualism is expected to rise it is not widespread yet. Many relatives still continue to settle close to each other and to form a cluster of homesteads. It is also not uncommon to find a large cluster of relatives settling on a piece of land belonging to one of them while they cultivate and graze their animals on lands belonging to others.

This practice of settling together or in close proximity has some very important advantages. One is that it allows the members of an extensive household or members of a cluster of homesteads of close relatives to have access to multiple micro-ecological zones for cultivation of various crops and for livestock grazing. By settling and cultivating close together it makes the protection of crops from wild animals and birds possible and effective. It is very difficult to protect the crops if a garden is isolated from others and people who have tried it have ended up losing almost everything they had planted and, of course, their labour (energy) and time. In effect this discourages individuals to settle in isolation.

Cultivation of gardens at close proximity also economises on labour for guarding crops and allows an individual to have several scattered gardens from which he expects to harvest crops although he does not spend every day and

night there to scare away the predators. As long as there are other farmers around protecting their fields, he knows that his crops are relatively safe and can therefore attend to his other fields.

The individual farmers who do settle on their individual pieces of land, and because they do not have enough labour for herding and for farm and other activities, are in fact forced to locate their garden in the area where other people have also made their gardens. In such a case whether one has enough land or not one is forced to borrow a piece or pieces of land to cultivate, and even to settle, and this is why land use restrictions encouraged by land reform would do a lot of damage.

Close settlement and cultivation patterns have another very significant advantage. On one hand they permit the grazing of the animals in an open range which is a necessary condition for raising livestock economically. On the other hand they make herding activity less labour demanding in that the animals do not require constant attention in case they enter into somebody's shamba and destroy crops. Then this enables a single person to look after a large herd of livestock without much effort, and also frees the extra labour that otherwise would have been committed to herding to be diverted to other activities, may be farm work or domestic work.

I found that labour exchanges between members of the separate households, but related and settling close together, are more frequent than between household members (related or not) whose homesteads are widely scattered from each other. Thus scattering of homesteads seems to reduce cooperation while close settlement seems to foster cooperation. In the latter case it is common to see women cooperating in harvesting and threshing millet and sorghum which is very hard work for one person. It is also common to see men cooperating in building a granary, a mururu (a grain storage container) or a hut.



In the case of the U. Region it was expected that people would favour nuclear households, first because agriculture is less precarious there given the better potential for agriculture in the area, and, second, because of the better availability of ox-ploughs and tractors which could be hired to ease the labour constraint or to compensate the loss of labour that would have been made available by the members of the extended household.

But as I tried to explain earlier the level of agricultural development in the U. Region is very low and therefore still precarious. This is in spite of the better conditions for agriculture compared to the L. Region. What there is in the U. Region is agricultural change but without development. The fact that people are now planting crops in rows and avoid interplanting does not necessarily mean higher yields. Production output per hectare is still very low for many crops. The tractor and ox-plough services, although playing a very important role in alleviating labour problems, are, however, not very effective because, in the first place, they are not enough and, secondly, the hiring charges are too high for the majority of farmers. Therefore the services are not available to most of the farmers and are also not always available when needed. Thirdly, even after having the field ploughed all the remaining work still has to be done by hand using less efficient tools.

This labour constraint is complicated further by the increasing shortage of labour for hire. Many would-be casual labourers prefer to go to urban centres or to the high potential agricultural areas where the wages are much higher. The cooperative labour groups, very popular in early days, would have been better sources of labour for many single families, particularly those whose income levels are very low, but these groups are now a thing of the past. The lineage based kinship groups from which labour could be obtained more easily for highly labour-intensive short-term activities (Schneider, 1981:113-118), have become obsolete since the implementation of the land reform programme.

As in the L. Region, there is, in the U. Region, little or no labour exchange between widely scattered but related nuclear households. More emphasis, as the survey indicates, now is put on individual efforts than on cooperation, and a stronger reliance on hired labour (when money is available) than on relatives. The closest neighbour, whether a relative or not, is, in fact, becoming a more important source of labour assistance than a kinsman who is a long distance away. One such mutual assistance members neighbours is in livestock herding. Because of the decline of a family herd, it has become rather uneconomic, in terms of return to labour in herding, for an adult to spend almost all day looking after a very small herd, usually of less than ten animals. Thus some families who are close neighbours are joining together to form a cooperative herding system whereby member of the co-opted families take turns to look after the joint livestock herds for a specified number of days. Where such cooperation is not possible then an individual family is forced to raise a few animals which can be penned or tethered almost all the morning hours until much of the farm work is done or until children come from school to drive them to where there is pasture and water.

It must be remembered that lack of open range in many parts of the Upper Region has not only discouraged the raising of a large herd but has also made herding a more labour-intensive activity because of the constant attention that must be paid to the animals to keep them off from other people's gardens, or otherwise one gets involved in a food compensation dispute.

If a family has to raise a large livestock herd then it may have to employ a herdsboy for KSh. 100/- to 120/- and a herdsman for Ksh 200/- per month, but very few people in Mbeere like to employ other people to look after their animals for fear that they might harm them in many ways. Or a family may have to do less cultivation in order to raise a bigger herd. And since herding is done mostly by women, it could also mean a serious effect on domestic work and could possibly then present more domestic problems which further constrain the viability of a household as a production unit.

All this shows how difficult it has become for a nuclear family in Mbeere, specifically in the U. Region, to raise any significant number of livestock which are a very important component of the whole production system (agro-pastoralism) given the prevailing precariousness of agriculture in Mbeere. In fact, my investigation shows that it is either the extensive family, or the nuclear household with a large membership, or the rich family that is able to raise a large livestock herd, and these are the families which perhaps would not be seriously affected by the effects of crop failure.

A closer examination of twelve households which I divided into four categories, viz; Rich/Extensive, Poor/Extensive, Rich/Nuclear, and Poor/Nuclear, show that the R/E and R/N household categories are in the best position to try new agricultural techniques particularly those which demand higher capital inputs. Like the R/E and R/N household categories, P/E households are able to engage in the cultivation of high labour-intensive crops such as tobacco (in the U. Region) and grow enough crops at the same time. While these three household categories are able to grow cash crops (i.e. cotton and tobacco) on regular basis, P/N households are not. Some even don't attempt. Also, while livestock herds tend to be larger in the P/E households than in the R/E and R/N households, the herds are smallest or not available in P/N households.

This is where a premature disruption, by land reform, of the developmental cycle of domestic groups has become an important inhibiting factor in Mbeere. According to Meyer Fortes (1948) there are three stages in the developmental cycle of domestic groups, viz; growth, fission, and dissolution. It is during the growth or the expansion stage of a domestic group that much labour is available and can be mobilised much more easily, and it is therefore the stage at which a household is most likely to attempt an agricultural innovation or a production technique which requires a large labour input. Or in order to ensure the availability of enough labour for the cultivation of a household's food supply, members of a domestic group may choose to continue to live together or in

close proximity. This has an added advantage in that by living close together or as one residential unit, the young family or the new domestic group in its early stage of development will be assured of support especially in terms of labour and security.

As people shift their emphasis from agro-pastoralism to crop cultivation it is expected that the division of labour that existed before within a household would also undergo some changes as part of a household's reorganization process to make it a more efficient and viable production unit. But an examination of several households through surveys and oral interviews indicates that there has not been any significant change in the division of labour.

For example, women still do most of the herding when children are not available, perform all the domestic work, and contribute the larger share of labour in farm activities. Sowing, weeding, harvesting and threshing sorghum and millet are all women jobs. Men are mostly engaged in opening new fields, cash crop management, casual labour, politiking, wage employment (usually outside Mbeere) and construction of residential houses and food stores. However, there is more overlap in the activities designated for men than those designated for women, and the latter end up working an average of 12.5 hours per day compared to men's average of 5.6 hours per day.

This apparent lack of change in the division of labour within a household and lack of labour co-ordination as implied by cooperation in some activities and lack of it in others, does not only cause a labour shortage but also makes the available labour less efficient.

Therefore it seems that the current change from the extensive household system to an emphasis on nuclear households is not a reorganizational process aimed at maintaining or maximizing a household's viability. It is a response to land reform and its emphasis on individualistic outlook to property rather than to the shift in emphasis from agro-pastoral

production system to crop cultivation. Thus in general the nuclear household in Mbeere is at an organizational stage which makes it, (i) less adapted to a production system that is more viable for Mbeere, (ii) weak in confronting the economic constraints resulting from the land reform programme, and (iii) more vulnerable to future droughts and famines.

#### Some Issues on Development

One of the objectives of this paper has been to raise, in a broader sense, questions on the implications of alternative development strategies in marginal areas of Kenya inhabited by pastoral and agro-pastoral societies. More specifically the paper has tried to raise questions on the validity of the individuation of the tenure system as a development strategy in Mbeere (a marginal land) given the fact that the tenure reform programme is not accompanied by other necessary development activities to absorb some, if not all, of the problems arising from the implementation of the programme.

Development plans for marginal areas of Kenya have strongly encouraged sedentarization and an economic life based on agriculture (crop cultivation) rather than on livestock or both (i.e. agro-pastoralism). In some areas land reform on the basis of individual land title has been adopted as an instrument (or strategy) to bring about this change. But there are important and necessary questions that the development planners must address themselves to in the first place. For example, what are the implications of the change to the social organization or kinship norms and their consequent effects on labour organization and commitment to livestock and crop production; what are the implications on the economic life of the people given the prevailing constraints.

The question of inequality in the distribution of land is also a crucial one and must be dealt with. Individuals with small pieces of land are economically handicapped if we take into account the capital and environmental constraints, and land use restrictions, all of which hamper him from raising both crops and livestock or to intensify crop cultivation. On the other hand there are individuals who own a lot of land, in some cases, more land

than they actually need. These individuals are economically advantaged and secure. They are advantaged in the sense that they can sell some of their landholdings to acquire capital with which to develop the remaining piece or pieces of land, or they can hold the extra land (unutilised) either to be sold when the value of land is high, or for the purpose of pushing up the value of land. The exorbitant prices of land further constrain the economic activities of the individuals with small landholdings. They are secure in the sense that they do not have to rely on crops alone because they can also raise some livestock.

Landuse restrictions do not necessarily mean that the land parcels being restricted from utilization by other people are being utilized by the owners. In some cases such parcels are left lying idle, and may be belonging to absentee landlords who need them probably for nothing else other than to raise their aggregate property needed in order to qualify for more loans. This is an added advantage to such landed individuals, who in many cases are few in number, but to the disadvantage of the majority of individuals whose economic life is jeopardized because they lack enough land to cultivate crops and/or raise livestock. In other words the majority end up in being caught in a kind of vicious circle of underdevelopment (income stagnation or deterioration). This clearly leads to an emergence of a distinct economic differentiation, i.e. the poor majority and the rich few.

This inequality in the distribution of land and its consequence calls for government intervention in land distribution processes to ensure "equal" distribution and in tightening land transfers especially where the transfer is sought in order to accumulate land for the purpose of acquiring non farm business loans. It also calls the development planners to address themselves to the question of the optimum size of landholding which an average household in a marginal area should have in order to carry out the necessary economic activities. This is a crucial factor which is very often taken for granted or ignored all together, but should be given serious consideration without which land reform loses its meaning as a strategy for rural development and for promoting the economic welfare of all individuals.

In Mbeere, where the average household size is around 8 persons, I found that the Land Control Board has established the minimum size of land to be about 4 acres in the medium potential areas, and about 10 acres in the low potential areas. According to the Board, anybody with land the size of any of the two cannot be allowed to sub-divide it (in order to sell one portion) without a letter from the agricultural officer. This is a very good policy but the irony of it all is that there are many people with less than 4 acres in medium potential areas and less than 10 acres in the low potential areas which they acquired during the land distribution process. Then what is the purpose of such a regulation when the majority of individuals have less than the minimum required size of land? The regulation applies to those who have the minimum required size or more, but there is simply no regulation aimed at helping the individuals with less than the minimum requirement. Such individuals are economically constrained and vulnerable, and would be extremely difficult for them to raise their standard of living if crop cultivation is their only source of income.

In the lower rainfall areas the importance of livestock in the economy of the people cannot be ignored. It should also be appreciated that the raising of livestock in these low rainfall areas allows people to exploit environments which are either only suitable for few drought resistant crops or which crops are altogether excluded from. In the absence of any significant technological change, e.g. irrigation works, to minimize agricultural risks and uncertainties, and to allow intensive agriculture and the cultivation of a wide variety of crops, pastoralism and agro-pastoralism remain the best ways of exploiting these low rainfall areas. The best thing then is to seek ways to develop or make these production systems more efficient rather than adopt policies or strategies which, in the first place, undermine them thus jeopardising the very economic base on which the survival and social life of the people depends.

The growing population (e.g. 3.5% per annum for Mbeere) and the increasing land scarcity in marginal areas also call for a greater attention for research on small ruminants (i.e. sheep and goats) as well as agronomic research on the drought resistant crops grown in these areas. For a long time there has been a neglect on research on sheats (sheep and goats), most emphasis being placed on cattle production but mainly in the high rainfall areas. Research on goat and sheep production is at present crucial owing to the fact that as population increases and land becomes scarce small ruminants become very important because their land requirement per head is much smaller compared to that of cattle.

There is already such a policy (Republic of Kenya, 1981:4) in which the Ministry of Livestock Development is "committed to the full development of the sheep and goat sub-sector" through research in order to develop more productive stock, through intensified extension service in order to have these stocks adopted by farmers and through a proposed credit scheme and better organization of markets which act as incentives to facilitate adoption and implementation of the policy. However, if implemented the policy would help significantly in the economic development of marginal areas, Mbeere in particular.

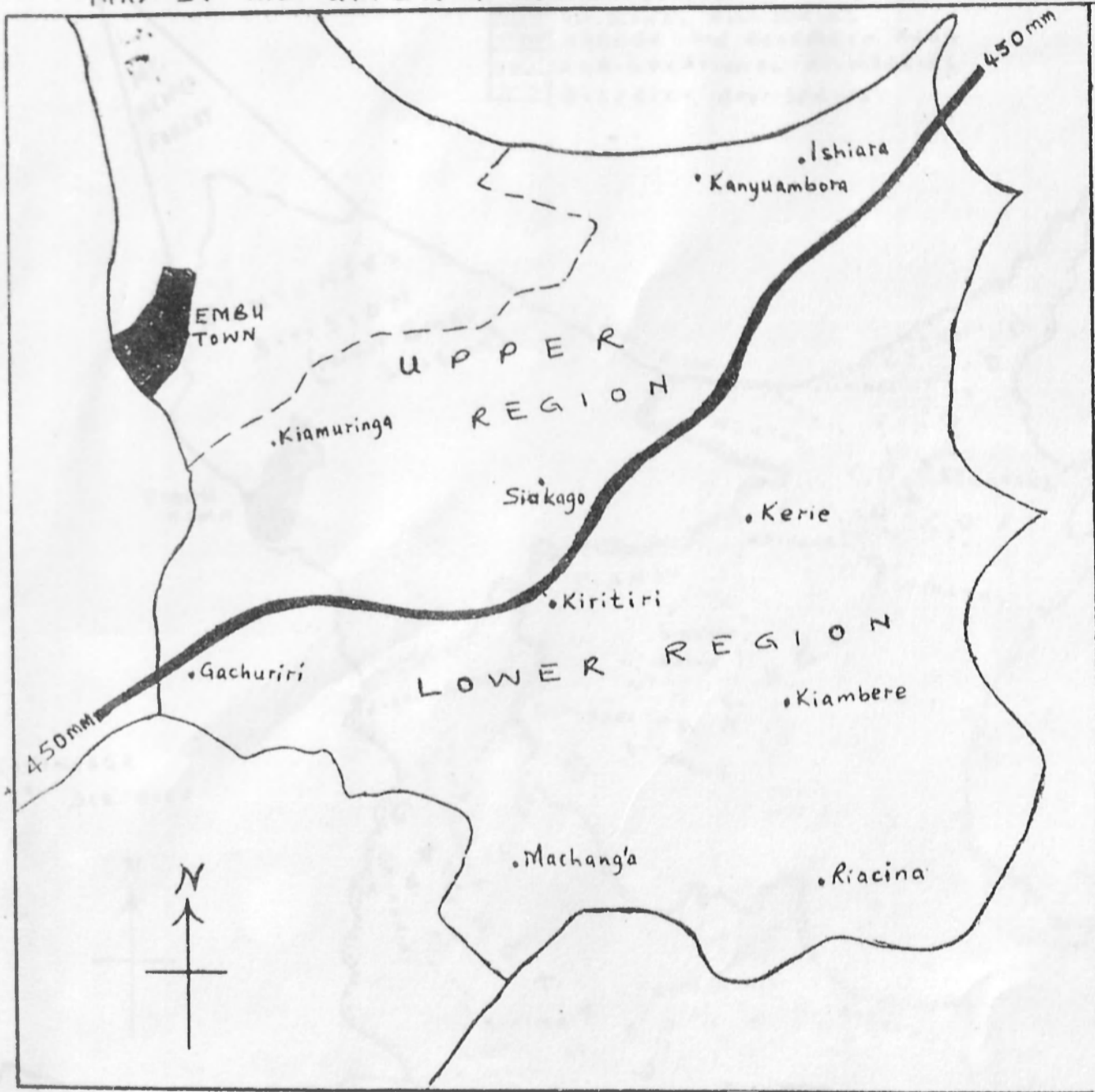
Except for a new variety of sorghum (known as Serena) which can be harvested twice a year (unlike the native variety, but still popular which is harvested only once a year) and Kat unani maize, very little else has been done in terms of research to improve the yields of the local drought-resistant crops i.e. millet, cow peas, pigeon peas and green grams. Agronomic research on these crops to improve not only their yields but also their resistance to predators and diseases is long over due. The research programme to improve the pigeon pea which is currently going on in Machakos, funded by I.D.R.C. through the University of Nairobi (Reports, 1981:25), is very encouraging and if successful as it promises it will be a significant step towards solving food problem in many marginal areas of Kenya.

Equally important is a policy contained in Sessional Paper No. 4 on National Food Policy (Republic of Kenya, 1981: 16) which aims at establishing guaranteed minimum prices for sorghum and millet in order to provide a price increase and encourage production of drought resistant food crops in arid and semi-arid areas for both human consumption and animal feed. But there is a lot more to be done in this area of providing incentives.











Also important, but often ignored, is the accommodation of the expertise of the pastoralists and agro pastoralists into the development policy formulating machinery. They have a lot to offer from their long experience in the exploitation of these marginal lands. Contrary to the common belief they are not necessarily resistant to change.

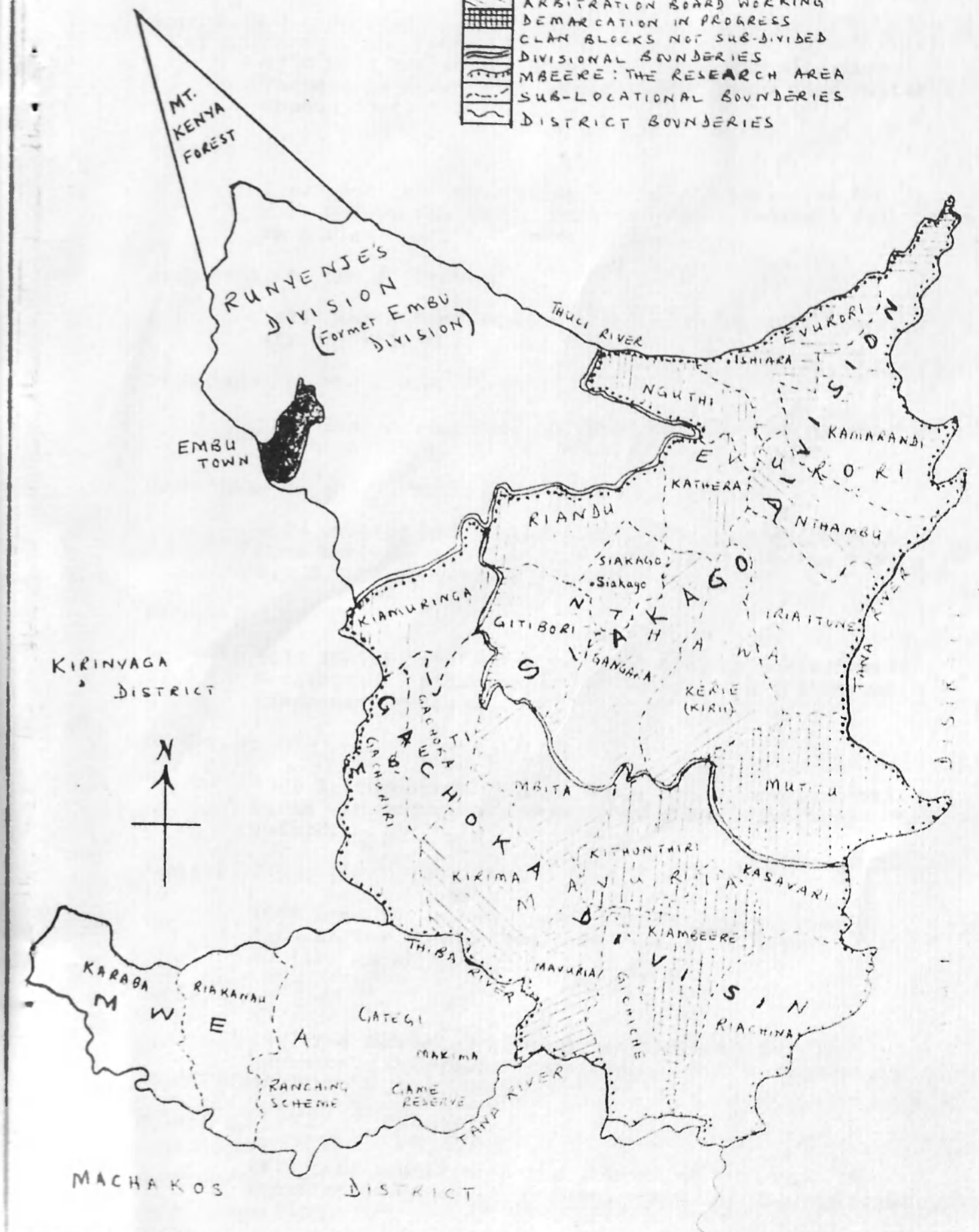


MAP 1: THE UPPER & LOWER REGIONS



MAP 2: LAND ADJUDICATION - MBEERE.

- KEY
-  REGISTRATION COMPLETED
  -  REGISTRATION WAITING
  -  OBJECTIONS GOING ON
  -  ARBITRATION BOARD WORKING
  -  DEMARCATION IN PROGRESS
  -  CLAN BLOCKS NOT SUB-DIVIDED
  -  DIVISIONAL BOUNDARIES
  -  MBEERE: THE RESEARCH AREA
  -  SUB-LOCAL BOUNDARIES
  -  DISTRICT BOUNDARIES



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