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AN ANALYSIS OF CONTINUED SEMI-NOMADISM ON THE KAPUTIEI MAASAI GROUP BANCHES: SOCIOLOGICAL AND ECOLOGICAL FACTORS

by

John M. Haldeman

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INSTITUTE FOR DEVELOPMENT STUDIES

UNIVERSITY OF NAIROBI

P.O. Box 30197

Nairobi, Kenya

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ABSTRACT

This report consists of analyses and conclusions based on the material presented in two previous reports concerning the Group Ranch Development Programme in Kaputiei Section of Kenya Masailand.

The interrelated sociological and ecological factors are examined which have led the Kaputiei Maasai to continue their traditional semi-nomadic practices instead of settling on their group ranches. In addition, the issue of whether the successes of the pilot scheme on Poka group ranch can be replicated on the other group ranches in Kaputiei Section is analysed in detail.
INTRODUCTION

This report represents one aspect of a larger study which has been going on for the past three years, an analysis of the pilot scheme of the Kaputiei group ranch development programme and some of its implications for development in Masailand. Research began when the author was the manager of Foka group ranch, the pilot scheme, as a United States Peace Corps Volunteer working with the Range Management Division. He subsequently continued research as a member of the Kaputiei Study of the Institute for Development Studies, University of Nairobi, and as a rural sociologist with the UNDP/FAO Range Management Project.

The purpose of this report, prepared for the Swedish International Development Authority (SIDA) at the request of the Range Management Division of the Ministry of Agriculture, is to analyse and draw conclusions regarding the possibilities of replicating the successes of the pilot scheme, based on the author's previous field research and the information contained in his two recent reports.*3 and 4*These reports were intended to describe in detail the contemporary situation in South Kaputiei to serve as a basis for comparison when subsequent studies are conducted of the changes resulting from the development programme.

More important, these reports should make the planners more familiar with conditions in the project area so that the development programme can be based on the existing structure. Abrupt change is likely to meet with the Maasai's legendary resistance. At present most of the Maasai are firmly committed to semi-nomadism, but according to the development proposals contained in the UNDP/FAO Kaputiei Report it is expected that they will suddenly reject their traditional system of resource utilisation and permanently settle on the group ranches. This report describes the interrelated sociological and ecological factors which will probably lead the Maasai to reject the UNDP/FAO proposals.

The area defined as South Kaputiei includes six individual ranches of 2,000 acres each just south of the small towns of Sultan Hamud and Emali and six group ranches, Foka (the pilot scheme), Molin, Olkarkar, Kiboko, Muko and Merueshi. A map is appended on which the movements between ranches can be followed. The individual ranches and Foka group ranch have developed rapidly the past few years, but traditional conditions prevail unchanged in the rest of South Kaputiei. South Kaputiei was selected for this study because of the author's familiarity with the residents and conditions, the contrast...
between the developed and traditional areas and the fact that the group ranches in this region will be the first in Kaputiei to be developed with funds from the International Development Agency and the Swedish International Development Authority.

Methodology

One of the favourite practices of many Maasai is deceiving inquisitive outsiders. They feel no non-Maasai has any right to know what they really think. However, the author has had extensive contact with the Maasai of South Kaputiei since 1968 and knows all thirty members of Poka group ranch, the six individual ranchers and dozens of Maasai from other group ranches. Most of the information in this report was gathered by lengthy informal interviews with those Maasai with whom substantial rapport had been established.
CONTINUED SEMI-NOMADISM IN SOUTH KAPUTIEI

This report is a description and analysis of the relationship of traditional Maasai semi-nomadism to the Group Ranch Development Programme which the Government is introducing in Kaputiei Section. The six individual ranches were established in about 1962 and Poka group ranch in 1964/65. These Maasai settled and remained on their respective ranches until 1970. This was in direct contrast to the situation in the surrounding undeveloped region called the Reserve by many local Maasai, where the majority of the people continued their traditional semi-nomadic practices. Although the entire section had been divided into individual and group ranches by 1965, most of the people in the Reserve paid little or no attention to the boundaries. They lived in their base camps when conditions were favourable, often but not always on the ranch for which they had signed up; however, they also regularly moved to other localities, usually due to the erratic distribution of rainfall. During the dry seasons, the people moved their herds to areas where there was adequate pasture for the livestock, and group ranch and section boundaries presented no barriers to these movements.

The perseverance of traditional migration patterns and the irrelevance of the group ranch boundaries is clear from the movements on the Merueshi group ranch from the dry to the wet season in 1970. During the dry season, 40 (80%) of the 50 members (excluding the two who are permanent residents of Poka) were living more than 20 miles away from their own ranch. Moreover, 39 of the 40 were living outside their own sub-tribal territory — they were deep in Kisongo Section in the Amboseli area. There were only 19 men on the ranch at this time, and nine of them were non-members. In July, after the long rains had produced an excellent stand of grass, there were 61 men on Merueshi, and 20 of them were non-members.

Due to the Lack of Development?

Some Maasai in the Reserve stated that since there was no development except on Poka and the individual ranches there was no reason for them to alter their customary semi-nomadic practices. It is true that there was no development in the Reserve from the time that the group ranches were originally established in 1965 until April 1971.
the author completed his research in the area, except on Kiboko where development began in 1970 in the area near the Nairobi-Mombasa highway and three new individual ranches were set up. The International Development Agency/Swedish International Development Authority loans for water development, cattle dips, immature steers and high quality bulls had not yet been released. As a result, the present situation on Merueshi group ranch is virtually the same as it was in 1929 — the year that the two boreholes were drilled, and the migration patterns described by the author in 1971 were still the traditional ones.

The Maasai in the Reserve have contended that they have not settled because the conditions have remained unchanged, and that they will settle when there are water development and dips, but this is dubious at best. It is true that the individual ranchers and Poka members remained on their ranches because they realized that, although there might be better grazing temporarily available in other areas, the advantages of the dips were more important in the long run. However, when the entire Kaputiei Section is fully developed there will be dips and water everywhere. Will this mean that the Maasai will not have to give up their traditional semi-nomadism? These men often smile and answer with characteristic understatement. "Well, perhaps that could happen."

The Effect of Legal Title

During the protracted hiatus between the original division of Kaputiei Section into group ranches and the issuing of legal title, some Maasai in the Reserve said that semi-nomadism was continuing because they lacked the legal authority to close the boundaries. The long awaited title deeds were issued to the individual and group ranchers in South Kaputiei in 1970. Yet, the extensive movements between sections and group ranches during the 1970-71 dry season took place after these individual and group ranchers and received legal title to the land.

No Poka resident moved onto or grazed and watered his livestock on an individual ranch without receiving permission from the owner. However, those men who moved to other group ranches did not ask the legal owners, the group representatives who hold the land title in trust for all of the group ranch members and at present also serve as the ranch committee. Instead, they followed their traditions: if they moved into an existing kraal camp, they asked permission from
the residents; if they established their own kraal camp, they asked no one. Water was requested from the customary users at man-made water points.

Attitudes of the Kaputiei Maasai toward Semi-Nomadism

The Maasai in the Reserve have shown by their actions during the past six years that they would live on their own ranches so long as there was sufficient grass. At such times, their brothers, fathers, sons, in-laws, clansmen and stock friends from other group ranches were welcome to join them. When there was insufficient grass on their own ranches, their previous hospitality was reciprocated and they moved to other group ranches.

Many Maasai believe that their semi-nomadic system is immutable and that any deviation from it will result in disaster for themselves and their herds. A common answer which the elders in the more arid areas give to the suggestion that they should settle is, "Either you move or you die." One man who was asked why he had moved from Merueshi to Amboseli in 1970 replied, "Where it doesn't rain, grass doesn't grow. Since there had been no rain on Merueshi, but it had rained in Amboseli, I moved to Amboseli."

Several men have pointed out to the author that they move not because they like to but because they feel that it is necessary in order for their cattle to be in the best possible condition, and since the people are dependent upon their cattle for subsistence the condition of the cattle must take precedence over the comfort of the people. Many of the Maasai in the Reserve are now interested in the advantages of settled life, particularly in developing their homesteads, so that they might have comfortable houses, furniture and farms, and sending their children to day schools. However, they often point out how futile it would be for a person to invest time and money in a comfortable house if later he would be forced to move because it has not rained in his area.

The Maasai's claims that they had not settled on their ranches because "there is no development in the area" or "we don't have the legal authority to close the boundaries" were usually convenient rationalizations which they used to evade the basic issue, namely, the

1. Dr. H. Hedlund, a social anthropologist associated with the University of Nairobi who also studied the migration patterns in Kaputiei in 1970/71, wrote regarding the members of Merueshi, Mbuko, Mbilin and Poka group ranches and the Maasai from Kisongo Section who moved onto Kiboko group ranch that, "None of these families asked the group representatives for permission to stay there."
frequent fluctuations in grazing conditions, primarily as a result of the erratic distribution of rainfall. Full development of the section will pose no obstacle to continued movement, and there was no decrease in movement after the ranches received title deed in 1970, when the members could have legally prevented entry by outsiders.

The Maasai characteristically answer probing questions from non-Maasai with replies which they think that the questioner wants to hear; rarely do they reveal their true attitudes. However, the migrations of the people in South Kaputiei during the recent dry seasons reflect their true beliefs and the environmental necessity on which they are based. When the author confronted two Maasai who had declared earlier that they would remain within their ranch boundaries and had subsequently moved to another ranch, they replied, "How can anyone be expected to stay on a ranch which has no grass?"

**RECIPROCITY**

The key to the Maasai system of resource utilisation is reciprocity. Land, forage and natural water supplies are communally owned, and outsiders are refused access only in very unusual circumstances.

The events of the 1969-70 and 1970-71 dry seasons once again demonstrated to the Maasai in the project area the value of their traditional principles of reciprocity and communal ownership of land. In 1969-70, the Kisongo Maasai allowed a large number of Kaputiei from the Merueshi, Mbuko, Olkarkar, Mbilin and Kiboko group ranches to move several thousand cattle deep into their territory. They permitted this because they had taken their herds into Kaputiei areas in the past and they were certain that at some future time they would again need access to Kaputiei grazing lands. Then a severe drought struck much of eastern Kenya in 1970-71, but the Kaputiei were fortunate and received some rain. Within a short time there were scores of Kisongo grazing and watering thousands of cattle in Kaputiei territory. In South Kaputiei

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2. This important issue is dealt with more fully in the sections on "The Traditional System of Land Usage" and "Traditional Regulations Concerning Semi-Nomadism" in the previous report, "Migration Patterns in South Kaputiei, 1969-71". (4)
many Kisongo went to the ranches which had adequate forage - Merueshi, Kiboko and Olikarar.

The movements of the Merueshi and Kiboko members between their neighboring ranches at this same time is another example of traditional reciprocity. In July 1970 there were eight Kiboko members living on Merueshi. In early 1971 seven of these men returned to Kiboko, most of them accompanied by several or all of the men from their kraal camps on Merueshi. The Kaputiei and Kiboko Maasai were returning the hospitality which had previously been granted to them by the Kisongo and Merueshi people, and in so doing they were ensuring that similar assistance would again be available to them in the future.

Legal Title

When the Kaputiei moved into Kisongo Section and the Kiboko members moved onto the Merueshi group ranch during the 1969-70 dry season, the legal titles to the group ranches had not been issued. Soon after this the individual and group ranches in South Kaputiei received title deeds. It was after the legal titles had been granted that the Kisongo moved into Kaputiei, the Merueshi members moved onto Kiboko group ranch, and the Poka members were permitted access to the individual ranches. Even though these Maasai had the legal authority to prevent entrance onto their ranches, the traditional principle of reciprocity continued.

Now that they have legal title, those ranches with adequate dry season grazing and consistent rainfall, Kiboko for example, could close their boundaries. The precedent for this policy has already been established on the individual ranches and Poka group ranch. This attitude would be a major departure from tradition and would be regarded as selfish and anti-social, but the desire to develop has led several other tribes in Kenya to abandon many of their traditions and this process is beginning with some Maasai, particularly those who are educated. If the ranches with favourable conditions close their boundaries, the

3. According to Dr. Hedlund, Maasai from the Kisongo and Matapato Sections grazed their livestock in Central Kaputiei on Mashuru group ranch. (5, p. 12.)

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members of the group ranches without sufficient dry season grazing and those in areas of inconsistent rainfall, Mbuko for example, would be placed in a new and difficult position. This could bring a level of friction which the traditional system successfully avoided. Moreover, many Maasai in other parts of Kenya are interested in the group ranch experiment in Kaputiei, and they might reject this form of development if they see a large part of the population cut off from the dry season grazing grounds.

The second possibility is that the Maasai in the Reserve will continue with their traditional migration patterns. There are a number of reasons why this could be the case. For one thing, the residents of this area have their customary wet and dry season grazing grounds which are not always included in the proposed group ranches of which they are members. It is unlikely that the men who normally move to a certain area during the dry season will stop unless effective controls are introduced. These are traditional migration patterns, and although the members of many other Kenya tribes have radically altered their life styles, the distinguishing characteristic of the Maasai has been their conservatism. It is extremely unlikely that they will adopt new practices unless it is to their advantage, which would not be the case if confinement to their ranches resulted in the deterioration of the condition of their cattle. One elder predicted that the Maasai in the more arid areas would continue to move as they had in the past because the issuing of title deeds would not make the rainfall more consistent. Considering the possibility of a group ranch closing its borders he commented, "If a group ranch wants to refuse this year, let them refuse. But next year, when they ask for help, they will be refused. Then what would they do?" The members of the group ranches know what will happen if they refuse to let outsiders on their ranches, and only those Kaputiei like the individual ranchers who may feel that they will never need help because their ranches are in exceptionally favourable areas would be willing to close their boundaries.

Individual Ranchers

Since the individual ranchers have settled on their ranches and do not move with their own herds, they do not normally allow others to move onto their ranches. Contrary to tradition, these Maasai have developed a very strong sense of private ownership. This attitude was legalised in 1970 when they received title deeds.

However, due to the seriousness of the situation during the 1970-71 dry season, the individual ranchers felt they had to open their...
borders. Five of the six individual ranchers allowed a total of nineteen Poka residents from the group ranch just south of them to move livestock onto their ranches. No one wanted to move onto the sixth ranch because there was not enough grass. These progressive ranchers could not break with tradition when their brothers, clanmen, in-laws, stock-friends and political allies were in need. The traditional practice of reciprocity was revived, although in somewhat muted form. One individual rancher explained why he had allowed a Poka man's cattle to graze and water on his ranch:

"His wife, a member of my clan, came to me and begged for help. She told me, "Our cattle are starving and therefore we are starving," I said to her, "Tell your husband to bring all of his cattle to my ranch. Then it will be you and your family and me and mine. If the rains fail, then we will all starve together."

Social Bonds

At the heart of the Maasai system of reciprocity are the powerful bonds of solidarity between the members of specific families, clans, age-sets and sub-tribes. In addition, there is the special relationship between stock-friends. All of these people are obligated by social convention to assist one another when the need arises. The strength of the bond is in proportion to the proximity of the relationship. For example, brothers have much stronger ties than men who are simply members of the same sub-tribe.

Members of the Kaputiei sub-tribe share a special identity relative to the Maasai tribe as a whole. Members of particular clans and age-sets are dispersed not only throughout the sub-tribe but throughout all of Maasailand. The families are more localised, although there are brothers who live at opposite ends of the section. Virtually every man in South Kaputiei has close ties with members of several or all of the group ranches in the area. Given these ties and varying conditions of the range, movement between the ranches must be expected to continue.

WHY THESE RANCHES AND THESE BOUNDARIES?

In general, the proposed group ranches do not correspond with the traditional migration patterns, and in some cases, what is now a group ranch does not include both the wet and dry season grazing.
areas customarily used by the residents. As the FAO experts pointed out in the Kaputiei Report, "While natural boundaries such as rivers or hillsides are easily recognizable, their use as boundaries is not always compatible with efficient water development or grazing management." (1, p. 58) In addition, the boundaries of the group ranches resulted in a very inequitable allotment of potential grazing resource to the members of the different ranches, ranging from 6.0 to 19.1 stock units per adult equivalent of the human population. (1, Table 23, opposite p. 58.)

**Sociologically Determined Boundaries: Elatia**

Since there are so many drawbacks to these group ranch boundaries, one wonders how they were chosen. The Kaputiei Report states that these were "sociologically determined boundaries" (1, p. 9) and that the group ranches were based solely on "sociological groupings of the population." (1, p. 58) According to the Kaputiei Report, the Kaputiei sub-tribe is composed of small political units or groups (elatias) which form the basis of the group ranches. The implication is that the territory and membership of each group ranch in the section corresponds to the membership and customarily used territory of the elatia of that area.

It should be noted that there were no sociological studies conducted by the UNDP/FAO Range Management Project in Kaputiei. In the Maasai language, the word elatia means the members of one kraal camp, all of whom are bound to one another by a number of reciprocal obligations. The term elatia may also be used to describe two or three small kraal camps clustered close together. However, as a general rule, if there are two normal sized kraal camps a quarter of a mile apart, they are two separate elatias. Thus, the elatia is not a permanent, stable division of the Maasai in the same manner as the moieties, clans, age-sets and sub-tribes. The membership of an elatia fluctuates; it is simply the people who happen to be living in the same kraal camp at the same time. If a man moves his family and cattle from one kraal camp to another, his elatia membership changes accordingly.

In the past when the Maasai banded together in large kraal camps of ten to fifteen or more family heads to protect themselves from cattle raiders, the elatia was the primary unit of defense. However, the importance of the elatia has declined with the need for defense.
The role of the elatia as the "sociological basis of the group ranches" has been thoroughly investigated by the author. This issue has been discussed at length with dozens of Kaputiei and with members of other sub-tribes; the Purko, Kesekonyokie, Dalalekutuk, Loita, Siria, Samburu and both the Loitokitok and Tanzania Kisongo. In all these groups an elatia means the members of one kraal camp, or of camps in the same very small neighbourhood.

Why was it claimed that the elatia was the basis of the group ranches? A former member of the Kaputiei Section Development Committee (the Ifeasai leaders who persuaded the Kaputiei to agree to divide the section's land into individual and group ranches, along with Peter Sadero, now the Rift Valley Provincial Range Officer) explained that this term may have been chosen because it was thought that when people became members of a group ranch it would be similar to people living together in a large kraal camp, hence elatia. In effect then this term represents the ideal rather than the actual. 4

Clan Groupings

Certain experts on the UNDP/FAO Range Management Project have been under the impression that each of the Kaputiei group ranches was the traditional land unit of a separate clan. Communal ownership of specific units of land by a clan is common among sedentary, agricultural tribes in Kenya. However, the Maasai clan system is patrilineal and membership is generally dispersed throughout all of Masailand. For example, there are members of the Lukumai clan among the Kaputiei, Kisongo, Purko, Matapato, etc. In Kaputiei Section, the group ranches are not based on traditional clan grazing grounds.

Since the Maasai clans are patrilineal, fathers and sons and as well as brothers should be members of the same ranch if the ranches had been set up according to clan. An analysis of the residents of Merueshi group ranch in July 1970 revealed that many clansmen were

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4. A.H. Jacobs, a social-anthropologist at the University of Nairobi who has carried out extensive research among the Maasai, wrote in a letter:

The so-called "sociological groupings" of the FAO Kaputiei Report do not in fact correspond to the basic sociological units which Maasai recognise as territorially or socially important. Indeed, it should be pointed out that the identification of these "social groups" in Maasai society was not done by an anthropologist or sociologist but rather by a grasslands botanist.
members of different group ranches. A few examples are four brothers, three Merueshi and one Kiboko; two brothers, one Merueshi and one Okarkar; four brothers, three Mbuko and one Merueshi; three brothers, two Merueshi and one Kiboko. Although these men were members of four different ranches, they were all living on Merueshi at that time. It is important to point out that of the dozens of Kaputiei Maasai with whom this issue has been extensively discussed, not one has ever stated that the group ranches were based on elatia, clan or any other traditional grouping.

In the past individual Maasai in South Kaputiei were known as residents of certain localities, and these localities were named after a permanent source of water. Today the South Kaputiei group ranches are based on these same permanent sources of water, but all of the customary users of each water point are not included in the same group ranch. For example, the customary residents of Simba Springs and Elkelonyeti wells are divided between Okarkar and Kiboko, and Merueshi and Kiboko group ranches respectively. Moreover, the fact that a man was a resident of the Merueshi area did not mean that he and his cattle remained there permanently, only that this was where he had established his base camp and his local socio-political loyalties and where he regularly returned after moving his cattle according to the erratic distribution of rainfall.\footnote{The extensive movements in South Kaputiei from 1969 until 1971, as described in the author's previous report, were still the traditional movement patterns in this region.}

Determination of Group Ranch Membership

J.K. ole Sein, who played an important role in the establishment of the Kaputiei group ranches in the early sixties as a leader in the Kaputiei Section Development Committee and Vice Chairman of the Kajiado African District Council, explained that when the section leaders had divided the land into group ranches, they explained the location of the different ranches to the Maasai who were free to become members of any group ranch. If a man wanted to move to another area when the ranches were being formed, ole Sein told him, "If you want to go there, just register your name there."\footnote{Personal communication.}

However, the Kaputiei Section Development Committee did recommend that...
people join the ranch in the area where they were residing at the time. Consequently, as ole Sein described the situation, "The members of Olkarkar are the people who were there" when registration was being carried out. 

The group ranch boundaries were tentatively established by members of the Kaputiei Section Development Committee and Range Management Division officials in consultation with the local residents; they were later demarcated by Land Adjudication Officers after discussions with the representatives of neighbouring ranches. The fact that there was a great deal of friction between the members of the different ranches and sections regarding these boundaries (for example, between the members of Mbilin and the surrounding ranches) resulting in alterations amounting to thousands of acres, reveals how tenuous these group ranch boundaries are.

Evolution of the Group Ranches

For many years progressive Maasai and concerned Government officials had been attempting to persuade the Maasai to settle or to organise systematic, rotational grazing schemes. The goal was to have the people develop their land and preserve the range resource. Since the majority of the Maasai were adamantly opposed to certain aspects of the schemes, this was a nearly fruitless task. However the severe drought followed by floods in 1959-62, convinced many of these pastoralists that there were serious limitations in their traditional system. In the past when there was virtually unlimited access to grazing areas, large herds were built up in times of drought on the principle that the more cattle one had the better the chances of at least some surviving. In 1959-62, this system failed badly because there were so many cattle in the reduced area available to the Maasai as the result of Kenya's colonisation that there was insufficient forage everywhere.

The most important factor leading to the formation of the group ranches was the anxiety of the Maasai regarding the future ownership of their traditional territory. Throughout Maasailand there was deep concern over the fact that the 1911 treaty between the Maasai

7. Dr. Hedlund and ole Sein discussed the issue of what served as the basis for the group ranches and their boundaries:

Dr. Hedlund: "Do the group ranches build upon any traditional grazing grounds or traditional boundaries?"

Ole Sein: "We don't have any traditional grounds, we were trying to create them."
and the British government, which guaranteed the integrity of their tribal lands, would become invalid at Independence. Masai leaders felt that the only way to compensate for the loss of this treaty was to obtain legal title to the land.

Since the Kaputiei were a small Masai sub-tribe occupying a thin strip of land between the Akamba, an agricultural tribe of approximately one million people, and the Kisongo, the largest of the Masai sub-tribes, they felt that their position was particularly insecure. Consequently, the Kaputiei were the first Masai sub-tribe to divide their entire section into individual and group ranches and apply for legal titles. Later the Kaputiei were told that the title deeds could be used as security for development loans. Since part of the Kaputiei territory borders on European ranches, many of these feaisai had seen the effects of modern ranching techniques, particularly water development, cattle dips and improved and exotic stock. As a result, a large number of Kaputiei were anxious for this form of development. Several Kaputiei leaders and residents have stated unequivocally that the major reason for establishing the group ranches was to obtain title deeds to legalise the ownership of the traditional lands and to be used as security for development loans.

According to these men, there was no attempt to establish ranches which would be suitable for permanent settlement since the majority of the Masai in the Reserve never agreed to abandon semi-nomadism. Considering the resistance to change exhibited by the Masai in the past, their leaders must be congratulated for having accomplished this first step - persuading the people to agree to the group ranch principle so that development could begin. Although the Poka men intended to settle, the majority of the members of the other group ranches in the Reserve look upon the group ranches as artificial creations, with no traditional or social basis, established primarily in order to secure legal title to the land.

IS POKA REPLICALE?

It is envisioned that, as a result of the group ranch development programme, the Kaputiei Masai will abandon their traditional practice of semi-nomadism and settle on separate, self-contained group ranches. In the past few years there have been precedents for this form of development in the area: six Masai settled on individual ranches in about 1962 and another thirty settled...
on Poka group ranch in 1964/65. The individual ranches are immediately south of the towns of Sultan Hamud and Emali, at the northern edge of Kaputiei territory, and Poka is just south of the individual ranches.

There has been significant progress on Poka which is the pilot scheme of the group ranch development programme in Kaputiei, particularly as the result of water development, the construction of two cattle dips, and the purchase of immature steers, Boran breeding stock from Northeast Province and Sahiwal bulls. All of this development was financed by loans to the individual members of the Agricultural Finance Corporation (AFC). 9

The cattle on Poka are watered daily and dipped weekly. In contrast, most of the livestock in the Reserve are watered every second day except during the wet season when surface water is available and are not dipped. Moreover, the Poka cattle cover far shorter distances on their daily treks to water and grazing. The Poka cattle are in better condition, have a lower mortality rate, and produce more milk than the cattle in the undeveloped areas of the section. In order to place the developments on Poka in the proper perspective, the conditions on this ranch are contrasted with those found on Merueshi, a nearby Kaputiei group ranch which is still in the pre-development stage.

TABLE ONE: THE CONTRAST BETWEEN POKA AND MERUESHI GROUP RANCHES 9

<table>
<thead>
<tr>
<th>MEMBERS who (have), What:</th>
<th>POKA</th>
<th>MERUESHI</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Rejected semi-nomadism</td>
<td>100%</td>
<td>10% (approx)</td>
</tr>
<tr>
<td>2) Cattle water daily during the dry season</td>
<td>100%</td>
<td>None</td>
</tr>
<tr>
<td>3) Dip or spray their cattle weekly</td>
<td>100%</td>
<td>4%</td>
</tr>
<tr>
<td>4) Sahiwal or Boran bulls</td>
<td>87%</td>
<td>4%</td>
</tr>
<tr>
<td>* 5) Live in kraal camps of one or two families</td>
<td>38%</td>
<td>2%</td>
</tr>
<tr>
<td>* 6) House outside the kraal camp fence</td>
<td>62%</td>
<td>4%</td>
</tr>
</tbody>
</table>

* Cond. next page

8. It should be noted that the short repayment period and high interest rates have been extremely unpopular with the Poka members. This issue deserves thorough investigation and adjustments in order to ensure harmonious relations with the ranchers in the project area.

9. The material in this table is from 3, where this and other data are explained and analysed.

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TABLE ONE: CONTD.

<table>
<thead>
<tr>
<th>MEMBERS who (have), whose:</th>
<th>POKA</th>
<th>MERURSHI</th>
</tr>
</thead>
<tbody>
<tr>
<td>7) Live in non-traditional houses</td>
<td>24%</td>
<td>None</td>
</tr>
<tr>
<td>8) Sell milk daily</td>
<td>47%</td>
<td>None</td>
</tr>
<tr>
<td>9) Own a bicycle</td>
<td>72%</td>
<td>9%</td>
</tr>
<tr>
<td>10) Wear western clothes</td>
<td>48%</td>
<td>2%</td>
</tr>
<tr>
<td>11) Engage in cultivation</td>
<td>60%</td>
<td>4%</td>
</tr>
<tr>
<td>12) Attended school</td>
<td>3%</td>
<td>13%</td>
</tr>
<tr>
<td>13) Send children to school</td>
<td>95%</td>
<td>13%</td>
</tr>
<tr>
<td>14) Percentage of the children who attend school</td>
<td>59%</td>
<td>2%</td>
</tr>
</tbody>
</table>

* Includes only members residing on the ranch.
++ Includes only school-age children.

Poka group ranch has been successful because the members were progressive Maasai who wanted to settle and develop, and on the ranch they had the advantages of water development and cattle dips. Poka is evidence that group ranching can work in Masailand. The Poka members have conclusively demonstrated to the Government and to other Maasai that it is possible for ordinary, uneducated Maasai to settle and develop. The crucial question which must be answered regarding Poka's role as the pilot scheme in Kaputiei (and in many respects, for the group ranch development programme throughout Masailand) is whether this form of development is replicable. Will water development and the construction of cattle dips on the other Kaputiei group ranches result in the members settling within the confines of their ranches and progressing in the Poka mold?

The practice of semi-nomadism has definitely inhibited development among the Maasai. The meagreness of their material culture is primarily a consequence of the fact that possessions must be limited to what they or their donkeys can carry. Once settled, the Poka members developed rapidly, in stark contrast to the majority of the people in the Reserve, (See Table One.)

10. This question is particularly relevant since the UNDP/FAO Range Management experts felt that "Kaputiei should be considered as a test area..." and that "the group ranch idea should be viewed as a distinct possibility for a large area of Kenya and other African Countries". (1, p. 78.)

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The Poka members settled and remained within the confines of their ranch boundaries from 1964/65 until 1970. It is important to point out that the only reason that this settlement was possible was that during this entire period there was always sufficient forage on the ranch to support the livestock. Even when Maasai in other parts of the section were forced by local droughts or the lack of dry season grazing to move their cattle, for example during the 1969-70 dry season, it was never necessary for the Poka residents to move their herds.

However, during the 1970-71 dry season there was inadequate forage on Poka for the first time due to an army worm invasion, and after having happily adapted to settled life for seven years, 47% of the members were forced by lack of grass to leave their permanent kraal camps. One quarter (24%) of the members moved off Poka and another 7% daily sent all of their cattle to a neighbouring individual ranch, so that one third (31%) of the Poka members had all of their cattle grazing and watering off the ranch. In addition, another one third (31%) of the members grazed and watered some of their stock, particularly calves, off the ranch, making nearly two thirds (62%) of the members with cattle living or grazing and watering outside Poka group ranch. All those questioned gave the same reason for moving after they had settled — there was insufficient grass on the ranch.

Two Poka members are generally considered by the others to be the most progressive men on the ranch. One was chairman of the ranch for nearly five years and the other is the present treasurer. They were the first Poka men to build large square houses with corrugated iron roofs, modern furniture, kitchens and latrines. They were also among the first Maasai in South Kaputiei to begin farming on a regular basis, and they have both privately bought Boran and Sahiwal bulls and cows. The wealthier older man has a small shop near his kraal camp, a modern corral and a cattle crush for treating his stock, and he has recently bought a new Datsun pick-up and employed a driver. The other had a thirteen acre farm in 1970, though game destroyed nearly all of the maize, beans and pigeon peas which had been planted, far larger than the one-half to two acre farms of the

11. During the 1970-71 dry season the Poka residents proved that they firmly believe in dipping their cattle, for all the cattle which were moved off the ranch were dipped weekly. In order to accomplish this, the herds were moved to areas where there was access to a dip or they were trekked long distances once a week to be dipped.
other Poka residents. In early 1971, he bought a trailer made from a Peugeot frame which is drawn by oxen and carries two 44-gallon drums of water, when at the other kraal camps on Poka and in the Reserve water is carried on the women's backs. However, as a result of the army worm invasion during the 1970-71 dry season, there was virtually no forage left in the areas where these two extremely progressive men normally grazed their stock. Consequently, both of them were forced to leave their comfortable houses, modern conveniences and farms and moved their families and herds off Poka and into traditional kraal camps on Nkama group ranch.

One of the most influential committee members explained why the Poka residents had reverted to the traditional practice of semi-nomadism:

Don't think that it's only the Merueshi and Muko people who will continue to move about. Even we Poka people have not entirely abandoned nomadism. If it rains on Okarkar but not on Poka, we won't stay here when there is plenty of grass on the next ranch. Don't I have a father and brothers on other group ranches? Are they going to watch while my cattle and family starve?

The most important lesson which can be learned from the actions of the Poka members during the 1970-71 dry season is that rejection of semi-nomadism is not solely dependent upon the progressive attitude of the people and the physical development of the area: such as water development, cattle dips and schools, but also upon the ecological conditions. The only reason that the Poka members remained on their ranch for seven years was favourable conditions and when conditions grew worse they were forced to revert to their traditional semi-nomadic practices, regardless of their commitment to development. The obvious implication is that progressive Masai will settle on group ranches when it is possible, and when it is impossible they will continue to be semi-nomadic. The replication of development in the Poka mold requires that the ecological conditions permit permanent settlement.

THE ECOLOGICAL DETERMINANT

Jacobs, in his report to the British Ministry of Overseas Development "The Pastoral Masai of Kenya", recommended that development in Masailand be based on the ecologically self-contained units, enkutoto, which were recognised by the Masai, (6, p. 62) and contained both the wet and dry season grazing areas customarily used by the residents of each locality, (6, p. 36). According to Dr. R.K. Davis, formerly the leader of the Kaputiei Study for the
Since the Kaputiei Maasai are semi-nomadic this means that their customary wet season and dry season grazing areas are ideally to be included in the ranch assigned to each group. How well social and ecological balances have been served by land adjudication remains to be seen.

Maasai Viewpoint

The progressive Maasai leaders on the Kaputiei Section Development Committee initially proposed in the early 1960s that the entire section should be divided into individual ranches, but the great majority of the Kaputiei contended that only the traditional communal ownership of the land allowed each individual to take advantage of the fluctuating conditions in different areas. They felt that the crucial factor was the erratic distribution of rainfall which meant that permanent settlement would be impossible in many areas of the section.

It was only after considerable persuasion by the members of the Kaputiei Section Development Committee and Government officials that the Kaputiei elders granted permission to a few Maasai to establish ranches on what had been formerly communal land. These were the six individual ranchers in 1962 and the thirty Poka members in 1964, and they settled and remained on the respective ranches except for the Poka members during the 1970-71 dry season. However, many Kaputiei Maasai have pointed out that there are considerable ecological differences between the individual ranches and Poka group ranch and the more arid parts of the Reserve.

One individual rancher settled in 1962, purchased immature steers in the Reserve, fattened them on his ranch and later sold them to the Kenya Meat Commission. Since these steers were watered daily, dipped weekly and covered comparatively short distances when walking to water and grazing areas, they were of better quality and fetched higher prices than similar steers from the Reserve. The multiple replication of this transition from subsistence pastoralism to commercial beef ranching is the goal of the group ranch development programme in Kaputiei, as described in the UNDP/FAO twelve-year livestock and finance projections for each group ranch. However, this successful rancher pointed out that the individual ranchers and Poka members chose to establish their ranches in the area just south of Sultan Hamud and Emali because settlement in this area was possible due to...
the unusually favourable conditions of relatively high and consistent rainfall and the presence of both wet and dry season forage. The presence of the railway pipeline also meant that water development would not be a difficult problem.

According to this rancher, the ecological conditions in many areas of Kaputiei Section are very different from those found on the individual ranches and Poka. On Mbuko and much of Merueshi and Mbilin group ranches the grass dries out quickly after the rains and, with the exception of a short bush (sericocomois hildebrandtii), there is no dry season forage. Rainfall is very inconsistent in this region and local droughts are common. He commented that "if the members of Merueshi and Mbuko attempt to settle permanently on these ranches their cattle would starve because there is often no grass."

Ecologists' Viewpoint

In March 1970, Dr. R.K. Davis, two ecologists from the University of Nairobi, and the author toured the Sultan Hamud individual ranches and Poka, Mbilin, Mbuko and Merueshi group ranches. Both of the ecologists, D. Western and M. Rainey who were familiar with other similar range areas in Kenya, expressed serious doubts about the practicability of dividing the more arid areas of Kaputiei into such small ranches. They agreed that Poka was ecologically viable as a self-contained unit, but they pointed out that the combination of wet and dry season forage available on Poka does not exist in other areas such as Mbuko and portions of Mbilin and Merueshi group ranches. They also emphasized that it is not Poka but these other ranches that are more typical of the remainder of Kajiado District. Western stated that because of the unfavourable ecological conditions it was impossible for the cattle to remain permanently on the ranches in the more arid zones. At that time cattle from Mbuko, Merueshi, Mbilin, Okarkar and Kiboko group ranches had been moved twenty to fifty miles from their base camps in Kaputiei Section to the Amboseli area in Kisongo Section.

Rotational Grazing Systems

In order to conserve the range resource and to allow the Maasai to settle within their respective ranch boundaries, the ultimate viability of each group ranch as a self-contained unit requires the
successful implementation of an effective rotational grazing system. The ecologist on the UNDP/FAO Range Management Project, H. van Swinderen, conducted an extensive survey of Kaputiei Section in order to determine the ecological zones and the vegetation and landscape types. He then attempted to plan rotational grazing systems for each of the Kaputiei group ranches based on the principles of seasonal grazing and assuming the completion of the proposed water development programmes. However, he discovered that this was impossible because most of the group ranches do not contain a suitable balance of wet and dry season grasses. He felt that the majority of the group ranches were too small to establish viable rotational grazing systems which would include areas to be set aside for resting or for emergency grazing in the case of rain failure. In his opinion, if the livestock are confined to their respective ranches the result would be constant grazing and trampling in the same areas which would inhibit the regrowth of the grasses. He added, "Since nearly all of the grass types in Kaputiei are unsuitable for continuous grazing, if the group ranches are developed as proposed I am afraid that they will suffer serious overgrazing."

Van Swinderen was particularly worried that some Maasai would settle on group ranches where settlement is marginally possible. While they might be able to remain with their livestock on these ranches for a few years, in his opinion the long run effect would be overgrazing and the deterioration of the range resource. He pointed out that while Poka was eminently suitable for settlement, it was not typical of the other Kaputiei group ranches nor of general range conditions in Kajiado District:

Kaputiei is above average in comparison with the rest of Kajiado District, and Poka is the best ranch in Kaputiei. Ecologically, Poka is definitely not representative of the Kaputiei group ranches because the grass cover on Poka is sufficiently rich to allow rotational grazing within the ranch.\footnote{Van Swinderen's analyses of the group ranches are presented in Table Two.}

Van Swinderen's analyses of the group ranches are presented in Table Two.
<table>
<thead>
<tr>
<th>RANCH</th>
<th>VIABLE?</th>
<th>ACREAGE</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>A) SOUTH KAPUTIEI</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>POKA</td>
<td>YES</td>
<td>25,500</td>
<td>The soil of much of the ranch is well-structured, deep sandy loam. This is the best ranch in Kaputiei in terms of composition and cover of palatable grasses.</td>
</tr>
<tr>
<td>MERUESHI</td>
<td>Probably NO</td>
<td>31,100</td>
<td>Widespread sheet erosion on the red soils (one-third of the ranch) and weed infestation on the volcanics (one-half of the ranch) caused by heavy use in the past, due to the presence of two boreholes since 1929.</td>
</tr>
<tr>
<td>MBUKO</td>
<td>NO</td>
<td>69,900</td>
<td>The soils are sandy, shallow and eroded. Nearly 60% of the ranch is dense bush and another 30% is bushed grassland with light grass cover. There is only minute dry season grazing.</td>
</tr>
<tr>
<td>MBILIN</td>
<td>Probably NO</td>
<td>38,000</td>
<td>Not large enough considering the conditions: one-fourth of the ranch is covered with dense bush and another one-fourth is black cotton valleys with unpalatable grass species.</td>
</tr>
<tr>
<td>OKARKAR</td>
<td>Probably YES</td>
<td>31,600</td>
<td>Open grassland but hilly and rocky and rather heavily used in the past due to the presence of Simba Springs.</td>
</tr>
<tr>
<td>KIBOKO</td>
<td>YES</td>
<td>35,800</td>
<td>Three-fourths of the ranch is rich Themeda grassland, primarily on red sandy loam plateaus. The ranch has not been heavily stocked and is therefore still in good condition.</td>
</tr>
</tbody>
</table>

13. This analysis of the ecological viability of the fourteen group ranches in Kaputiei Section is based only on the ecological factors and the assumption that the stocking rate would be maintained within the carrying capacity of each ranch. The important problems of erratic rainfall and the cultural and economic pressures on the Maasai to increase the size of their herds are not considered.
B) THE REMAINDER OF KAPUTIEI

<table>
<thead>
<tr>
<th>RANCH</th>
<th>Viable?</th>
<th>Acreage</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>NKAMA</td>
<td>YES</td>
<td>106,700</td>
<td>The major advantage of this ranch is its large size. Therefore, within the ranch there are many different habitats which would make it possible to practice seasonal grazing. This ranch is the size which ecologists prefer.</td>
</tr>
<tr>
<td>ARROI</td>
<td>Probably YES</td>
<td>48,400</td>
<td>Very good central alluvial plain with above average rainfall. The viability is doubtful because the western portion of the ranch is covered with dense bush on steep slopes.</td>
</tr>
<tr>
<td>MASHERU/IMARORO</td>
<td>YES</td>
<td>61,400</td>
<td>Even alone, Mashuru (35,000 acres) is viable. This ranch has excellent grass cover and composition. There is little bush and the ranch has not been heavily grazed. Imaroro (26,400) which alone is not viable due to the fact that it is covered with bush and has virtually no open grassland, merged with Mashuru and the resulting unit is ecologically viable.</td>
</tr>
<tr>
<td>ERANKAU</td>
<td>NO</td>
<td>31,100</td>
<td>As a result of the conditions in this area, all three of these ranches are too small to be ecologically viable.</td>
</tr>
<tr>
<td>ILMANEN</td>
<td>NO</td>
<td>30,800</td>
<td>Of the total (nearly 100,000) acreage: 62% is bush, 19% is bushed grassland and only 15% is grassland. (The remaining 4% is woodland and wooded grassland.) If the ranches were joined rotational grazing should be possible and the resulting unit would probably be viable.</td>
</tr>
<tr>
<td>EMARTI</td>
<td>NO</td>
<td>38,000</td>
<td></td>
</tr>
<tr>
<td>EMPUTIA-NGAT</td>
<td>YES</td>
<td>50,500</td>
<td>Both ranches are large, possess good quality open grasslands and have no bush problem.</td>
</tr>
<tr>
<td>EMBOLIAL</td>
<td>YES</td>
<td>62,200</td>
<td></td>
</tr>
</tbody>
</table>

Ecology of Commercial Ranches Adjacent to Kaputiei

The management practises on the developed European ranches which lie just north of Kaputiei also cast doubt on the viability of the Kaputiei group ranches as self-contained units. Although conditions on these commercial ranches are much more favourable than in the more arid regions of the Reserve and the stocking rates are kept within the carrying capacity of the rangeland, even these ranches cannot always be managed as totally self-contained units, and the cattle are sent to
The Group Ranch Concept: A Solution to the Problem of Stock Control?

There were a number of sound reasons for the Government's decision to develop the bulk of Masailand as group ranches:

1) The haphazard allocation of individual ranches needed to be halted in order to protect the interests of the Masai as a whole, so that the majority would not be exploited by the indiscriminate grabbing of the best land by a few of their more "progressive" tribesmen.

2) The Government policy was followed of not allowing any suitable land to remain undeveloped.

3) It was realised that the development of Masailand must be based on economically viable units or the entire programme would be self-defeating.

4) Developing Masailand as group rather than individual ranches would permit the Government the advantages of economies of scale in water development and the construction of cattle dips.

5) The Masai would receive legal title to the land which would result in the traditional system of communal ownership and its inherent problems being replaced by group ownership of specific tracts of land. It was hoped that these group ranches would be the solution to the awesome problem of stock control since legal ownership of defined units would demand a greater concern for the preservation of the range resource by the members of each group ranch.

The traditional communal ownership of land could be a serious obstacle to progress by preventing any individual or group of Masai from settling and developing. For example, if a group of Masai tried to settle in one place, it would be possible for other Masai with thousands of cattle to converge and finish off the grass, making it impossible for those who had decided to settle to remain. By acquiring title deeds each group ranch would have the legal authority to keep outsiders from trespassing and so would be able to conserve its own grazing resource. For all of the above reasons the author is convinced that group ranching is the most logical and pragmatic method of developing Kaputiei Section. The Government can initiate development on group ranches without producing a landless class, which would result in a serious political and social problem, or causing radical changes in the traditional way of life of these Masai.

However title deeds will not prevent group ranch members from overstocking their own ranches.

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THE OBSTACLE: PROBLEMS WITH NO PROPOSED SOLUTIONS

However, while agreeing to the principle of group ranching, the author is not convinced that the specific group ranches in Kaputiei Section will be viable as self-contained units on which permanent settlement is either possible or desirable. Although the development programme will open up new areas and permit a more rational use of the total range resource as the result of water development and the construction of cattle dips, the Masai graziers will still not be able to fully utilise the rangelands because of unfavourable ecological conditions and the erratic distribution of rainfall. Because of this, several of the group ranches in Kaputiei Section could well prove non-viable.

Unfavourable Ecological Conditions

A variety of unfavourable ecological conditions exist on many of the Kaputiei group ranches. In several parts of the section there are areas where the soils are shallow, sandy, volcanic or rocky. Boulders and large rocks cover considerable expanses of Olkarkar, Nkama and other group ranches. Sheet erosion is widespread on Merueshi and in the central highlands, and there are numerous valleys with steep, bush covered slopes where herding is particularly difficult and hazardous.

On many group ranches bush, weeds, and inferior unpalatable grasses reduce the livestock carrying capacity and limit the dry season grazing. There is no simple remedy to this problem of unsuitable forage types, particularly when it is the consequence of poor soils and low rainfall. However, with better rangeland management, including rotational grazing, suitable stocking rates and controlled burning and bush clearing, the situation could be improved. Unfortunately in the opinion of the UNDP/FAO range ecologist, it is impossible to establish effective rotational grazing systems on many of the Kaputiei group ranches, particularly on the ranches on which it is most needed, and therefore a range management programme directed towards rehabilitating and preserving the range resource is not feasible.

Erratic Rainfall

A basic theme which has run throughout this report and the author's recent report to the UNDP/FAO Range Management Project is that a major constraint which inhibits the full utilisation of the range resource is the erratic distribution of rainfall. Due to its unpredictability, the erratic distribution of rainfall was not considered in Table Two in which the ecological viability of the Kaputiei group ranches was analysed.
resource in Kaputiei Section is the erratic distribution of rainfall. In this semi-arid region the rains often fail in some parts of the section and all areas do not receive equal amounts of rain during each rainy season; there are often seasons when rain falls abundantly in one place while a neighbouring area receives little or none. As a result there are wide variations in the livestock carrying capacities of different areas at the same time, and of the same area at different times. Although a farmer in the Kenya highlands could earn a reasonable living on a twenty acre plot, this would be impossible in Kaputiei Section.

Virtually no rain fell in Kaputiei Section from mid 1959 until the torrential downpours of November 1961. During this two-and-one-half year drought most of the cattle died and the pastoralists suffered widespread famine. Jacobs wrote that "by August of 1961 the District Commissioner had estimated that the Maasai of Kajiado District alone had lost over 400,000 head of cattle, or close to 80% of their former herds." (6,p.1.) Since there were so few cattle left, the grasses became firmly re-established during the several years of above average rainfall which followed. By 1968 the rangelands in Kaputiei Section were in excellent condition and the cattle population had increased dramatically and was well dispersed throughout the section. In January and February of that year the human and livestock censuses were carried out; in June the livestock carrying capacities of the group ranches were determined, and this information served as the basis for the UNDP/FAO Range Management Project's proposals concerning the development of Kaputiei Section.

After heavy short rains at the end of 1968, the long rains in 1969 failed, and by October calves and weaker cattle were dying in the Reserve. Although there was heavy rainfall on Poka in late 1969, these short rains were light or failed completely in many areas of South Kaputiei. Nearly all of the Mbuko and 80% of the Merueshi members, as well as residents of Mbilin, Olkarkar and Kiboko left their own ranches and even their sub-tribal territory and moved their herds twenty to fifty miles to Amboseli in the heart of Kisongo Section where abundant rain had fallen.

The long rains which came a few months later were heavy, so the Kaputiei returned to their own section, although not necessarily to their own group ranches. There was drought in much of eastern Kenya in 1970 and early 1971, but the residents of South Kaputiei were

16. The long rains normally fall from March or April until May, and the short rains during November and December.
fortunate in that there was rain on the individual ranches and on parts of Poka, Kiboko, Merueshi and Olkarkar group ranches, so members of Mbuko, Mbilin and Poka group ranches and scores of Maasai from Kisongo Section grazed and watered their cattle on Kiboko and Merueshi.

It is obvious that the inconsistent rainfall in Kaputiei is a crucial factor in the lives of the residents, playing an important role in determining their migration patterns. During years of sufficient rainfall the cattle are in excellent condition and produce plentiful milk, the people are well fed and there is no necessity to move the herds. However, during years of inadequate rainfall the cattle lose condition, young, old, and weak livestock die, and milk production is drastically reduced; consequently, the people are hungry and are forced to move in search of pasture. The experts on the UNDP/FAO Range Management Project based their twelve-year finance and livestock projections and the proposal that the Kaputiei group ranches be developed as separate, self-contained units on the unusually favourable condition which they found in Kaputiei Section in 1968. When seen in terms of the twelve-year period from 1959-71, the exceptionally good conditions of 1968 can be contrasted with the normal and drought conditions which, together, make up the total rainfall pattern in this section.

One of the strongest recommendations of this report is that development planning for semi-arid regions must take into consideration the long term ecological conditions, in particular the inconsistent pattern of rainfall. The erratic distribution of rainfall in Kaputiei Section during the past three years, which has resulted in a number of local droughts, is evidence that the long term ecological viability of several of the group ranches is extremely doubtful. Furthermore, it could be extremely difficult and perhaps impossible for the members of these group ranches to meet their loan repayment commitments.

Mbuko: A Non Viable Group Ranch

In contrast to Poka and the individual ranches which are in an area of heavy and consistent rainfall, Mbuko is an example of a group ranch which is completely unsuitable for permanent settlement. Rainfall on Mbuko is very erratic and consequently the livestock carrying capacity varies enormously at different times. In January 1968 there were 85 members and 5,460 cattle (2,857 stock units) on Mbuko. The UNDP/FAO range management experts had proposed that the ranch would carry 2,278 stock units from the third to the twelfth year.
of development. However in March 1971, because of drought there were only three members and approximately fifty cattle on the entire ranch. Instead of the projected 30 acres per stock unit there were 1,400 acres for each cow, and even these cattle were thin. Mbuko group ranch was a vast expanse of bare, brown earth dotted with skeletons of thorn bush.

The mass exodus from Mbuko group ranch during the 1971 dry season was the result of the members' very pragmatic decisions to move their cattle to other areas because there was virtually no forage available on the ranch. One comparatively progressive man accurately expressed the general attitude of the residents when he was asked why he had left Mbuko although he was a registered member: "What were my cattle supposed to eat... dust?" The fact that it is not possible to develop this nearly 70,000 acre ranch as a self-contained unit is particularly relevant to the future planning of similar rangeland areas in other parts of Kenya.

CONCLUSION

Due to the ecological conditions, the optimal form of development in Kaputiei Section is commercial beef ranching. If the area in the Section proposed for group ranch development were divided equally, each adult male would receive 471 acres which would not be viable as a commercial beef ranch. Consequently, some form of group ranching is the only possible solution to the development of this area. There is a definite trend toward change and modernisation among many of the younger men in Kaputiei Section, members of the Kololiki and Mauani age sets, ranging in age from about twenty to forty. However since a man's herd is his subsistence and his wealth, the basic interest of virtually every Maasai in the project area is to ensure that his livestock are in the best possible condition.

As a result of the ecological factors, particularly the erratic and unequal distribution of rainfall, there are wide variations in the quality and quantity of forage available in different areas and at different times, and the people feel compelled to move their cattle to take advantage of these different and fluctuating conditions. When there was insufficient grass on Poka group ranch during the 1970-71 dry season, even the progressive men most firmly committed to the settled way of life left their developed homesteads and reverted to the traditional practice of semi-nomadism. The inescapable conclusion is that the members of the group ranches

17. This figure was reached using statistics from the Kaputiei Report.
will only remain within the confines of their respective ranch boundaries if the ecological conditions permit; since this is not the case in much of the Reserve, the residents of those areas will not settle. As a consequence of the combination of ecological conditions, the practice of communal resource utilisation and the fact that the group ranches are artificial units with no traditional or sociological basis, movement between the group ranches can be expected to continue. As long as the ecological conditions remain unchanged and the people continue to be subsistence pastoralists, it is unrealistic to expect these Maasai to abandon their traditional semi-nomadism, for it was in response to the ecological conditions of semi-arid regions that this system evolved and was maintained for centuries.

If the Maasai are to settle and develop on separate group ranches, it is essential that each of these ranches be ecologically viable over the long run as a self-contained unit. This is not the case for many of the group ranches in Kaputiei as is evident from Table Two and the description of the irregular rainfall pattern in this region.

In addition, a fundamental problem in Masailand is that the traditional system of resource utilisation depends on natural controls of the livestock numbers and unlimited forage. In the past seventy years, while the natural controls have been significantly reduced (and this development programme will reduce them still further), the available grazing areas have been severely limited by the partitioning of the land and the increases in the human and livestock populations. If the natural increases of the herds are unchecked, the consequence is overstocking which could eventually result in the deterioration of the range resource itself. Effective controls must be established, acceptable to the owners of the land and livestock and firmly based on existing ecological and sociological factors.

RECOMMENDATIONS

Development planners must realise that nomadic and semi-nomadic pastoralists can only settle if the ecological conditions are favorable, regardless of physical development such as water development and cattle dips. Development plans for arid and semi-arid areas must take the traditional system of resource utilisation of the indigenous
pastoralists into account, so that development proposals will be based on the existing structure and will be acceptable to the owners of the land and livestock. The long term ecological conditions, particularly the inconsistent rainfall pattern, must be taken into account so that effective rotational grazing systems can be set up on ecologically viable units. It would then be possible for the pastoralists to remain within defined areas and become responsible for the preservation of the range resource by controlling the number of stock.

There should be a thorough analysis of the results of the development programme on the group ranches in Kaputiei before development plans are drawn up for group ranches in other pastoral areas. Planning must be the result of a dialogue between the planners, the implementers and the Masai, and the cooperation of all those involved must be assured if policy proposals are to be effectively carried out.
BIBLIOGRAPHY


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Michael Gwynn, ecologist, UNDP/FAO Range Management Project.

Hans Hedlund, social anthropologist, formerly with the University of Nairobi.

Alan Jacobs, social anthropologist, University of Nairobi.

Roy Lewis, veterinarian, formerly with the Kenya Veterinary Department and then the UNDP/FAO Range Management Project.

Michael Rainey, ecologist, University of Nairobi.

Jonathan ole Solitei, former Chairman of the Kaputiei Section Development Committee.

Hugo van Swinderen, ecologist, formerly with the UNDP/FAO Range Management Project.

David Western, ecologist, University of Nairobi.

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