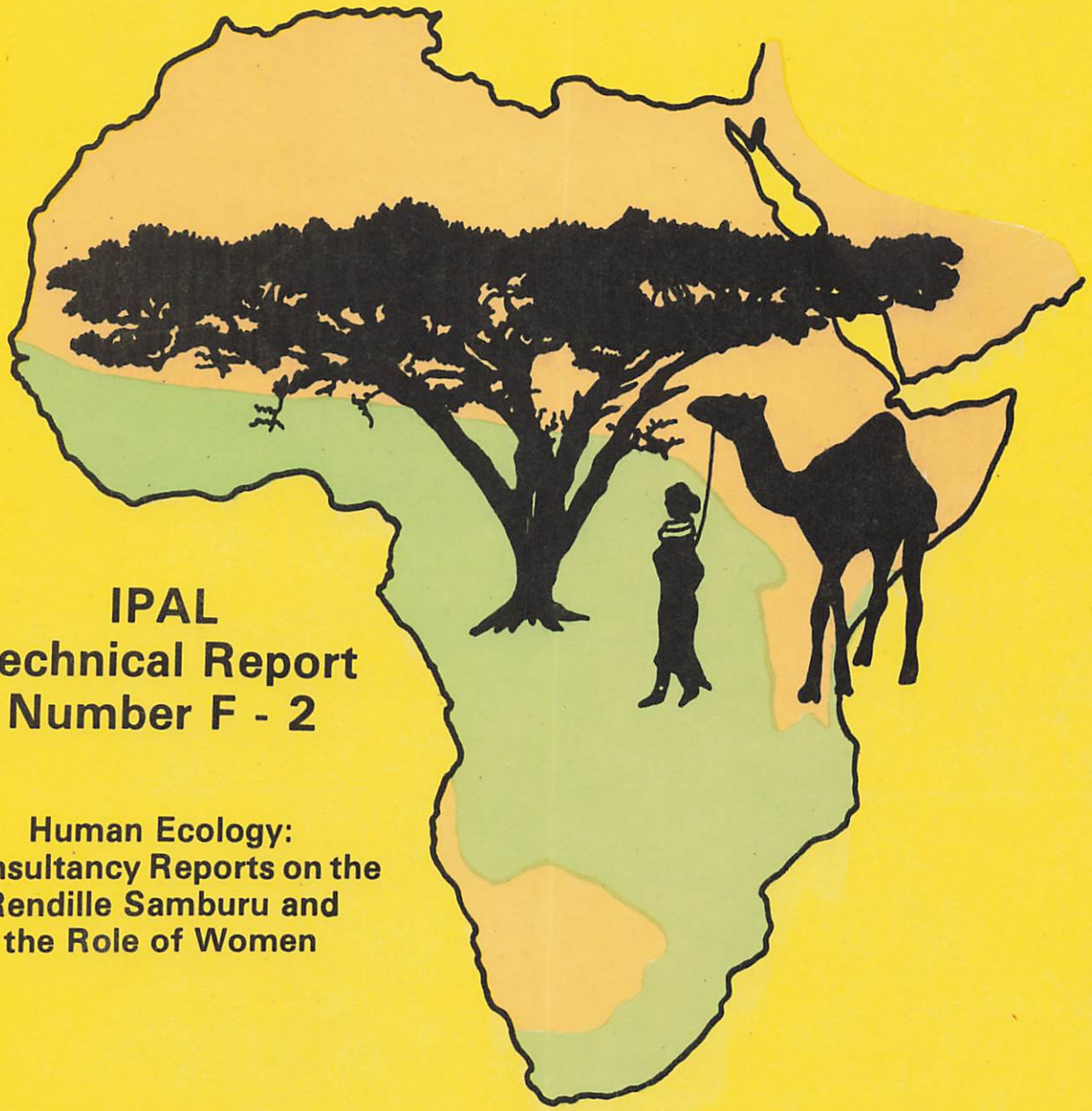
Federal Republic of Germany

Unesco Programme on Man and the Biosphere (MAB)

Republic of Kenya

Integrated Project in Arid Lands (IPAL)



IPAL Technical Report Number F - 2

Human Ecology: Consultancy Reports on the Rendille Samburu and the Role of Women

MAN AND THE BIOSPHERE PROGRAMME

Project 3: Impact of Human Activities and Land Use Practices on Grazing Lands

FORWARD

The three studies reported in this technical report are the results of short term consultancies commissioned by the project as part of the presently on-going Human Ecology programme of IPAL. These studies present preliminary background information for studies which will be later reported in depth by the projects Human Ecologist. Observations and conclusions drawn in the studies are those of the authors and do not necessarily reflect the views of the project.

W.J. Lusigi
IPAL Project Co-ordinator

IPAL Technical Report Number F - 2

FACTORS RELATED TO STOCK OWNERSHIP AND POPULATION MOVEMENTS; AND PERCEPTION OF LAND PRESSURE AND OTHER ENVIRONMENTAL CHANGES AMONG THE RENDILLE IN MARSABIT DISTRICT

by
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HUMAN ECOLOGY: A STUDY OF ENVIRONMENTAL PERCEPTION AND MODES OF SURVIVAL AMONG THE SAMBURU IN KENYA

by
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THE ROLE OF RENDILLE WOMEN

by
Gemma J. Adu Bobie

UNESCO - MAB FRG Integrated Project in Arid Lands

SUMMARY INTRODUCTION TO IPAL AND THE TECHNICAL REPORT SERIES

The Integrated Project in Arid Lands (IPAL) was established by UNESCO with financial support from UNEP in 1976 with the aim of finding direct solutions to the most urgent environmental problems associated with desert encroachment and ecological degradation of arid lands. It forms part of the international UNESCO programme, Man and the Biosphere (MAB) which has links not only with UNEP's Desertification Unit but also with FAO, in response to the Plan of Action adopted by the 1977 United Nations Conference on Desertification. It is an example of the type of pilot activity that UNESCO and UNEP, together with other organizations and a number of governments, are trying to promote to provide the scientific basis for the rehabilitation and rational management of arid and semi-arid zone ecosystems, through integrated programmes of research (including survey, observation and experimentation), training and demonstration. Phase III of the project, 1980-1983, is supported by funds in trust to UNESCO provided by the Federal Republic of Germany.

During the first phases of IPAL, a co-ordination unit was established in Nairobi and the initial field work started in the arid zone of northern Kenya in a working area of 22,500 km^2 situated between Lake Turkana and Marsabit Mountain. The project now operates five field stations at Mount Kulal, Olturot, Kargi, Korr and Ngurunit, with the project headquarters in Marsabit which is the administrative centre of the District. Since its establishment the project has researched several aspects of experimental management of the region, concentrating upon 'human ecology' of the nomadic pastoralists in dynamic inter-relationship with the animals, plants and the other resources of a drought-prone, uncertain environment.

During the next three years (1980-83), the investigations in progress will be extended and intensified to develop resource management plans of models for the area, taking into account the increasing human population, the trend towards sedentarization, the degradation of primary productivity, and the increasing incidence of soil erosion, all of which are factors resulting in the necessity for constant famine relief measures in this region. Results obtained in the project are the subject of a number of training workshops and seminars in which Kenyan and regional scientists from the Sudano-Sahelian region participate.

This report is one of a series published by IPAL describing technical findings of the project and, where appropriate, giving management recommendations relating to the central problems of ecological degradation in the arid zone. The reports are divided into the following categories distinguished by the base colours of their covers:

A. general, introductory and historical: white

B. climate and hydrology: blue

C. geology, geomorphology and soils: brown

D. vegetation: green

E. livestock and other animal life: red

F. social and anthropological: yellow

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Figure. 1 Location of study area

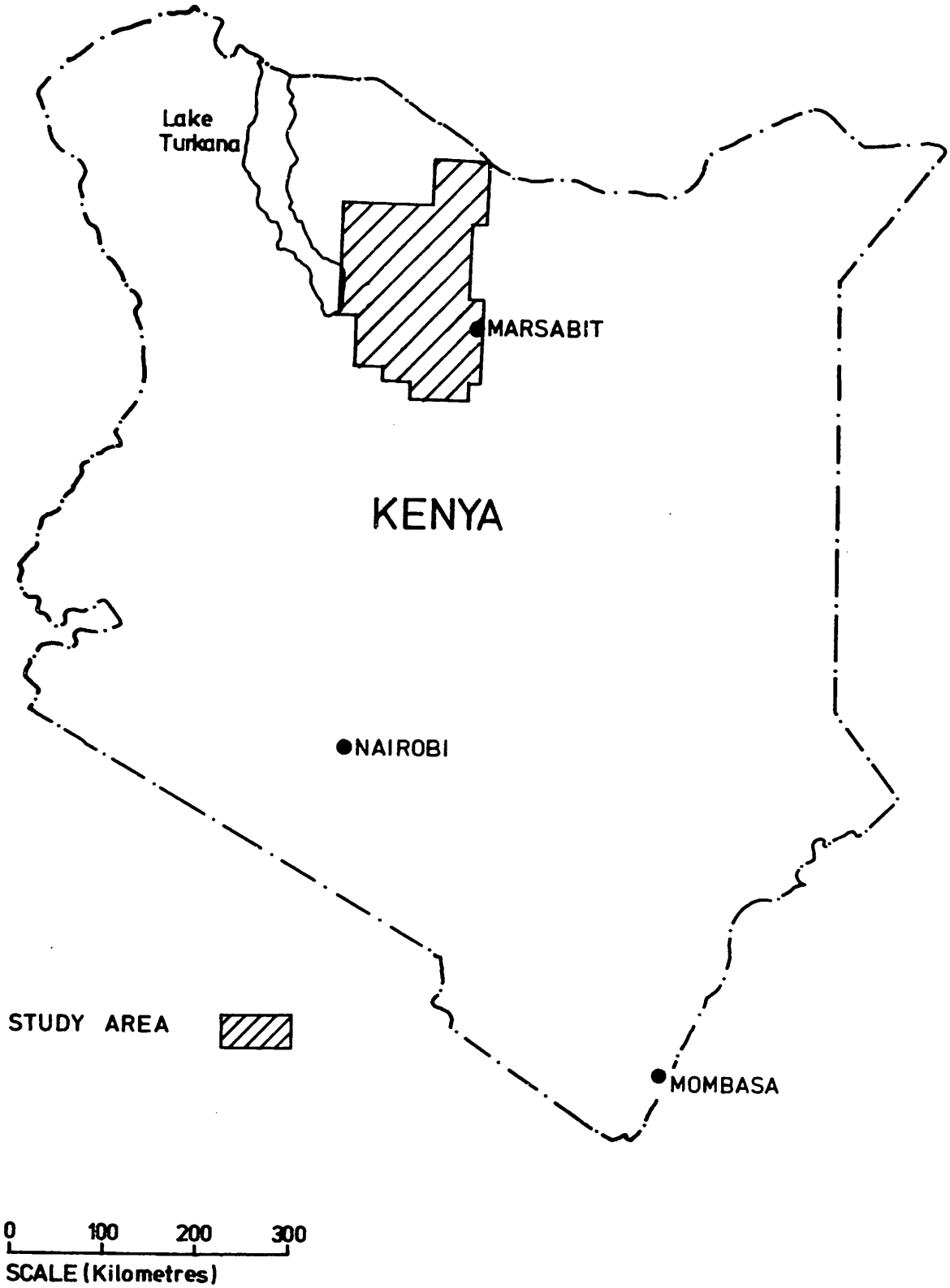
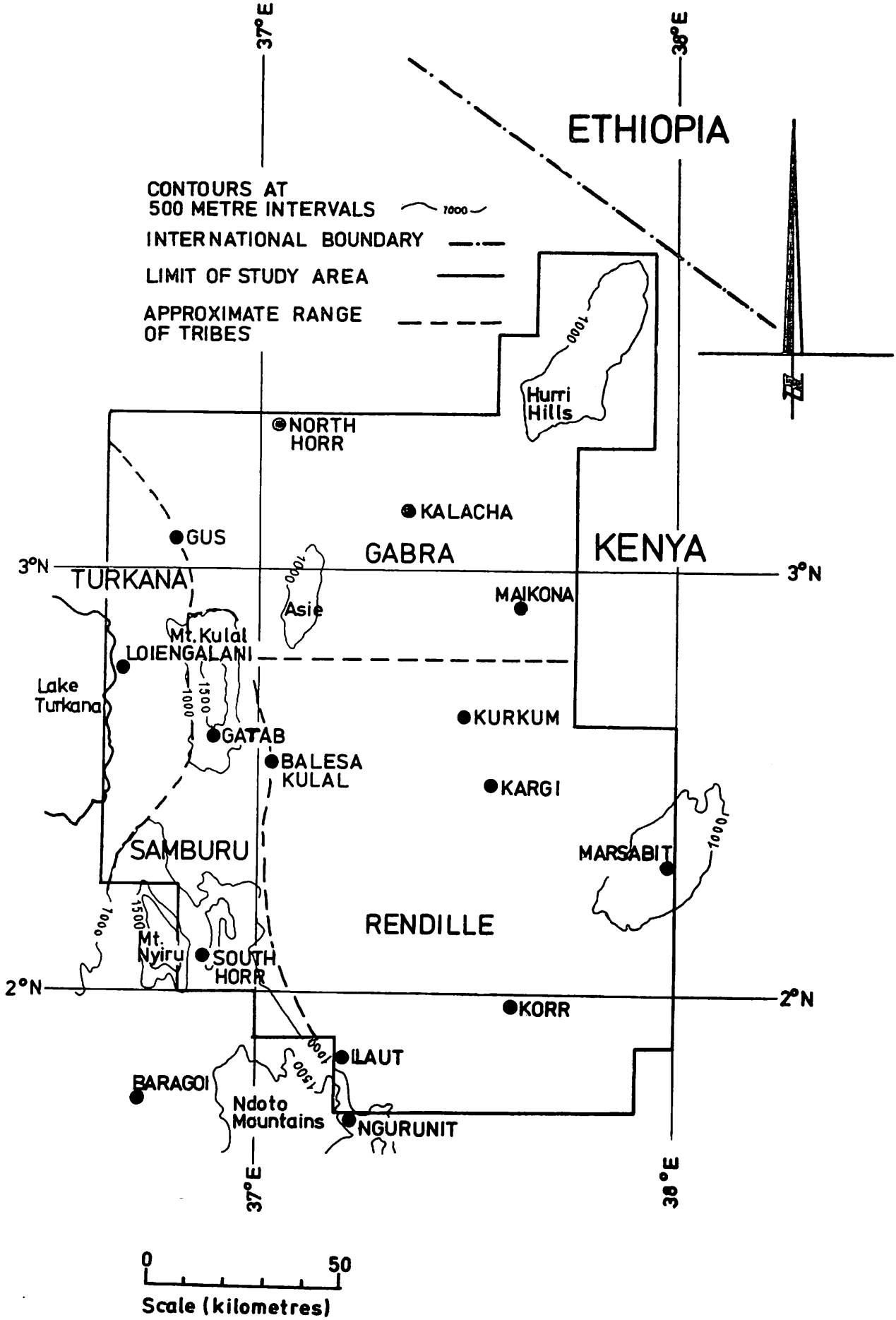


Figure. 2 **The study area**



FACTORS RELATED TO STOCK OWNERSHIP AND POPULATION MOVEMENTS; AND PERCEPTION OF LAND PRESSURE AND OTHER ENVIRONMENTAL CHANGES AMONG THE RENDILLE IN MARSABIT DISTRICT

by

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1. Introduction

Although the arid area of northern Kenya has always been one of limited natural resources, including water, vegetation and soil potential, much of the land degradation observed today is essentially the result of human activites in the recent past. In particular, increased control over pastoralists' movements across "tribal" boundaries, as well as the emergence of a number of settlements around permanent water points, have led to land over-use and progressive loss of vegetation and soil cover (Lamprey, 1978). Furthermore, new developments such as the creation of forest reserves, national parks and commercial ranches, and the establishment of mission centres and schools, have robbed the pastoralists of their "flexibility, both ecologically and economically" and thus limited the ability of the people to exercise traditional mechanisms of coping with environmental and economic crisis (Sobania, 1979, p. 49; Lusigi, 1981, p. 13).

The above factors indicate than human activities in northern Kenya exert considerable pressure and stress on the existing ecological resources, which are in turn influenced by the relatively fixed climatic and soil conditions in the area. It is the objective of the Integrated Project in Arid Lands (IPAL) to study the causes of land degradation and desert encroachment in an attempt to rehabilitate degraded production systems and devise a "rational management of resources" in the arid area of northern Kenya (Lamprey, 1978; Lusigi, 1981). Within the IPAL framework of action, which includes many interrelated studies (e.g. plant and animal ecology, animal health and nutrition, climatology, hydrology, geomorphology, and so on) it is an important objective to determine man's special relationship with other biotic elements in the area. This concern requires that we study the social institutions of the people and the manner in which they relate to the use of essential resources (especially vegetation and livestock), if the goal of arresting the process of desertification, to which man may contribute either directly or indirectly, is to be achieved.

It is recognized that the survival and stability of the habitat in northern Kenya will largely depend on how the organization and aspirations of the people are geared to preserving the basic resources which sustain

life in the area. Thus, although man, like other organisms, is an integral part of the biotic community, he differs from the other organisms in that his role is not "prescribed by his anatomical physiological structure", but rather directed by his habits and desires in creating a "fit" with the conditions of the physical environment (Hawley, 1950). Therefore, in order to control the process of land degradation and desertification to which man contributes substantially, we need to go "beyond problems of overgrazing and excessive tree felling which are more immediate causes of desert encroachment" (Lamprey, 1978, p. 3-4) and "identify and rectify through education elements of social structure which influence the current behaviour of the people in the environment" (Allen, 1981).

Despite continuing efforts to preserve and upgrade vegetation as well as to determine the impact of livestock on vegetation in northern Kenya (see Herlocker, 1979; Walther and Herlocker, 1980; Field, 1978), no serious attempts have been made to assess actual or potential impacts of human activites and institutions on resources in this area. Aside from periodic droughts and consequent loss of vegetation, resulting in famines, increases in human and livestock populations are likely to trigger activities that could lead to degradation of the habitat in the long run, and seriously limit the ability of the people to improve their standard of living. The level of living in any community depends on its population size, resource abundance, and social organization permitting equitable distribution of resources and opportunities in gainful employment (Hawley, 1950, p. 173). Therefore, an attempt to uplift the standard of living among pastoralists in this area, as well as to search for means of preserving environmental resources, must begin by examining the nature of the demands the social structure of the people imposes on the environment. It is therefore important to understand how and why specific social arrangements exist to relate human and livestock populations to the "efficient" use of existing resources such as water and vegetation. Furthermore, people's attitudes and perceptions concerning the rearing of livestock must be assessed, in the hope that they may reveal the desires that the relevant authorites could take into account in planning for development in this area.

2. Purpose of the study

The purpose of this sociological study is to assess:

a) the composition of Rendille households and relate it to stock ownership and other resources such as water and vegetation;

b) the effect of changes in human and livestock population on land use and perceived pressure on available resources;

c) the nature and causes of current population movements (of people and livestock) and the social and economic goals achieved through such movements;

d) the perception and aspirations of the people concerning current changes in land use, livestock management and social relationships, as well as to examine relative inequalities in access to valued resources;

e) the implications of increases in human and livestock populations and changes in land-use habits for the long-term stability of range resources.

3. Methodology

Data for this study were obtained through a combination of data-collecting techniques that included participant observation, interviewing of key informants, and the administration of a questionnaire to a sample of Rendille households located around Korr and Kargi. "Since Korr and Kargi are among the areas which seem to demonstrate some of the worst cases of localized desertification" (Lusigi, 1981, p. 28; Lamprey, 1978, pp. 4-5) it is only proper that we study the impact of man's activities in these two areas, and further examine the implications this has for developments in other IPAL areas.

In participant observation we were able to note age-sex division of labour within households, the time schedule of daily movements of livestock to grazing areas, location of manyattas in accordance with patterns of clan relationships, purchases of modern consumer items from local shops, and so on. Other observations were made around water points. Among the important observations we made here were those relating to the frequency with which animals were watered in a week, distance travelled to watering points, the nature of associations formed in watering activities, and the nature of information exchanged when people met at water points.

By interviewing key informants such as elders, chiefs, councillors, teachers, and other knowledgeable individuals, we were able to probe deeper into some issues (e.g. estimates of livestock number in the households, characteristics of people who form associations, food-consumption patterns among households, etc.) that could not be fully covered in the questionnaire.

It was the questionnaire, however, that became the major instrument of data collection. Given the limited period (only three months) in which this study had to be completed, in addition to the search for varied information on the social and economic life of households, the use of a questionnaire was almost unavoidable. Also, the questionnaire seemed an appropriate method of tapping information on attitudes, perceptions, and preferences in a form that could be quantitatively analysed.

We selected households as units of analysis because most decisions affecting the social and economic life of the Rendille community are made at the household level. Thus it is within the household that decisions are made on where to water animals, where to migrate, whom to choose as stock associates, how to divide stock among family members,

which animals to sell for cash and so on. In these households, only male elders were selected for interviewing, partly because they are more knowledgeable about the household's life history and experience, but more because elders have authority to make binding decisions on all matters of community life. Our sample consisted of 113 households, 57 of which are from Korr and 56 from Kargi.

The subsequent analysis will largely emphasize social relationships in the use of available resources and will take account of views expressed by males. This analysis will be presented in different sections as follows:

After discussion of the study area in the next section, the presentation of major findings beginsin Section 5, where we examine the characteristics of households and their relationships to type and distribution of stock. In Section 6 an attempt is made to identify the important factors in households' stock management. The aim here is to show how these factors interrelate in a manner to ensure efficiency in the use of essential resources such as water and vegetation. Section 7 deals with peoples' perceptions of the value (both socially and economically) of different types of stock, with a view to determining how this may bear on livestock offtake. Section 8 examines patterns of land use and perceived pressure on land and vegetation in the light of increasing human and livestock populations. These perceptions may be vital in making people receptive to much-needed environmental education. In Section 9 we seek to discover whether people discern any social changes and how these changes tie up with needed socio-economic development to raise the living standards of the people. Finally, Section 10 focuses on the conclusions and implications of the findings for the overall range management whose major goal is to improve the pastoral economy.

4. The study area

The IPAL study area is located in Marsabit District in northern Kenya and lies between 1°50' and 3°30' North and 36°10' East. The area covers nearly 22,500 km², within which four ethnic groups are either wholly or partly included. These are the Rendille, Gabbra, Samburu and Boran. In the last 25 years, the population of these groups has doubled and may double again in 10 years if the current rates of population growth persist. Due to increase in human population and fear of tribal raids, these groups of people have experienced a reduction in their home ranges. Indeed, about 25% of the project area is not used, due to insecurity (Lusigi, 1981, p. 5).

The Rendille

The Rendille are pure pastoralists with a current population of 22,000 and now occupy 8,000 km² of a former range of 57,600 km². Furthermore, only 60% of their present range is in effective use, due to poor security, especially fear of raids by Turkanas and Samburu (Sobania, 1979, p. 49; Schwartz, 1980; Dolan, 1981). The Rendille have had an experience of periodic droughts in the past but were able to adjust to drought conditions through migration in search of other grazing areas. Currently, however, the Rendille have not fully recovered from the effects of the 1969-73 drought, "as many people have been on famine relief since that time" (Lusigi, 1981, p. 28).

As pure pastoralists, the Rendille concentrate on camel, goat and sheep keeping, but an increasing number of them are taking to cattle rearing, as practised by the neighbouring Samburu (Spencer, 1973). Since the Rendille live in one of the driest areas in northern Kenya, they have found it necessary to take to camels and small stock because these animals do well in deteriorated ecological conditions. In recent years the camel population has increased among the Rendille and other people in northern Kenya, partly due to deteriorating ecological conditions and the increase in human population (Monod, 1975, p. 177). Two major Rendille settlements are to be found in the Korr and Kargi areas, where data for this study have been obtained. These settlements, like many others in the range areas of Marsabit District, have arisen due to

the establishment of permanent water supplies and food-relief centres. These settlements have resulted in the over-use of local vegetation and other resources, to such an extent that the process of "localized desertification" is now discernible around these areas (Lusigi, 1981, p.28). It has further meant increased interaction with outside communities, especially through the medium of trade. Through this trade, the Rendille are now able to purchase modern commodities that were not among the traditional consumer products. Among the popular commodities bought are maize-meal (*posho*), sugar, tea, tobacco, clothes and shoes. Indeed, these commodities alone account for 90% of the items sold in shops in the Rendille area (Njiru, 1981, p.13).

5. Characteristics of households and distribution of stock

5.1 Age-sex characterstics and household activities

Analysis of Rendille data indicates that there are slightly over seven individuals in each household, and these are distributed as below in terms of age and sex.

	Mean number
All	7.27
Adult males	1.70
Adult females	1.53
Children under 16	
Males	2.04
Females	2.00

Given that a Rendille household is a cluster of several families under the authority of a male elder, these figures suggest the existence of some families who have no children. A shortage of children, especially male children, is a serious handicap to a family with livestock since children are relied upon for herding. On the other hand, male and female adults seem to be few for a society emphasizing polygamy and large families in order to generate sufficient labour for herding, watering activities, food preparation and child care, fetching firewood, and so on (Torry, 1977, pp.4-13). As Table 5.1 shows, 57.5% of the households have single male adults while 61.9% have single female adults. Only 34.5% of the households have two or three male and female heads.

Table 5.1. Percentage of male and female adults and the number in the households

Number	Adults	
	Male	Female
1	57.5	61.9
2	25.7	25.7
3	8.8	8.8
4+	8.0	3.6
	100.0	100

N = 113

Given the various divisions of tasks in the household (see Table 5.2), it is apparent that women are expected to handle more household tasks than any other category of people in the household. Thus the percentage of households who believe women's responsibilities are to fetch water, prepare food and care for children, and fetch firewood are 83.2%, 96.5% and 61.9% respectively. Indeed the only major responsibility of men and children is herding, for which 84.1% of the households believe men and women should be responsible.

It is therefore not surprising that given the few adults in the household, in addition to the pressure on women to perform many tasks, most respondents felt that the reason stock associations are formed is in part to increase the labour supply.

Table 5.2. Activities of household members (percentage of households)

Activity	None	Members: Men	Women	Children	Men/ Children	Women/ Children	All
Herding	.9	2.7	-	9.7	84.1	.9	1.8
Fetching water	-	-	83.2	.9	1.8	14.2	-
Food prep. childcare	2.7	-	96.5	-	-	.9	-
Fetching firewood	-	-	61.9	.9	.9	34.5	-

N = 113

Demand for labour seems to be increasing because of school attendance by children, who are then not available for herding or to help in water collection. Currently, about 55% of the households report school attendance by children.

5.2 Distribution of stock in the household

One of the major reasons why households think a labour shortage exists arises from the high livestock numbers relative to the number of people in the household, as has been noted above. Table 5.3 shows mean distribution of stock in households, taking account of age and type of stock.

Table 5.3 Mean number of stock per household by age and type of stock

Type of stock	Age of stock			
	All ages	Young	Middle age	Old
Camels	12.9	2.0	5.5	5.4
Cattle	11.3	2.3	4.5	4.5
Sheep	42.5	11.4	16.8	14.3
Goats	43.5	11.9	17.3	14.3
All	110.2	27.6	44.1	38.3

* Ages were recorded as follows in terms of years

	Young	Middle Age	Old Age
Camels	Under 6	6-12	Over 12
Cattle	Under 4	4-10	Over 10
Sheep/Goats	Under 2	2-8	Over 8

The average number of stock per household is 110, 86 of them small stock (sheep and goats). There is an almost equal number of cattle and camels (11.3 and 12.9 respectively), suggesting that the Rendille, who have traditionally been camel owners, are increasingly taking to cattle. Camels, cattle, sheep and goats require varying range conditions (Goldschmidt, 1979, p.4) and it is therefore necessary to allocate them to their appropriate range; the existence of only a few adults in the households may not permit this. Therefore, some households may have no option other than to graze these animals together, resulting in overgrazing and range degradation (Herlocker, 1979, p.14). In fact, the burden of herding falls heavily on men and children (as was indicated by 96.5% of the respondents), and, as already observed, these are too few to meet the herding needs of the households.

As an illustration of the herding burden on men and children (especially male children), we have calculated ratios of stock to the number of males (both adults and children) in the household (see Table 5.4). Theoretically, each male herds (and presumably waters) 29.5 animals, of which 6.5 are large stock - camels and cattle - and 23 are small stock. However, this burden is not shared equally

between children and adults. Although male adults have the heaviest burden (i.e. 64.8 animals for each adult male), in reality it is children who are more loaded since they are likely to take care of the more numerous small stock. For children, and to a less extent adults, this burden may be increasing as more and more children take to attending school, or divide their time between school, herding, and other household tasks. The current figure of households reporting school attendance by children is sure to increase every year.

Table 5.4. Ratios of large stock and small stock to males in the household

Category of males	Type of stock		
	All stock	Large stock	Small stock
All	29.5	6.5	23.0
Children	54.0	11.9	42.1
Adults	64.8	13.9	49.4

5.3 Summary

Rendille households at Korr and Kargi have an average size of slightly over 7 individuals and experience high stock-people ratios. Women in households are burdened by tasks such as water collection, food preparation, and child care, while men are burdened by herding tasks. Small stock (sheep and goats) make up 78% of all stock in the household, while cattle have been only recently introduced from the Samburu.

6. Important factors in household stock management

6.1 Water points, vegetation and distribution of camps

The most important resources in the range are water and vegetation. The distribution of these resources largely determines the geographical distribution of human and animal populations, as well as patterns of population movement. Therefore, we expect centres of human and livestock populations and duration of stay in these places to be closely related to the availability of water and vegetation.

The mean number of water points used per household is 4, while the mean number of camps is 2.6. This suggests longer duration of stay around camps than around water points. (Table 6.1 shows the

Table 6.1. Percentage distribution of households by number of water points and number of camps in a year

Number of water points or camps	Percentage households: Households using water points	Percentage households: Households using camps
No response	4.4	9.7
1	3.5	8.0
2	12.4	27.4
3	24.8	32.7
4	22.1	15.0
5	19.5	4.4
6+	13.3	2.8
	100.0	100.0

N = 113

distribution of households by number of water points and camps in a year.) Such longer durations of stay around camps further imply land over-use and degradation by loss of vegetation. Since households probably locate themselves in areas where relatively adequate pasture exists and then branch out periodically to water points, it is advisable to intensify efforts in promoting vegetation rather than in providing water, in order to discourage settlements and consequent land degradation.

6.2 Distances to grazing areas

The number of places grazed in a year is sure to vary with distances from water points. Below is the distribution, in percentage of households:

Number of places	Percentage households
None	.9
1-2	2.7
3-6	30.0
7-10	34.5
11+	31.9
	100.0

It can be observed that the majority of households (66.4%) graze their stock at at least seven places may be in close proximity to each also be remarked that these places may be in close proximity to each other, since they must also be close to the small number of camps (2.6 per household) used in a year.

Indeed, Table 6.2 shows that nearly 78% of the households indicate the shortest distance between grazing areas to be 6 kilometres or less, and although 93% give 10 or more kilometres as the longest distances they cover during the year, this may refer to only one long-distance migration to other grazing areas.

Table 6.2. The longest and shortest distances (km) covered between grazing areas

Distance in kilometres	Percentage households	
	Longest distance	Shortest distance
Under 4	-	23.0
4-6	2.7	54.9
7-9	4.4	5.3
10-12	29.2	10.6
13+	63.7	2.7
Other	-	3.5
	100.0	100.0

N = 113

It is observed further that while the mean shortest distance covered between grazing areas is 5.7 km, the mean longest distance is 18.7 km. Since we would not expect a round journey of 37 km between camps and grazing areas, this strongly suggests that these longest distances between grazing areas are indicative of migration rather than daily or weekly movements of stock between grazing areas.

6.3 Population movements and related factors

Movement of people and livestock is a characteristic feature of most pastoralists as they search for pasture and water. In Rendille, about 75% of the households make at least two moves in a year, while 22% have become permanent residents around perennial water points and food-relief centres. With the increased provision of immobile facilities such as dispensaries, schools, and shops, more people are expected to become sedentarized. Currently, however, the majority of the people are still nomadic and their longest duration of stay in any one place is only 6.4 months. We think that sedentarization should be discouraged by every means in order to reduce land degradation by the local over-use

of vegetation. Towards this end, it would be in order to identify factors influencing population movements so that they can be considered in an overall planning process.

Table 6.3. Responses on reasons prompting households to move

Reason	Percentage households	N
To be nearer water	40.7	46
In search of grazing areas	39.8	45
Just used to moving	2.7	3
To avoid conflicts with neighbours	1.8	2
To avoid raids	1.8	2
Other (no response, many reasons, etc.)	13.2	15
	100.0	113

N = 113

Table 6.3 shows some factors perceived by respondents as the major forces behind population movements. It is apparent that water shortage and the search for grazing are nearly the only reasons households decide to move. Thus, 80.5% of the households believe movements are made essentially in order to be nearer water points or grazing areas. It is not surprising that an equal proportion (40%) perceive the existence of water and of pasture as essential considerations in making moves, since water and pasture are complementary factors in pastoral life. Since humans and livestock need water more immediately than any other resource, its provision must be made in dispersed places in order to encourage movement, and hence more balanced spatial use of vegetation. It is also important to note that the reason there are only 1.8% who think moves are made to avoid raids is because most people do not perceive themselves as moving beyond the confines of the present Rendille territory and, in a significant number of cases, not beyond the number of settlements where security is assured.

Given these people's aspirations for periodical moves to areas where water and vegetation are available, it is discouraging to note that due to undesirable conditions such as fear of raids, the Rendille are increasingly getting settled in localized areas where water, security, and food relief are available. The data here show that 32% of the households already consider the current place to be the usual place of residence. On being asked to state factors that could make people want to stay in one place, respondents gave answers in the manner shown in Table 6.4.

Table 6.4. Responses on what factors could make people want to stay in one place

Response	Percentage households	N
Water	39.8	45
Water, dispensary, schools, shops	30.1	34
Water, grazing	17.7	20
Other (no response, don't know, none)	12.4	14
	100.0	113

Table 6.4 shows that nearly 40% think availability of water alone is sufficient to make people settle in one place. It is possible, however, that these people also assume the existence of a non-pastoral mode of subsistence, such as wage employment and/or trading in popular commodities such as *posho*, sugar, tea, tobacco, and clothes (Njiru, 1981, p. 13). It is also noticeable in Table 6.4 that any other factors that would encourage settlement must also include water as a basic requirement. Thus, in the view of most respondents (70%) the availability of water and immobile facilities such as dispensaries, schools and shops would be sufficient conditions to induce people to settle in one place, although this, no doubt, also assumes the availability of means of subsistence. Consistent with the spatial requirements of pastoral life, the majority of respondents think it would be improper to assume that water and pasture will always be available in a place of permanent settlement. Only 17.7% think that water and grazing could always be available.

Besides the limiting factors such as water, pasture and security, there may be secondary factors which encourage migrations. Respondents were asked to state what other goals, besides those shown in Table 6.3, are achieved through movement. These secondary goals are shown in Table 6.5.

Most of these goals seem to be attempts to enhance the self-confidence of households and the sense of belonging in the community. In this harsh pastoral environment, tests of ability to survive through movement assure the households of their ability to surmount any unpredicted hazards in the environment.

Table 6.5. Secondary goals achieved through movement

Goals	Percentage households	N
Tests ability to survive	51.3	58
Enables interaction with others	27.5	31
Encourages co-operation of families	11.5	13
Increases status	8.8	10
Other	.9	1
	100.0	113

It is indeed part of a necessary social awareness since "pastoral life demands of its practitioners a greater measure of physical hardship and endurance than most other tribal careers;... a readiness to engage in battle and to protect their animals... and in order to sustain themselves in these inherent difficulties and dangers, it is necessary to develop a personal commitment" without which "they would cease to be pastoralists" (Goldschmidt, 1979, pp. 26-27) Associated with assurance of survival in a pastoral environment is the further need to move in order to interact with other people (27.4%) and raise the level of co-operation and mutual help and trust.

6.4 The bearing of livestock and social relations

The social institutions of a pastoral society like the Rendille revolve round livestock. Livestock, especially the large stock, form an important medium through which social relations are expressed. Among the Rendille, rights and obligations are expressed through camels and cattle. It is generally true that "an individual without stock becomes isolated from potential pathways of co-operation and mutual insurance in times of hardship... and must survive outside the pastoral economy" (Sobania, 1979, pp. 13-14). Furthermore, bond friendships are created through "loan animals", in part to ensure support in disputes and assistance in periods of labour shortage. For the Rendille and Boran, the camel is the only animal that can be utilized in this function (Spencer, 1973, p. 272).

It was with the above observations in mind that we tried to assess the role of stock in social relations among the Rendille. By far the most important factor determining relations between households is labour shortage, which is largely alleviated through task sharing among stock associates. This observation has also been made among the Gabbra (Torry, 1977). Nearly 93% of the households said the reason they form stock associations is to increase labour supply in the household. Slightly over 60% said they were currently in stock unions, and nearly all of them said they had formed associations in the past. The mean length of the association was 3.4 years. This shows that associations are not permanent, because they involve people who may not always decide to migrate to the same areas in search of pasture, or people who, for whatever reason, may want to part company.

It is generally claimed that the Rendille, unlike other pastoralists in northern Kenya, have strong beliefs about the right to independence of their individual families and therefore do not always have to channel their rights and obligations (through use of stock) to kinsmen (Spencer, 1973). When asked to indicate the nature of their relationship with the family in the nearest camp, 42% of the respondents said there was no kinship relationship. Since associations and stock friendships are usually formed in common grazing areas, and since family stocks are divided among members who constantly branch out in different directions to reduce the risk of theft and optimize the use of vegetation, it is only sensible that individual families should be given discretion to enter

into contracts and agreements that can be revoked with minimal social and economic costs.

When family members divide stock among themselves and take off to "satellite camps", there are no strong obligations to maintain contacts on a regular basis. Nearly 49% of the respondents indicate that they rarely or never contact their relatives living in "satellite camps" in the course of a year, and only 33% contact them on a daily or weekly basis. Perhaps the ability to contact relatives in other camps is a function of distance, but it is also possible that contacts arise only when there is vital need, such as payment of bride price, intrafamily disputes, and so on, which may not occur in a year.

6.5 Summary

The mean numbers of water points and camps used in a year are 4 and 2.6 respectively, suggesting longer durations of stay around camps than one would expect in a pastoral setting. Therefore there should be efforts to promote vegetation in dispersed areas so that people move to avoid the over-use of vegetation in localized places.

On the average, people cover distances of 5.7 kilometres between grazing areas. Distances in excess of 18 km between grazing areas are likely to be long-distance migrations. The duration of stay in any area largely depends on the availability of water and vegetation. Durations of stay in camps average 6.4 months in a year. However, an increasing number of people are settling in places where there are permanent water supplies, food-relief activities, and protection against raids.

Important social relations are created through the use of stock, in the form of either loans or gifts of animals. Such relations become important in sharing labour and providing mutual support during disputes.

7. Perception of the value and use of livestock

7.1 Factors influencing ownership of stock

We think that the desire to own stock will be importantly influenced by (a) preference for particular types of stock, (b) availability of resources needed in the care of livestock, and (c) amount of assistance available for the care of stock. We will take up these factors in turn and see what the Rendille respondents thought about them.

a) Preference for different kinds of stock

Most people would want to own camels, sheep, and goats, but only a few consider cattle to be important. When asked to indicate the type of stock that is more useful than others, respondents were almost equally divided between camels on the one hand and goats and sheep on the other (see Table 7.1).

Table 7.1. Responses on type of stock considered most useful in the household

Livestock	Percentage household	N
None	2.7	3
Camel	40.7	46
Cattle	14.2	16
Sheep and goats	38.0	43
Combination of above	4.4	5
	100.0	113

Although the camel is an important animal in Rendille social structure and forms the basis of many types of social relationships (Spencer, 1973), the Rendille also recognize the value of small stock such as sheep and goats. Thus it would be wrong to give the impression (as Spencer does) that the Rendille prize the camel to the virtual exclusion of all other stock. In the economic sense, it would be

difficult for the people to subsist on camels alone. Small stock are almost the only source of daily food and the only source of cash income for most households. On being asked to state why they valued these stock, 52.2% said they valued them for food, clothes, and cash (see Table 7.2).

Table 7.2. Responses on why households value different kinds of stock

Reason for valuing stock	Percentage households	N
Food, clothing, cash	52.2	59
Camels survive better here	32.7	37
Inexpensive and multiply quickly	5.3	6
Depend on them for everything	5.3	6
	4.4	5
	99.9	113

The 33% who valued camels did so as a form of insurance, since these animals (though not prolific) have the capacity to endure the harsh environment. Thus the value placed on the camel is far greater than its value as a source of food and cash.

b) Availability of resources for animal care

Respondents were asked to indicate what they thought would be the major resource needed to improve the care of livestock in the area. By a wide margin (79.6%) most people thought the availability of water would be the major resource. Only 13.3% thought access to grazing areas was a critical need (see Table 7.3).

Table 7.3. The critical resource needed to improve animal care

Facility needed	Percentage household	N
None	1.8	2
Water supply	79.6	90
Access to grazing areas	13.2	15
Security against raids	2.7	3
Large family (for labour)	1.8	2
Co-operation between families	.9	1
	100.0	113

The fact that an overwhelming majority want a better supply of water and almost ignore other important resources, such as security and access to vegetation, suggests that most people do not perceive the deteriorating ecological conditions in the range. This is surprising, all the more so considering that the people interviewed reside at Korr or Kargi, where the process of desertification due to sedentarization and consequent destruction of trees and shrubs is quite considerable (Lamprey, 1978, pp. 4-5). Therefore, the efforts being made by UNESCO/ IPAL to devise methods of imparting environmental education in order that the local people may perceive their environment more realistically and thus rectify undesirable developments (see Allen, 1981) are of considerable importance.

c) Assistance in stock care and provision of food

As indicated earlier, the labour shortage may be acute in a large number of households. It has also been shown that the Boran, who are camel keepers and occupy an area with relatively similar ecological conditions to those of the Rendille, suffer from a chronic labour shortage (Torry, 1977). The high stock-people ratio among the Rendille implies that most people can count on help from relatives and friends for the care of animals. Assistance is also expected in the form of food

and animal loans in the case of poor families (Spencer, 1973). Asked whether assistance is offered by relatives, 69% of the households indicated that they received assistance while 28% said that they did not. Those receiving assistance are expected to reciprocate by offering help in the event of need. The most common form of help from relatives is watering and herding stock, followed closely by gifts of livestock (see Table 7.4).

About 15% are given food or loan animals by richer relatives, who are presumably short of labour for their own large herds. However, watering and herding activities require that a significant number of households (30.1%) seek help from relatives as a matter of mutual obligation. Also, a significant number (25.7%) receive gifts of stock, although such gifts are likely to be made after a long period of service (Spencer, 1973).

Table 7.4. Form of help given by relatives

Type of help	Percentage households	N
None	2.7	3
Watering and herding	30.1	34
Gifts of stock	25.7	29
Food and loan animals	15.0	17
Other (e.g. any help, no response)	26.5	30
	100.0	113

Respondents were further asked to indicate whether they provide more help than they receive from relatives or vice versa. The results show that more people (40.7%) perceived themselves rather as recipients than givers of whatever help is given than perceive themselves as providing more help than they receive (30.1%).

7.2 Use of livestock

As pastoralists, the Rendille must explore ways of raising their levels of living through diversified uses of livestock. In particular, commercial uses of livestock seem to offer the major option that could alleviate some problems in range management as well as raise the socio-economic levels of families. Therefore the uses to which livestock are put must have implications for the possibility of encouraging offtake in livestock through trade in order to reduce overstocking while ensuring that productivity increases arising from improved management contribute to the raising of living standards in the area" (Njiru, 1981, p. 2).

Besides food, most people use stock to meet social needs, as Table 7.5 indicates. Bride price and economic investments constitute almost the only social needs for which livestock are important, although only 34.5% take economic investment to be important. It must be remarked, however, that economic investment is perhaps more an attempt to accumulate stock to meet food needs in case of drought than an attempt to market them for cash. Indeed, stock accumulation, even when range conditions may be deteriorating in terms of carrying capacity, is a form of "insurance policy designed to build up capital assets which offsets deleterious effects of future lean years" (Lewis, 1975, p. 43).

Table 7.5. The major uses of livestock besides food

Use of stock	Percentage housolds	N
Social status	1.8	2
Social contacts	3.5	4
Economic investments	34.5	39
Bride price	57.5	65
Combination of above	2.7	3
	100.0	113

However, it has been shown that in northern Kenya, perceptive individuals recognize the advantage of destocking and range management but do not receive encouragement through proper marketing and assistance in providing fodder (Lamprey, 1978, p. 5). Njiru has also shown that, contrary to the belief that pastoralists in this area do not sell livestock,

the offtake for small stock through sale in 1979-80 was 25.7%, and this was higher than the 20% estimate of the Marsabit 1979-83 District Development Plan (Njiru, 1981, p. 12). Since it would be desirable to encourage offtake in return for cash that can be used to purchase consumer products, the lives of pastoralists in this area must be made stable and predictable in terms of food supply.

Respondents were further asked to state the degree of importance of each type of stock for various uses, as a guide to an understanding of how they are likely to react to livestock increase in the future (see Table 7.6).

Table 7.6. The degree of importance attached to each type of livestock for various uses

Types of use and stock	No response	Degree of importance: Very important	Important	Not very important	Not at all important	Other
Social status						
Camel	.9	70.8	8.8	12.4	6.2	.9
Cattle	-	10.6	47.8	31.0	7.1	2.7
Sheep/goats	-	44.2	28.3	23.0	3.5	.9
Social contacts						
Camel	.9	28.3	8.8	24.8	35.4	1.8
Cattle	.9	61.1	20.4	9.7	4.4	3.5
Sheep/goats	.9	43.4	49.6	3.5	1.8	.9
Economic investment						
Camel	.9	27.4	23.9	33.6	12.4	1.8
Cattle	.9	64.6	12.4	9.7	9.7	2.7
Sheep/goats	.9	55.6	29.2	8.8	3.5	1.8
Bride price						
Camel	.9	92.8	2.7	.9	1.8	.9
Cattle	.9	31.0	58.4	5.3	1.8	2.7
Sheep/goats	-	3.5	24.8	12.4	56.6	2.7
Source of food						
Camel	-	25.7	7.1	49.6	16.8	.9
Cattle	-	22.1	21.2	38.1	15.9	2.7
Sheep/goats	.9	97.3	.9	.9	-	.9

The perceived importance of stock as shown in Table 7.6 should be seen in the context of the long-run household objectives of increasing food supply and economic investment. By a wide margin, 85% and 98.2% of households consider sheep and goats to be either very important or important for economic investment and as a source of food, respectively. Small stock also command considerable importance in terms of prestige and social contacts. In fact, most people rank them higher than cattle in terms of social status and considerably higher than camels in terms of social contacts. Perhaps this is because small stock are easily expendable to meet social needs. Thus the residents are sure to intensify the rearing of sheep and goats. It is also noteworthy that although 77% of households think cattle are either very important or important for economic investment, 65% indicate that there are less than 10 cattle in each of their households. In general, the mean number of cattle in the households is only 11.3, compared with a mean of 86 for sheep and goats (see Table 5.3, above).

Therefore, in the perception of residents, cattle hold great potential for economic investment in the area, although their increasing number would pose a problem to the quality of the habitat. In general, large stock command only social importance in terms of prestige, social contacts, and bride price. We discern no major changes in these social values, and therefore residents will continue to keep these animals despite their limited value as a source of food and an economic investment.

7.3. Summary

Households' ownership of livestock is importantly influenced by preferences for each type of stock, the availability of resources (in the form of water supply, access to grazing areas, security, and so on) for stock care, and the ability to secure assistance in stock care. The perceived uses of livestock point more to social uses, such as payment for bride price, implying the need to extend the kinship network, and less to market uses or economic investment. However, a consideration of specific uses shows that sheep and goats, and to a lesser extent cattle, have great potential as sources of food and economic development.

8. Patterns of land use and perceived pressure on land and vegetation

Patterns of traditional land use and the manner in which this may be changing due to human activities are an important consideration for improved range management. In this section the aim is to examine the existing patterns of land use and perceptions about the environment by focusing attention on land ownership and use allocation, pressure on range resources, and response to land degradation.

8.1 Land ownership and use allocation

a) Beliefs about land ownership

Most people (64%) do not think they own the land they now occupy, although a significant number (36%) do believe the land is theirs. In 58% of the cases, respondents also thought that land is communually owned. This is as would be expected given the mobility of the people and livestock and common water points and grazing areas. The majority of the respondents (75%) also think that anyone is welcome to use the land but do not specify whether these should be only the Rendille people.

b) Allocation of land to livestock

It is common knowledge that camels, cattle, and small stock (sheep and goats) are suited to different kinds of vegetation, and require different amounts of water. Therefore, the people maximize the use of available vegetation in relation to water supply by distributing stock to the areas best suited to them. The observation made here is that 95% of the households allocate livestock to different areas according to suitable vegetation for each type of stock. Such allocation is easier in the case of camels, because they are able to travel far from main camps and to remain longer without water than other animals. Allocation is also more manageable during wet seasons, as can be seen in Table 8.1.

Table 8.1. When selective allocation of land to livestock is likely

Time	Percentage household	N
All the time	17.7	20
During dry seasons	15.9	18
During wet seasons	62.9	71
Other (no response)	3.5	4
	100.0	113

The majority of households (62.9%) find it easier to allocate land selectively during wet seasons because the variety and amount of vegetation increases during this time. In dry seasons, only 15.9% allocate land selectively, and different types of stock are concentrated together in a few places where browsing is possible, and thus compete for limited vegetation and consequently degrade the land.

However, most people do realize that excessive land use around camps destroys the environment. Therefore, households with unmarried adult males are able to disperse them far afield to take care of the large stock, while young boys mind small stock nearer the main camps. The data here show that 60% of the households have at least one household member (often an unmarried adult male) staying far from the family camp and herding large stock, mainly camels.

8.2 Pressure on land resources and response to land degradation

Nearly all households (99%) believe that there has been an increase in human population over the last 10 years, resulting in an increase in both the number of families and family sizes. However, despite this population increase, 44% think there is no pressure on land, and those perceiving pressure (46%) attribute this to deteriorating resources, especially vegetation, rather than to population increase (see Table 8.2).

Table 8.2. Responses to whether there is pressure on land

Type of pressure	Percentage households	N
No pressure	44.2	50
Pressure due to increase in number of families	.9	1
Pressure due to increase in family size	1.8	2
Pressure due to restriction on land use	7.1	8
Pressure due to deterioration of resources	46.0	52
	100.0	113

Despite this felt pressure, 95% indicate no change in the traditional management of livestock, although 89% believe that livestock can destroy vegetation, while 46% believe that the general vegetation has either deteriorated or greatly deteriorated over the last 10 years. Respondents perhaps indicate no change in the method of traditional livestock management because they are not aware of any such methods, as shown by responses in Table 8.3.

Table 8.3. Stated traditional methods of ensuring conservation of the environment

Method	Percentage households	N
None	64.6	73
Migration	21.2	24
Selling or slaughtering stock	14.2	16
	100.0	113

Only 21.2% believe that migration is a traditional method of preserving the quality of the environment, perhaps because the majority see prospects of settling down at Korr and Kargi and therefore do not want to appear to be contributing to land degradation. A smaller number (14.2%) think selling and slaughtering excess stock has the function of conserving range resources. The fact that a recent study shows an offtake rate of nearly 26% for small stock in Rendille territory (Njiru, 1981, p. 12) suggests that the people are beginning to realize the value of selling excess stock for improved stock management and household economic gains. Since one goal of livestock management in this area is to increase the level of offtake, planners must intensify the effort to motivate people to sell excess livestock. Already, a growing number of people are beginning to link deterioration of resources to overstocking and increase in human population, as can be seen in Table 8.4.

Table 8.4. Respondents' indications of what contributes to deterioration of resources

Causes	Percentage households	N
Cutting trees and overgrazing	27.4	31
Increase in human and livestock population	23.0	26
Failing rain	36.3	41
"God's will"	6.2	7
Other	7.1	8
	100.0	113

The people will soon realize that even failing rain (to which 36.3% attribute the degradation of land) is indirectly caused by overstocking and the destruction of trees and shrubs which attract rain. It is also noteworthy that 50.4% attribute land degradation to destruction of vegetation and growth in human and stock populations. Since the destruction of trees and other vegetation is related to human and animal needs,

suitable tree species for the area (e.g. *Acacia senegal*), must be identified and tree planting programmes encouraged (Herlocker, 1979).

8.3 Summary

Most people do not think they own the land they now occupy, but a significant number wrongly believe they do. Given the constant mobility of nomadic people and the common use of scarce resources, communal ownership of land resources, especially vegetation, is only to be expected. The selective allocation of land for use by different types of livestock is dependent upon the existence of suitable vegetation for each type. However, this option is only possible during wet seasons, when a variety of vegetation is abundantly available. Residents recognize that human and livestock populations have increased over recent years, but perceive no pressure on land resources due to these increases. Also the majority do not perceive migrations as a traditonal method of conserving biotic resources, perhaps because, as potential permanent settlers in the area surveyed, they do not want to incriminate themselves in over-use of land resources. However, they express concern that increased tree felling and overgrazing due to the increase in human and livestock population is likely to degrade the environment.

9. Perceived social changes, social aspirations and future development goals

In any community, social and economic changes are either accommodated, accepted, or rejected, depending on whether they adversely affect people's aspirations and their cherished ways of life. In Marsabit District, and among the Rendille in particular, changes likely to affect the mode of life of the people could arise from changes in land use, and therefore changes in the stock management that forms the basis of the pastoral economy. Furthermore, these changes may affect the social structure of this pastoral society and endanger the valued relations among its people.

9.1 Type of change

Respondents were asked to indicate whether they discerned any changes in the land-use system or other changes affecting the households' management.

a) Changes affecting land use and livestock

As Table 9.1 shows, the major change which is seen as affecting land use is the decreasing number of places for browsing stock (70.8%). Respondents think that there are few places for browsing stock when at the same time a significant number (23%) believe there has been an increase in human population.

Increase in livestock population may imply increase in human population, although only 4.4% think increase in human population affects land use. Therefore, increased localization of browsing areas added to increased overstocking are sure to lead to serious land degradation through over-use of available vegetation.

Table 9.1. Changes seen as affecting the land-use system

Changes affecting land use	Percentage households	N
Decreasing places for browsing	70.8	80
Increase in livestock	23.0	26
Increase in humans	4.4	5
Restrictions by the authorities	1.8	2
	100.0	113

Besides factors affecting land use, there are other factors affecting the management of livestock, and therefore changing the way of life of the people. Table 9.2 shows that nearly 40% think there are too few stock to meet the needs of increasing family sizes among the Rendille. It is surprising that such families demand larger numbers of stock when the mean number of animals per household is 110 (see Table 5.3, above). Perhaps what this means is that within the household (which in our conceptualization is composed of a number of families) there are younger families possessing few animals because they have not had much time to build up their herds.

Table 9.2. Changes seen as affecting households' stock management

Changes affecting livestock management	Percentage households	N
Too few for the increasing family size	39.8	45
Increase in diseases, pests and parasites	29.2	33
Problems of access to pasture and water	21.2	24
Too many for family labour	4.4	5
Raid danger	4.4	5
Problems of production for market	.9	1
	99.9	113

Another factor seen as affecting livestock is the increase in diseases, pests and parasites (29.2) although there have been Government efforts to improve animal health in the area. A significant number of people (21.2%) see problems of access to pastures and water as a factor affecting the position, although there is bound to be a considerably higher number of Rendille people experiencing the problem of water shortage in places other than Korr and Kargi. It is not immediately understandable why only 4.4% are constrained by fear of raids from managing their stock, especially through migration to better grazing areas. Until a couple of years ago raiding activities by the Turkana and Samburu have been intense in the area.

b) Changes affecting social relations

Changes in valued social relationships arise mainly from the declining social control among the youth (37.2%), confusion in the age-sex division of labour (30.1%) and the declining authority of elders, in which 23% seem affected, as Table 9.3 shows.

Table 9.3. Changes seen as affecting valued social relationships

Changes	Percentage households	N
Declining social control of youth	37.1	42
Confusion in age-sex division of labour	30.1	34
Declining authority of elders	23.0	26
Decreasing co-operation	6.2	7
Increase in conflict among families	1.8	2
Other	1.8	2
	100.0	113

Most of these changes seem to relate to intergenerational relationships between the young and old, and between parents and children in particular. Because of increased education for children and the possibility that these children will take up jobs outside the pastoral economy, these relationships will most likely result in still greater strain, since children will no longer depend on parents for rewards in the form of livestock.

9.2 Impact of change on perceptions

Respondents were further asked to indicate whether the changes noted above were desirable or undesirable. Also, perceptions of how these changes may be promoting inequalities among families were examined.

a) Evaluation of changes

As Table 9.4 shows, not everyone sees these changes as good. Only 46% consider them to be good and welcome changes, though another 8% take some of them to be good and others bad. Although only 14.1% of the households think these changes are either bad or very bad, nearly 40% are ambivalent about them, since they say they do not know.

Table 9.4. Responses to the question whether changes are good or bad

Response	Percentage households	N
Good and welcome	46.0	52
Good, but some are bad	8.0	9
Mostly bad or very bad	14.1	16
Other (don't know, no response)	31.9	36
	100.0	113

Respondents were further asked to indicate what was good or bad about these changes and gave the responses seen in Tables 9.5 and 9.6.

Table 9.5. Respondents' indications why changes are thought good

Good changes	Percentage households	N
Schooling, famine relief, Christianity	46.0	52
Modern possessions (e.g. clothes, *sufuria*)	3.5	4
Settling in one place	1.8	2
Medical care of families	.9	1
Other	47.8	54
	100.0	113

Table 9.6. Respondents' indications of why changes are thought bad

Bad changes	Percentage households	N
Disobedience by youth	11.5	13
New religions and prostitution	4.4	5
Every change is bad	2.7	3
Destruction of habitat	1.8	2
Other (don't know, no response)	79.6	90
	100.0	113

Table 9.5 shows that 46% of those who saw good changes as occurring in the area (cf. Table 9.4) also specify these changes as schooling for the children, the introduction of a new religion (Christianity), and famine-relief activities. Although an increasing number of people are settling permanently at Korr and Kargi, very few (1.8%) believe this is good. This suggests that most people are forced by adverse ecological changes to settle in places where food relief and protection are available. It is also noteworthy that although most people would want to see improved animal health, only 0.9% perceive changes as promoting animal health in the area.

It was remarked earlier (see Table 9.3) that 37.1% of the households perceived a declining social control of youth. However, not all respondents see such changes as bad, as Table 9.6 shows. Only 11.5% perceive disobedience by youth even though most of the young people are no longer totally bound by decisions made by elders. This suggests that the elders recognize the right of young people to make some independent decisions pertaining to difficulties in trying to fit into a changing society. One major change around the Korr and Kargi areas is the progressive land degradation due to human settlement. However, Table 9.6 shows that only 1.8% perceive destruction of the habitat as a major undesirable change, suggesting that more education on the need to preserve the environment should be given (Allen, 1981).

b) Perceived inequalities

The general equality observed among pastoral people arises from the need to share common resources (e.g. water, vegetation, security, and so on) in the environment. As Dahl points out, "egalitarianism among the Boran, as in other pastoral societies, arises due to limits to the possible accumulation of wealth over generations" (Dahl, 1979, p. 279). Since a viable pastoral economy must ensure equal access to essential resources in the environment, it was found necessary to assess Rendille perceptions of access to valued facilities. Table 9.7 provides individual households' perceptions of whether they are better or worse off than other households in terms of access to certain facilities that tend to be valued by most pastoralists.

Table 9.7. Households' relative access to valued facilities when compared to other households and percentage distribution

Facility	Relative access			
	Better	Equal	Poor	Other
Water	5.4	90.3	3.5	.9
Vegetation	4.4	92.0	2.7	.9
Marketing of livestock	1.8	90.3	7.1	.9
Medical care of livestock	3.5	85.8	9.7	.9
Family labour supply	10.6	57.5	30.1	1.8
Protection against raids	.9	95.6	.9	2.7

N = 113

In general, equality seems to be seen as existing in regard to the most important facilities (i.e. water and vegetation) among the Rendille. Those who see themselves as enjoying equal access to water and vegetation are 90.3% and 92.0% respectively. Equality is also quite high in terms of livestock marketing facilities, medical care of livestock, and protection against raids. However, available labour supply among families presents greater inequalities. We note that while 10.6% think they have better access, a large number (30.1%) think they have poorer access to family labour. We saw earlier (Table 5.4) that there are high and presumably increasing stock-people ratios among Rendille households, implying that households without a significant number of males will experience a labour shortage in watering and herding livestock.

Despite high levels of equality in access to most valued facilities that could promote the wealth of individual households, there are inequalities in the social and economic standing of households. Table 9.8 shows that only 52.2% of the households thought they enjoyed equal standing with other households in the community.

Nearly 18% of the households thought they were doing better than others while nearly 10% thought they were doing worse than other households.

Table 9.8. Relative social and economic standing of the households

Relative standing	Percentage households	N
Better in this household	17.7	20
Better in other households	9.7	11
About equal	52.2	59
Other (no response, don't know)	20.4	23
	100.0	113

We also thought that increasing socio-economic standing would be reflected in the type of modern items possessed by the households. The results are shown in Table 9.9, where households are ranked in terms of the number of items possessed. For our purposes here we limited the number of possessions to nine.

Table 9.9. Percentage distribution of households by possession of modern items

Number of items*	Percentage households	N
7 - 9	27.4	31
4 - 6	34.5	39
Under 4	38.1	43
	100.0	113

*Items: panga, watering-can, shoes, iron sheets, axe, aluminium pot, blankets, shirts, shovel

It can be seen that households are beginning to differentiate themselves in terms of possessions. Only 27.4% of the households have 7 - 9 modern items, while 38.1% have less than 4. Perhaps the possession of these items, in addition to the possession of livestock, is related to perceived inequalities in socio-economic standing.

9.3 Measures to foster socio-economic development

IPAL's commitment is not only to seeking practical solutions to the current conditions leading to land degradation and desertification in northern Kenya, but also to seeking methods of improving the pastoral economy in the area in order to raise the living standards of the people.

Any socio-economic programme aiming at introducing changes that will promote the living standards of people must be acceptable to the people themselves. Therefore, it is important to tap people's perceptions of the right methods of raising their socio-economic standards. With this object, respondents were asked to indicate what they thought would be the most effective and acceptable method of assisting them in promoting community development.

The responses in Table 9.10 show that the majority of the people (66.4%) would want to see a better marketing system for their livestock. This is an important observation, given that one of the objectives of IPAL in range management in this area is to increase the level of offtake for livestock (Lamprey, 1978, p. 5; Njiru, 1981, p. 2).

Table 9.10. Recommended methods of promoting socio-economic development

Recommended method	Percentage households	N
Create market for livestock	66.4	75
Educate children	22.1	25
Improve communication	4.4	5
Combination of above	7.1	8
	100.0	113

Also important is the education of children (22.1%) although one would have wanted to see more people opt for child education. Perhaps the reason only a few households want education for children is because they know that education would involve cash expenditure (for buying clothes and contributing to school funds), when most households are poor due to the limited market for their livestock products. It is also possible that many households find it difficult to send children to school when these children could be "profitably" utilized for herding.

By a majority of 67.3%, respondents also recommended that the Government should involve itself in development programmes through consultation with elders (Table 9.11). Also, 26.5% think that the best service the Government can provide is to instruct people in proper livestock management.

Table 9.11. Responses about how the Government can assist in development

Method of assistance	Percentage households	N
Consult with elders	67.3	76
Instruct in livestock management	26.5	30
Determine what is good for people	4.4	5
Other (no response)	1.8	2
	100.0	113

Thus, in general, the Rendille people would not want to see the initiation and functioning of any development programmes without the initial approval and on-going support of the people.

9.4 Summary

The major changes occuring in Rendille society are changes affecting a) systems of land use, b) households' stock management, and c) valued relationships between parents and children. The majority of the people perceive favourable consequences for these changes (especially in education and famine relief) but a significant number have misgivings about disobedience by the young.

The majority also see nothing good in settling in one place, although they are unable to see how human activities at Korr and Kargi are leading to desertification.

Nearly all the people perceive no inequalities in the socio-economic standing of households and the ability of these households to purchase desirable modern items. The measures that could be taken to assist people in fostering socio-economic development include creating facilities for marketing livestock, the education of children and consultation with the people in any programme aiming at improving their welfare.

10. Recommendations

1. Need for a substitute for child labour

Alternatives to child labour in activities such as herding and watering stock must be found in order to increase the level of school attendance by children. Currently, only 55% of the households have children attending school, and not all school-age children are attending school even among these households.

2. Need to discourage settlements

The people should be encouraged to adhere to the traditional nomadic life in order to avoid settlements, which often result in the over-use of vegetation and excessive tree cutting. It is therefore recommended that distribution of water points (whether boreholes or dug wells) be done on an ephemeral rather than a perennial basis. Perhaps this requires that hydrologists establish ground-water depths and variations in depth levels during the year.

3. Need to promote acceptable uses of money

In order to raise the level of offtake through sale of livestock, the people must be shown how they can make long-term uses of money accruing from such sales. In this regard there is need to go beyond purchasing of perishables (e.g *posho*, beans, canned foods, etc.) which tend to be geared to sedentary subsistence, to long-term investments in animal health, child education, household equipment which facilitates movement, and so on.

4. Need to determine suitable numerical ratios of large to small stock

A balanced use of vegetation by livestock will depend on mean household numbers of each type of stock and the abundance of the species of vegetation best suited to each. Therefore, livestock numbers must be in ratios that are consistent with the availability of vegetation most useful for each stock type. This will avoid intertype stock competition in the use of vegetation, especially in situations (and these are many) where all types of stock are herded together to economize on the limited labour supply.

5. Need to increase awareness of impact of overgrazing and growth in human population

It is surprising that most people perceive no relationship between increase in human and livestock populations and the quality of the environment, given that the respondents resided at Korr and Kargi where progressive land degradation due to overgrazing and tree cutting is quite remarkable. Promotive activities in the form of environmental education through all available media (e.g. school, radio, barazas, community-development activities and so on) must be encouraged.

6. Need to arrest emerging inequalities in socio-economic standing among households

Naturally, social inequalities among pastoral people are held to a minimum because ecological conditions dictate communal sharing of resources rather than individual acquisitions at the expense of others. Although respondents have relatively equal access to valued facilities (e.g. in the use of water and vegetation), they do not have equal access to markets for sale of livestock and their products. They also show differences in their ability to purchase desirable basic household items.

7. Need to maintain stability and relations within households

Pastoralists will co-operate with IPAL in creating an efficient range-management system only if their aspirations and life goals are met. In particular, it is important to avoid developments that may impose strains in relationships among family members, especially relationships based on age and sex.

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HUMAN ECOLOGY: A STUDY OF ENVIRONMENTAL PERCEPTION AND MODES OF SURVIVAL AMONG THE SAMBURU IN KENYA

by

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Preface

The integrated disciplinary approach to the study of the arid and semi-arid ecosystems of Kenya is a move in the right direction. This relatively new scientific approach to the study of spatial phenomena in parts of north-eastern Kenya was initiated by UNESCO in 1976. The fundamental objective of these ecological studies has been the collection of relevant data for the formulation of appropriate policies for the "rehabilitation and rational management" of these arid and semi-arid ecosystems on a nation-wide basis. It should also be realized that through these studies, the identification of appropriate policy instruments for implementing development programmes is possible.

The design of this research was therefore influenced by the UNESCO objectives, which have been succinctly summarized in the IPAL research hypothesis: "through rational management it should be possible to raise the productivity of the range to support pastoral life". However, this study of environmental perception by the Samburu community also had its own specific aims and objectives. The primary objective was to examine how the dynamic aspects of the environmental perception of these people have influenced their pastoral life, whereas the secondary objective was to identify their cultural inhibition against the diffusion of modernization processes and suggest how best such processes could be promoted among these nomads, who are traditionally perceived as conservative and hostile to the processes of modern socio-economic development.

In addition, I would like to remind the reader that this report is written for both policy makers and scholars. It is generally known that the formulation and implementation of policies are mostly the responsibility of politicians and civil servants. In developing countries, most of these people have insufficient time to digest academically presented reports and for this reason the present report aims at striking a balance in the presentation of its subject matter.

In conclusion, I would like to thank the IPAL Project Co-ordinator, Dr. W. Lusigi, sincerely for the valuable support he has given to this research project.

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22 March 1982

Chapter I

A synopsis of the ecological crisis in Samburu District

Introduction

Ecologists have long been aware of the dominant role of man as a significant catalyst in the deterioration of arid and semi-arid ecosystems. It has been concluded that the nomads who inhabit these ecosystems have themselves caused most of the experimental development strategies for their habitats proposed by ecologists and other regional planners to fail. The failure of these development programmes partly reflects myopic interpretations of the nomads' perception of their ecosystems. The wealth of data collected on physical, biotic, and human population characteristics has not been properly synthesized to portray a realistic model of the pastoralists' behaviour. Consequently, it should not be surprising to observe that nomadic communities often rebuff externally derived forces of socio-economic change.

The author believes that satisfactorily gauging human perception of the environment is a complex problem. Human environmental perception is a dynamic process which changes in a spatio-temporal context. It also changes with the changing level of modernity. In other words, the totality of societal perception of an environment is a product of the experience of several generations. The manifestations of these experiences are people's attitudes, prejudices, tastes and level of aggression. Furthermore, cultural norms in reproductive behaviour and other societal, social, economic, and political institutions also partly reflect people's perception of their environmental levels of risk and utility. For these reasons, it is suggested that formulating appropriate development policies which aim at changing people's traditional modes of living requires a continuous process of monitoring changes in human behaviour over a long time. One is therefore bound to consider failures in the implementation of development policies in arid and semi-arid ecosystems as partly a function of past failures in continuously monitoring changes in the nomads' perception of their own environment and the resultant behaviour.

Population growth rate

The concept of population growth in this text incorporates both natural rate of increase and net migration. The natural processes which maintain the ecological balance of the arid and semi-arid ecosystems are considered to be the environmental hazards of disease epidemics, drought and famine, primitive methods of population control such as infanticide, and population out-migration. These natural factors operating as a check on rapid rates of population growth in most natural ecosystems are becoming ineffective.

The attempts being increasingly made to integrate the traditionally neglected regions of north-eastern Kenya into the scheme of national development strategies have reinforced the need to organize food-relief programmes and improve medical services and infrastructural facilities. The forces of regional modernization processes are reducing mortality rates and are also increasing the prospects for in-migration to these environments. Consequently, recent trends in population growth in the arid and semi-arid regions are reinforcing the perennial conditions of ecological disequilibrium manifested by increasing levels of desertification.

Referring to the Samburu District, the 1962 population census estimated the total Samburu population at approximately 48,750. In 1969, the population had increased to approximately 54,796 people, and in the most recent population census (1979) they were found to number about 73,625. These population aggregates yielded population growth rates of 1.7% and 2.95% for the two intercensal periods respectively. Evidence from registered births and deaths at the major hospitals in the district throughout the year 1980 yielded a crude birth rate of 393 births per 1,000 population and a crude death rate of 104 deaths per 1,000. The absolute natural increase was therefore 289 births per 100 population, or a natural increase of 2.89% per annum. A gloomy picture emerges if the total Samburu district population is examined, viz. the de facto population of the Samburu community plus the de facto population of other ethnic groups in the district. The 1969 de facto population of Samburu district was relatively much higher, amounting to 69,519 persons.

By 1979 this had increased to approximately 76,908 people. The intercensal population growth rate for the district was therefore approximately 1.01% per annum. This growth rate, though much lower than the national average rate of 3.4% per annum (Central Bureau of Statistics, 1981), should not be regarded as portraying the true rate of growth for the district, as under-enumeration was possible in the district due to the fact that during August, when the national census was carried out, most of the Samburu nomads had migrated to the wetter highlands in Marsabit District. Nevertheless, it should be realized that with even an annual population growth rate of 1.0% per annum, it would take Samburu District about 70 years for its population to double. Yet, with the observed growth rate of about 2.8% per annum, on the basis of vital registration statistics, the district would take only 24.2 years to double its population. Such a population growth rate is bound to increase the level of ecostress in the district.

Another related demographic crisis facing Samburu District is the increasing level of ethnic assimilation. In 1962, the Samburu ethnic group represented a greater level of ethnic homogeneity because the Samburu constituted over 83% of the entire district population. In 1979, the Samburu constituted the relatively low proportion of 75.0% of the total district population. Another 17.5% consisted of Turkanas, 2.5% of Kikuyus, and the remaining 5.0% was composed of other tribes. This changing trend in the ethnic composition of the district is a glaring indication of the increasing impact of in-migration on the district. The ecological crisis associated with in-migration to the district can be perceived in the context of two factors, namely the population characterisitics of in-migrants and the number of additional livestock brought into the district by such in-migrants. The majority of these in-migrants are nomadic pastoralists such as the Turkana, Rendille, and Gabbra. These nomads moving into the district with their large herds of livestock are likely to contribute to the problem of overgrazing.

In addition, the traditional land cultivators such as the Kikuyu, whose settlements have increased recently, have introduced land-tenure systems which are deleterious to the ecosystem. To illustrate, they have introduced market gardening near major urban centres such as Maralal, Wambaa, and Suguta Marma. The perception of these in-migrants of land as an economic asset which can be exploited under individual ownership as opposed to communal land ownership is likely

to be diffused among the nomads. Consequently, land grabbing by a few able nomads and in-migrants is a new phenomenon. However, it is correct in a historical perspective to argue that this is not really a new phenomenon, as it was initiated by white settlers on the Leroghi Plateau during the period of colonial administration. All these forces are likely to influence nomads in the direction of sedentary pastoralism.

Another ecological threat could be associated with the stream of businessmen in-migrants. Their demands have reinforced the establishment of relatively better infrastructural facilities. These businessmen have also stimulated the need for a cash economy due to their participation in livestock trading and the marketing of foodstuffs. For these reasons, the nomads are beginning to experience increased monetary circulation from the sale of their livestock. Moreover, their taste for certain foodstuffs is also changing rapidly. All these processes of modernization are creating conflicts between processes of modernity and traditionalism, particularly as the level of sedentarization accelerates near major urban centres such as Maralal town, Wambaa town, Baragoi town, and Suguta Marma. Another demographic crisis is the changing sex ratio of the Samburu. In 1969, these nomads had a sex ratio of 1.04, a predominance of males. Similarly, the 1969 de facto population of the district had a sex ratio of 1.03, also indicating a predominance of males. However, in the most recent population census (1979), a remarkable change was noticed. The Samburu community now had a sex ratio of 0.07, a predominance of females. Similarly, the district de facto population also yielded a sex ratio of 0.93, also a predominance of females. The author's personal observation of the population composition of the *manyattas* endorsed this finding. Could it be that most of the male population (warriors) were herding livestock elsewhere? A general indirect interview with elders and senior women tended to confirm the predominance of females in most families. This trend to a decline of the male population could be attributed either to increased mortality rates of males or to under-enumeration of the male population during the last census. The first proposition is plausible in view of the number of widows noted. If not, a combination of both factors could explain the changed sex ratio. It should be realized that the protection of the pastoral economy

has been partly the responsibility of warrior males. If their number is reduced significantly, then a threat to the pastoral economy is imminent.

Land-use crisis

According to the recent agricultural census, about 140,000 hectares of Samburu District, or 16% of the total land, is regarded as high-potential and medium-potential agricultural land. The average agricultural density of these areas in 1979 was approximately 0.6 hectares per person. This indicates a situation of high population pressure on these delicate ecosystems. With increased large-scale and small-scale crop farming in these areas, the nomads are being pushed further out of the relatively poorer grazing lands. To the Samburu, this is a bitter reminder of past experiences under the colonial administration, when their good grazing lands were alienated for white settlement. Consequently, increasing conflicts in land use are being fomented by land-adjudication programmes. Areas of complete land adjudication are Elberta, Longata Nanyukie, Poro A, Lodo Kejek, Lodunkwe, and West Waso. Most of these areas encompass the high- and medium-potential agricultural areas of the district. Furthermore, new areas such as Ndoto A, Poro B, Marti, Maralal, Wambaa West and East have also been declared for the adjudication programme. These land demarcations, though regarded as necessary for an organized block-grazing system, have increased conflicts in land use between individual pastoralists and group ranches, especially during periods of drought when cases of trespassing are more frequent.

Samburu district also has four gazetted forest reserves, encompassing 325,000 hectares or about 37% of the total district land. The Government has gazetted Mt. Nyiru (45,400 ha) and Mathew's Ranges (92,680 ha) as water-catchment areas. In addition, Mt. Ndotos (96,040 ha) and Kirisia Lorroki (90,889 ha) have been left as traditional grazing zones for nomadic pastoralism. Accordong to one of the district forest officials, during periods of extreme drought these nomads are allowed to utilize the forests, but within the upper-forest-line rule to safeguard against soil erosion. All these spatial restrictions are pushing horizontal nomadism towards sedentary pastoralism. Consequently, increased degradation of vegetation is spreading rapidly within the district.

Another significant phenomenon in land use is the increasing number of rural nucleated settlements offering different types of services. These settlements, which could be classified as urban centres, rural shopping centres, security outposts, and waterpoints, have become increasing centres of in-migration. The major district urban centres are Maralal, Baragoi, Wambaa, Suguta Marma, Barseloi, and Archer's Post. These major urban centres have attracted sedentary pastoralism within their immediate periphery. Consequently, overgrazing of the areas surrounding these towns is marked. It should also be realized that Samburu District, like other north-eastern regions, has poor security, caused by the cattle rustlers commonly referred to as *Ngorokos* who have dominated all the northern and north-western parts of the district. The eastern parts of the district also experience occasional incursions by the Somali bandits called *shiftas*. All these spatial factors of insecurity are forcing nomads into sedentary pastoralism, especially near centres where the Government can provide effective security. In a sense related to this factor is the annexation of large parts of the district for military exercises. This factor has also contributed to the exclusion of nomadic pastoralism in affected areas. A rather more significant factor to note is the strategic locations of the district centres. Most of these settlement centres are near permanent water-points or good pasture. In addition, the demand for a local fuel supply by urban residents tends to stimulate the charcoal-burning business. Furthermore, the food requirements of these centres have also encouraged market gardening around them. All these land-use activities are contributing to a rapid deterioration of the vegetation cover around these rural settlements. Lastly, the urban centres have also become important food-relief centres for the destitute nomads. For these reasons, rural-urban migration is becoming a new social problem. The missionaries have done a commendable service in this respect; however, they have in turn created a problem in the relations between the nomads and Government officials, as the nomads expect the Government to be equally generous in trying to solve their problems.

Environmental hazards

The occasional cyclic pattern of environmental hazards, in the form of disease epidemics and drought, constitutes a serious problem in the development of arid and semi-arid ecosystems. Though ecologists perceive these elements of ecostress as necessary biotic factors in controlling over-population (Abeywickrama, 1961) these environmental phenomena render horizontal nomadism a necessary means of survival. In addition, these conditions render the rearing of exotic livestock, which have no immunity to the common diseases of such environments, a constraint on improved productivity in these regions. Lastly, attempts to control the frequency and intensity of these biotic factors often result in increased levels of ecostress, due to the impact of increased numbers of livestock and larger human aggregates on such delicate ecosystems. Prior to 1976, these arid areas of north-eastern Kenya experienced seven years of consecutive drought (Field, 1978). As a result, the nomads were forced to settle near major urban centres where food-relief services were available. These settlements, as noted previously, resulted in overgrazing of the nearby land. In addition, the prolonged effects of drought have forced nomads to alter their traditional diet. To day, more nomads are eating maize-meal, tea, potatoes, beans and vegetables to supplement their traditonal menu of milk, meat, and blood. Changing dietary practices have also created a need for money to use in purchasing these foodstuffs and other luxury items. All these are forces of socio-economic change which create conflicts between traditionalism and modernity. The pace and extent of the successful diffusion of modern socio-economic development processes will therefore depend on the right approach by the region's administrators and planners.

Research methodology

Sample size

The results of this research are based on a probability sample-size estimate of approximately 5% of the total adult population. This sample, of about 263 male respondents, represents 49.6% of the original probability sample-size estimate of 530 adult respondents. Furthermore, about 35.7% of the total respondents were from Maralal Division, 33.8% from Baragoi Division and 30.4% from Wambaa Division. These three ecological zones represent forest vegetation round Maralal township, open grassland with scattered *Acacia* thorn-trees around Baragoi township, and predominantly *Acacia* thorn-tree vegetation around Wambaa township.

Methods of data collection

The majority of the nomads interviewed were living within a 10-kilometre radius of the three major urban centres. Travelling to distant rural environments was impossible, due to lack of transport and the relatively short time allocated for the research. In addition, reliance on the questionnaire approach was the only practicable method for collecting "attitude information" in the time available. The author's desire to use participant observation as another method for collecting information was frustrated by external factors which were unforeseen.

Despite the stated limitations, the quality of response was extremely good. Reliance on respected members of the nomadic community as interpreters and guides made the author more readily acceptable. Since these local interpreters know their people well, it was possible to limit the possibility of deliberate misinformation. In addition, oral interviews with elders, chiefs, Government officials and missionaries also assisted in providing valuable data which could be used to verify information provided by the nomads themselves.

Synopsis of chapters

Chapter 2 gives a brief examination of the ecological features of Samburu District. This is necessary as these environmental features

have a bearing on the totality of human perception of the environment. Chapter 3 contains a brief examination of population characteristics and social structure.

Chapter 4 is an analysis of the perception of land cultivation as an alternative source of livelihood within arid and semi-arid ecosystems (Samburu District).

Chapter 5 examines the relationship between migration of the nomads and their perceptions of the environment, and how this finally influences their organization of space utility.

Chapter 5 narrows the analysis to show how environmental perceptions influence human settlement, while chapters 6 and 7 examine how the totality of human perception of the environment influences actual settlements and the pastoral economy respectively. Lastly, chapter 8 gives a brief analysis of the connection between the Samburu study and the IPAL study area. It concludes with a list of recommendations.

Chapter 2

Ecological background of the study area

Location and size

Samburu District is the traditional habitat of the Samburu people. The district extends between 36°25' and 30°04' east longitude and 0°35' and 2°30' north latitude. It therefore covers an area of approximately 20,804 km².

Physical features

The district is divisible into three main physical regions, namely (i) the south-western plateaux, (ii) the western plains, and (iii) the central and eastern plains (see Fig. 1).

The south-western plateaux have an average altitude of 15,000 and 2,000 metres above sea-level. This constitutes a high plateau zone extending from Suguta Marma in the south-west through the Maralal Massif and Porror. The entire zone forms the Leroghi Division of the district.

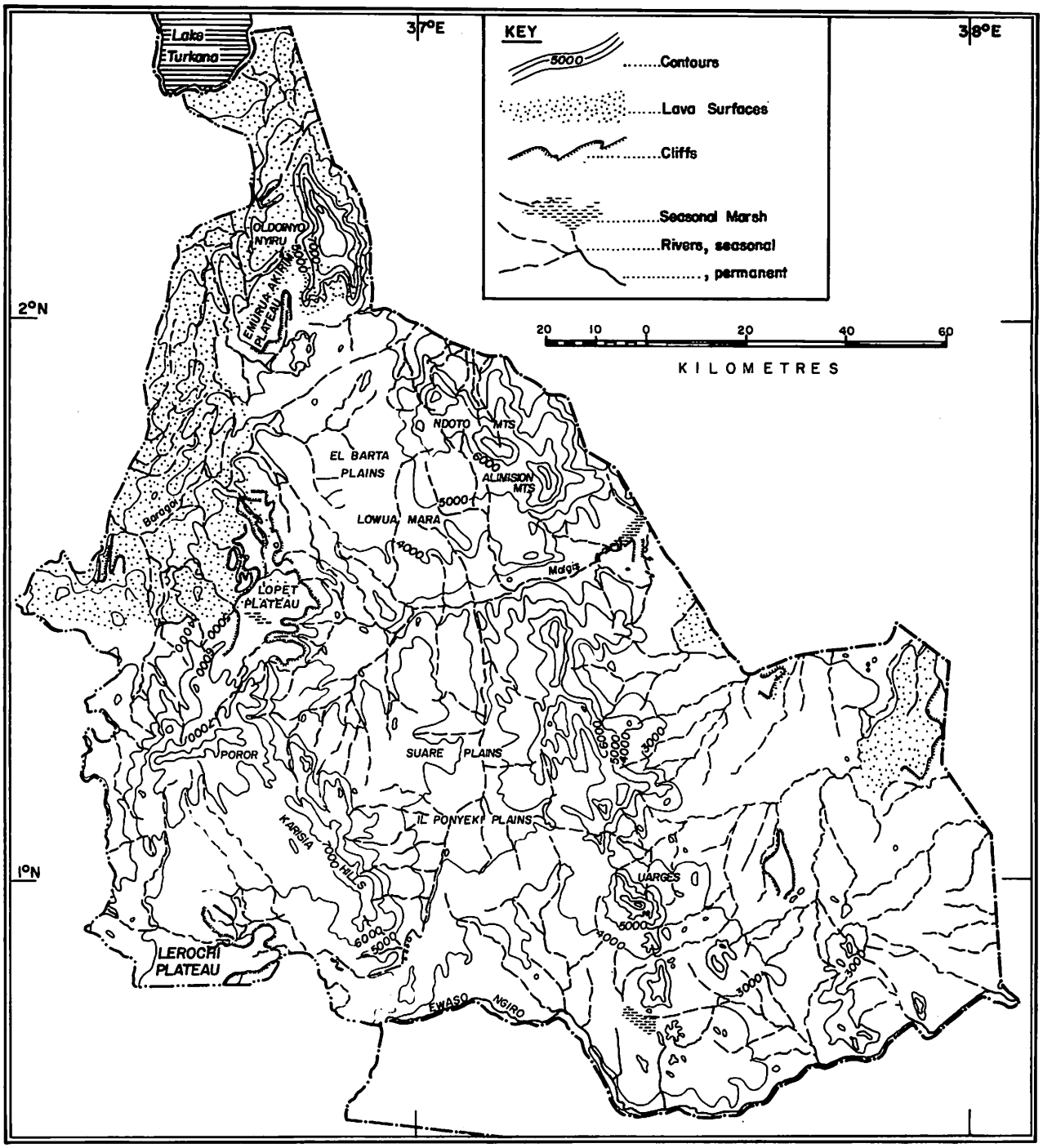
The central plains, bounded by the western plateaux and a line of discontinuous mountain ranges on the east, such as Mathew's Ranges and the Ndotos, is made up of several small plains extending from the south near Ewaso Ngiro river and broadens to the north to form the Elbarta plains. These plains are dotted with volcanic cones covered with poor *Acacia* vegetation and occasionally rocky inselbergs.

To the east of the eastern mountain ranges is the extensive eastern plain, locally referred to as Lpurkel plain. This plain averages between 800 and 1,500 metres above sea-level. Its surface has scattered volcanic cones covered with poor vegetation.

Drainage systems

The entire district has extremely poor surface drainage systems. It is only in the extreme southern portion of the district that permanent streams of the Ewaso Ngiro river are found. The central region of the district also has intermittent river systems (of the Malgis river) which drain in a west-east direction. For purposes of river-basin development, two distinct river basins emerge, lying on both sides of the range of mountains running from Nyiru - the Ndotos and the Mathews Ranges (Ldoinyo Lenkiyyo). All these ranges, which are over 1,500 metres above

Fig. 1 Relief features of Samburu District



sea-level, receive high amounts of 'orographic rainfall'. Nevertheless, most of the surface streams are intermittent, because of the sandy nature of the soils, inadequate rainfall, and high rates of evaporation.

The entire district therefore has arid and semi-arid conditions, with two distinct rainfall regimes.

Climate

The western plateaux or Lerroki plateaux have two rainfall regimes. The long rainy season extends between April and August, while the short rainy season normally extends between October and November. These plateaux receive between 750 mm and 1,200 mm of rainfall per annum. This is, however, only the case on most of the actual ranges. The rest of the plateaux receive between 500 and 750 mm of rainfall per annum. Other parts of the district receive rainfall only in April and November. Most of these areas, particularly the central plains, receive between 250 and 500 mm of rainfall, compared with the 200-250 mm of rainfall experienced over the eastern plains.

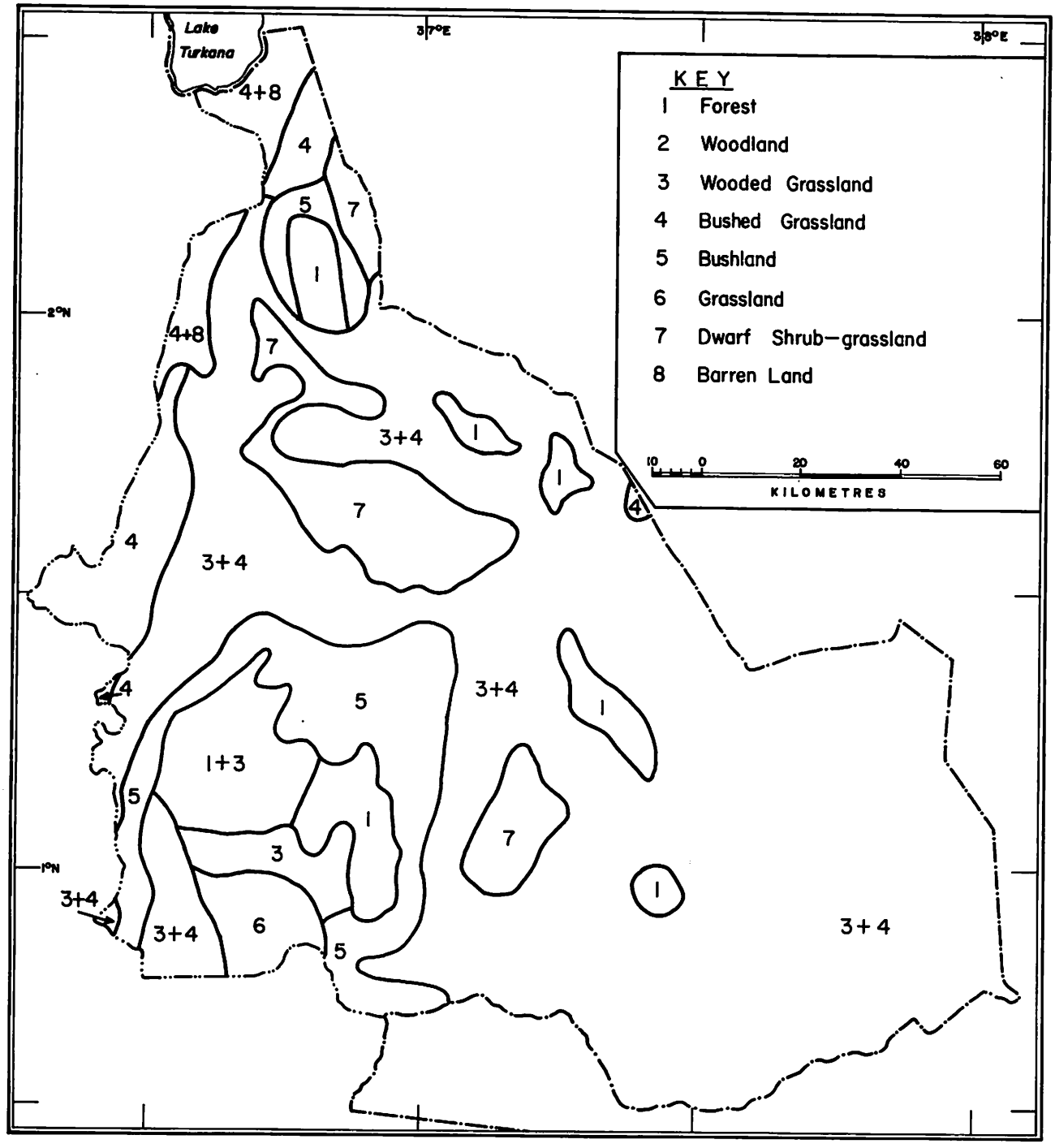
The district generally experiences extremely high temperatures, with a mean annual minimum of 24°C and mean annual maximum of 33°C. Consequently, the district has high evapotranspiration rates, which have caused the growth of stunted vegetation cover in most areas.

Vegetation

On the basis of Fig. 2, it is observed that some 60% of the district is covered with wooded grassland vegetation (3) and bushed grassland vegetation (4). In fact, the entire eastern plain, which experiences arid conditions, is covered by this type of vegetation only. In addition, the relatively wetter western plateaux have a varied composition: forest vegetation (1), wooded grassland vegetation (3), bushed grassland vegetation (4), bushland vegetation (5), and open grassland vegetation (6). These conditions suggest that the western plateaux offer more opportunities for different types of land use.

In conclusion, the bulk of the Elberta plains to the north tend to experience conditions of greater aridity. For this reason, the

Fig. 2 Distribution of vegetation in Samburu District



area is covered with dwarf shrub-grassland vegetation (7). The vegetation characteristics of the district as a whole therefore suggest that the economy of these ecosystems will rely heavily on proper range management practices, as there is limited scope for land cultivation.

Chapter 3

Population characteristics, social structure and environmental perception

Introduction

A general classification of ethnic communities in East Africa regards the Samburu as members of the East Nilotic groups of Kenya (Heine et al., 1980). However, further linguistic classification sub-divides the East Nilotic group into the *Maa* speaking people and the Teso-Turkana group. The Samburu are regarded linguistically as members of the *Maa* speaking group. The other members of this group are the Maasai and Camus (Njemps), as noted by Heine and his colleagues.

In fact, the Samburu resemble the pastoral Maasai in their economy (Spencer, 1965). and oral evidence suggests that they diverged from the Maasai about 1,000 years ago. Nevertheless, the Samburu are normally differentiated from the Maasai in the sociological perspective (Heine et al 1980). Further oral evidence suggests that the Samburu regard the Ndorobo as socially close to them, in the manner in which an orphan is brought up by a family. Historical evidence portrays the Ndorobo as a poor community which lost its entire herd of livestock after a serious environmental catastrophe. It was the Samburu people who gave them a few livestock to subsist on, apart from their hunting.

Family structure

The Samburu community is divisible into two main groups or 'moieties'. The first group is called Nkicu Naarok (black cows) and the other is referred to as Nkicu Naaibor (white cows). These two major groups are further divided into eight patriline phratries or clans (G.E.S.P. 1981). The clans of the Nkicu Naaibor were the Lukumai, Lorugucu, Lomuso and Longieli.

The Samburu, like other nomads, have no clearly tailored concept of kinship in the traditional way. To them clanship is based on a social obligation of mutual help and trust and not on a common ancestor (Spencer, 1973). The concept of brotherhood is therefore based on descent and bond. This is a useful system, for it could guarantee better

prospects for survival in a limited territory characterized by high levels of ecostress and free spatial mobility. Under such circumstances, it is possible for nomadic settlements to bring unrelated families together for grazing purposes or for common security. For these reasons, it is necessary for a good-neighbourliness strategy to be cultivated. It was evident from the study of the *manyatta* visited in Maralal Division that about 48.9% of their family heads had a relationship with other family heads who were regarded as bond-friends. The proportions in Baragoi and Wambaa divisions were 44.9% and 60.0% respectively. Such a population composition of *manyattas* indicates that under a pastoral mode of life help may be sought from people who are not necessarily kinsmen. As Alan Jacobs (1972) states:

> Among the Turkana a man who is closely related *ipso facto* is one who gives and is given animals.

This shows not only mutual affection and confidence but also makes for genuine co-operation in each other's lives. The need for security and labour favours the cultivation of such practices, and a cultural system which favours the cultivation of bond-friends thus aims at reducing environmental risks.

Social structure

A significant feature of the Samburu system of administration and political functions is the existence of an age-group system. All the circumcised men of the society are classified into age-groups. In this respect they resemble the Rendille of Marsabit District. Traditionally, a new age-group is formed about every 12-14 years. The age-group of warriors is called *Lmurran* and the warriors in the age-group of old people are called *Lpayyan*. A study by G.E.S.P. (1981) was able to identify the major initiation or age-groups of the entire community as follows:

Name of age-group	Year of initiation
Imerico (Lmericho)	1912
Ikiliako (Lkileku)	1921-22
Lmekuri (Lmukuri)	1936
Ikimaniki (Lkimaniki)	1948
Ikicille (Lkiabu)	1960-62
Ikiroro (Lkudumu)	1972-76

The names in brackets were given by an old informant. These were the names of the 'kings' of each age-group, or more simply, the names of the elders of each age-group after whom male populations for each cohort had to be named. These age-group 'elders' influence the behaviour of their respective groups tremendously.

Administration and decision making

It is essential to realize that, before the arrival of the colonial administrators, the Samburu had neither a central political power nor a system of chiefs. Consequently, individual families had autonomy in the decision-making process. The consequence of this fluid system of administration was that there was no control on the spatial mobility of individual families. The use and re-allocation of family property up to the present day is determined solely by individual household heads. For this reason, policy measures which aim at influencing the livestock herd must be endorsed finally by each individual household head.

Among the Samburu the highest political power was the council of clan elders, consisting of elders selected from every clan. Their main role was mediation between clans. Otherwise, it was the 'king' of each circumcision group who had the greatest impact on their age-mates. What these 'elders' have authorized will be binding for that circumcision group. But with the establishment of the office of the chief in the 1920s these traditional elders realized that the authority of the chief is more powerful. For this reason, circumstances have forced them to work with the chief. It must, however, be emphasized that the effectiveness of these 'elders' depended on individual charisma. Their rule was in most cases by consensus and not by the dictates of a well centralized political body (G.E.S.P., 1981).

It is also noted that the main function of these traditional elders was the performance of rituals during different ceremonies. Today the elders play a more significant role, namely consultation in matters affecting the clans, especially those initiated by the Government and other independent agencies such as missionaries.

In conclusion it is to be noted that women take no part in the decision-making process at any level of the Samburu family structure. As Spencer (1965) states:

Samburu is essentially a man's society and from the male point of view women are inferior and politically uninfluential; patriarchy is the norm.

Despite this inferior position of women, their role in stabilizing relationships between clans or tribes is respected.

The impact of environmental perception on demographic features

Introduction

The Samburu perception of their environment is best summarized by Fig. 3, which portrays the spatial pattern of population density in 1979. It is observed that a pattern of nucleated-but-scattered settlement is well established. As previously noted, these are the rural centres which offer a range of services and security. It is further noticeable that the majority of these centres are within the western plateaux or along the eastern mountain ranges. These are the micro-regions which offer prospects for relatively better pastoral activities because of the availability of water and grass. Between these centres the population tends to be scattered in a zone running from south to north within the western plateaux and along the eastern mountain ranges.

Average parity

Environmental perceptions of high mortality conditions have led the Samburu to evolve a cultural norm which cherishes large families. According to the 1969 population census estimates, the entire district experienced an actual total fertility rate of 5.2 children per woman reaching menopause. By 1979, the average number of births per woman increased to 6.5 children (based on the 1979 census estimates). The noted intercensal increase in average parity was therefore about 25.7%.

It is suggested that the attainment of a large family size among the Samburu reflects their traditional attitude towards early marriage among the female population (see Table 1). About 56.4% of females (a majority) get married between the cohorts aged 15 and 19 years.

Fig. 3 Population distribution in Samburu District

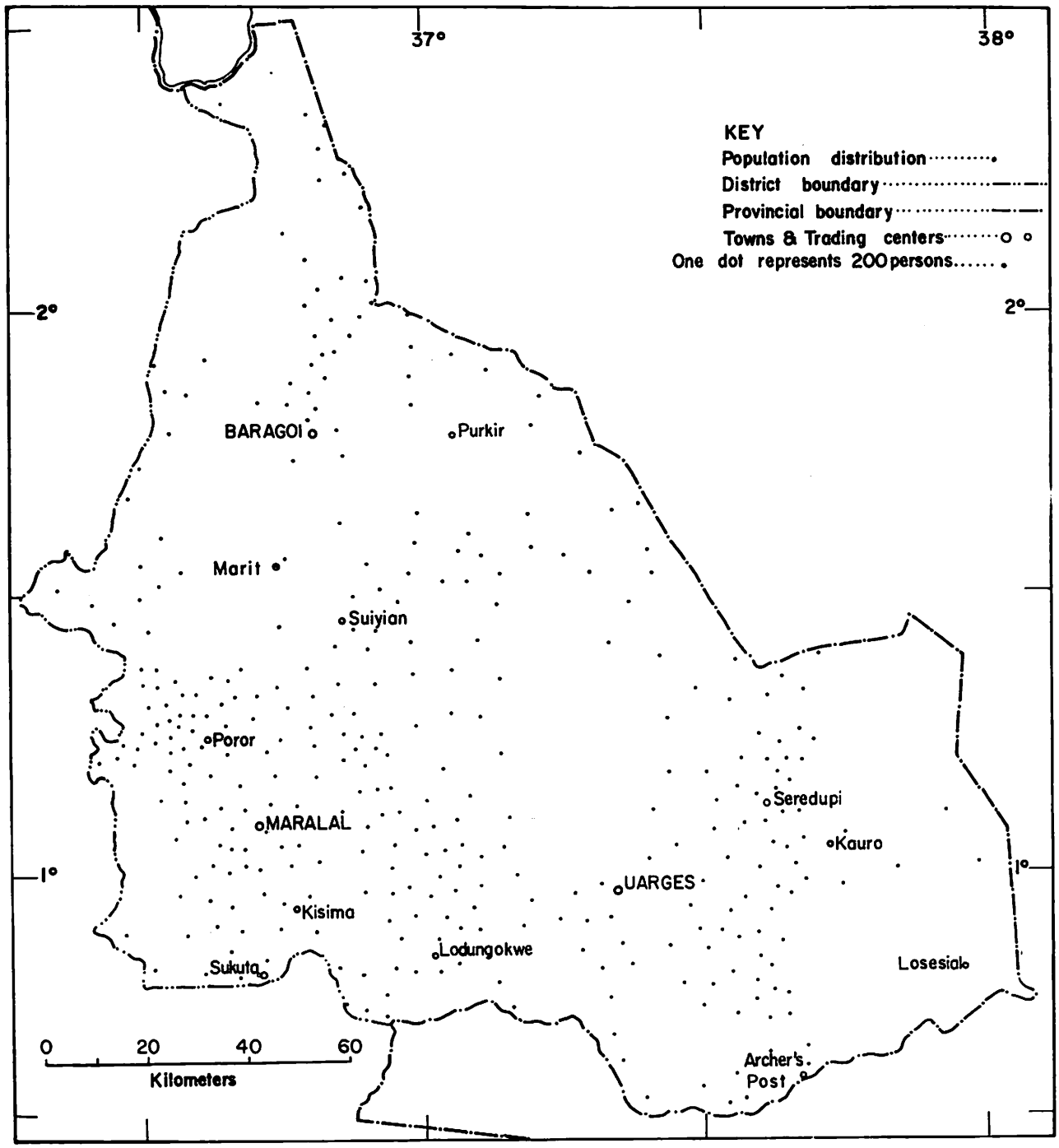


Table 1. Age at first marriage.

Age-group in years	Number of male population sampled	% of total male population	Number of female population sampled	% of total female population
Below 15	13	7.5	24	14.5
15-19	33	19.0	93	56.4
20-24	60	34.7	42	25.5
25-29	41	23.7	6	3.6
30+	20	11.6	0	0.0
Not stated	6	3.5	0	0.0
	173	100.0	165	100.0

Equally significant is the proportion marrying between 20 and 24 years, as they constitute 25.5% of the total females sampled. The number of women marrying at advanced age is negligible; none were noted above 30 years. Reference to the male population reveals that they generally marry at relatively older ages, with a majority (34.7%) marrying between 20 and 24 years and a significant proportion (11.6) marrying above 30 years of age. It is, nevertheless, postulated that with the increasing impact of modernization processes on the Samburu people, the cultural norm of late marriage among the male population is bound to die a natural death. It was noted by most male warriors interviewed that some males prefer late marriage because of "exciting experiences of warriorhood".

It is also postulated that the average parity is bound to increase because of the increasing medical services being made available to these nomads. According to the 1969 population census estimates, the proportions of women aged 15-49 years who were sub-fecund were 58.9%, 20.9%, 7.5% and 11.0% among the age-groups 15-19 years, 20-24 years, 25-29 years and 30-34 years respectively. Numerous references in the demographic literature attribute the high levels of sub-fecundity among nomads to venerial diseases. So, with the increasing diffusion of medical services among these people, the incidence of sub-fecundity

is bound to decrease, resulting in increased fertility rates, *ceteris paribus*. This suggestion becomes more plausible when the improved standard of nutrition among these nomads is taken into consideration.

It was also observed that polygamy is a common cultural feature among the Samburu. Polygamy may also contribute to low fertility levels. This survey found that the proportion of childless women in monogamous unions was 18.4% and 4.8% for the females sampled in Maralal Division and Wambaa Division respectively. These proportions were scarcely half of the proportion of childless women in polygamous unions. For example, in Maralal Division, about 31.6% of women in polygamous unions were childless. The significance of polygamy must be conceived in the context of the Samburu perception of their environment. First, it is encouraged by the livestock ownership of a person. As one informant stated:

> If the first wife is childless, the husband has no alternative but to invest his livestock in the possession of a second, third ... wife.

According to their custom only male children inherit their father's wealth, so that a male child must be obtained at all costs. Polygamy is therefore seen as a means of achieving this goal and at the same time as an investment medium for livestock. Nomadism requires a high level of labour supply and polygamy helps to achieve this goal.

Mortality conditions

As a rough indication of the crude death rate, the district, according to the 1979 population census, experienced an infant mortality rate of 77/1,000 compared with about 130 infant deaths per 1,000 in Marsabit District. This is a clear indication of the high level of environmental risks still experienced in these regions.

An attempt to obtain the nomads' perception of the seasons of high infant deaths is shown in Table 2.

Table 2. Perception of seasons of high infant deaths.

Season	Maralal 94=100%	Baragoi 86=100%	Wambaa 80=100%
Wet	51(54.3)	16(18.0)	56(70.0)
Dry	31(33.0)	20(22.5)	24(30.0)

(Percentage computed on the basis of total sample population)

The Samburu people perceived wet seasons as the period of high infant deaths. This is to be expected, as during the wet seasons the surface water-ponds and other accumulations of stagnant water encourage the breeding of mosquitoes, thus increasing the incidence of malaria. Furthermore, during wet seasons, increased loss of body heat renders the body weak because of insufficient consumption of heat-generating foodstuffs. The nomads' normal diet consists of only meat, milk, and blood, which are deficient in calories generating body heat. In addition, during wet seasons there is plenty of milk for children, with the result that during this period most children suffer from gastrointestinal diseases, which are frequently fatal.

A further attempt to identify their perception of the major causes of deaths is given in Table 3. It is observed that these nomads regard diseases in general as the major cause of deaths. Equally significant as a cause of deaths are wild-animal attack, cattle raids, famine and starvation.

Table 3. The major causes of deaths.

Cause of death	Maralal Division 94=100%		Baragoi Division 89=100%		Wambaa Division 80=100%	
Diseases in general	78	83.0	36	45.5	76	95.0
Wild animals	26	27.7	16	18.0	67	83.8
Famine/starvation	25	26.6	11	12.4	9	11.3
Abortion/pregnancy	20	21.3	10	11.2	30	37.5
Childbirth	10	10.6	6	6.7	2	2.5
Cattle raids	14	14.9	16	18.0	43	53.8
Old age	13	13.8	4	4.5	2	2.5
Poor nutrition	10	10.6	3	3.4	1	1.3
Floods/accidents	3	3.2	2	2.3	12	15.0

The traditional methods employed to reduce the level of mortality rates reflects also changing perceptions of the role of traditional medicine as a cure for most diseases. An increasing attempt is being made to obtain modern medical services from hospitals, dispensaries, and health centres (see Table 4). This change in attitude towards medical services is attributed to the proximity of most *manyattas* surveyed to the major urban centres of the district.

In conclusion, the effect of high mortality rates is presumed to be mostly on the male population. Their traditional age-sets of warriorhood expose males to greater environmental risks. Consequently, the Samburu culture cherishes male progeny and also values polygamous unions, which are partly caused by the custom of living brothers, or other relatives, inheriting the wives of deceased men. These polygamous unions are therefore perceived as increasing family sizes. This is necessary to maintain self-sufficiency in labour requirements. Lastly, the Samburu people encourage early first marriages, particularly among the female population. There is tremendous disrespect for unmarried adults, and attempts are often made to give the marriage institution even greater societal respect.

Table 4. Measures to reduce mortality rates.

Method used	Maralal 94=100%		Baragoi 89=100%		Wambaa 80=100%	
Modern medicine	52	55. 3	27	30.3	72	90.0
Traditional medicine	44	46.8	36	40.5	57	71.3
Improved nutrition	2	2.1	N/S	N/A	N/S	N/A
Migration	1	1.1	N/S	N/A	N/S	N/A
Building better *manyattas*	1	1.1	N/S	N/A	N/S	N/A
Killing wild animals	2	2.1	N/S	N/A	N/S	N/A

Attitudes and prejudices of the Samburu

The Samburu are highly ethnocentric and have poor public relations. They refer to a non-Samburu as a *mangati*, meaning an enemy. Although they are receptive to change (Republic of Kenya, 1976) they seem loath to initiate it. In this respect they differ significantly from the Maasai, who have demonstrated that they can develop themselves. One is therefore bound to suggest that local political leadership is the root cause of the main differences between Maasai and Samburu in initiating socio-economic changes. Personal communication with district leaders and civil servants tended to suggest that proposition. It was the opinion of most informants that Samburu politicians and other prominent local leaders are working for the *status quo* rather than for effective socio-economic changes for the district. The other element of difference between the Maasai and the Samburu is the 'attitude of dependency' of the latter. In this respect, the Samburu are similar to the Rendille. These people expect assistance in all aspects of life, ranging from food supply to the building of schools. The observation was made by one of the government officials, who stated:

> These people, even when they have a lot of money after sale of their livestock, will still queue for food relief.

That statement endorses the proposition that these people like begging. According to several elders, begging is a cultural practice among the Samburu, as it is protected by taboos. Anybody refusing to give alms

or help in whatever form the begger asks will be cursed. This is the main reason hindering most Samburu from venturing into business; they fear to lose heavily in such activities because of begging. To verify this allegation, a sample survey of shops in the three major urban centres of the district revealed that most of the businessmen were either Turkanas, Kikuyus or Borana. The attitude of dependency is an obstacle to self-help projects. In addition, such projects are seen as an indirect way of reducing the people's livestock herds. Despite these cultural differences between the Samburu and the Maasai, one cannot be blind to environmental factors as possible causes of differences in the speed of socio-economic development between the nomadic groups.

It should be stated again that most civil servants interviewed held the opinion that educated Samburu are the engineers of the *status quo* in socio-economic development by the dual characteristics that they exhibit. Some educated Samburu do not want to be associated with their culture. Others in the district tend to revert to traditional ways of living. It is noted that educated women are regarded as social misfits and have no prospects of marriage among Samburu males of their own educational status. Consequently, most educated Samburu women, i.e. those with secondary and upper primary education, marry into other tribes. Those social misfits who have no alternative often resort to prostitution, trying to use sex as a means of communication. It is through such pre-marital sexual relations that pre-marital pregnancy is becoming a growing social problem. Marrying such girls is prohibited indirectly through the cultural institutionalization of taboos which are supposed to bring bad luck to their families. For this reason, unaborted pre-marital pregnancy results in permanent spinsterhood, unless such a woman is lucky enough to be married by a person from another tribe. It is partly the harsh treatment of pre-maritally pregnant women that is responsible for the low levels of illegitimacy among the Samburu. However, a number of elders interviewed expressed the opinion that today the incidence of pre-marital pregnancy is on the increase. They attributed this to the increasing impact of female education.

Further discussion with the elders revealed the notion that it is mostly the poor nomadic families who send their children to school. The children sent to primary schools are properly fed, and consequently most families who cannot afford to feed their children properly prefer to send their children to such schools to reduce the burden of dependency. In addition, more girls are sent to school because the girls generally have less work to do at home than the male children, who are used by preference in the grazing of domestic animals and who offer security to the *manyattas* at night when they reach the age of warriorhood. This imbalance in the education of boys and girls is creating a social crisis, as educated girls cannot find husbands among the illiterate men. The exposure of girls to more liberal ways of life in boarding schools located in other regions, which are relatively more advanced, is likely to increase the incidence of pre-marital sex, particularly among girls accepted for secondary education.

The Samburu are noted as a stubborn people. Their stubborness is a by-product of the gerontocratic authority of age-set systems which require them to demonstrate loyalty only to their elders and not to foreigners. For this reason, the institutionalization of a centralized system of authority symbolized by the office of the chiefs is bound to meet with resistance. Even among themselves, disagreements are acknowledged and respected. This therefore requires the chiefs in Samburu District to work closely with the council of elders in order to administer effectively. Most elders interviewed expressed disapproval of the modern system of electing local chiefs. The advertisement of the post on the basis of proper qualifications is regarded as inadequate. Most elders spoke of the need for greater participation by the council of elders in the screening of prospective candidates. It is believed that this exercise will help to ensure the choice of a chief who will be respected by the council of elders or 'kings' of the different age-groups, as they will have participated in his selection. For this reason, the local 'kings' are bound to co-operate more closely with chiefs and the functions of the chief will also be made easier as his major role will be as a liaison officer between the nomads and the Government.

Dietary practices

The Samburu are known to like sugar, tea and tobacco. It is not uncommon to find people who have walked several kilometres from the rural areas to come and buy these items in the major urban centres. With the increasing circulation of money resulting from greater participation in livestock sales, the diet and eating behaviour of these nomads is bound to change. This survey noted that most of these people are now eating and like the following foodstuffs: maize-meal, potatoes, cassava and tea, as well as using tobacco. These people, like the other nomadic tribes, apparently do not like poultry. This has been culturally institutionalized through taboos which discourage the eating of chicken (and also fish). But it should be noted that it is probably the inconvenience of keeping poultry and transporting them during migration, which sometimes comes abruptly, that discourages the keeping of poultry. Increased sedentarization will encourage these people to keep poultry, as was observed around the major urban centres where people had developed an interest in selling eggs to the urban residents, particularly around Maralal town.

Having briefly examined the population characteristics of these people and the features of their environment, we should now examine how these nomads have translated their perceptions of the environment into a pastoral mode of life, which they regard as the only means of survival in arid and semi-arid ecosystems.

Chapter 4

Samburu perception of land cultivation as a source of livelihood

Traditionally, nomadic communities loathe arable farming. This attitude towards land cultivation is a realistic assessment of the viability of arable farming as an alternative source of livelihood in these arid and semi-arid ecosystems. The level of rainfall reliability and intensity is a natural hazard to successful crop farming in the district. As a result of this, attempts to introduce arable farming have failed, partly because the insufficient rainfall causes frequent crop failures. The survey revealed a widespread general dislike of crop farming, particularly in the relatively more arid zones of Baragoi and Wambaa Divisions. To illustrate, about 98.9% of pastoralists in these two regions respectively expressed strong dislike for crop farming. But in the relatively wetter regions of Maralal Division, almost half of the pastoralists sampled expressed themselves as strongly in favour of land cultivation. The proportion of such nomads expressing themselves as in favour of land cultivation was 47.9% of the total number sampled.

It was observed that those who were in favour of land cultivation regarded crop farming, not as an alternative source of livelihood, but as a means of saving their livestock populations. They argued that the ability to grow their own food crops reduces the propensity to sell their animals in order to purchase foodstuffs and other luxury items. On the other hand, those who expressed a dislike for land cultivation argued that crop farming makes a person poorer.

It was, however, observed that the western plateaux of the district, consisting of the Leroghi plateau and the Kisima plains, have recently been the foci of modern agricultural practices. The diffusion of land cultivation into the region is partly attributed to the influence of Kikuyu migrants. In addition, the Ministry of Agriculture and Catholic missionaries, as well as a few white farmers, have contributed to the growth of small- and large-scale land cultivation. These farming activities have induced nomads to take up market gardening, particularly around Maralal town where the population of civil servants

and other business people offers a ready market. It was therefore noted that 36.2% of the pastoralists sampled admitted owning a plot for crop farming. Yet, there was zero response for such activities in Baragoi and Wambaa Divisions, which are relatively more arid. The pastoralists who admitted they owned plots actually had very small holdings; 28.7% had plots of less than 5 hectares and another 4.3% had farms of between 6 and 10 hectares.

A further attempt to elicit their attitude towards land adjudication again revealed a strongly favourable attitude to land adjudication in the better watered areas of the western plateaux (see Table 5). It is observed that in Maralal 39.4% of respondents expressed preference for land adjudication, compared to a negligible response of about 1.3% in Baragoi and Wambaa Division.

Table 5. Attitude towards land adjudication.

	Maralal		Baragoi		Wambaa	
Preference for adjudication	No	%	No	%	No	%
Yes	37	39.4	1	1.10	1	1.3
No	57	60.0	88	98.9	79	98.7
Land adjudication in progress						
Yes	15	16.0	5	5.6	1	1.3
No	79	84.0	84	94.4	79	98.7

This pattern of response also emerged when they were asked whether actual land adjudication was in progress in their settlement areas. The main reason given for disliking land adjudication was its restriction of the free movement of livestock during very dry seasons. Nomads perceive land as societal property; the idea of individual or group ownership of land is foreign to their culture and must be resisted at all costs. In addition, they have associated the re-establishment of block ranching schemes with the "motive of exploitation". As one elderly informant stated, "most of the co-operative grazing schemes are dormant. These nomads, due partly to ignorance and the fear of losing their livestock if they fail to pay loans offered by the Government to improve

their ranches, do not want to borrow money to develop their co-operative grazing schemes." It must further be observed that their nomadic mode of living makes them devalue their land title deeds, as during periods of drought they abandon their grazing blocks in search of green pastures elsewhere. It is also realized that the laws regulating the management of these co-operative ranching schemes are too rigid to be satisfied by these people, who are mostly illiterate. It is too much to expect them to follow proper accounting procedures and to hold annual meetings under situations of frequent spatial instability. In addition, they are afraid to satisfy the requirement of reducing their livestock herds to meet the carrying capacity of their grazing blocks.

Table 6. Preference for selected crops.

	Maralal		Baragoi		Wambaa	
Cereal crops	94=100%		89=100%		80=100%	
Beans/cow peas	36	38.3	12	13.5	23	28.8
Maize	64	68.1	27	30.3	20	25.0
Millet (sorghum)	5	5.3	10	11.2	12	15.0
Rice	2	2.1	4	4.5	16	20.0
Root crops						
Potatoes	41	43.6	6	6.7	23	28.8
Onions	13	13.8	3	3.4	18	22.5
Cassava/yams	5	5.3	3	3.4	13	16.3
Carrots	18	19.1	-	-	-	-

Despite the above problems facing block grazing schemes, there is hope for the introduction and intensification of small-scale land cultivation to supplement pastoral farming. The changing diet of these nomads is beginning to exert an influence on their demand for certain crops; the need to cultivate such crops is now only frustrated by the problem of water scarcity. An attempt to assess nomads' preferences in cereals and root crops which can be introduced for small-scale farming is reported by Table 6. There is sufficient evidence that maize, beans and potatoes are regarded as important food

crops. It is plausible to attribute this change in attitude to the impact of the food-relief programmes on these nomads.

To ascertain whether the preference for these crops was translated into reality, the actual cultivation of such crops was investigated; this revealed that the above crops, and also green vegetables, have become important supplements to the normal nomads's diet of meat, milk, and blood (see Table 7). It must be emphasized that the consumption of these foodstuffs is relatively greater among sedentary nomads who have settled within the immediate periphery of the major rural service centres. It is further noted that most of these small-scale farms are within the wetter western region of the district, where an adequate rainfall of between 750 mm and 1,200 mm is received annually. In addition, market gardening has been partly influenced by the population of non-Samburu in the major urban centres of the district, because their demand for these products has created a possible market for them.

Table 7. Actual cultivation of selected crops.

Types of crops grown	Number growing the crop	% of total respondents
Maize	33	35.1
Peas/beans	34	36.2
Vegetables (cabbages/*sukuma wiki*)	21	22.3
Potatoes	27	28.7
Carrots	17	18.1
Onions	17	18.1
Pepper	9	9.6
Tomatoes	3	3.2
Pumpkin	3	3.2

(Data based on Maralal division only)

Although some nomads expressed a favourable attitude towards land cultivation, the majority also expressed concern over problems they perceived as confronting arable farming in the district. As

indicated in Table 8, the majority of these people expressed the opinion that lack of farming experience is the greatest obstacle to farmers. Equally significant are the problems of drought, lack of Government assistance, shortage of farm inputs and wild animals. A discussion with some Government officials revealed the opinion that lack of education among the pastoralists is a major hindrance to successful arable farming in the region. It is therefore suggested that the nomads need education in farming activities. This could be best achieved through farmers' training institutions, as in other districts of Kenya. In addition, more extension services are required. Some of the Government officials, however, argued that a lot of Government assistance is already being given in the form of compensation for property destroyed by wild game, by the giving of loans, fertilizers, tractors to cultivate farms and the digging of dams. The only problem they noted was the greater level of dependency among these nomads; they expect everything to be done for them.

Table 8. Pastoralists' perception of arable farming problems.

	Maralal Division	
	No.	%
Lack of farming knowledge/experience	-29	30.9
Drought	-24	25.5
Lack of Government assistance	-19	20.2
Lack of farm inputs/fertilizers/seeds, etc.	-12	12.8
Wild animals	-8	8.5
Lack of finance	-6	6.3
Lack of veterinary services	-4	4.3
Lack of extension workers' services	-3	3.2
Lack of marketing facilities/poor transport	-3	3.2
Problem of labour supply	-1	1.1
Problem of diseases	-1	1.1
Soil erosion	-1	1.1

Apart from establishing farmers' training centres for these ecosystems, where better scientific methods of range management or animal husbandry and land cultivation could be taught, it is also noted

that attempts should be made to expand areas suitable for cultivation through irrigation. A study by the G.E.S.P. (1981) identified the following areas within Samburu district as suitable for irrigation.

Table 9. Areas of possible irrigation.

Location	River	Administrative area	Project holder
Amaya	Amaya	Leroghi/Baringo	Government
South Horr	Balesa	Baragoi	Consolata Mission
Barsaloi	Parsaloi	Baragoi	Consolata Mission
Ngutuk	Ewaso Ngiro	Wambaa	Consolata Mission
Ongiron	Ewaso Ngiro	Wambaa	Consolata Mission

Source: G.E.S.P. (1981)

This study also discovered a serious weakness among the nomads, namely their habit of selling their produce during bumper harvests to purchase more cattle instead of storing such surpluses. This is one of the problems which can be eliminated through proper advice to the nomads.

Summary

It is this background of a relatively poor though optimistic attitude towards land cultivation which forces the Samburu to carry on with pastoral life. Subsequent chapters of this report will examine the nomads' perception of the pastoral economy and the way in which they have evolved cultural norms to protect this economy against external forces of socio-economic change.

Chapter 5

Migrations and perception of the environment

Introduction

It was shown in the previous chapter that the environmental problems of arid and semi-arid conditions limit the prospects for large-scale cultivation as a reliable source of livelihood. Consequently, nomads have evolved a tradition which fosters free spatial mobility and settlements to safeguard their pastoral ways of life. It is the thesis of this chapter that proper range management is the best means of utilizing these ecosystems. The nomads for hundreds of years have realized this and have traditionally evolved sound methods of range management that modern scientists can only work to improve upon where necessary.

The analysis of this chapter is in three parts. The first section examines pre-colonial migrations and the evolution of the nomads' perception of their environments. The second part examines the arrival of colonial administration and the attempts made to influence the nomads' decision-making process on land-use activities, and the last part is an examination of the present settlement patterns in the district.

Pre-colonial migrations and perceptions of the environment

As the Samburu migrated from their place of origin in the regions to the east and west of Lake Turkana, they dispersed over a wider territory than their present home district. Their pre-colonial territory extended in pockets between Mt. Kulal, Wato, Marsabit, Meru, Nakuru and Lake Baringo (Spencer, 1965; Sobania, 1979). These early waves of migration therefore exposed the Samburus to diversified ecological systems rich in wild animals and covering several micro-climatic regions, and offered prospects for sedentary agriculture, particularly around Marsabit Mountain, the Maralal massif, Leroghi plateau, and Laikipia plateau. Their rejection of an agricultural economy in favour of a pastoral economy can only be explained in the

context of environmental and technological determinism. Sedentarization caused by either farming or fishing involved greater opportunity costs and higher levels of technological development than these nomads were prepared to meet. To them pastoralism probably offered a more flexible means of livelihood that demanded little effort and relatively low levels of technological inputs.

Their traverse over many ecosystems was therefore instrumental in helping them evolve a unique environmental perception of risks and utility. Consequently, they evolved a cultural system which had a psychic relation with livestock. For them to survive through different ecosystems with varying degrees of ecostress it was essential that they should acquire a sound knowledge of environmental phenomena. This was achieved in two main ways. First, territorial mobility was characterized by high frequency of 'return-migrations'. Multiple-migration returns, viz. the return of migrants to their original places of settlement, enriched their knowledge of certain environments. Through such movements they could also benefit from past water points they had build. An example of a well documented return migration by the Samburu occurred in the Mt. Kulal area in 1930 and 1940 (Sobania, 1979). These re-visits to known environments strongly characterize any historical analysis of early migrations and settlement patterns of nomads. Return migrations significantly reduced environmental risks, as good pastures and water-points were known as well as safe migration routes.

The other way of safe guarding prospects for survival was the acquisition of a sound environmental education through the Samburu cultural system, which emphasizes informal education. With respect to their system of education, migrations become the most significant means of acquiring environmental knowledge.

Table 10. Sources of environmental education.

	Maralal	Baragoi	Wambaa
	94=100%	89=100%	80=100%
Methods of learning	%	%	%
Personal experience through migration	53.2	30.3	61.3
Teaching by parents, mostly fathers	22.3	44.9	30.0
Teaching by elders of the clan	37.2	9.0	2.5
Teaching by age-mates	5.3	11.2	5.0
Teaching by bond-friends	2.1	3.4	5.0
Teaching by relatives (others)	-	1.1	2.5

Equally significant was knowledge passed on to children by parents. The subject matter taught or learned through personal experiences covered a wide range of environmental survival rules. These incorporated knowledge of safe migration routes, location of water points, characteristic features of good pastures, how to identify places with underground water reservoirs, knowledge and use of traditional herbs for both livestock and human use, different types of root fibres and, more generally, all aspects of good animal husbandry.

An old *mzee* informant stressed that knowledge of environmental signs of changing seasons was critical in the survival game. Each clan had its own local scientists (astrologers and meteorologists) who could predict the future incidence of serious drought or heavy rainfall and other environmental hazards with a great degree of accuracy. Despite the presence of these wise elders, every person had to improve his general knowledge of the environment to cover, for example, the list given in Table 11. It is seen that by studying the changing features of an ecological system, the nomads can tell whether the rainy season or drought is approaching. This is essential to enable them to take necessary precautions if long journeys are to be made or the livestock population is to be altered to meet future expectations.

Table 11. Knowledge of environmental changes.

	Maralal		Baragoi		Wambaa	
Signs of an approaching wet season	94=100%		89=100%		80=100%	
Clouds begin to appear in the sky	80	85.1	60	67.4	54	67.5
Trees begin to flower/become green	56	59,6	42	42.7	50	62.5
Winds begin to blow strongly	42	44.7	50	56.2	48	60.0
Certain birds begin to fly around	30	31.9	38	42.7	42	52.5
Butterflies appear in great numbers	20	21.3	32	36.0	19	23.8
Temperatures rise	15	16.0	11	12.4	32	40.0
Elders study stars to predict changes	34	36.2	8	9.0	28	35.0
Counting of seasons	10	10.6	2	2.3	16	20.0
Livestock change their behaviour		-	14	15.7	12	15.0
Signs of an approaching drought						
All water sources dry up	60	63.8	60	67.4	72	90.0
Vegetation dries up, i.e. grasses/ trees, etc	92	97.9	89	100.0	76	95.0
No clouds seen in the sky	32	34.0	40	44.9	63	78.8
Temperatures rise	44	46.8	38	42.7	40	50.0
Nights become very cold	8	8.5	20	22.5	36	45.0
Livestock don't get enough pasture	10	10.6	22	24.7	25	31.3
Winds begin to blow	14	14.9	20	22.5	40	50.0
Stars are seen by elders	-	-	16	18.0	16	20.0
No birds seen around	-	-	13	14.6	12	15.0
Signs of good pasture						
Plenty of water in the region	62	66.0	70	78.7	77	96.3
Plenty of grass in the region	48	51.1	49	55.1	69	86.3
Livestock don't die/no diseases	18	19.1	10	11.2	62	77.5
Milk is plentiful	22	23.4	16	18.0	58	72.5
Areas which are cool, e.g. mountain slopes	28	29.8	17	19.1	20	25.0
Frequency of animal mating increases	10	10.6	9	10.1	11	13.8
Animals become fat	15	16.0	22	24.7	60	86.3
Salt licks are available	14	14.9	6	6.7	4	5.0

In summary, it is suggested that environmental-education strategy as a means of fostering survival among the nomads helps in reducing environmental risks caused by ignorance of the new environments migrated into. It is also noted that greater autonomy of individual family heads in decision making about when and where to migrate banks heavily on the environmental knowledge of family heads. Therefore, the introduction of socio-economic changes should also emphasize the education of the individual family head.

Colonial administration and environmental perception

With the onset of colonial administration an attempt was made to influence the nomads' perception of their environments by interfering with their traditional process of decision making and execution (Sobania, 1979). These moves, however, failed because the nomads were not offered viable alternatives in the new decision-making process. The 1936 Samburu Grazing Control Rules were specific to only the Leroghi Plateau where white settlers had greater interests. According to these rules, organized rotational grazing schemes were to be implemented as against the traditional system of seasonal grazing over an area of 2,000 km² in the Lorroki plateau. A tax of 2 shillings was to be paid for every herd of 20 cattle possessed by Samburu in that region and an additional 10 cents for every animal beyond that number. These ideas were reinforced by the Swynnerton plan and the grazing scheme became effective on the Leroghi plateau between 1950 and 1956 (G.E.S.P., 1981). This move to restrict the number of the nomads' livestock in one of their best pastures during dry seasons was met with fierce resistance. The colonial government, realizing its impending failure, introduced a new tactic, namely the 1956 quarantine which restricted the sale and movement of native livestock. Consequently, increased populations of livestock in their newly confined environments soon resulted in the numbers exceeding the carrying capacity of their traditional grazing areas. The situation became worse in 1957, when a prolonged drought caused the loss of many herds. The elders threatened a rebellion and an elternative grazing

scheme was initiated on the Leroghi plateau. The Plateau was divided into 8 sections to enable each of the eight phratries of Samburu to have alternative seasonal grazing during periods of drought. Even so, the number of livestock allowed to graze in each of the eight schemes was limited. By 1960 the concept of grazing schemes had extended to 28% of the entire district (G.E.S.P., 1981).

To influence the attitude of the Samburu towards proper animal-husbandry practices further, the concept of improving cattle breeding was also started by the colonial government in 1946 around Wambaa. At first, 10,000 km² of land was demarcated for this project and 146 million shillings set aside to develop waterpoints and hopefully to persuade the Samburu to accept rational grazing schemes. Offers to assist them to sell their surplus livestock were also made. Unfortunately, these moves never materialized, due to the repeated declaration of quarantines and the loss of livestock caused by the 1960 drought. The idea of taxation on herds of livestock was always unacceptable and the idea of block grazing was seen as a denial of the right of free mobility. It was therefore not only the sheer ignorance of these people about the benefits of such range-management practices, but rather the prevailing mistrust and fear of economic exploitation by the white man which conditioned the Samburu to reject these practices (G.E.S.P., 1981).

The nomads perceived the colonial government's creation of crown-lands, which took most of their forest-lands and good agricultural lands, as a direct way of exploitation and a threat to their survival. The situation worsened with the annexation of large areas of grazing land as game reserves and game sanctuaries. Since these moves were perceived as treacherous and exploitative, the nomads were not enthusiastic about adopting sound veterinary advice and services, especially if such services implied the reduction of livestock herds and limitation of the freedom of mobility.

Another problem came with the creation of tribal grazing lands. Traditionally, different ethnic groups had traditional buffer zones between them. Those zones, however, never arbitrarily grouped different ethnic communities together as was the case with the boundary

demarcations of the colonial governments, which in some cases split ethnic groups into two. In addition, warring communities often attempted to reduce tension through intermarriages and mutual association in economic exchange and occasionally military alliance. The creation of tribal grazing lands by the colonialists never considered these mechanisms. It therefore tended to reinforce ethnocentrism by creating territorial concepts and the idea of land ownership. These tribal homelands therefore restricted free spatial mobility and shattered economic and military associations between friendly tribes.

Lastly, the introduction of a money economy through the marketing of livestock and the encouragement of small-scale farming were environmental factors which proved unpopular with the nomads. It was this false start by the colonial administrators, augmented by the institution of the office of the chiefs, that made nomads suspicious of the administration. This element of mistrust still exists, particularly with the introduction of measures which influence pastoral life.

Environmental perception and territorial organization strategy

The nomads have a cultural system which fosters free spatial mobility. They also choose freely where to locate a settlement *(manyatta)*. This traditional perception of a free spatial mobility norm is probably changing, as only 19.2% of the respondents in Maralal Division agreed that they could migrate, compared with a response of 16.6% for Baragoi and the relatively higher response of 41.3% for Wambaa. The increasing erosion of free spatial mobility is due to the environmental factors already mentioned, such as insecurity caused by *ngorokos* (cattle rustlers) and *shiftas* (Somali bandits), which are becoming more critical as determinants of sedentary pastoralism. Equally significant is the increasing number of newly constructed water-points that also induce sedentary pastoralism.

Nomadism is the only practicable means available in the search for water, pastures and salt licks. These movements therefore require small, manageable family units. For this reason, nomadic communities often lack a well organized, centralized political and administrative system

and are dependent upon an age hierarchy in the allocation of power and in decision making. In other words, the need to maintain the mobility of small family or economic units of a clan enables individual family heads to have greater autonomy in decision making about when and where to migrate. This, however, does not mean that other members of the family or clan cannot be consulted, as can be inferred from Table 12. In fact, a decision about when to migrate is the prerogative of the family head, whereas decisions on where to migrate are increasingly influenced by both clan elders and warriors. Some informants suggested that if movement is towards a relatively new environment, then reconnaissance trips by warriors have to be made. When these warriors return to report, their advice has to be taken seriously, though elders make the final decision. The autonomy of

Table 12. Decision making and migration.

	Maralal		Baragoi		Wambaa	
Decision on when to migrate	No.	%	No.	%	No.	%
The family head	90	95.7	30	33.7	64	80.0
Elders of the clan	2	2.1	37	41.6	10	12.5
Warriors of the clan	1	1.1	20	22.5	5	6.3
Others	1	1.1	2	2.2	1	1.2
Decision on where to graze						
The family head	79	84.0	24	27.0	42	52.5
Elders of the clan	5	5.3	34	38.2	36	45.0
Warriors of the clan	10	10.6	31	34.8	2	2.5
Others	0	0.0	0	0.0	0	0.0

individual families in decision making is therefore a significant feature of the survival game in arid and semi-arid ecosystems, as individual decisions reduce the impact of localized environmental risks on an individual family. It is therefore only widely spread environmental hazards which can affect the entire clan.

It must be emphasized that movements may not necessarily be based on a free decision. Table 13 identifies the major environmental causes of coerced migrations. It is, nevertheless, proposed that migration still offers the best response to these problems within a primitive system.

Three major causes of forced migration identified were attacks by cattle rustlers, disease epidemics and drought, or family matters.

Table 13. Causes of coerced migrations.

	Maralal	Baragoi	Wambaa
Environmental factors	94=100%	89=100%	80=100%
Attack by enemies (cattle rustlers)	41.5	65.0	55.1
Disease epidemics	29.8	38.8	44.9
Drought/famine	53.2	35.0	60.7
Wild-animal attack	2.1	61.3	6.7
Government eviction	2.1	22.5	21.3
Performance of ceremonies	3.2	3.8	2.1

It should be realized that their low levels of technological development render movement possible at short notice. The absence of household furniture and other items, as well as the temporary nature of huts, tremendously reduce the load to carry. In situations where members of the family are too sick or old to move long distances, they are often left behind with a few animals or some people to nurse them till they get better. If not, they are carried on donkeys as is normally done with children who cannot walk long distances. Similarly, if some livestock are too sick to endure the hardships of a long trek, they are often killed and the meat preserved for future use, or the journey may be postponed until the stock are well and strong enough to move. Occasionally, the family may be split, with an advance group going ahead with the main herds while a smaller group remains behind to care for the sick animals until they are strong enough to follow the rest. Most old informants agreed that their success in these constant moves is attributed to their traditional skills in food preservation and storage. Milk can be preserved for several days in locally made containers, while meat can be preserved for months and stored in forms very convenient to carry. In addition, the traditional eating habit of one heavy meal a day is another advantage.

The research reported in Table 14 also revealed that nomadic pastoralists often prefer to follow definite routes. To illustrate, about 73.4% of respondents in Maralal agreed that they have preference for certain routes, whereas about 47.2% and only 0.5% said the same for the Baragoi and Wambaa regions respectively. These nomadic migrations tended to follow the kind of routes mentioned in Table 14.

Table 14. Preference in migration routes.

	Maralal	Baragoi	Wambaa
Routes	94=100%	89=100%	80=100%
Major roads	%	%	%
Yes	4.3	23.6	16.3
No	95.7	76.4	63.7
River valleys			
Yes	69.1	51.7	37.5
No	30.9	48.3	62.5
Old animal tracks			
Yes	44.7	47.2	6.3
No	55.3	52.8	93.7
Forests			
Yes	44.7	27.0	31.3
No	55.3	73.0	68.7

It is evident that movements close to river valleys were preferable as a means of reducing the problem of water scarcity and because of the availability of good pastures, particularly during droughts.

Another significant feature of nomadic movement is the splitting of families and herds. As already noted, splitting of herds is necessary in situations where many animals are sick. However, occasionally it is a deliberate strategy calculated to reduce the effects

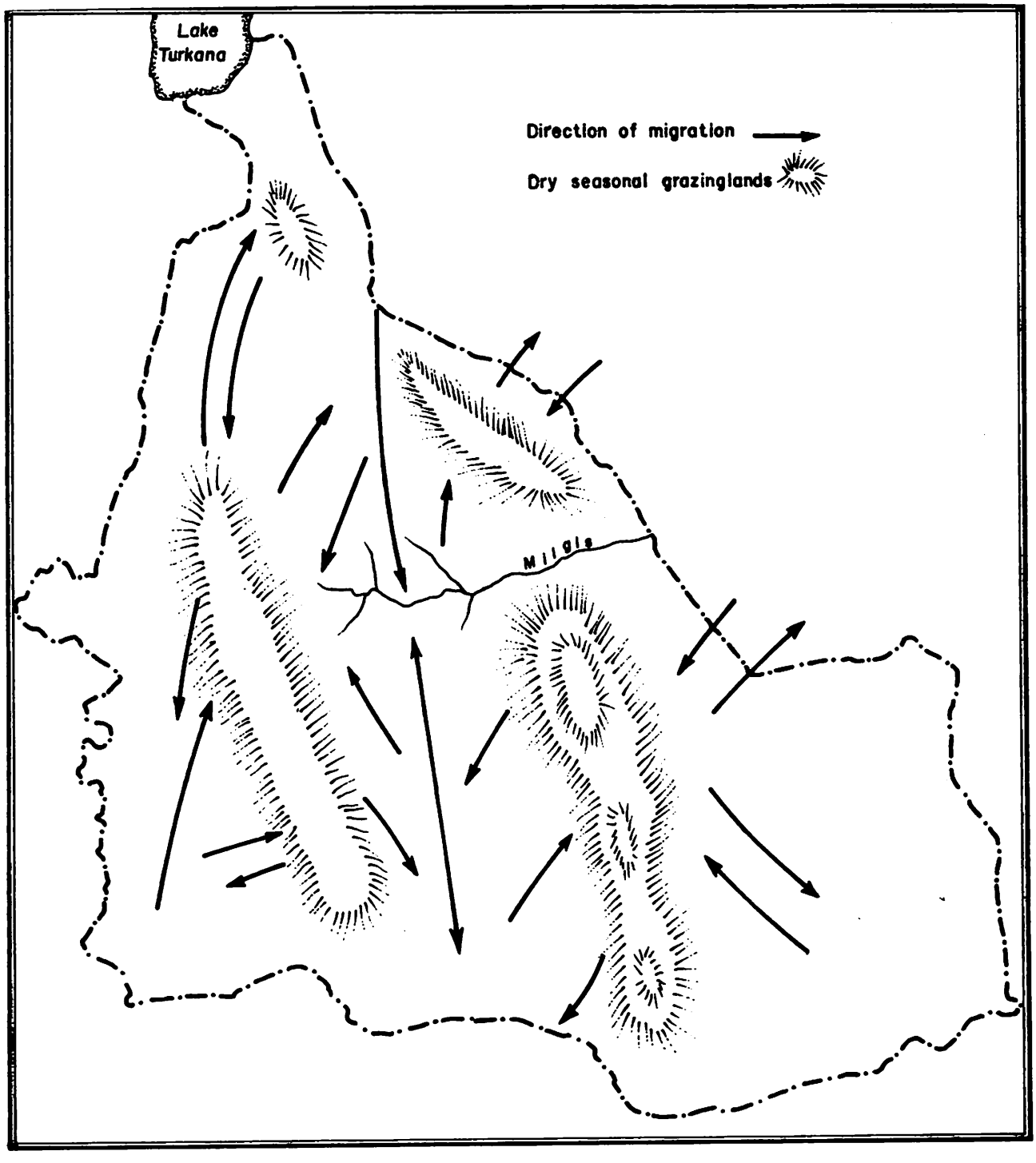
of environmental risks to a whole family herd. For example, if animals have to migrate to a distant area for pastures, some family members, consisting of old persons, women, children and a few male adults, are left behind with a few animals to subsist on. This is truly an environmental management practice which assists in reducing environmental risks to a whole family or livestock herd. A broader territory is likely to have micro-ecological units, with differences in resource potentials. If family members of a clan are scattered over all these ecological units, then localized epidemics, aggression by cattle rustlers and drought may affect only a small portion of the entire clan.

Attempts to gauge the volume and direction of intended migrations among the Samburu revealed again that their perceptions of environmental risks and security powerfully influenced the decision on where and when to move. In Maralal Division, approximately 31.9% agreed that they were intending to move, compared with 42.7% for Baragoi and 68.8% for Wambaa. These statistics suggest that increased sedentary nomadism is affecting Maralal and Baragoi more than the Wambaa region. Increased sedentarization in Maralal may be attributed to increased participation in land cultivation, as already noted in chapter 2. In Baragoi, increased sedentary nomadism by Turkana in the region reflects mostly the impact of *Ngorokoism* and food-relief programmes.

The intended moves were apparently highly localized, for they were mostly within a 10-kilometre radius of the three major urban centres. The intended migrations to places beyond 10 kilometres constituted only 20.2%, 21.3% and 31.8% for the Baragoi, Wambaa and Maralal regions respectively. These intended migrations were mostly to traditional areas of green pasture during dry seasons, illustrated in Figure 4.

They can be identified as a northern grazing zone of Mt. Kulal, Nyiro, the Ndotos, and the South-Horr belt; a western zone, consisting of Kirisia, Porror, and the Maralal massif, and an eastern grazing zone consisting of the Mathews Range and the southern plains of the Ewaso Ngiro river.

Fig 4 Major migration streams of pastoralists in Samburu District



Chapter 6

Environmental perception and settlement strategy

Introduction

In the previous chapter it was observed that environmental education was a necessary condition for nomadic migrations to survive in unpredictable arid and semi-arid ecosystems. It was also noted that with the onset of colonial adminstration attempts were made to reduce horizontal nomadism to sedentary nomadism by using the block grazing schemes, an attempt which failed because of mistrust on the part of nomads. Major attributes of nomadic migrations were also analysed. From these discussions it is evident that nomadic movements are not random in the sense that they are unpredictable. These movements are predictable if environmental changes can be satisfactorily gauged. It was also observed that the pattern of spatial mobility was seasonal, tending to alternate between lowland plains during wet seasons and the surrounding mountains during dry seasons. Movements between these grazing zones also tended to follow river valleys or known animal tracks to minimize environmental risks.

In this chapter, an attempt is made to identify what major environmental considerations influence the final decision on where to locate temporary settlements before the next move is made. This is an important factor in the context of increasing sedentary nomadism in the district. Such places, apart from experiencing the increasing effects of desertification due to overpopulation, also require the provision of services for these nomads, which will offer a valuable opportunity for diffusing the processes of modernization among them.

Perception of ideal settlement areas

The nomads' perception of an ideal place (site and situation) for locating a *manyatta* strongly reflects the impact of pastoralism as a means of survival. According to Table 15, environmental phenomena influencing animal health and population were of paramount significance in influencing decisions on where to build a *manyatta*. In other words, environmental factors influencing human welfare, health and security were apparently of secondary inportance. This should not be interpreted to

Table 15. Perception of ideal places for location of a *manyatta*.

Location of a *manyatta*	Maralal 94=100%	Baragoi 89=100%	Wambaa 80=100%
Near water points (rivers, springs, boreholes, etc.)	82(87.2)	60(67.4)	56(70.0)
Good pasture (water, grass, natural salts)	54(57.5)	48(53.9)	38(47.5)
Areas with good climate (no drought, diseases, etc.)	18(19.2)	3(3.4)	17(21.3)
Mountain slopes, hill slopes	50(53.2)	21(23.6)	43(53.6)
Plains (open grasslands)	39(41.5)	36(40.5)	24(30.0)
Forest lands	28(29.8)	27(30.3)	4(0.5)
Areas with good security (no wild animals, enemies)	32(34.0)	12(13.5)	16(20.0)
Near health centres, dispensaries, hospitals	5(5.3)	3(3.4)	12(15.0)
Near town centres, trading centres	21(22.3)	18(20.2)	16(20.0)
Near schools	2(2.1)	1(1.1)	(1.3)
Near cattle dips	4(4.3)	3(3.4)	11(13.8)
Near other *manyattas*	6(6.4)	6(6.7)	8(10.0)

mean that nomads do not care about their own security or health. Their health and security are in fact inseparable from those of their animals. Table 15 endorses this suggestion. To illustrate, approximately 15% of the respondents in Wambaa regarded settling near a dispensary, health centre, or hospital as important, compared to the relatively lower responses of 5.3% and 3.4% for Maralal and Wambaa Divisions respectively.

Table 15 further reinforces the significance of water availability as a crucial determining factor in the location of *manyattas*. About 87.2% of the respondents in Maralal Division regarded water as critical in deciding where to locate a *manyatta*, as compared to only 70.0% in Wambaa and 67.4 in Baragoi. Locating *manyattas* on mountain slopes or open plains was equally popular. The mountain slopes probably enable strong winds to sweep away mosquitoes during wet seasons. Furthermore, such locations also offer strategic positions for defence, as one elder noted. The plains, on the other hand, offer good pastures.

The perception of ideal places for building *manyattas* was found to be partly consistent with spatial reality except in the case of settlements near urban centres or trading centres (see Table 16). This finding, as stated earlier, probably reflects a bias in the areal sampling of respondents. Nevertheless, there is a growing tendency for sedentary nomadism to increase near urban centres because of the prospects of better security, water supply and food-relief programmes. This research therefore found the majority of nomads settling very close to urban centres. In fact, the majority were found within a 5-kilometre radius of the three major district nodes, namely Maralal, Baragoi and Wambaa (Table 16). Another factor accounting for this changing pattern in spatial settlements is the impact of other modernization processes initiated from these urban centres. The availability of consumer goods such as sugar, tea, and tobacco, which are popular with the nomads, induces people occasionally to walk several kilometres to purchase them. In the words of one old informant, "Settling near urban centres makes it easy for us to buy sugar and tobacco." Note also the growing effects of market gardening around these major urban centres. This is an important spatial phenomenon which has been encouraged by up-country migrants to the urban centres.

Table 16. Distance from *manyattas* to selected spatial phenomena.

Region/phenomena	0-4 km		5-10 km		over 10 km	
	No.	%	No.	%	No.	%
Maralal	94	100	94	100	94	100
Water points	77	81.2	7	7.5	8	8.5
Market centres/towns	34	36.2	17	18.1	43	45.7
Health centres/dispensaries	30	31.9	12	12.8	52	55.3
Forests	31	33.0	5	5.3	58	61.7
Cattle dips	49	52.1	9	9.6	36	38.3
Baragoi	89	100	89	100	89	100
Water points	53	59.6	11	12.4	25	28.1
Market centres/towns	32	36.0	27	30.0	30	33.7
Health centres/dispensaries	34	38.2	21	23.6	34	38.2
Forests	16	18.0	7	7.9	66	74.2
Cattle dips	-	-	-	-	-	-
Wambaa	80	100	80	100	80	100
Water points	67	83.8	11	13.8	2	2.5
Market centres/towns	53	66.3	14	17.5	12	15.0
Health centres/dispensaries	53	66.3	2	2.5	25	31.3
Forests	48	60.0	5	6.3	27	33.8
Cattle dips	-	-	-	-	-	-

It is evident again from Table 16 that the existence of water points tremendously influences the spatial settlement patterns of the nomads, especially in regions with adequate water supply. Again, settlements near cattle dips emerge as relatively more important than settlements near towns. This again reflects the priority given to livestock. However, in places of extreme aridity where scarcity of water makes cattle dips impossible, they do not influence settlement, as seen in the Baragoi and Wambaa region.

Summary

There is strong evidence that the life of the nomads can be changed in a relatively short time by using 'supply of water' as the bait. More surface-water dams or boreholes and wells should be constructed along the routes that connect their upland grazing areas to the lowland grazing plains. At these water points, schools and other essential facilities for promoting socio-economic changes could be built.

Chapter 7

Environmental perception and animal husbandry

Introduction

In the previous chapter it was observed that actual sites of settlements tend to be dictated by environmental factors which give priority to the well-being of livestock. It was thus realized that water points, good pastures and salt licks are important determinants of the site and situation of *manyattas*. The chapter also indicated an increasing trend to sedentary nomadism, particularly around the major urban centres.

In this chapter an attempt is made to investigate further the nomads' traditional practices of good animal husbandry in the framework of their perception of their operational environment. It is proposed that good animal-husbandry practices are culturally institutionalized and have been passed from one generation to the other unconsciously.

The nomads are known to cherish the principle of 'no specific pasturage rights' (Jacobs, 1972). This is safeguarded by the moral code, which states that "No man should be denied pasturage and water for his animals" (Spencer, 1965). This principle of accommodation-for-survival increases the collective group effort in protection against external aggressors. It also diffuses conflicts between different clans or ethnic groups. Yet, with increasing implementation of block-grazing schemes and cultivation, as well as land adjudication, the principle of 'no man's right' is bound to change. In previous chapters, this research has demonstrated that the concept of property ownership or territoriality at the individual family and societal levels is gaining momentum. It is therefore in communally owned grazing lands that the principle of 'no man's right' is still operational. The desire to have exclusive rights over water points, especially those constructed by individual families or clans, is again being reinforced by the increasing acceptance of property ownership among nomads who practise arable farming. The idea has also been diffused by in-migrants from other parts of Kenya, where land consolidation has been completed.

Environmental perception and ideal stock population

The Samburu have a psychic relationship with livestock. Their subsistence economy pivots on the population size of domestic animals, mostly cattle. Livestock numbers act as a barometer of social status. Social cohesion can be enhanced by giving livestock as gifts or loans (Jacobs, 1972). It is also noted that the society uses livestock as a means of rewarding services rendered. On the other hand, punishment can be measured by the number of livestock one is expected to pay as a fine. In addition, arbitration between warring tribes or communities can be effected through livestock.

For the above reasons, Sobania (1979) rightly states that "the notion of property according to the nomads around Lake Turkana relates not to the ability to survive physically but to an insufficient herd to live as a herdsman." An attempt to elicit the Samburu perception of the ideal livestock-population size per family was thus met with outrageous responses, which included the following extremes:

- a million cattle
- as many as possible
- as God may wish
- five hundred.

From these responses it was evident that the majority of the nomads prefer to have several hundred cattle, sheep and goats. It was only with respect to camels and donkeys that most preferred a few (i.e. below 50). It has been noted that the Samburu do not like keeping poultry, and this is institutionalized by taboos. Equally strange was the small number of dogs kept for security reasons.

An old informant stated that the Samburu do not keep dogs because of a myth connecting a dog with their origin as a community.

It must be emphasized that nomads see their prospects of survival, in terms of numbers. Even a person considered to be extremely poor from a societal point of view may still have scores or hundreds of livestock, as shown in Table 17.

It is observed from Table 17 that the majority of the nomads still consider a herd of a few hundred cattle, goats and sheep as a poor man's herd. In the words of an elderly informant: "It is better to have too many thin cows than a few fat cows." The nomads see their survival as closely linked with the number of their livestock. A few healthy animals may not survive a catastrophe, whereas there is a high probability of many animals

from a large herd surviving through most environmental hazards.

Table 17. Perception of a poor man's herd size.

	Number of livestock suggested							
	5-25		25-50		51-100		100-200	
Maralal division	No.	%	No.	%	No.	%	No.	%
Cattle	14	14.9	6	6.4	22	23.4	52	55.3
Goats/sheep	25	26.6	16	17.0	14	14.9	39	41.5
Camels	40	42.2	4	4.3	-	-	-	-
Donkeys	58	61.7	36	38.3	-	-	-	-
Baragoi								
Cattle	15	16.9	18	20.2	26	29'2	30	33.7
Goats/sheep	14	15.7	16	18.0	27	30.3	32	36.0
Camels	26	29.2	36	40.5	14	15.7	13	14.6
Donkeys	36	40.5	42	47.2	10	11.2	1	1.1
Wambaa								
Cattle	22	27.5	15	18.8	18	22.5	25	31.3
Goats/sheep	18	22.5	20	25.0	20	25.0	22	27.5
Camels	19	23.8	35	43.8	12	15.0	14	17.5
Donkeys	22	27.5	50	62.5	4	5.0	4	5.0

Those surviving will therefore continue supplying the meat, milk and blood on which the Samburu live. It was also observed that people in the relatively wetter south-western parts of the district show less preference for camels. Nevertheless the number of camels increases as one travels to the northern and eastern parts.

The Samburu, like other nomadic tribes, have evolved an elaborate traditional system for increasing herd size. Whether these animal-husbandry practices are employed in complete awareness of the carrying capacity of grazing lands is doubtful. From Table 18 it can be seen that proper animal-husbandry methods, which include overal skills in proper feeding and watering of animals, looking after their health properly and controlling the period of calving etc., are considered to be most important in increasing herd sizes. The success of proper animal

husbandry, however, depends on constant spatial mobility in the search for water and good pasture. Equally significant is the ability to offer effective security against cattle rustlers. From Table 18, it is also to be noted that the traditional practice of stock raiding is regarded as normal for increasing the size of herds. Lending livestock to bond-friends and other relatives also plays a double role in animal husbandry.

Table 18. Traditional methods of increasing livestock numbers.

	Maralal 94=100%		Baragoi 89=100%		Wambaa 80=100%	
Method	No.	%	No.	%	No.	%
Proper animal husbandry/ migration	62	66.0	58	65.2	49	61.3
Cattle raids, thefts, war spoils	32	34.0	37	41.6	30	37.5
Livestock marketing, buying and selling	36	38.3	12	13.5	21	26.3
Dipping cattle (modern veterinary care)	12	12.8	4	4.5	11	13.8
Marriage dowry	20	21.3	3	3.4	10	12.5
Loan from friends and relatives, etc.	40	42.6	16	18.0	28	35.0
Splitting herds during drought (watering and pasture)	4	4.3	2	2.2	7	7.87
Compensation/reward for other services	2	2.1	2	2.2	3	3.8
Magic	13	13.8	3	3.4	1	1.3
Inheritance	10	10.6	5	5.6	6	7.5

Apart from distributing the element of risk (the nomads do not put all of their cows in one kraal), such practices also help poor members of the family to increase their herd to a number sufficient to live on as a herdsman. It should also be realized that the use of livestock as bride-price or dowry is another way in which controlling the size of herds has been culturally institutionalized. The institutionalization of different types of marriage ceremonies functions as a control mechanism on the livestock population. It also helps in creating social contracts which can be relied upon during periods of difficulty. Marriage therefore functions as a destocking mechanism to the parents of the girl.

It has been observed that the modern system of livestock marketing is also gaining momentum. Its success as an organized mechanism for regulating herd size is being frustrated by lack of well organized animal auctions. The frequent declaration of foot-and-mouth disease quarantines reminds the nomads of the colonial tactics of exploitation. The fewness of the veterinary-service centres sometimes forces nomads to walk several kilometres in order to obtain clearance to move their livestock from one part of the district to another for marketing purposes. In addition, lack of adequate storage facilities for the large sums of money obtained after the sale of an animal is also a frustrating factor. For this reason, most Samburu prefer to sell their goats and sheep, as the money obtained from such sales can be quickly utilized to provide small domestic luxuries such as sugar, tea, tobacco, clothes and beer. In other words, for more cattle to be sold, the demands and aspirations of these people must be raised. This can be done through adult-literacy classes or the introduction of small fees whenever services are offered for their livestock. This is based on the notion that these nomads will be willing to sacrifice anything in order to save their stock.

Another animal-husbandry practice is grazing big and small stock separately. The Samburu only graze the big and small animals together when there is an acute labour shortage in the family and help is not available from other relatives. The nomads are aware that goats and sheep are browsers, while cattle are grazers. As a result, the fast movement of goats and sheep makes it difficult to graze cattle properly. The majority of elders also argued that cattle often kick small animals when they are grazing together, and also tend to move long distances in search of pasture, which may not be necessary with small animals.

The Samburu also have their own style of protecting animals during periods of severe drought. According to Table 19, migration is perceived as the most effective method for protecting livestock; 72.3% of pastoralists said so in Maralal, and 71.9% and 80.0% in Baragoi and Wambaa respectively. The other significant methods used were cutting leaves of trees to feed livestock, digging wells or bore-holes to obtain water, and splitting herds, i.e. separating the strong and healthy from the weak and sick animals.

Table 19. Traditional methods of protecting livestock during severe drought.

Method	Maralal 94=100%		Baragoi 89=100%		Wambaa 80=100%	
Migration	68	72.3	64	71.9	64	80.0
Cutting leaves from trees	44	46.8	43	48.3	46	57.5
Cutting grass to feed animals	8	8.5	12	13.5	3	3.8
Digging boreholes/wells	15	16.0	26	29.2	35	43.8
Splitting herds for watering	34	36.2	36	40.5	29	32.6
Other methods	8	8.5	11	12.4	14	17.5

Splitting herds requires that animals be watered in rotation. In addition, during epidemic diseases the nomads also employed their traditional system of quarantine. To illustrate, sick animals were never grazed and watered together with healthy ones. Areas known to have caused the death of livestock in large numbers were declared restricted areas and information about them was passed from one clan to another. In addition, traditional veterinary services were of tremendous value and each clan had specialists in veterinary medicine. However, the nomads are today seeking more help from modern veterinary services as a last resort, especially when faced with mass deaths of livestock. In addition, they are realizing the importance of cattle-dips as a preventive measure against vector-borne diseases. For this reason, several cattle-dips have been built, particularly on the western plateaux, where more surface-water points are available. Despite this change in attitude towards the use of cattle-dips, some nomads expressed dissatisfaction about their effectiveness, arguing that dipping domestic animals is becoming less effective in reducing the incidence of parasitic diseases because the wild animals which share grazing grounds with them are not dipped. Consequently, the rate of re-infection of the domestic animals is very high. In conclusion, it was also observed that nomads regard the bleeding of sick animals as one of the best ways of curing them.

Summary

In this section it has been seen that nomads have an emotional attachment to their livestock. To them, the number of animals is extremely important. In this regard, modern socio-economic changes can be effectively introduced among these people through programmes which help to increase the number and health of livestock. It is therefore suggested that these people could be easily reached through increased veterinary services. In addition, their traditional methods of destocking could be replaced by modern methods which are more attractive, particularly an organized marketing system which encourages sales of livestock during dry seasons.

Chapter 8

The impact of the Samburu community on the IPAL study area and recommendations

Introduction

In the previous chapter it was noted that the Samburu, like other nomadic groups, have evolved a traditional system which regulates their herd sizes. It was also noted that traditional conservative attitudes towards processes of modernity are slowly giving way to the acceptance of modern veterinary services. This is because these services help to reduce the mortality rates of the animals with which they have evolved a psychic relation. For this reason, other forces of socio-economic change might well be channelled through such services.

In this chapter an attempt is made to suggest ways in which the knowledge gained about the Samburu could be useful in the regional development of the IPAL study area, which borders Samburu District to the north-east.

Traditional co-operation

The Samburu and Rendille are regarded by historians as having a common place of origin. Their past economic alliances, political co-operation and common stand against one notorious enemy, namely the Turkana, have led some to suggest that a blood relationship subsists between them. It is known that there has been a high level of intermarriage between these two communities. Consequently, some Samburu have families within Rendille territory and *vice versa*. Under such conditions of regional co-operation, development projects carried out in one zone could have spill-over effects in the other region. In situations where decision making by the elders is required before implementing certain projects, these elders could seek advice from their neighbours.

Spatial distribution

According to the information obtained from the 1969 and 1979 population censuses, more Samburu people are to be found in Marsabit District than there are Rendille in Samburu District. To illustrate, in 1969 the

Samburu in Marsabit District constituted about 1.8% of the total district population, whereas the number of Rendille in Samburu District was negligible, constituting only about 0.3% of the total population. This pattern still prevailed during the 1979 population census. However, caution is needed in handling these figures, since the spatial distribution of nomads is controlled mostly by the wet and dry seasons. The 1979 census was taken in August, and at this time every year most Samburu are still in their northern grazing areas in Marsabit District, as the period before August is always dry in Samburu. For this reason, any census carried out in August is likely to find many Samburu in the IPAL study region.

The spatial distribution of these two groups has been encouraged by mutual respect in the matter of seasonal grazing among these tribes. The increasing number of camels among the Samburu, who are traditionally cattle herdsmen, is an indication of the growing closer association between the two tribes. The two groups therefore have a greater prospect of influencing each others's animal husbandry practices. In addition, development projects based on the total population size of the IPAL study area should make allowance for increased population coming from the Samburu region.

Summary

The Samburu and Rendille have a long tradition of close alliance in all respects. With increased intermarriage between them, these tribes are slowly being assimilated into a new generation of Samburu/Rendille people.

Recommendations

Animal husbandry

It has been observed that the Samburu during seasons of drought cut tree leaves and grass to feed their animals. This offers a good opportunity for experimenting with fodder crops. Areas with reasonable annual rainfall could be used to cultivate such crops. Irrigation can also help in the cultivation of better species of vegetation (grasses) which can be used for feeding animals during periods of drought.

The improvement of veterinary services is also desirable. However, it is suggested that such services should not be rendered free. It is desirable to impose some fees which would increase the demand for money among these people. In addition, the improvement of livestock marketing is desirable as a means of destocking in these areas.

It was seen that the Samburu have an emotional attachment of their livestock. In order to help them, this relationship should be broken through the provision of more surface water points, i.e. the construction of new dams, boreholes and wells, and the improvement of the existing ones. These measures will increase sedentary pastoralism, which has been seen to encourage socio-economic changes through the services offered within such settlement centres. Lastly, rational seasonal grazing is likely to be more acceptable than block-grazing schemes. However, the implementation of a rotational grazing scheme may require each clan to have such grazing areas within every grazing zone selected.

Arable farming

Farmers have described ignorance of arable farming and lack of farm inputs as hindering the development of cultivation in Samburu District. For this reason it is necessary to have a local farmers' training centre to assist the nomads. Such a training centre should teach nomads general scientific methods of proper animal husbandry, as well as better methods of arable farming in arid and semi-arid ecosystems. Such facilities will also make the work of extension-service workers easier.

It is only through such institutions that nomads can be taught the importance of supplementary sources of income through activities such as poultry keeping, market gardening, honey production, etc. It is also through such institutions that livestock-marketing practices can best be taught. Such a farmers' training centre could operate well if other functions of the chief were also carried out within them.

Wild animals

The problem of wild animals has been partly solved in Marsabit District and in the Olambwe Valley in South Nyanza District. The methods used in these two regions can also apply elsewhere. It is therefore recommended

that sedentary nomads who supplement pastoralism with land cultivation should group their farms in one area. This will make it easier for such farms to be fenced or collectively protected against wild animals. Protecting such farms is difficult when they are scattered all over a region.

Pastoralists or farmers in these areas need to be educated to appreciate the contribution of tourism to the economy of the country as a whole. They should be taught that the resources used to compensate them against damage caused by wild animals come from the tourist industry. Lastly, these people should be encouraged to spray their animals more frequently instead of using cattle-dips, which are more expensive to manage.

Administration

As suggested earlier, the chief needs to play the role of a liaison officer much more than has been the case hitherto. The nomads are stubborn by nature. For this reason, coercion or exertion of authority will only make them rebel against all the forces of socio-economic change introduced by the Government. Their gerontocratic system of administration can only be challenged through increased education of the young. Education of the young people will also reduce the availability of labour at the individual family level, and this is likely to affect nomadic pastoralism seriously.

Provision of infrastructure and security

It is believed that the socio-economic development of the district would be accelerated by the provision of better infrastructural facilities such as roads and more settlement centres. It is also noted that lack of security is causing increased settlement near the major urban centres. Consequently, such places are experiencing increased levels of desertification. For this reason, the provision of better security is needed to enable a greater dispersal of settlement centres. The concentration of nomads around such places could offer prospects for the quick diffusion of socio-economic changes. However, it is important to control the total number of families settling in such places in order to avoid rapid rates of environmental deterioration.

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THE ROLE OF RENDILLE WOMEN

by

Gemma J. Adu Bobie

Introduction

Women occupy a key position in the family and hence in the development of a nation. This fact is now widely accepted and for many years the United Nations and its various agencies have been working to bring about the full integration of women into the development effort. Various U.N. meetings have been held to review the progress made in improving the access of women to education, better employment and health facilities. Some progress has been made but much still remains to be done.

According to the 1979 census, the population growth rate in Kenya was an estimated 4 per cent per year, making Kenya one of the fastest-growing countries in Africa and the world.

"Three quarters of Kenya's land is arid and semi-arid, and supports over one quarter of its population including ten major nomadic pastoralists. Modern influences on these groups have resulted in the increase of both human and livestock populations and increased sedentarization. Resulting pressure has deteriorated the productivity of the land through overgrazing which, combined with effects of drought, has led to a need for famine relief" (Lusigi, 1981).

In Kenya, national development goals are laid down in the Fourth Development Plan, 1979-1983, which has as its overall objective the alleviation of poverty throughout the country.

To overcome poverty the Government intends to:

- create income-earning opportunities through capacity utilization, employment creation, and rural development;
- improve expenditure patterns, especially for family income, as social change takes place;
- provide services to meet the basic needs of the people in areas such as nutrition and health care, basic education, water supply and housing;
- build institutions to overcome institutional deficiencies in the present economic institutional framework and to expand the present distribution of social services.

Kenya has already achieved a creditable economic development, and this development has inevitably led to profound social change. Kenya believes, however, that such changes must be constructive, supportive of

development, strengthening the family, promoting national unity, respecting the rights and needs of others and enhancing human dignity. It is Government policy to strengthen the family as a social unit through its several community activities, its functional-literacy programme, and its support for family-oriented activities by voluntary agencies. It must be said, however, that certain sections of the population have not yet fully benefited from the effects of this social change, and they include the nomadic pastoralists of Kenya's arid and semi-arid lands (ASAL). The Government is very much aware of this fact. In 1978 it appointed an Interministerial Task Force which defined and provided a framework for development and also identified constraints on ASAL development. Thus the Government intends to embark on positive development projects in the ASAL in the very near future.

Before implementing any form of development projects it is always advisable to analyse the position of women within the society concerned. As Gustav Geiger, the Swedish sociologist, has said, "The position of women in a society provides an exact measure of the development of that society." The French philosopher Charles Fourier, making a similar statement in 1805, went even further in postulating a "general principle" that "Social progress and changing eras are linked to increase in women's freedom." Fourier was thus of the opinion that the study of women's position would be vital; it would indicate the trend of social change as a whole, since women have proved to be agents of change. Indeed, "Social change is usually synonymous with changes in social structure. It is clear that the position of women represents a coherent structure in which all the elements are integrated: ideology, role in the family, role in society, economic role, sphere of activity and sphere of forbidden activity" (Sullerot, 1971).

Objectives

The major objectives of the study reported here were:

- to determine the role of women, both present and past, in Rendille society;
- to establish what social and economic role they have played in their communities;
- to find out how their role fits in with the present socio-economic set-up;

- to establish whether there are any adjustments needed to enhance their role under present circumstances; and

- to establish what role they can play in the control of both their former and present practices.

Methodology

This study covers the second stage of consultancy, the period 1 July to 30 September, and is a continuation of work started on 1 March 1982. Data were collected through participant observation, informal questioning, and open-ended interviewing, with the assistance of a local girl who is a resident of Kargi.

In Kargi there are 15 *manyattas* (camps), each composed of a specific clan. The 9 clans represented are distributed as follows:

1. Nahagan
2. Matarbah
3. Rongumo
4. Nahagan
5. Dubsahai
6. Gob-orre
7. Nahagan
8. Rongumo
9. Gabaneyo
10. Galdeelan
11. Gabaneyo
12. Odolla
13. Gabaneyo
14. Urwen
15. Elegela

Both the Urwen and Nahagan *manyattas* were observed in detail and from the rest of the manyattas 4 households were selected at random for observation and interviewing. The great advantage of participant observation proved to be that it allowed one to get on well with the women within a relatively short time. They allowed us to mingle with them as we observed their family life and daily activities, even to the extent that several of them confided some of their inner feelings to us. Thus we were able to have woman-to-woman chats and to joke freely while going to the well, collecting firewood or sitting around the fire cooking and sharing meals.

In Kargi, a Rendille *manyatta* is composed of families that are mostly related to one another. The various camps had been established in Kargi during the 1970s, mainly for the following reasons:
(i) during that period there were severe droughts and most people lost their herds; they therefore moved to Kargi where they were guaranteed assistance from the Catholic missionaries in the form of famine relief and medical supplies;
(ii) they were attracted to Kargi by the availability of piped water;
(iii) they were also attracted to the trading centre, where they could buy beads, footwear, clothing, tobacco, and food;

(iv) the Government has provided Kargi with armed guards for security purposes, and this also acted as an attraction. The Rendille live in constant fear of being attacked by neighbouring ethnic groups, who make frequent raids on the livestock.

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Areas of study

Since nomadism is not a profession but a culture, to collect the necessary data for the objectives described, the following were examined:

- marriage among the Rendille;
- what constitutes a good wife;
- the birth system and child rearing;
- views on family size;
- food habits;
- knowledge of traditional healing;
- division of labour;
- folksongs and dancing;
- leadership and women's groups;
- the woman's perception with regard to social changes; and
- the basic felt needs of the Rendille woman.

Major findings and results

Marriage

The Rendille form a closely knit society in which the household is conceived within the framework of a polygamous and extended family system. In Kargi most of the women in the various households are 30 years of age and above and their husbands from 40 years and above. This age composition can be explained by the situation that exists among the Rendille, where people do not just marry individually. Young men who are passing through their adolescence are called *morans* (warriors), and these *morans* are normaly grouped into different age-groups which are categorized according to the time they were circumcised. After circumcision the *morans* have to wait for eleven years before getting married, and during those eleven years they serve their group as herdsmen and warriors. Thus the women marry rather late, waiting for *morans* to finish their terms of service to the community.

Before marriage however, there is a tradition of giving beads as a form of token selection of future marriage partners. If a *moran* admires a girl (who may be as young as only 12 years), he does not approach her directly. He buys beads (we were informed that a *moran* would even sell a cow and use all the money to buy beads) and gives them to his age-mates to deliver to the girl's mother. In some cases, where the girl is very young, she will just be decorated with the beads without being informed where they come from; but gradually she learns the truth through the whisperings of her older girl friends.

In some cases where a mother refuses to accept the beads the *moran* will not just give up. He will often team up with his age-mates from the *manyatta* and they will approach the so-called "difficult" mother until they accomplish their mission.

A girl is allowed to receive beads only from one *moran*, since the giver is regarded as her future husband.

Despite the fact that young girls are allowed to have sex freely with the *morans*, they are not expected to become pregnant (*morans* are normally informed of the art of *coitus interruptus* by their elders). A *moran* who makes a girl pregnant is stigmatized. A girl who becomes pregnant is not allowed to carry her pregnancy through birth. The women from her *manyatta* will take her into the bush, lay her on her

back on the ground, and then, one at a time, jump on her stomach until abortion takes place. No matter how many times a girl becomes pregnant the women will use the same method of producing abortion. In some cases young girls are said to have bled to death under this treatment but the women were of the opinion that it was better for such a girl to die rather than bring shame on her household. The old women said that this is the only method they know of causing an abortion; though they have heard that some people use herbs to induce abortion, they were not aware what herbs were effective.

Before marriage bridewealth in the form of eight camels has to be paid by the bridegroom to the bride's parents. Traditionally the marriage ceremony and feasting on goats lasted eight days; at present the number of feasting days varies from clan to clan. On the second day of marriage the bride is circumcised by an experienced old woman. Among the Rendille circumcising a woman symbolizes maturity and fertility in marriage. Once married, a woman was never considered to have a cause to seek divorce, but at present some of these norms regarding marriage are being broken down, due to outside ethnic influence or to changes in behaviour (as we shall see later when examining social changes).

2. What constitutes a good wife

In marriage the Rendille still adhere to and cherish the concept of a good wife as one who is a housewife and a mother. Thus a woman's goal in life is to attract and marry a man and live with him in harmony in his *manyatta*, which is normally composed of his mother, stepmother, brothers and sisters, cousins, aunts, uncles and age-mates. A wife gradually learns her husband's age-mates, whom she has a traditional obligation to entertain and respect just as if they were her own husband. A Rendille wife is supposed to be (and, with few exceptions, she still is) meek and humble and her life turns on her husband's decisions in practically everything except as to how she carries out her daily duties. Rendille women are not malicious or jealous, nor do they often quarrel. In fact, during all the time I was among them I heard the word *inafu* (jealousy) only once. The competitive spirit, which is a norm in the commercial world, does not prevail among the nomadic Rendille women.

Historically and currently emphasis is placed on the woman's physical appearance. The concept of beauty (just as with the Maasai, Turkana and Pokot) is that it is not only in the eyes of the individual beholder, but in the eyes of the entire community. Thus a woman is colourful in her decoration of beads and the red ochre which is traditionally dug from around Mount Kulal, though today it is also available in the shops. On getting married a woman is decorated by her mother or stepmother with a *bukhurcha* (an ornament worn around the neck on top of the beads she had been given by a *moran;* see Annex 1 for an illustrating photograph). This ornament is made from a tree called *barr (Hyphaene coriacea)* and is worn only by a married woman.

By the time of marriage, a woman's body should have been tattooed, by a *moran*, around her waist. Furthermore, a woman will not marry without having had her ear-lobes pierced and then artistically decorated with beads. The Rendille have extremely clean teeth which they brush using a local tooth brush. Importance is also attached to the pattern of the woman's teeth. Thus the women file their upper front middle teeth into a V shape while with the lower jaw a middle tooth is pulled out. Metal and plastic bangles are worn on the arms and legs. One can say that these decorations help to bring colour into life in the arid lands.

What constitutes a good wife among the Rendille is not only valued in terms of art; a good wife should also be a good labourer and a mother. As Molnos (1973) says, "the ideal of fertility was firmly impressed into the traditional images of the 'proper man' and 'proper woman' in East Africa. Barrenness, sterility or limited fertility were socially considered humiliating conditions and misfortunes". A good wife, therefore has to bear and nurture children. However, barrenness is not a ground for divorce. A good wife is supposed to be a good worker. Women do not work outside their homes but they shoulder the greater part of the daily work in the harsh nomadic environment.

Lastly, a good wife does not eat before or with her husband; she eats after her husband has finished his meal.

3. Widows

In Rendille society widows are never inherited by the brothers or close agnates of the deceased husband. A widow may have a secret *thumasi* (companion). If the widow is young and has no son, the elders of the

camp choose a husband for her. The chosen man should belong to the same clans as the deceased husband.

It may be said, therefore, that the women live by rules evolved over generations to make their life secure; they are to a great extent traditionalists and not yet affected by the pressure of modernization and development.

4. Delivery system and child rearing

In Kargi there are no facilities for maternal and child health care. There is a small hospital, started in 1975 by the Catholic missionaries who are based in Marsabit. This hospital has helped the Kargi community in some ways.

The majority of women we talked to have their babies at home with the help of an elderly woman who serves as a traditional birth attendant. Some few women did mention to us that they had walked to Marsabit Hospital (which is about 45 kilometres away) so that they could have their baby in hospital. However, they confided to us that they would never go back a second time, due to the fact that they missed the care of their relatives while in hospital. Thus most Rendille women have their babies in their own *manyattas*. In many cases children have died at delivery or a few days later, and some have said that the umbilical cord was infected, as may well happen if a dirty blade has been used to cut the cord. After delivery the mother is not allowed to eat or drink anything except tea without milk. It is believed that if she drinks milk or water, her spinal cord will break. After 5 days a goat is slaughtered and she is given only soup, not meat. Goats may be slaughtered on 2 separate occasions, but she is not allowed to eat the meat. Until a few years, ago, a woman who had given birth was not even allowed to drink milk for as long as 3 months, but this custom is now gradually dying out. Most of the women said that after 10 days a mother is allowed to eat and drink anything.

Miscarriage

Miscarriage is quite common, due either to walking long distances or poor health. Child mortality is also still high.

Breast feeding

Breast feeding is virtually universal among the Rendille. The women have a positive attitude to it and are aware of the importance of mother's milk for a baby. Until a few years ago, women breast-fed their babies for between 2 and 3 years, but today, with sedentarization, some of these norms are being relaxed. Now the women are breast-feeding their babies between 1 and 2 years.

The post partum tradition whereby sex is abstained from between husband and wife while the mother is breast-feeding is still adhered to. The women are of the opinion that a mother cannot feed two babies at the same time - that is, one *in utero* and one at the breast. This is a traditional way of spacing children which was practised by many African societies. Furthermore, traditionally, if a mother had twins they were thrown away, partly because it was considered a bad omen and partly because a woman could not suckle 2 children. Today, twins are no longer thrown away, but one of the twins is given to its grandmother to breast-feed. This practice should be discouraged, however, because in the cases we saw the children were very much under weight.

5. Views on family size

The majority of the women expressed the view that they have no desire to limit their birth rate and thus have no preference for a fixed number of children. However, there is preference for boys rather than girls, because a woman who does not bear a son does not inherit her husband's wealth (camels, cows, sheep and goats). Instead, the wealth is inherited by either the husband's brothers or a co-wife who has a son. However, daughters are also a joy to the household because they are regarded as an economic asset; one day they will bring brideweath, which is in the form of camels. Also girls help in the nomadic labour force in that as early as the age of five or six they help with the milking and herding the small flock of calves or kids and lambs, near the *manyatta;* later on they join the *morans* to herd the animals in the *fora*.

In the course of this study 4 woman indicated a desire to use "the injection" (as they called it) as a method of family planning,

when they have attained the desired number of children, which was 4. These women have been to Nairobi to visit their husbands, and they are about 25 to 28 years old.

6. Food habits

The Rendille are extremely proud of their nomadic culture and they lay great emphasis on the consumption of milk. In order to gain a comprehensive picture of food habits, people's diet was observed on the daily visits to the *manyatta*. In Kargi the community showed the following daily feeding pattern:

7 - 7.30 a.m.: breakfast, consisting of tea with milk; the children also take fresh unboiled milk.

10 - 10.30 a.m.: tea with milk, sometimes with *gathaha* (an indigenous ginger) added.

12 -12.30: lunch, mainly porridge made from maize meal with salt and sugar added. Some families cooked *ugali* (stiff porridge) two or three times a week. This *ugali* is eaten with either sour milk or ghee.

4 - 4.30 p.m.: tea with milk.

7 - 7.30 p.m.: dinner, composed of the same foods as lunch.

There were 3 *manyattas* where it was observed that some people ate a variety of foods, such as maize and beans, rice and chapatis, and some even ate eggs. These families had lived in either Marsabit or Nairobi with their relatives. But the majority of the women said that when they ate maize and beans during the drought when they obtained famine relief from the Government, they suffered from stomach ache; thus today many would rather abstain.

It may be said that Rendille food habits are influenced by seasons and ceremonies. During ceremonies either sheep or goats are slaughtered and there is plenty of meat. A woman will not just have a goat slaughtered without her husband's decision. If she gives birth to a child and a goat has to be slaughtered in the absence of her husband it is a close male relative who makes the decision.

During the rainy seasons all the animals come back from the *fora* to the *manyatta*. This is a time of festivities and the gourds are overflowing with milk.

During the dry season particularly all the animals are taken out to the *fora* and the women and children are left with only a few animals from which they obtain their daily supply of milk. The amount of milk consumed varies from house to house. Some of the families experience a shortage of milk, and tea can be scarce during the dry season. The elderly members of the community are usually badly hit at such times. From one *manyatta* to another it is quite common to hear the following lamentation from the old women:

Ngoko taya!
majani makhabo
sulhal makhabo
Oh! ngoko taya!
(My grandchild!
there are no tea leaves
there is no sugar
Oh! my grandchild!)

Most of the women use credit from the Somali shops for the needed foodstuffs, and their husbands or relatives pay the bill at the end of every month, while others from time to time barter milk in order to obtain sugar, tea or flour.

In Kargi, there is a small butchery. If an animal is to be slaughtered for sale, it is first inspected by a Health Officer. The owner of the animal hires the butchery for a daily fee of 20 shillings for either sheep or goats and 60 shillings for a cow or camel. It was noted that the butchery is active twice a week, and on each occasion a goat is sold. The Rendille eat only the meat of camels, cows, sheep or goats. Traditionally they are not supposed to eat other meat nor are they supposed to eat eggs, chicken or fish. Though their diet does not include green vegetables, they do eat fruits, which they pick while on the move.

With regard to the young girls and boys who spend a whole day away from the *manyatta* attending to the small herds, they each carry a gourd with milk. The women expressed the view that sedentarization has brought a problem in their feeding habits because now they have to keep buying expensive food, whereas when they were leading a nomadic pastoral life there was always plenty of milk to drink; as was noted in Tunisia, "when nomads are sedentarized, land-use pressures become

seasonally and annually continuous. The ecosystem is denied respite it needs during dry years, while inhabitants are forced to intensify their pressures on the land in order to survive. In addition the population grows, its food and fibre needs increase and its sedentarized pressures on the land increase proportionately. The ecological result of such changes is a progressive degradation of the system" (Wagner, 1978). This is also applicable to the nomads of Kenya, who are living in arid land and are sedentarized.

7. Knowledge of traditional healing

We did not examine in detail the various uses of herbs, their names or the ailments they are used for. However, most people in the *manyatta* were using modern medicines and only once in a while did one observe the women boiling the bark of trees for either fever or to cure a stomach ache. The women said that normally a sick person, before taking any medicine, is given camel's milk which is supposed to cure any kind of disease.

It was observed that all the children were wearing charms. These were in the form of pieces of wood or bones, which it is believed protect children from evil eyes. This, one could say, helps the women psychologically while rearing their children. As Mead (1956) says "the large amount of time and human energy spent in ritual, magic, and other religious practices seems to be wasted... but to the native, they give him faith in his work, saving him from anxieties."

8. Division of labour

The burden of labour among the Rendille is heavily carried by the women. They do almost all the household duties while the men are the decision makers, take care of the camels and cows, and provide security for the community. Below is a list of the various activities that a woman toils at within the harsh environment (see Appendix I for photographs):
1. A woman bears and nurtures children, and despite disease, drought and raids, which are beyond her control, she raises strong children.
2. She builds the collapsible hut which is made of sticks on the inside and of *eyma (Sansevieria)* and animal skins on the outside. Today, sacks are also used to cover the outside of the round hut. The sticks used to

build the interior are normally passed on from mother to daughter, so that a mother's hut tends to become small. As the *eyma* is not available in Kargi, the women walk to Marsabit to cut it. It is then burnt and buried for 2 to 3 weeks. Meanwhile the women walk back home, to return when the time has elapsed. The *eyma* is then packed on donkeys and the women walk alongside their animals on the journey home. At home the *eyma* fibre is woven into mats that are used to cover the roof of the huts. Ropes are also made from the same material. The women say that this is most tedious work and is done once a year. When the Rendille are on the move it is the women who dismantle and later rebuild the hut.

3. It is a woman's duty to fumigate the various gourds. This is done by either an old woman or a young mother. Gourds are fumigated twice a day, morning and evening, and it helps to prevent the milk from curdling. The following trees are used to provide the fumigating wood

(a) *Gaer (Cordia tinsensis)*
(b) *Dume (Maerua crassifolia)*
(c) *Golod (Cadaba mellifera)*
(d) *Bihhil (Acacia mellifera)*
(e) *Ejer (Olea hochstetteri)*

4. Collecting firewood and fetching water is done by grandparents, old mothers, and adolescents.

5. Every day the women milk goats, and sometimes cows, morning and evening. Young girls, as early as 5 - 6 years of age, also help their mothers in the milking of small animals.

6. Cooking and making ghee from sheep's milk and house management are also woman's work.

7. Sometimes a mature woman also herds sheep and goats, which is usually a duty for young boys and girls.

8. The skins that adolescent girls wear are usually colourfully decorated by the women. The skin is first of all dried, then it is scraped and dyed, using bark from the following trees:

(a) *Halale (Boswellia hildebrandtii)*
(b) *Dowo Hadodo (Cammiphora candidula)*

The barks from the above trees are boiled with salt to produce a reddish dye, in which the skin is soaked, and then hung out to dry. After a day or two the skin is softened by smearing it with ghee.

Lastly it is sewn and decorated with beads.

9. Decorating gourds with cowrie shells and weaving of containers, water pots and mats.

10. Accepting beads from *moran* on behalf of their daughters and then decorating the adolescents accordingly.

11. Making shoes for children and for themselves from animal skins.

12. Circumcising a bride is the duty of the old women.

9. Folksongs and dancing

The Rendille are very fond of music and dancing. The dancing is sometimes between men and women, *moran* and young girls, or performed by women among themselves. There are songs that are sung specifically when the new moon is sighted, songs for *sorio* or songs that are sung when the women are having an inter-clan dancing competition (some Rendille songs were recorded during the study; the cassette is deposited with the IPAL Co-ordinator, and for the meaning of the words see Appendix II). The women were of the opinion that music soothes their life and after watching them singing and dancing, full of life and laughter, I fully supported their belief.

10. Leadership and women's groups

During the various visits from one *manyatta* to another the women were asked whether they had a female leader, to which they replied that they do not see a need for one.

They said that every woman knows her obligations to her family and to the community, and consequently wondered what need there should be for a leader. The Rendille women, as mentioned before, do not work outside their homes and they do not engage in any form of income-generating activities. This is no doubt mainly because they have not been exposed to different ideas or activities in which they could be involved fruitfully in generating an income.

Womens's groups

In Kargi and also in Marsabit there is a Maendeleo Ya Wanawake group. The group in Kargi was formed in August 1981 by Mr. Hakim Perera, an

officer of the Department of Welfare and Social Services based in Marsabit. Mr. Perera identified, with the women's consent, a Chairwoman for the group, which is composed of 56 women representing the various *manyattas*. To become a member one has to pay 50 shillings for enrollment. The fees collected, plus some money that Mr. Perera gave the group as a Government contribution, were used to buy sheep and goats. The first objective of the group was the buying and selling of small stock at a profit. This did not work well, and their objective is now to build a small curio shop. The members intend to decorate various items for sale at their shop. They hope that the tourists who occasionally pass through Kargi will buy them.

Actually, the majority of the members do not attend meetings. Some women confided to us that they did not foresee any achievement from the group activities, while others said that at the various meetings people argued too much, whereas they were not used to raising their voices to each other.

One observed that the group lacked leadership, and noted that in order to give the group credibility people should be engaged in an income-generating activity where each woman would see a personal benefit.

Women should also take advantage of the adult classes that are available in Kargi. But it should be pointed out that the time allocated to adult classes is an odd one - 2 p.m. At that time it is extremely hot and most people, who normally get up at 6 a.m., are having a nap. Adult class attendance is therefore poor. Women also said that the classes were a bit far for them to walk at that particular time. Others again said that truly they did not see the advantages of attending adult classes. To educational programme planners it may be said that "the implementation of the concept of basic education possibly consists in great part in convincing the community that the basic education programmes which are being proposed effectively correspond to their felt needs. The most effective way of doing this is to involve the community from the beginning in the policy-making, planning and programming processes" (UNESCO/UNICEF Co-operation Programme, 1980). Arrangements should also be made for the Kargi group to visit other Maendeleo Ya Wanawake groups in order to see the various income-generating activities.

Women's contribution to the Kargi community

In early 1975, 2 women accidentally fell into the Kargi well and drowned. This caused great sorrow and fear among the women, who decided for the first time in their history to hold a meeting under a tree, where they discussed the possibility of getting piped water. The women were led by a Somali woman trader. The male community was alarmed to see women discussing and taking decisions under 'their' tree, for women traditionally never meet under trees to make decisions. The women willingly made contributions so that they could get piped water. The amount was not large, but the important point is that they had demonstrated a spirit of co-operation. The women approached the chief, requesting that a piped-water system should be introduced to Kargi. By the end of 1975, Kargi had 2 piped-water points, although the women do still use the well sometimes.

In the same year the women requested Father John (a Catholic priest who comes to Kargi once a fortnight) to build them a church, for the service was being conducted under a tree. Furthermore, the women told Father John that they would appreciate it if some kind of medical facilities were brought to Kargi, for sometimes children died on their mother's backs as they were walking to Marsabit to be attended by a doctor.

Both these requests were granted, and the hospital is now being run by a Boran nurse.

11. What is the woman's perception of social change

Before touching on women's perception with regard to social changes, let us first see some of the changes that are taking place. They include:

a. Education of both boys and girls and adults;

b. Elopement and divorce which are becoming common, especially among the young girls;

c. Circumcision of young school girls before marriage;

d. Wearing of clothes (*kangas*) instead of skins;

e. Young girls no longer sharpen or pull out their teeth and tattooing is no longer common;

f. Intermarriage with neighbouring ethnic groups, mainly the Gabbra, Boran and Samburu;

g. Sedentarization.

In order to get an insight into the women's perception with regard to social change, women were asked open-ended questions about their views, and also about what changes they would want to see introduced. Below is a summary of some of the answers.

With regard to *education* most women had a negative attitude; they expressed dismay that nowadays girls attending schools have no respect for their elders, nor are they willing to help with the daily herding of sheep and goats during their holidays. Furthermore, the same girls are setting a bad example to the community, for they bring pressure on the old *ngokos* to circumcise them while they are in school, which is contrary to the Rendille culture, with the excuse that they fear it might be more painful if they waited to mature.

Elopement and divorce were also associated with education and women expressed unfavourable opinions regarding those practices. Previously eloping was unheard of, but since the 1970s school-girls and also girls from the *fora* sometimes elope with "men in trousers", as the old women called them. Rendille men traditionally wear the *shuka* (a cloth wrapped around the waist).

However, the women admitted that there were advantages in education, in as much as their girls and boys who go to school can read letters for them sent by their husbands, sons or brothers, who are mainly working in Nairobi as watchmen.

Divorce is now becoming common for various reasons. Some women run away because of husbands' frequent beating. Traditionally, if a Rendille husband beat his wife the men from his *manyatta* would meet the next day under a tree and discuss what should be done. Normally a goat was sent to the relatives of the beaten woman as an apology. Today the women lamented that a husband could beat his wife merely because she raised her eyes at him and no meeting is now held under a tree nor is a goat delivered to the relatives.

Some women, the elders complained, leave their children scattered around while seeking another marriage to a younger husband.

With regard to *employment* the women had mixed feelings; some said they would want to be employed only around Kargi (a few of them are working as maids for the Somalis at the shopping centre), but not to go to work in Marsabit or Nairobi. Others felt no need for seeking employment at all.

With regard to the *wearing of clothes*, the majority of the Rendille women still adhere to the wearing of skins. They say the advantage of the skin is that it does not need to be cleaned; thus it is practical, since water is scarce. Furthermore the skin is durable, whereas *kangas* tear easily when they go to collect firewood. Thus the wearing of clothes is not acceptable to most Rendille women, who remarked that the first time women started wearing clothes, in the 1970s, the rains failed to come on time. Some women said that their husbands would have to decide whether a wife should wear clothes or the traditional skins.

The attitude towards the use of *modern medicine* is positive and one cannot regard the Rendille strictly as herbalist. However, when it comes to the delivery of children, practically all the women indicated a preference for being at home.

With regard to living in *modern houses*, the majority of women still prefer living in their traditional collapsible huts, which, they say "is what makes us Rendille". A few women did express the wish to live in iron-roofed houses.

With regard to *sedentarization*, attitudes varied from *manyatta* to *manyatta*; some favour sedentarization while others are against it.

Changes women suggest

Below are some of the changes the women said they would want introduced:

a. Construction of roads and availability of transport, so that they can ride to Marsabit (instead of walking) where foodstuffs are cheaper than in Kargi.

b. Better hospital facilities; at present they have to walk to either Marsabit or Wambaa hospital, which are both quite far away.

c. Better security from raids by other groups.

d. Some expressed an interest in getting employment around Kargi.

The above may be considered as the woman's *basic felt needs*.

AN ANALYSIS OF THE FINDINGS

From the field work one found the following traditions rather incompatible with today's way of life:

Promiscuity and the method of abortion.
Circumcision.
The delivery system for women giving birth.
Food habits.
The division of labour.

Promiscuity and the method of abortion

This tradition leaves much to be desired. With the introduction of education, emphasis should not just be laid on academic qualifications. but the system should also try to mould the young people's moral fibre. The parents should be encouraged to play a greater role themselves in the attitude change of their children. Thus, the involvement of parents, the family and the community as a whole is needed in determining and meeting the sexual needs of the adolescents; it is very important, as articulated in the IPPF'S policy statement on education (1977) that "people should be approached within their community and family settings rather than arbitrarily classified as targets".

The method that is being used for abortion should be discouraged strongly, for it is not acceptable by any standards.

Circumcision

In 1976, the Director-General of the World Health Organization drew the attention of the World Health Assembly to the need to combat taboos, superstitions and practices that are detrimental to the health of women and children, such as female circumcision and infibulation. Female circumcision is an issue which has been debated at various local and international meetings. For instance, it caused concern at the Copenhagen U.N. Women's Meeting (1980). However, it may be said that it is a delicate issue and needs tactful handling in changing people's attitudes to this traditional practice.

In Africa, female circumcision is still being practised in the Sudan, Somalia and in some parts of West Africa. In Kenya this tradition is not only practised by the Rendille; it is also common among the Maasai, Kipsigis, Kikuyu and the Merus.

President Moi has recently banned female circumcision and he has advised Kenyans to "maintain cultural values beneficial to the nation and discard those which were useless" (*Daily Nation*, 27 July 1982; for cuttings, see Appendix III).

Professor Mungai has explained to the nation the significance of this traditional custom and its medical implications (*Sunday Nation*, January 1974; see Appendix III).

With the Rendille, the approach should be sychronized with the health and developmental projects to be introduced, rather than tackling and condemning the issue in isolation. The Rendille woman, past and present, has contributed to her society in the preservation of the Rendille culture by playing the role of 'good wife'.

Delivery system

One is of the opinion that where houses are crowded and ill ventilated and where sanitary measures are inadequate, it is desirable to provide maternal and child health care facilities, so that women can be persuaded to go to hospital for their delivery. The habit of not allowing women to eat adequately after delivery should be discouraged.

Food habits

Care for the child's nutrition begins with the improvement of the mother's nutrition during pregnancy and lactation. The present Rendille diet of mainly milk, tea and porridge is monotonous and restricted and marketing facilities for various foodstuffs need to be extended to the Kargi population. On occasions when a goat is slaughtered, all the meat is usually consumed on that particular day. The Rendille do not have a method of preserving meat, and therefore nutritionists need to instruct the women in the way to smoke and dry meat for future use.

Division of labour

In the nomadic life children are an important part of the labour force. This puts us in a dilemma, for if nomadism is here to stay how do we deal with the problem of illiterate children? This is where "some scholars have suggested that the curricula in nomadic schools be geared towards nomadism" (Khogali, 1980). In that way the nomadic society will not be deprived of its labour force, nor will it remain ignorant of outside activities. It should not go unmentioned that men's attitude towards work needs to be researched, so that their attitudes can be changed without destroying their self-esteem. The women's burden of work needs to be lightened, and this could be done by utilizing both the donkey and the camel.

RECOMMENDATIONS

After examining the various duties that Rendille women perform, the following may be recommended:

1. Lightening her work load and simplifying her work process, so that she can have time to spend in constructive development projects and income-generating activities that need to be incorporated into the Rendille community;
2. Making basic services available;
3. Establishing better educational institutions specifically geared to the nomadic life.

Notes on the recommendations

Various conferences, seminars and meetings have been held to discuss the future of pastoral peoples, nomadism and its compatibility with the conditions of modern life. The conclusion is that nomadism is here to stay. Breeden (1971) was of the opinion that "to abolish nomads because they have other skills, know other things, hold other aspirations, and live by other customs than ours, in short, because they are different is unworthy; there is a place for nomads in the world, often enough a place we cannot use without them. We must not steal it from them for if we do, we reduce the richness of human life; we rob ourselves."

In view of the above, we can say that constructive changes need to be introduced into the nomadic life without damaging the pattern of family life. The Rendille woman's load of work needs to be lightened and her work process simplified. This could be done by encouraging the greater use of donkeys in fetching water or collecting firewood. The riding of donkeys and camels also should be encouraged. At present camels (which are considered sacred) are only ridden by the sick or the elderly when moving, and donkeys are not ridden at all.

The women of Kargi are not currently engaged in any form of income-generating activities and yet the women know how to weave artistic baskets and they beautifully decorate their gourds. The various co-operatives that are based around the major towns in Kenya

need to approach the women for their handicrafts for sale. In that way a woman could earn some money for her daily needs. Furthermore, a hides and skins project could be started to demonstrate to the women how to make different leather goods that could be sold.

As far as making the basic services available is concerned, Article 25 of the Universal Declaration of Human Rights states that:

1. "Everyone has the right to a standard of living adequate for the health and well-being of his family, including food, clothes, housing and medical care... and the right to security in the event of... sickness, disability... old age..."
2. "Motherhood and childhood are entitled to special care and assistance."

Health is defined by the WHO as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity." Such well-being is impossible to achieve without an adequate standard of living or security. Yet the Rendille are exposed to various ailments which are associated with desertification (trachoma, epidemics) without adequate medical services. Health services and the use of mobile unit services which already exist in the country need to be extended to the Rendille, taking into account the following things for demonstration: general hygiene, nutrition, ways of combating ill health, taking care of the elderly and discouraging over-large families. Dissemination of population education should go hand in hand with health and educational projects, for the major bottleneck is illiteracy. Thus people should be made to realize the problems of large families on an individual basis, rather than being told that it is a global problem. For as Ogot (1972) said, "man is not only a political or economic animal: he is also a cultural animal. When, therefore, we formulate our population policies, we have to remember that basically what we are trying to do is change the reproductive habits of a society. This means a radical change in the meaning of such fundamental concepts as sex, the family, the roles and relative status of the 2 sexes. In short, if we are to succeed in getting a society to adopt new population policies, we have to accept that this must imply a major cultural change." And this will not come easily. As Watson (1978) said of the Maasai: "In Maasai we taught courses and communicated by all possible means for 2 - 3 years with very little effect. Then came a

break-through. It seems as though sufficient numbers of people were convinced and then something happened. In Maasailand, settlement was accepted; group ranches and individual ranches were set up. Cattle dips were built and water supplies improved, many schools and dispensaries were established. However, to do this type of thing successfully, strong motivation is required. After all, we are expecting people to do a great deal of hard work." Actually one could add that what is needed is working with a missionary zeal and it may be recommended that some workers should be recruited from the indigenous people and given the necessary training to enable them to carry out various developmental projects in the *manyattas*. Furthermore, the old women who are serving the community as birth attendants should be identified and consulted, for they are in a way the opinion leaders in the community. The women's traditional approach to health care is their attempt to deal with their environment with the very severe limitations imposed by poverty and lack of medical knowledge. Modern midwifery will gain credibility by working side by side with the traditional birth attendants.

The right to an education is clearly expressed in the Universal Declaration of Human Rights, which states that education should be free, "at least in the elementary and fundamental stages"; elementary education should be "compulsory", technical and professional education "generally available", and higher education "equally accessible to all on the basis of merit". In defining education one might borrow President Nyerere's formulation (1976), that:

"Its purpose is the liberation of man from the restraints and limitations of ignorance and dependency. Education has to increase men's physical and mental freedom - to increase their control over themselves, their own lives and the environment in which they live. The ideas imparted by education or released in the mind through education should be liberating skills. Nothing else can properly be called education."

In planning and implementing educational programmes it is important first to identify the needs of the target group. Furthermore it should be taken into account that "education should seek to impart direction to traditional culture in order to obviate any tendency towards stagnation and to make the traditional culture responsive to change, so that the

traditional culture and the pressures of modern cultural and technological development become as far as possible reconciled and work together constructively" (Commonwealth Secretariat, 1970).

Through education, the nomadic woman should be taught to acquire certain skills, values and attitudes to adapt herself to twentieth century ideas. The educational system will have to be both formal and informal, but people should not be forced to go to school - they should participate voluntarily. Furthermore, programmes of education should accompany measures for improving land use. Education should thus not only involve the "3 Rs".

There are, of course, various constraints in implementing educational projects among the nomads, but it can be done. For instance in Somalia, where 60 per cent of the population lead a nomadic life, educational projects have blended in with the nomads and their environment.

The use of folksongs and dancing, moreover, should not be neglected in educating a nomadic society, who normally place emphasis on rituals, ceremonies and folk dance.

CONSTRAINTS

In implementing developmental projects in the arid and semi-arid areas there are various major constraints that must be overcome. These are already mentioned in the Kenya Government document *Arid and Semi-Arid Lands Development in Kenya* (n.d.), and in summary they are:

1. Environmental limits, resulting in inadequate production to feed the population of the areas and creating a dependence on outside relief.
2. Limited and unadapted technology.
3. Serious population and migration constraints; present land and water endowments and their distribution cannot support increased population using present technologies.
4. Many of the inhabitants in the arid and semi-arid areas are traditionalists and are not prepared to innovate and initiate change.
5. An implementation constraint.

Government's ability to implement projects is severely limited by staff, vehicles and equipment. Also some resistance to postings in these areas has led to difficulties in carrying out the Government's projects.

6. Lack of a developed public infrastructure, which in these areas lags behind the rest of the country.

One may add that for the Rendille community, another constraint is language. The Rendille language is not documented and the majority of the people do not understand or speak either Swahili or English.

CONCLUSION

It should not go unmentioned that the Rendille do not regard nomadism as a way of life that they ought to abandon; many consider that it is a good life, and there is no internal pressure against it. Thus "measures to combat desertification must be seen as having human and social objectives. They must be inspired by acknowledgement of the rights of people living in dry land to acceptable standards of health, nutrition, education, livelihood and social well-being consistent with human dignity" (Secretariat of the United Nations, 1977).

In this U.N. Decade for Women, much has still to be done for the Rendille women regarding "equality, development, and peace".

APPENDIX 1

Photographs illustrating women's role in the Rendille society



After cutting the *Sansevieria*, the women are seen carrying it for processing, that is burning, burying, and then weaving it, to be used as a roof.



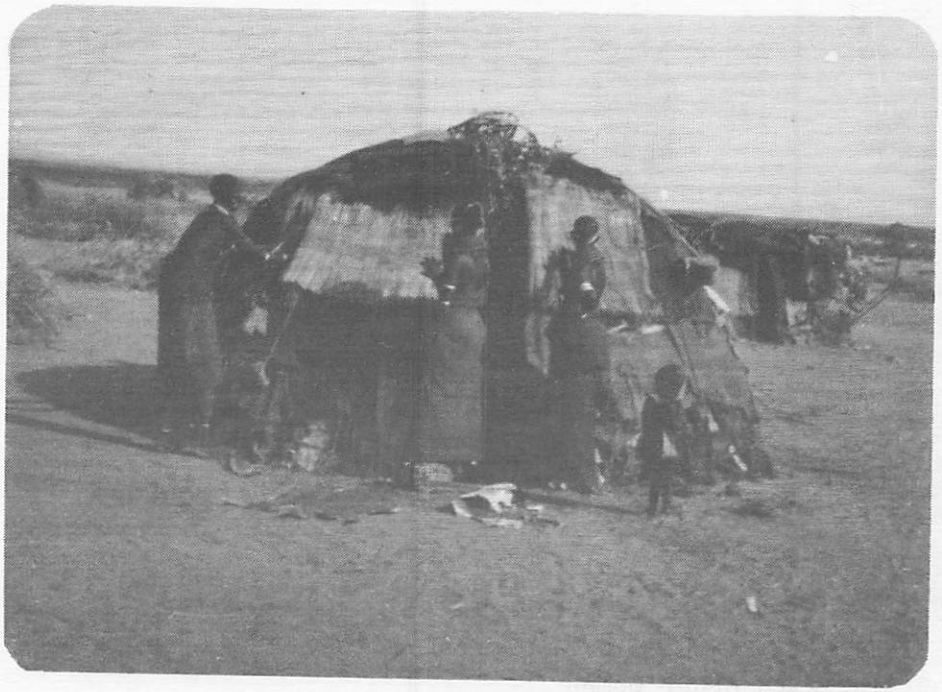
Weaving the *Sansevieria* into mats is done either inside the hut...



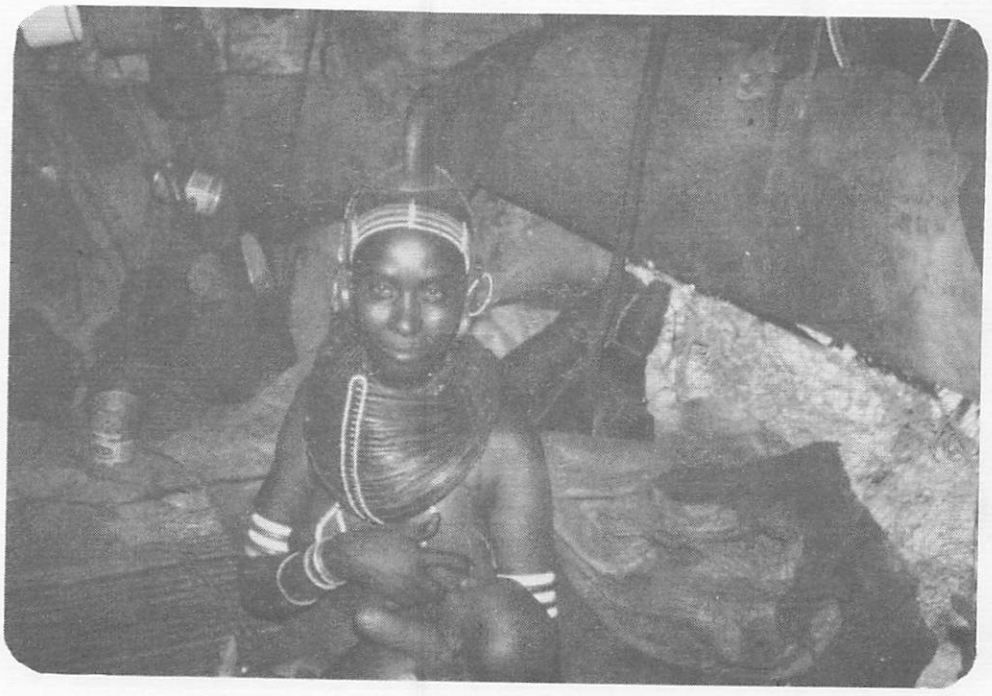
...or outside with other women.



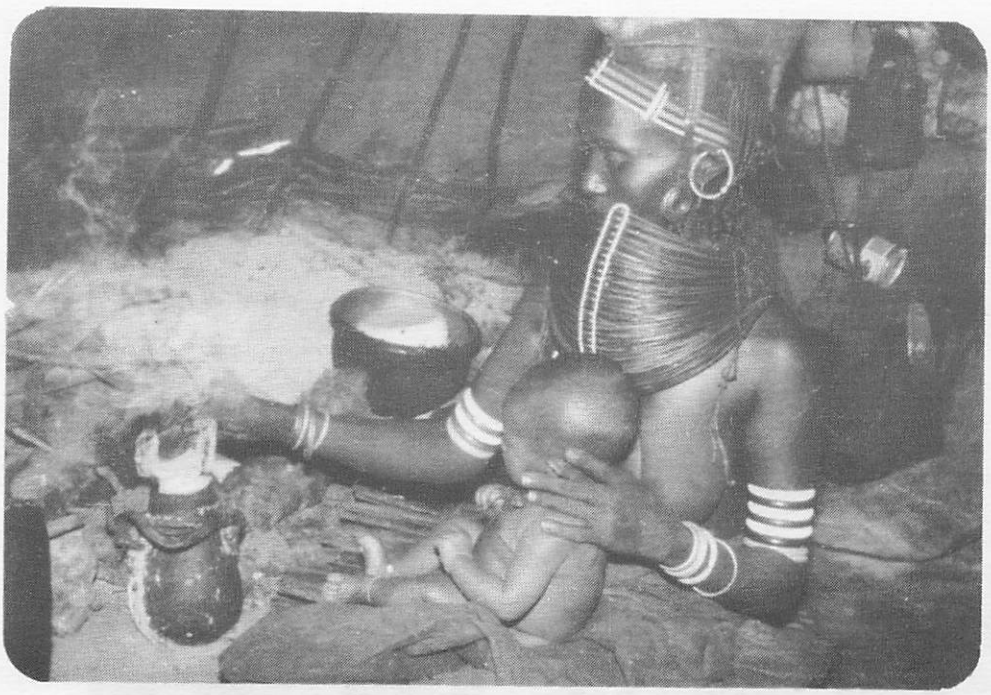
It is the women's duty to build the collapsible hut. The presence of a crow is considered a good omen at this time.



Grandmothers help in daily chores.



Motherhood is her first duty. The *doko* (raised hair smeared with ochre) is worn by a mother whose first-born is a boy.



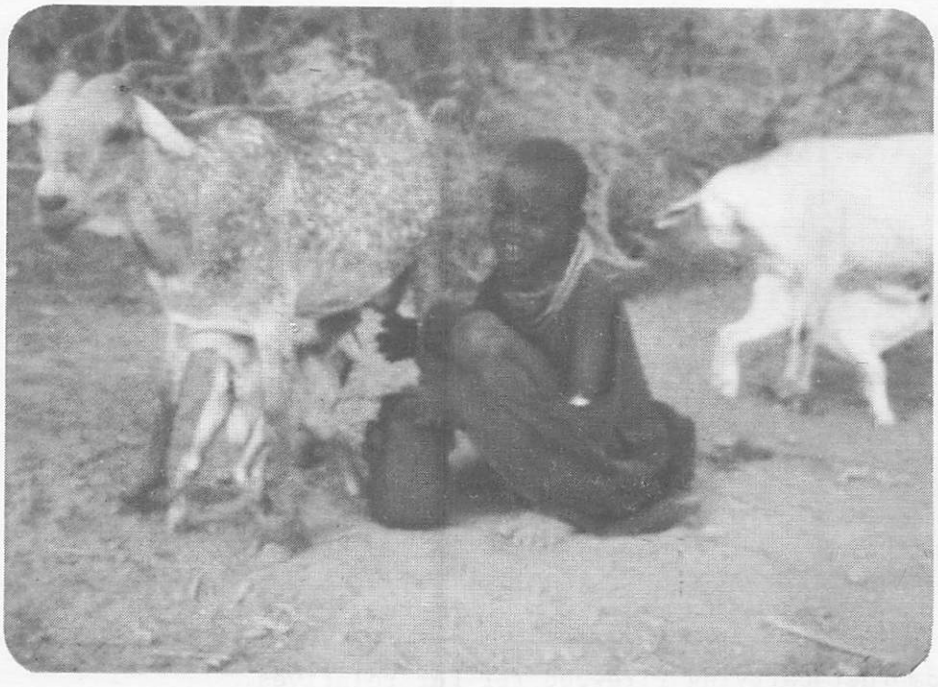
Fumigating gourds is a daily routine.



A grandmother carrying firewood for her relatives.



One of the relatives, a daughter-in-law, receiving her share of the wood.



Apprenticeship to one's environment starts early.



Water is normally carried on one's back; the pot this woman is carrying is hand woven.



Some families live far from a well and the women walk to and fro to fetch the water. Camels help to carry both traditional and plastic containers.



She cooks for her family inside her hut.



Butter or ghee is made in a gourd.



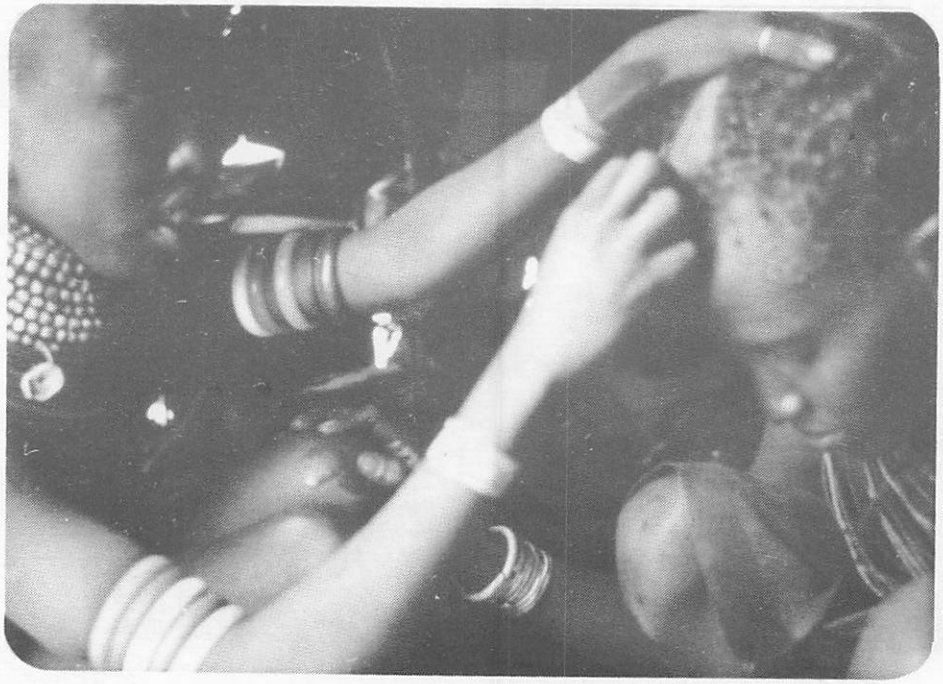
Mother sweeping the kraal while her daughter looks on.



Grandmother scraping a hide to be worn by an adolescent, a mother or by herself.



An adolescent girl wearing a decorated skin. She is examining a *Commiphora* plant from the bark of which a dye is obtained for colouring either sheep or goat skin.



Heads are usually shaved inside the hut; long hair is believed to make the head itch.



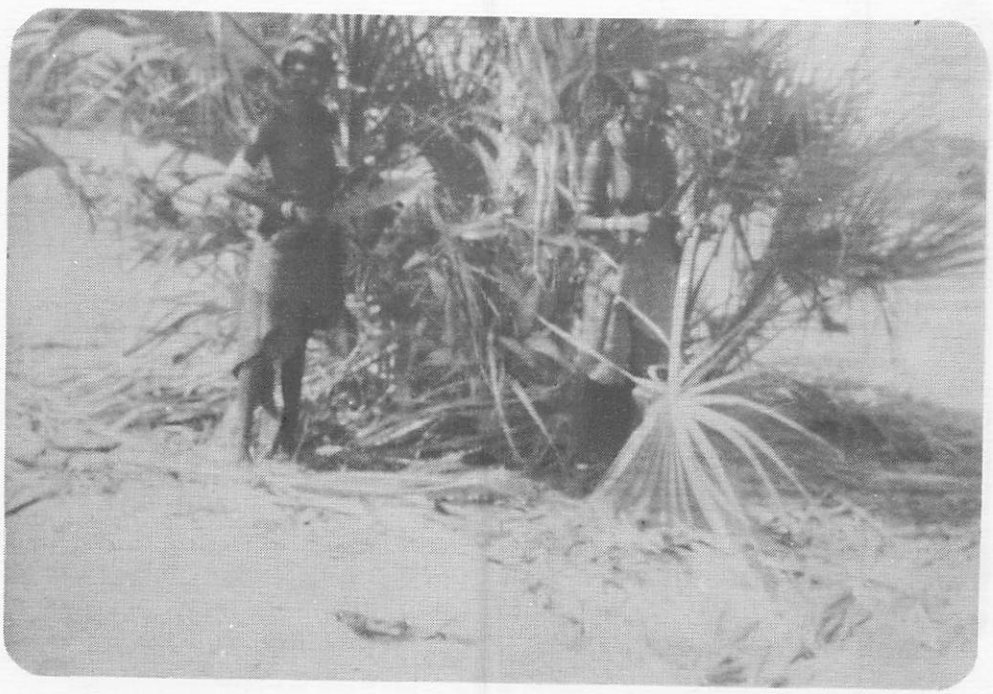
The head is smeared with red ochre mixed with animal fat, to protect the scalp from the heat.



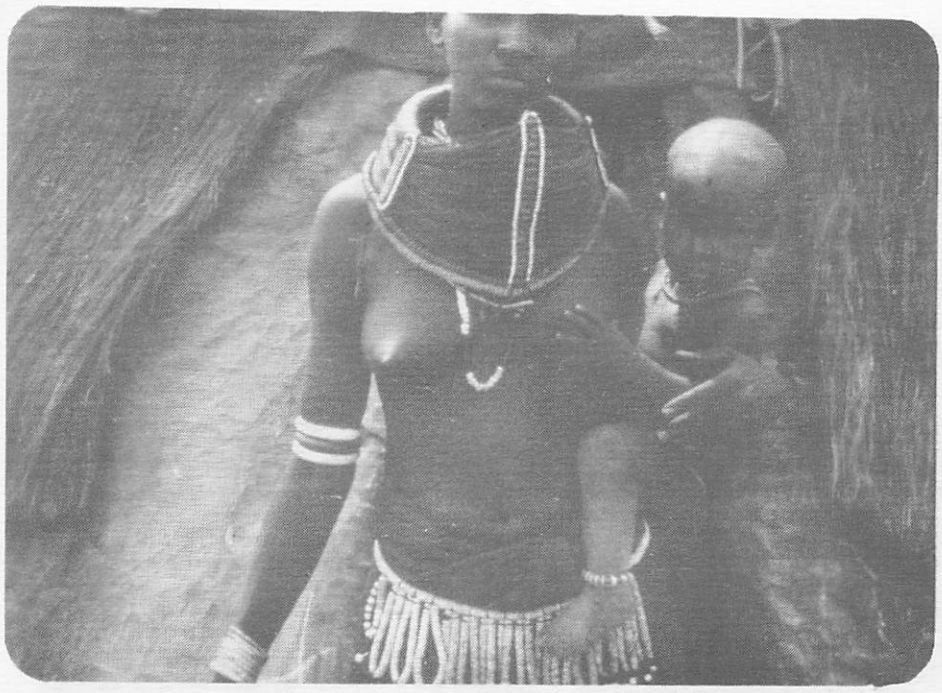
Today, some clans who have intermarried with other ethnic groups have learnt the art of hair braiding; it is accepted by various women.



The beads that girls wear are accepted by their mothers from the *moran*.



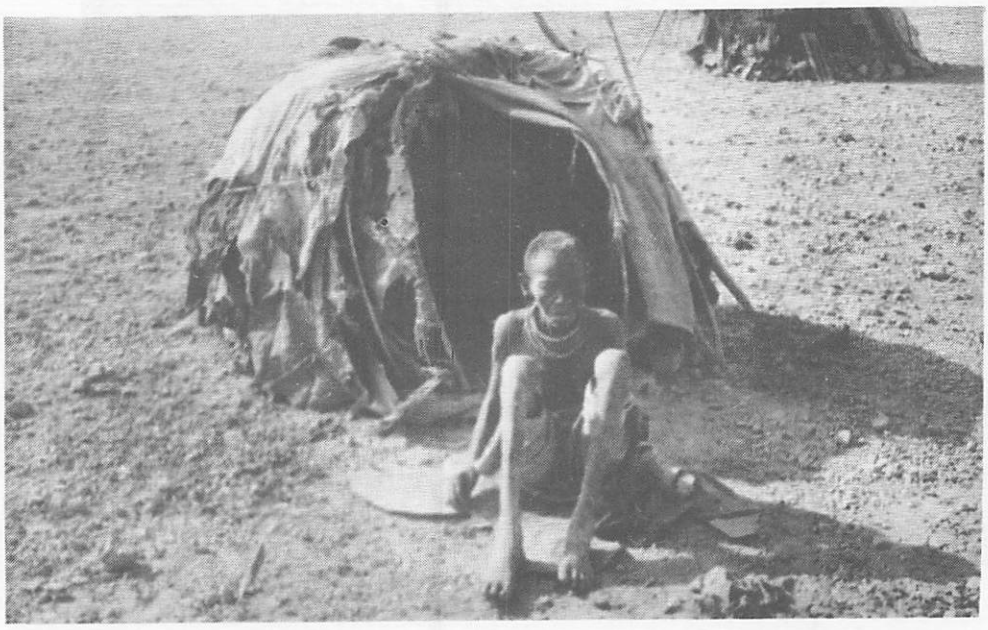
Hyphaene coriacea is used in making the ornaments for decorating a bride.



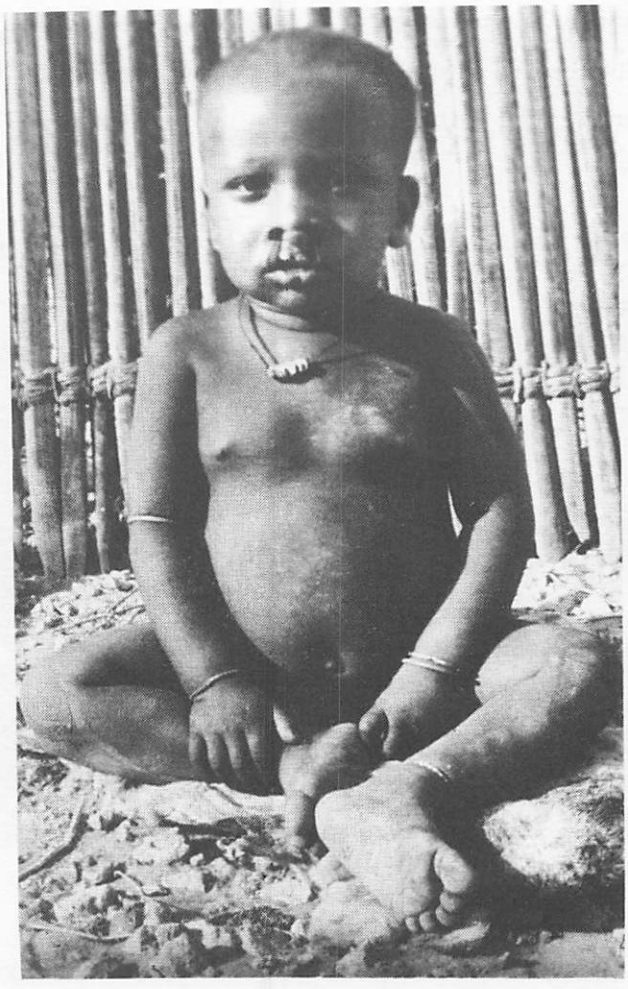
A married woman wearing a *bukhurcha* around her neck. The red china beads in the centre of the ornament are handed down from mother to daughter. Plastic bangles are worn alongside the traditional metal bracelets. The beads around the woman's waist are made from ostrich eggs. Today, these beads are becoming rare, for the women are aware of the Government's policy of protecting the ostrich.



One of the consequences of sedentarization is the relaxation of norms regarding child spacing. The woman above is expecting her third baby 2 years after her last child; yet a decade ago, it would have been after 3 years.



The elderly are also affected by the effects of sedentarization.



Hospitals are a basic need for both mother and child.



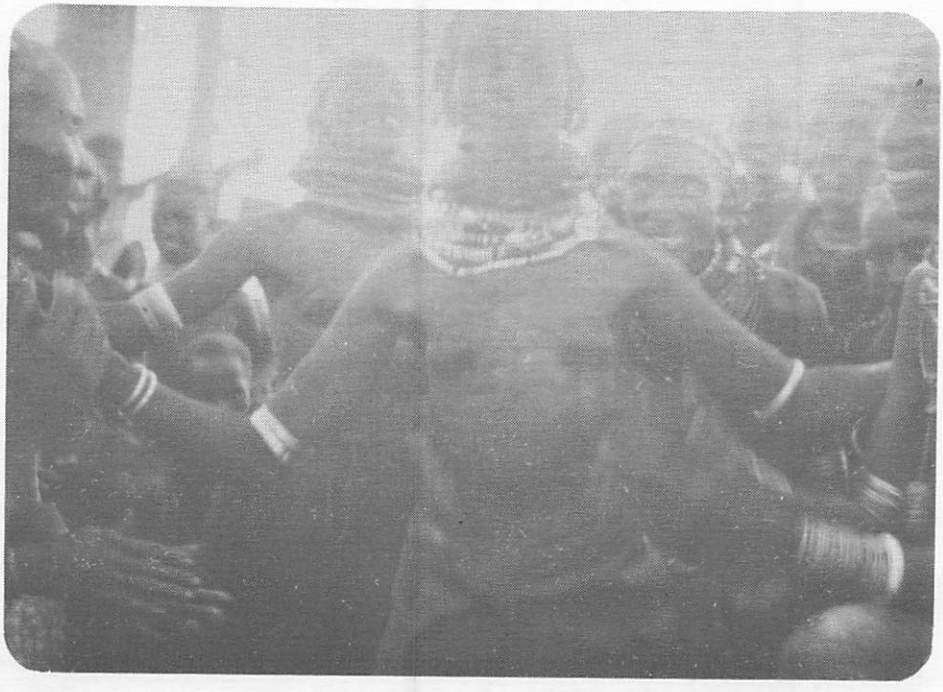
The missionaries cannot accomplish all that is needed on their own. In the background here is a missionary hospital.



Nevertheless, a woman labours on.



The men however, provide security for the society and also maintain the nomadic economy by herding the animals, mainly camels.



The women have a positive attitude towards life. As Shakespeare said, "If music be the food of love..." The Rendille play on!

APPENDIX II

Meaning of songs on the cassette of recording made during the study.

Song No. 1 This song is sung when the new moon is seen. It is mostly in praise of the *moran* and their camels. It praises the *moran* for walking the camels to the water-point.

Song No. 2 This song is sung during drought when rain has failed for a long period. The Rendille believe the chanting will bring them rain. Thus the singing takes place close to the *nabo* (place of worship) and not outside the camp.

Song No. 3 This song is sung after a raid has taken place. If a *moran* returns with a captured camel, this song is sung praising him. It is also sung when a camel has a new calf and during the *sorio* ceremony.

Song No. 4 This is mainly sung by the *Urowen* clan. It is in praise of the place where they have settled.

Song No. 5 The various clans use this song to praise or tease the *Odhola* clan.

Song No. 6 It is sung as praise of the *Maturbah* clan. At a time of drought there was much suffering due to the failure of the rains. The *Maturbah* moved into a camping site to join the other Rendille in search of pasture. After they moved in, the rains started. This song was composed to praise the clan who brought the rain.

Song No. 7 Serves the same purpose as song No. 1.

Song No. 8 Also sung when the new moon is sighted. It praises the Rendille boys for their bravery and the fact that they are never defeated.

Song No.9 Sung for the same reasons as song No. 4.

Song No. 10 Also sung when the new moon is seen; the singers remind themselves how their men went on raids and captured some animals.

Song No. 11 This is sung in praise of a mother who has many *moran*

Song No. 12 This is sung mainly by the old women remembering the times their husbands defeated their enemies. The song is in praise of the husbands and all their age-mates.

APPENDIX III

President condemns female circumcision

PRESIDENT Moi has condemned female circumcision in Baringo District.

"If I hear of a person circumcising girls in this district, he will be on fire," he said. The President said those found committing the act or encouraging it would be prosecuted.

He said the people who circumcised girls were going so not because it was healthy but because they wanted to make a living.

President Moi was speaking at Kabarnet Hotel on Sunday night after he was entertained by several school choirs. He urged locational and district level leaders to ensure that the habit was stopped.

The President advised Kenyans to maintain cultural values beneficial to the nation and to discard those which were useless. Stressing the need for refining culture, he gave the example of the difference between "pangas" used in the past and at present.

President Moi said culture did not mean that people had to smear themselves with mud or wear skins at special occasions. Elaborating, he said religion had become a greater part of Kenyan culture as opposed to witchcraft.

The President noted with satisfaction that wananchi had become healthier after giving up traditional brews. He however, noted with concern that the country's population was increasing at a much higher rate than before. He urged leaders to preach the importance of family planning and to educate wananchi on the necessity of bringing down the birth rate.

On development, President Moi said Baringo District had greatly prospered. He recalled that when he was a teacher at Kabarnet High School there were very few educated people in the area. He said the school now had about 540 students while Kapropita Girls High School had about 560.

"It used to take about eight hours to drive by lorry from Kabarnet to Marigat or Eldama Ravine while it now takes less than an hour," the President said, adding that about 90 per cent of school-age children in the district were now attending school.

Present at the function were, among others, the Minister for Water Development. Mr. Jeremiah Nyagah, an Assistant Minister for Water Development, Mr. Edward Kiptanui, an Assistant Minister for Cooperative Development, Mr. Henry Cheboiwo, the MP for Baringo East, Mr. Katurkana, the Director of Personnel Management. Mr. Aaron Kandie, the Rift Valley PC, Mr. Hezekiah Oyugi, the Baringo DC, Mr. Victor Musoga, and the Kabarnet Urban Council chairman, Mr. Philemon Chelagat.

This afternoon, President Moi is expected to open the Nairobi branch of the Bank of Oman. The ceremony is expected to take place at 4 p.m. at the bank in Kenyatta Avenue.

—NATION Report and KNA

Reproduced from the DAILY NATION 27th July 1982.

CIRCUMCISION:

What is the significance of this traditional custom?

".....and he later received the symbolic rite of circumcision....."

So the Bible says in one of its many attempts to explain the meaning of circumcision. The origins and meaning of the practice of circumcision has continued to be a subject of debate. Those who practice it hold it with great significance while those who do not practice it may even condemn it.

Yet the practice of circumcision of men and women is probably one of the most deeply entrenched traditional customs among many communities of the world.

In many communities it is a traditional ritual which is performed routinely to signify the transition from childhood to adulthood for the young male and female initiates. In this way, the ritual plays a great part in the life of the community which practices it.

The circumcision of men and women has thus variously been involved in the religious, traditional and other aspects of the cultural lives of the communities which practice it.

With introduction of new religions like Christianity and Western forms of education into communities such as those of Africa, the custom attracted the attention of foreign religious leaders and administrators.

In particular, female circumcision attracted the greatest amount of attention. Great efforts were made by foreign authorities to abolish it, but because of the way in which these efforts ignored the social significance of the custom, the results in many cases were to get it even more strongly entrenched.

Circumcision of males is practiced by many communities in the world. In many African communities, male circumcision is one of the rites that they routinely go through to signify the attainment of adult status.

In some religions, however, the circumcision of men is a badge of the faith and a male baby is circumcised as soon as possible after birth. . . .

Most circumcision rituals for men and women are preceeded by a period of intense activity of preparation, including dancing and singing.

The manner in which the ritual of circumcision is carried out varies from one community to another.

In the case of both male and female circumcision, traditional circumcisers in some countries are undergoing training in methods for preventing infection occurring after the operation.

When carried out under traditional custom, circumcision of both males and females results in infection which, in spite of treatment with traditional herbs, makes it necessary for the young initiates to remain more or less immobilised for about one-month.

This period has been reduced to a few days where infection is stopped from occuring.

Reproduced from the
SUNDAY NATION, January 21st 1980

APPENDIX IV

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