Land tenure frontiers and food security among Maasai pastoralists in Kenya

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Chapter 10

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Marcel M.E.M. Rutten

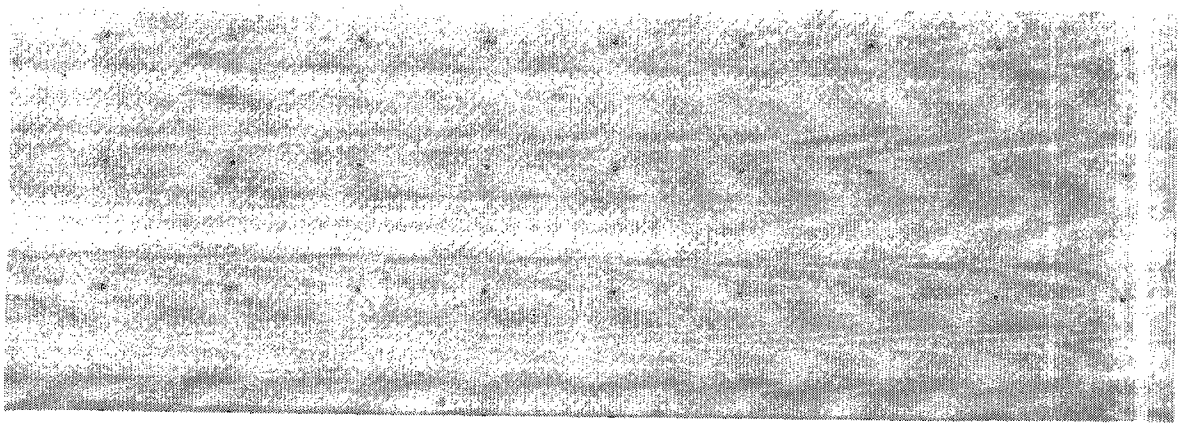
Introduction

The number of undernourished people in Africa has increased by 46% since 1970, reaching 175 million in 1995 (IFPRI, 1995). Most of the food production gains in Africa during the last decades resulted from an extension of the agricultural frontier into drier regions (Platteau, 1988). However, at present this arid frontier can only be moved marginally, while it has already reached its sustainable limit in some countries. What can be done to cover the difference between food needs and production in Sub-saharan Africa aside from importing food? The IFPRI 2020 vision report mentions a whole range of actions including enhancing natural resource management by securing and reforming property rights (IFPRI, 1995:49).

A reform in property rights is considered by some as the first and foremost action needed: 'land tenure and land use policy issues will be of strategic importance in the 1980s and 1990s as the frontier phase is exhausted' (Eicher, 1984:455–56). Privatization and individualization of landholdings has also been propagated in the past by institutions like the World Bank.

This process of tenure change, which started in the humid areas of Africa, has reached the border zone between sub-humid and semi-arid areas. The frontier of private and individual tenure rights is increasingly creeping into the formerly held communal and public arid and semi-arid lands of Africa (Dufour, 1971; Rutten, 1992; Besteman, 1994; Hesseling, 1994). Kenya's Kajiado District, home of Maasai pastoralists, is illustrative of this process. The district comprises 22,000 km^2, inhabited in 1989 by some 265,000 people, slightly half of them Maasai pastoralists. Soils, rainfall regimes and vegetation cover differ significantly. Only 8% has reasonable potential for cultivation (Agro-climatic zone IV (50–65% r/Et). Most of this higher potential land is situated along the upland fringes of the district. Zone V (30–50% r/Et) covers foremost the northern and central regions and comprises a total of 56% of the area. The remaining 36% is in zone VI (20–30% r/Et) encom-

H J. Bruins and H Lithwick (eds), The Arid Frontier, 185–208



passing the southern rangelands. Today the importance of cultivation is increasing rapidly, both in terms of land occupation and, even more profoundly, by the number of producers involved. The estimated availability of Good Agricultural Land per Person, expressed in High-Potential Land Equivalents, declined from 0.45 to 0.18 ha from 1969 to 1989, particularly due to immigration. The land tenure and agricultural frontier in Kajiado District has almost enclosed the sub-humid/semi-arid zone IV and is now creeping into semi-arid zone V.

The Maasai were once called 'the most wealthy tribe in East Africa, both in land and the stock they were able to sustain' (KLC, 1934). Now their nomadic future and even their pastoral future has turned bleak. The processes of structural impoverishment and acute major crises of hunger and starvation for man and his animals seem to have become more frequent in recent times.

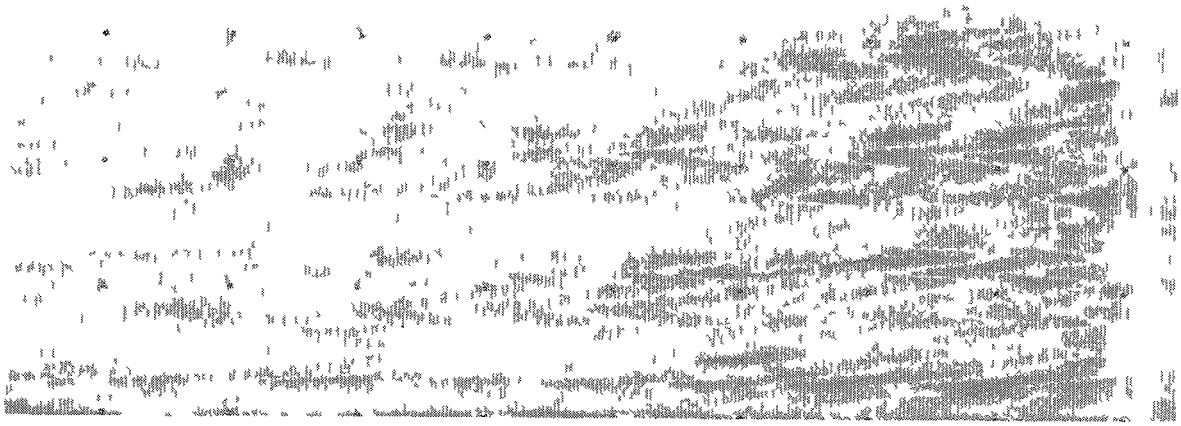
Rebuilding their herds and returning to a full pastoral way of life is a goal that is no longer fulfilled by growing numbers of Maasai. Systems of mutual assistance needed for restocking are falling apart. Livestock diseases result in forced slaughterings. Cash needs for food acquisition and other non-food needs, such as schooling, require the sale of animals. The main causes for this growing crisis in the pastoral population include: (1) relatively less livestock numbers in relation to the larger human population, and (2) stratification of livestock ownership.

The human population growth is viewed by some researchers as the main cause of the economic problems of today's pastoralists. Droughts, rangeland degradation, reduced access and control over land, as well as an unfavorable, even hostile, political and economic environment are other major factors. Opinions as to the relative importance of each of these causes differ between several schools of thought within and between disciplines (Behnke, 1985). However, they all share the view that traditional nomadic pastoralism is losing ground. This chapter makes an assessment of changes in the land tenure frontier and its impact on the food security of Maasai pastoralists. The effects of commoditizing land in Kajiado District on the food entitlements of the Maasai population is studied in particular.

Land Availability, Tenure and Food Security: A Conceptual Approach

LAND AVAILABILITY

Though landlessness is foremost a phenomenon of Asian countries, the increase in landlessness during the 1980s was highest in Africa. The emerging problem of landlessness in Africa is related to a combination of several factors. The large increase of the agricultural population and the growing tendency towards the privatization of land rights are two main factors (WCARRD, 1988:41).



Land availability to nomadic pastoralists was abundant in the past. Dry season grazing areas were considered to be laying idle throughout most of the year by agriculturalists and administrators. There has been continuous outside pressure to turn these essential links in the mobility pattern of livestock into cultivated lands. Land available to pastoral households is increasingly being recognized in the last decades as becoming a scarce resource. Non-livestock activities or changing land tenure arrangements are responsible for adding to the growing set of obstacles to maintain a viable pastoral way of life.

LAND TENURE

Three broad trends of policy governing access to land have prevailed during the early 1980s in Africa:

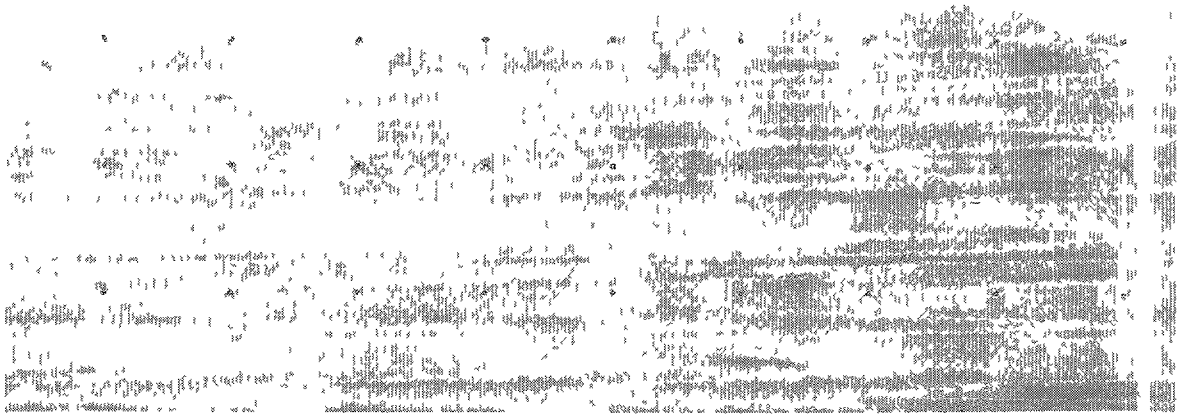
1. There have been shifts in some countries towards a socialization of land through cooperatives, collectives and state farms, sometimes coupled with villagization programs (as in Ethiopia, Mozambique, the Congo).
2. There have been shifts towards or a continuation of the privatization of land, as in Malawi, Kenya, Liberia, and Reunion.
3. There have been adaptations of existing customary tenures as in the Gambia and Lesotho (WCARRD, 1988:38).

Within the first group of countries, the need has been recognized for greater allocation of resources towards the peasant sector and cooperative sector, as state farms are not achieving their intended results. In the second group of countries, programs of accelerated adjudication and registration of individual titles continued. These countries are reported to face an increasing number of landless people, rural-urban migration and settlement in marginal areas (Kenya, Malawi).

In the third group of countries, the adaptation of customary tenure has taken various forms such as the establishment of land allocation committees chaired by the chiefs with regulations and leaseholds (Lesotho). These latter arrangement represents a steady expansion of state power in the regulation of customary tenure.

A switch to the adoption of the second type of land policy can be recorded among a growing number of African countries. This will probably sharpen the inequality in the land distribution which, though less pronounced as in Latin America or Asia, does exist in Africa. Some of the factors contributing to this imbalance seem to have originated from the privatization of lands held under customary tenure. Indeed the highest inequality of land distribution in Africa is found among the group of countries propagating the privatization and individualization of land, *e.g.* Liberia, Kenya, Reunion (WCARRD, 1988:38).

It can be concluded that the trend in most countries of the developing world is one of further deterioration in access to land for a majority of farmers. Groups such as pastoralists, hunter-gatherers, the illiterate and female agriculturalists are



particularly victims of the capitalization of land. These groups cannot compete with the vested interests of powerful groups of rich farmers, ranchers or multinationals. Sometimes the dispossessed oppose each other over the same lands, for example marginalized farmers competing with pastoralists. This struggle for land can also be recorded among members belonging to the same group between age groups or clans. Increasing competition evolves into open conflict.

FOOD SECURITY

The Food and Agriculture Organization of the UN defines household food security as access to food at all times as necessary for a healthy life for all members of the household (FAO/WHO, 1992). The achievement of household food security has three dimensions: adequacy, stability and sustainability (Frankenberger *et al.*, 1993). Adequacy refers to foods which are adequate in quality and quantity, free from toxic and harmful substances, and culturally acceptable. The supply of food should have a reasonable degree of stability throughout the year, as well as from one year to another. A household should be able to bounce back and regain an adequate food supply in case of a shortfall, often referred to as resilience. Finally, the supply of food should be sustainable; the ability to generate access to sufficient food while maintaining the endowment of resources over an extended period of time (Brouwer, 1994; Maxwell, 1995).

A model developed by IFAD distinguishes immediate, underlying and basic conditioning factors resulting in adequate, stable and sustainable food supplies at the household level (Brouwer, 1994:13 and Figure 1). Immediate factors are access to an adequate food base (all the foods available from different sources) and effectiveness in food handling (*i.e.* all processes necessary for increasing the life of food products and their safety such as storage, conservation and processing). Underlying factors are the stable access to essential resources, the management of resources and the pattern of social support. Finally, basic conditioning factors are the structures and mechanisms for control and management of resources, local agro-ecological conditions and the existing marketing system.

The linkage between tenure rights and food security at the household level is first and foremost one of agricultural production; access to suitable land enables the production of food, and hence its consumption. Tenure institutions indirectly affect food security at the regional or national level through overall food availability and hence food prices. Maxwell (1995:1) postulates that:

> enhancing the security of rights to land should, presumably, enhance food security. There is strong evidence of a direct negative link; that is, how reduction in tenure security or outright loss of access in an agrarian society leads directly to loss of food security, or alternatively, how severe food entitlement failure or famine results in the distress sales of land and other productive assets.

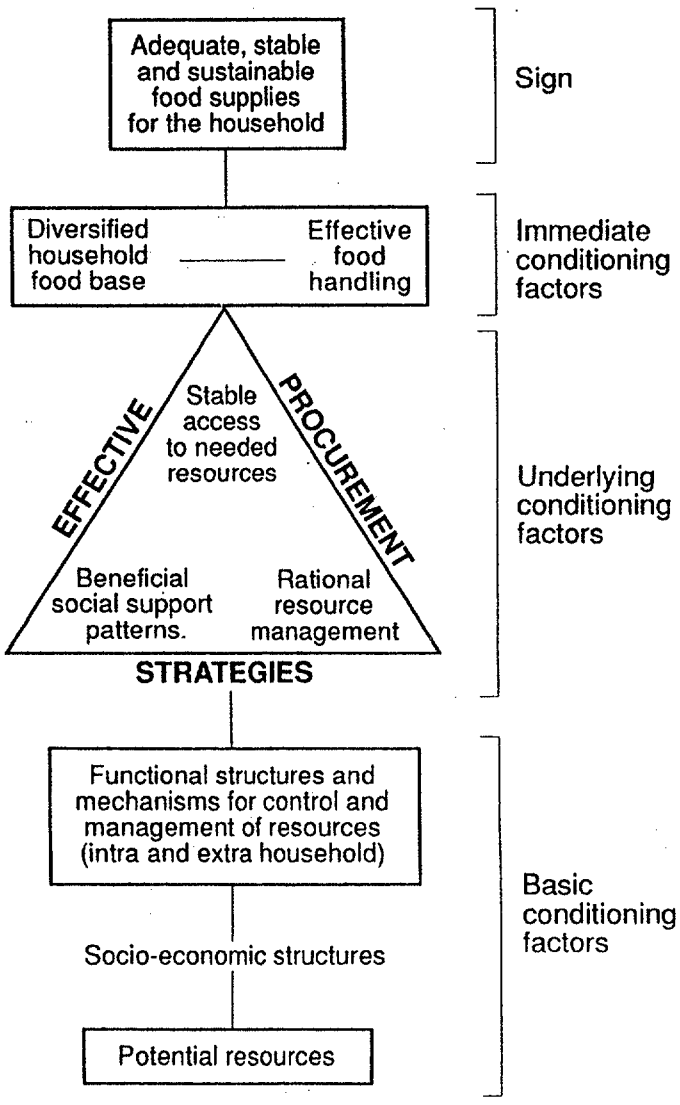
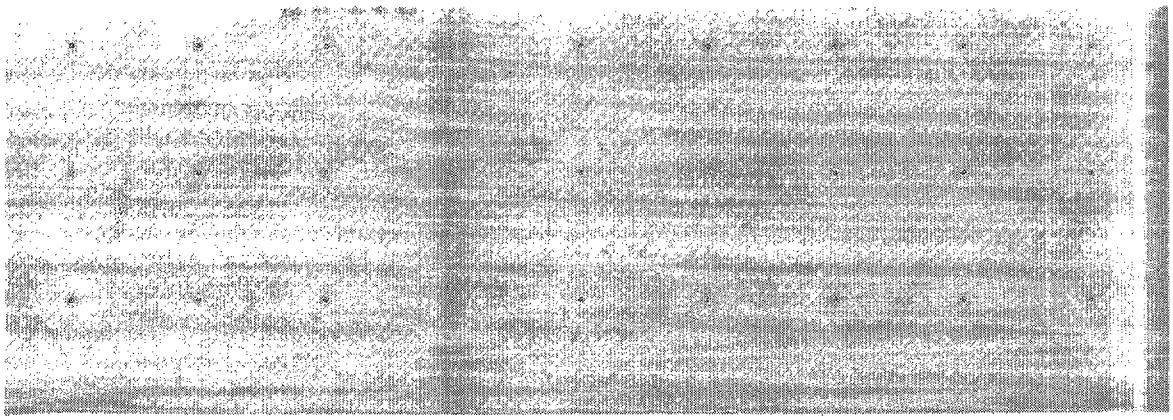


Figure 1. Factors affecting food security (see Frankenberger *et al.*, 1993).

The evidence of a positive linkage, on the other hand, is subject to numerous empirical questions; how is food access obtained (direct production, income and market access, food transfers through barter, begging and the availability of food stocks); in which way link livelihood strategies land use and food consumption; is this linkage employed in a sustainable way; and how do changes in land security affect livelihood strategies and the sustainability of resource usage (Maxwell, 1995).

Methodologically, 'household food security' is very difficult to operationalize. Consumption is usually taken as a proxy for the much more complicated defini-



tion offered above. At best, measures of consumption capture only the elements of food sufficiency and, to a partial degree, food access. The incorporation of dynamic elements such as of rights to land as parts of the endowment on which household food entitlements relies would help to capture the elements of sustainability and uncertainty outlined above.

The Maasai Food Base

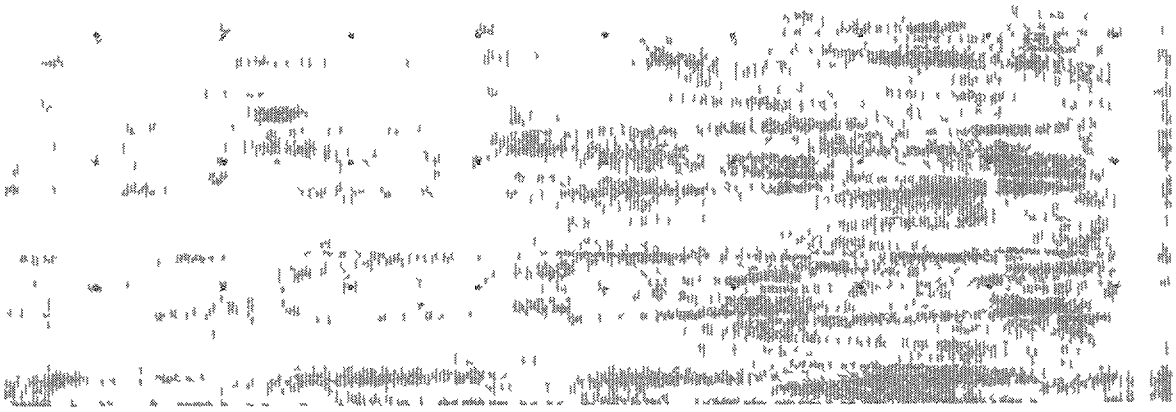
The main aim for every Maasai household is to secure food in sufficient amounts. Livestock is used as an intermediate to convert grasses and shrubs into milk, meat and blood. For a long time the Maasai were able to subsist entirely on the produce of their large herds, either directly (milk, meat, blood) or indirectly through (lucrative) barter for agricultural products. However, the number of stock units per capita has dwindled over the years. More mouths have to be fed, while livestock numbers increase at a lower pace in an erratic manner (Dietz & Rutten, 1989).

Milk is the Maasai staple food of choice, its availability varies seasonally and is heavily dependent on rainfall and the number of cattle owned. Milk is consumed fresh as well as skimmed or mixed with tea. Milk is also stored and turned into sour milk. Fat (*i.e.* butter or animal fat) is also important, especially for young children.

The consumption of meat is low and taken at random depending on the number of (forced) slaughtering because of old or diseased animals or the occurrence of ceremonies. Blood, fresh or mixed with milk, is rarely drunk.

According to Århem (1989:77) a diet of milk, meat and blood from domestic livestock, cattle in particular, is considered the right or ideal kind of food among the pastoral Maasai. All other foods would be considered unworthy. Such a diet also distinguishes the pastoral Maasai from other neighboring groups who eat cultivated crops. In spite of this ideal it is known that for a long time Maasai pastoralists have consumed cereals (Lawren, 1968; Gower, 1948). Moreover, this strong feeling for a traditional livestock-based diet is, willingly or unwillingly, eroding due to a number of reasons. The Maasai have decreasing numbers of livestock available per capita to feed themselves on a purely pastoral diet. Moreover, Maasai youngsters increasingly join schools where other types of food are served. Food habits are also changing due to assimilation of many outsiders with agricultural backgrounds into the Maasai households. All these factors seem to change the negative attitude to cultivation and its products.

The change in food habits is exemplified by the gradual acceptation of chicken, rice and maize in the Maasai diet, mainly as porridge or cooked maize meal. Taboos on fish and pork are still strong. Food restrictions also apply to certain periods in the life of the Maasai. For example, pregnant women reduce food intake from the seventh month onwards to prevent babies becoming too big. Maasai warriors are not allowed to eat food containing fat in the presence of women. Finally, the change



in diet is also influenced by the increased availability of maize and maize meal, through a better infrastructure, improved transportation and the expanding number of shops in the rural areas. Rainfed and irrigated cultivation is also growing in importance in the Maasai area. Nowadays some 50% of dietary energy intake comes from non-livestock foods (Homewood, 1992).

The Maasai diet results in a very high protein intake but an insufficient energy intake (65–80% Required Daily Intake), according to certain official standards. However, some authors raise questions as to whether FAO's recommended daily intake for energy is set too high to be applicable to Maasai pastoralists (Bekure *et al.*, 1991:111).

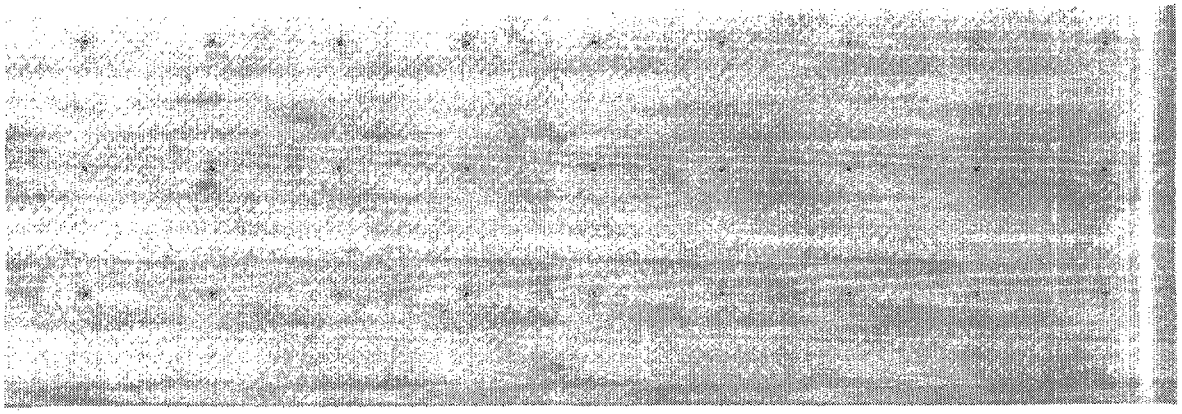
Intra-household food distribution should be taken into account, when analyzing household food security, because adult men and adolescents are favored at the expense of women and children. The former have better access to food (especially meat) than the latter. The rules of food distribution dictate that the elders are served first. They demand respect for having gone through all ritual stages from boyhood, via warriorship, through wars, raids and suffering, to the current status of junior or senior elder, awaiting their final journey to the ancestral world (Rutten & Tonkei, 1995). Moreover, they control finances enabling them to buy meat from local butcheries and drink beer in the bars, especially on market days. Men regularly gather to discuss issues and might decide to slaughter an animal and share the meat. Animals that died during times of drought are consumed by the adolescents accompanying them. Warriors to keep their strength as they join in so called meat-camps *(olpul)* at the end of the dry season to consume enormous amounts of meat from animals provided by the community.

Mature women, by contrast, are the chief participants in the production and maintenance of food security in their homes. If they fail in this respect, they might face severe punishments. Their efforts are fully directed to obtain food for all household members (except the warriors), through milking, buying, borrowing and, if need be, by begging. They are the last persons to be served. The wife will stay hungry, if the amount of food is not sufficient.

The position of children in intra household food distribution is less clear. Nestel (1989:28) reports that undernutrition is mainly manifest in early childhood as a result of an inappropriate diet (milk predominately) for 2–5 year olds. Severe physical stresses associated with herding practices of the 9–14 age-group may relate to insufficient food intake. They walk up to 20 km a day. The main meal is in the evening, while they eat wild roots, berries and tubers during the day time.

Maasai Livelihood Strategies in Securing Access to Food

Food security in a pastoral setting is to a large extent related to the ability of the herder to keep a large and varied enough herd for direct milk production, and to a



lesser extent meat and blood. In addition, the sale of animal products such as milk, meat, manure, bones, hides and skins enables the purchase of food, *i.e.* agricultural products, sugar, tea, *etc.*

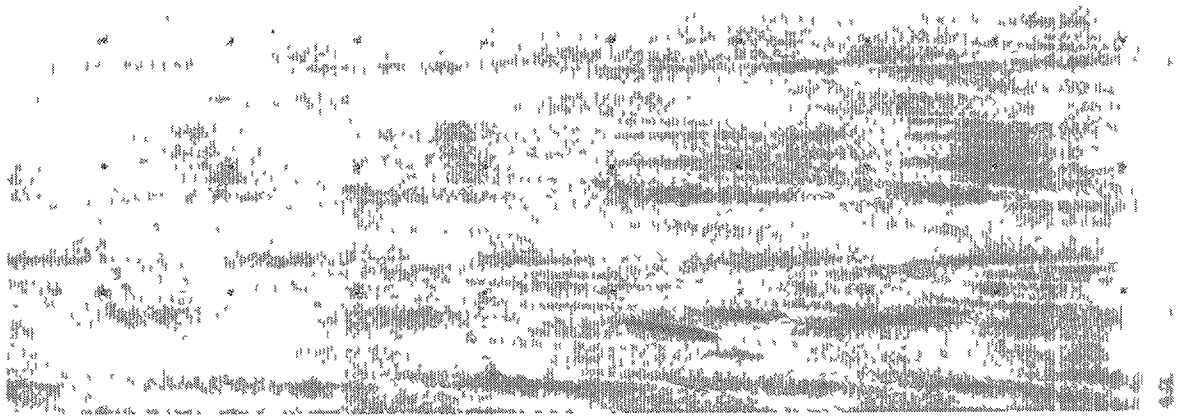
Productivity levels in the arid and semi-arid rangelands of Africa are more difficult to predict and/or to control, as compared to temperate zone pastures. The former areas are marked by intra and inter-annual fluctuations between wet and dry seasons. Fodder and water availability fluctuate in time and space, forcing pastoralists to trek with their animals in search for new grazing grounds and water. Mobility of herds and people in search of fodder and water is but one of these strategies. Other factors affecting mobility are the need to avoid disease affected and insecure areas. Actual migration patterns are also influenced by the location of trading centers, agricultural areas and quarantine regulations. Pastoralists are used to seasonal variations in food availability accompanied by a dwindling milk production in the dry season. Besides a sufficiently large herd for direct subsistence needs, pastoralists need to maintain enough breeding animals for reproductive reasons, as an insurance against losses due to diseases and droughts, as well as for social obligations (bridewealth, assisting poorer kinsmen, *etc.*). Thus management of African rangelands cannot solely be directed towards achieving maximum commercial output.

In this non-equilibrium environment, animals mediate between man and the natural environment, converting the scarce resources of water and pasture into milk, meat, blood and other animal products for direct consumption or sale. The risks involved necessitate the herd owners to engage in a whole range of stress coping strategies against droughts, diseases, and predators as part of their overall livelihood strategy geared at accumulation of wealth, betterment, sustenance and, in exceptional circumstances of crisis, survival (Dietz, 1991).[1]

The strategies employed ultimately aim to secure the physical well being of the household by defending the accumulated wealth or by restoring it. Thus both, preventive and curative elements can be distinguished. Preventive elements are preservatives, applied (long) before the actual problem arises. Curative elements are applied as a 'cure action' when problems are there to be solved. Preventive strategies among Maasai pastoralists (Rutten, 1995c) are mainly aimed at securing the underlying and basic factors affecting food security (*i.e.* herd management and resources management). The relative importance of each of these strategies varies in time and place. Some of the elements involved are listed below:

HERD MANAGEMENT

- Keeping sufficiently large herds to accommodate anticipated losses resulting from droughts and diseases.
- Herd mobility enhances the optimal use of a heterogeneous environment.



- Destocking through sales before and during a crisis (*e.g.* a severe drought) and restocking when pasture is available again after a drought.
- Managing a variety of livestock species (cattle, camels, sheep and goats) with specific ecological niches (grasses, shrubs, trees) and production characteristics (*i.e.* different periods of milk recovery, disease susceptibility).
- Allocation of animals with friends and relatives on special loan arrangements allowing the reclaiming of these animals in times of need;
- Breeding animals with low basal metabolic rates and high milk and meat output.
- Dipping the animals in acaracide baths to prevent tick-borne diseases; installing tsetse fly traps.
- Castrating animals which helps to fatten them in order to make them more drought resistant.

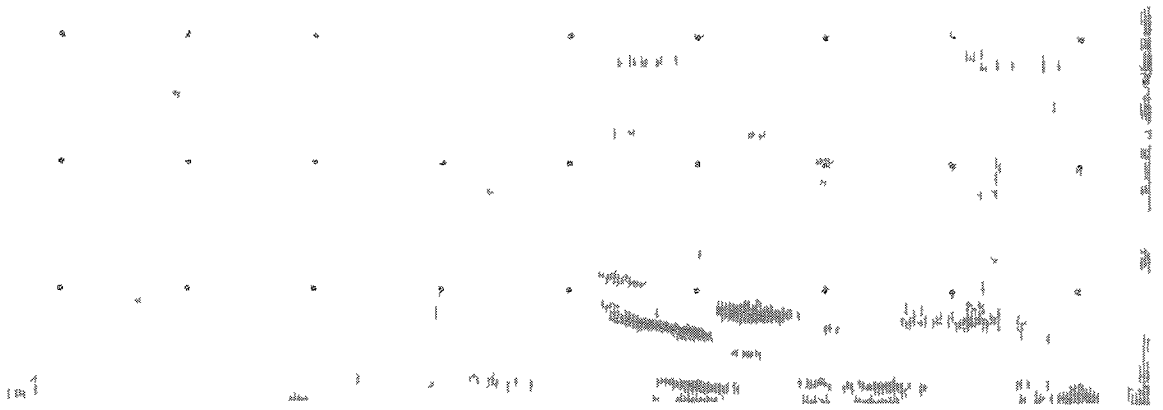
RESOURCE MANAGEMENT

- Certain dry season grazing areas (*e.g.* hilly areas) are set aside in cooperative agreement with other households.
- Individual households refrain from using certain patches of land nearby their permanent homesteads. These fenced areas *(olkeri)* are used for calves and sick animals.
- Making improvements in water availability through shallow wells and boreholes.
- Food preservation through drying of meat *(sureeni)* or storing of cheese *(encholati)*. These traditional practices are on the decline, foremost because cereals are easily available nowadays.
- Diversification of the household economy through engagement in rainfed and irrigated cultivation, wage employment and commercial business.
- Bank accounts are increasingly used to store money for less fortunate days.

Emergency strategies in managing the Maasai food base are implemented during and following times of stress or severe crises. The most important of these strategies are differentiated as follows:

CHANGE IN FOOD HABITS

- Reduction in food intake by the pastoralists. Less home produced milk is available. Less food is eaten especially by herdsmen.
- Change in food intake. Milk is mixed with herbs. More goats and sheep are milked. Less favored parts of the animal such as hub, liver, tongue, pancreas



and heart are eaten. Terribly emaciated meat from dead animals is boiled, roasted or cooked. Blood consumption increases (cooked or mixed with milk). Sales of animals and skins increase to buy food from the shops mainly maize meal and sugar or barter from agriculturalists.

- Hunting of antelopes and elands, as well as gathering of wild fruits, berries and roots.

CHANGE IN HERD AND RESOURCE MANAGEMENT

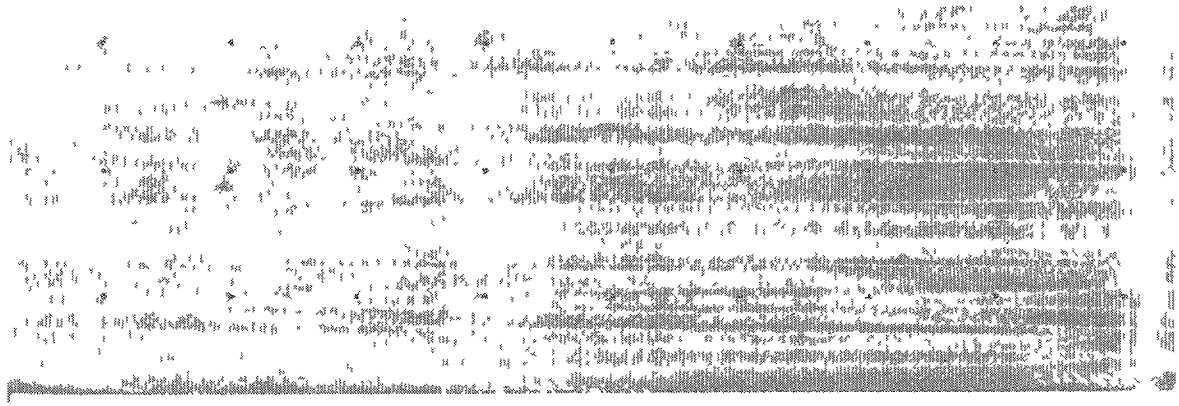
- Elderly people take over livestock herding, while younger Maasai search for distant pastures.
- Use of dry season areas, renting of outside pastures or long distance trekking to areas controlled by other groups.
- Collection of grasses, tree pods and leaves as fodder, especially for young calves and rams.
- Animal intake of drinking water is changed from every day to once in two days.
- Milking practices are changed as more milk is left for calves and less milk is consumed by people.

SOCIAL SUPPORT NETWORK

- Assistance is sought from friends and relatives (money, labor, animals, food).
- Praying and sacrificing a ram of specific colors (said to be on the decrease).
- Relief programs organized by the Government and Church either in the form of free hand outs or as Food for Work Programs as introduced in 1994. Such relief also alleviates the need to sell livestock. FFW might undermine the natural recovery cycle of the pastures.

During 1994, the men contributed less in FFW activities, took less responsibility for household food security and instead lived a luxurious life in the small rural centers. Food relief programs have become a new safety net within the Maasai society to an extent that young Maasai no longer are aware of the term *emperi* expressing a disastrous situation whereby in addition to animals human beings die as well (Rutten, 1995c).

Access to and control over land is an essential precondition for a successful implementation of many of the food security strategies mentioned above. Let me, therefore, present an analysis of the Maasai land resource and its changes this century.



Maasai Land Availability and Tenure: A Historical Review

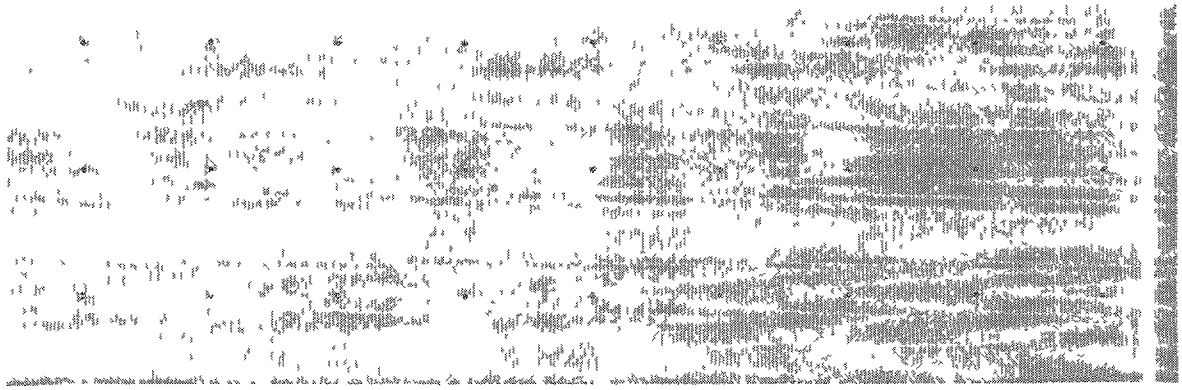
COLONIAL PERIOD

Toward the beginning of the 20th century plans were made by administrators in unofficial alliance with influential settlers to remove the Maasai from their best grazing areas. In 1902, the First Crown Lands Ordinance allowed the local administration to issue settlers with 99 year leases and the possibility of selling land. The decision as to whether land was vacant or not was in the hands of the British administration. In practice this meant a denial of traditionally established African rights over land. The land policy was successful in attracting white settlers. Large concessions were granted to South African and British entrepreneurs to an extent that some sub-ordinates questioned Commissioner Eliot's policy of integration by inducing the Maasai to settle in small villages among Europeans. They preferred to divide the pastures and set apart a reserve for the Maasai where settlers could not interfere. Treaties were signed in 1904 and 1911 which made it possible to remove the Maasai from their best pastures in the north to a southern reserve. This area of less quality, about 36,000 km^2, is only half the size of their former territory. In fact over half of the areas settled by Europeans used to be former Maasai lands.

Agricultural groups like the Kikuyu, Kamba and Chagga were very much interested in the areas suitable for cultivation within Maasailand. Individual Maasai households allowed these groups to cultivate in these high potential zones on a share cropping basis. However, a special permit was needed to enter the Maasai Reserve. The official policy was to prosecute and return all Kikuyu who could not claim, through long residence or circumcision rights, to have become Maasai.

The Kenya Land Commission, installed in 1932 to review African land grievances, had established the boundaries of the Reserves for every group in Kenya. The Maasai unsuccessfully repeated their protest against the loss of land. The Kenya Land Commission reaffirmed the policy of the Administration towards pastoralists, totally opposing any extension of their land. The Commission even blamed the Maasai for having so much land to the detriment of Europeans and other African groups.

The British Administration fostered that traditional grazing control among the Maasai had been inadequate. The British aim was to implement a grazing control plan for each Maasai section, restricting the movement of stock from one section to another in order to enforce an economic limit within the boundaries of each section. The Maasai reserve was subdivided in 14 sections *(iloshon)*, each having a specific territory with well-defined boundaries. Livestock movements between sections needed approval of the section's authorities. In June 1946 the Maasai decided the abolition of section boundaries which allowed free grazing for the Maasai pastoralists throughout the whole of Maasailand in order to overcome a drought



situation. By the early 1950s this decision was withdrawn. Large grazing schemes were established during the 1950s. Grazing principles were based on the traditional use of the area appended with strict grazing controls enforced on a clan basis by Grazing Committees. However, the Administration fully realized that 'owing to the vagaries of the rains it cannot be expected that an even pattern for grazing control will ever be achieved' (KDAR, 1957:16). This was proved in 1959 when any controls had to be abandoned as cattle based on the scheme had to go far afield in search of grazing even trespassing into neighboring districts and into Tanganyika.

Since 1954, local Maasai politicians in Kajiado District had started acquiring large individual ranches without a legal basis. Support for these individuals was, nevertheless, provided by the Local County Council, often because of private interests.

In addition to the grabbing of land from within, the land resource base available for Maasai livestock herding dwindled further as more agriculturalists started to infiltrate and occupy the high-potential dry season grazing pastures. The establishment of the Amboseli Game Reserve and Nairobi National Park, partly in response to an international conservationist lobby, put further strain on the availability of land for livestock.

POST-COLONIAL PERIOD

The Maasai feared that independence would end the Maasai Treaties of 1904 and 1911 which gave them exclusive rights to occupy Kajiado and Narok Districts. They went as far as to request the United Nations to recognize a Maasailand which comprised of Tanzanian and Kenyan Maasai. This proposal was as much condemned to fail, as was the Maasai request to the British Government to hand back the former 'White Highlands'.

Discussions concerning the status of Maasailand intensified in the early 1960s. The land tenure debate was particularly significant among the Kaputiei Maasai. A wide variety of propositions were discussed, such as the registration of all of the Kaputiei section area under one title deed or the creation of a fringe of individual ranches near the northern boundary to stop illegal infiltration. The Colonial Authorities had disagreed with the one title deed option. The idea of individual ranches suggested by young and educated Maasai was supported by the Kajiado County Council. Elderly Maasai opposed the move to individualization. Support for the latter was given by the Lawrance Mission of 1965 that criticized the haphazard approach of the government to the Maasai land question and the illegal approval of the creation of individual ranches. However, in 1969, all of the Maasai sections accepted the group ranch concept as introduced by the Kenya Livestock Development Project sponsored by the World Bank (see Figure 2).

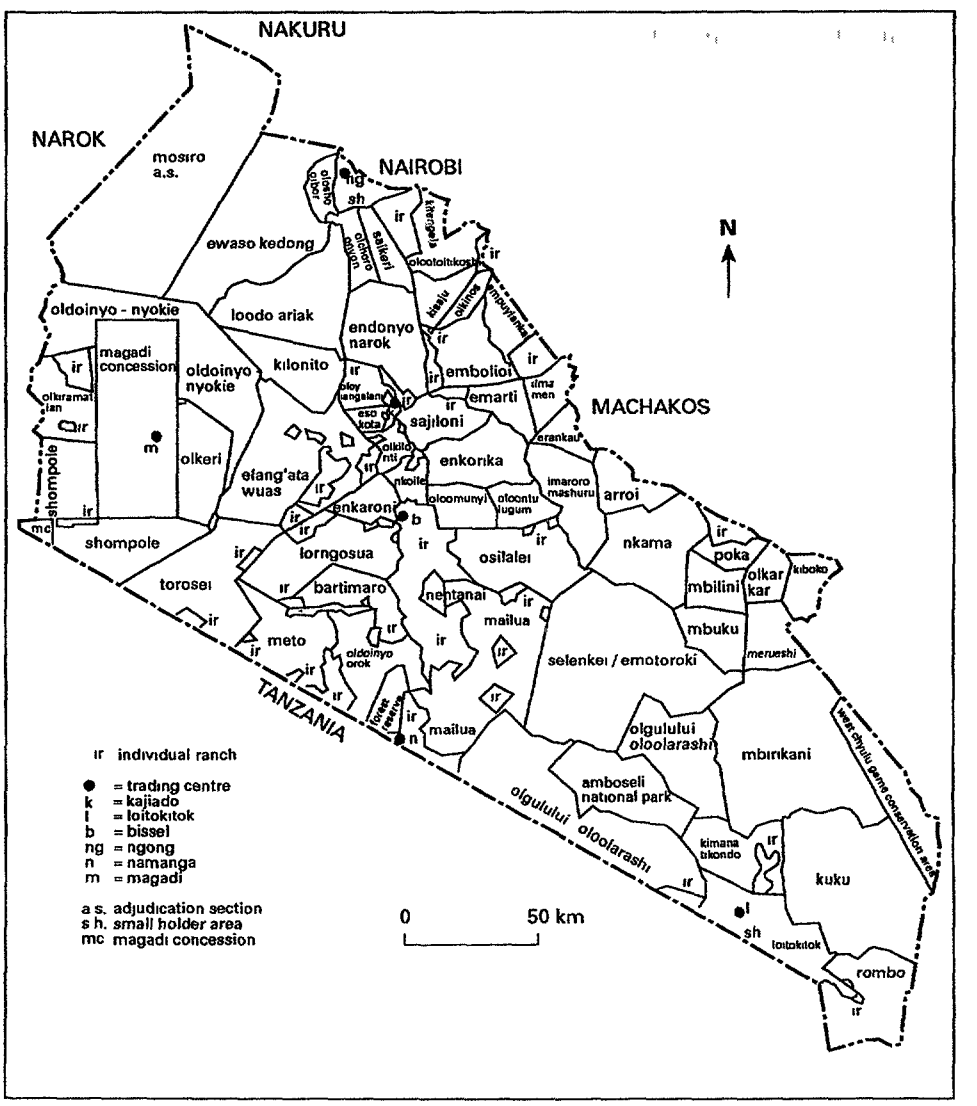


Figure 2. Kajiado District group ranches.

A group ranch may be defined as a certain piece of land communally owned by a group of people who are registered as the legal owners through membership of the particular ranch. An attempt was made, through the provision of loans for infrastructural development and steer fattening, to transform the semi-nomadic, subsistence-oriented production of the Maasai pastoralists into a sedentary, more commercial system. This market-oriented production was intended to bring about

a destocking of the Maasai pastures while at the same time providing meat for the national and international market. Phase one of the Kenya Livestock Development Project (KLDP I) was officially started in 1969. By 1970, 14 group ranches, covering over 10% of the district's area were recorded in the Kaputiei area. Two more phases followed in 1974 and 1980 which brought the total number of group ranches to 51 covering some 15,200 km^2 or some 75% of the Kajiado District area.

The performance of the Kajiado group ranches has been eagerly followed by several scholars and review missions. The introduction of the group ranch had various organizational, juridical and economical consequences: (1) The Kajiado District group ranches were effective to stop the allocation of individual ranches, to be taken from communal lands, by an educated elite of Maasai. The feared massive influx by non-Maasai was also hampered. Outsiders could buy only land from individual ranchers, as in the Ngong and Loitokitok areas. (2) The group ranches generated the construction of boreholes, dams, troughs, tanks, pipelines and cattle dips. (3) Wildlife was enabled to continue roaming freely over large parts of Kajiado District.

Besides these accomplishments, several problems and failures of the group ranches can be mentioned:

(a) Delays and problems in project implementation;

(b) Disappointing rates of investment and difficulties in loan repayment;

(c) Continuing trespassing of group ranch boundaries;

(d) Refusal to de-stock ranches;

(e) No real transformation to a market-oriented livestock production; and

(f) Corruption among several group ranch committees.

The group ranch concept was an artificial creation which lacked a firm traditional, sociological and ecological basis. Moreover, the implementation of this change in land tenure was over-ambitious as a method to cause the destocking of the pastures and the commercialization of production. Hardly any account was taken of the pastoralists own strategies and household needs. These problems and frustrations increased the wish among many Maasai for the subdivision of the group ranch into individually owned shares.

By 1990 a total of 40 group ranches had made the decision to dissolve their ranches. Only 4 group ranches opposed the idea of subdivision, while another 7 ranches had not yet decided. In other words, 78% of the ranches had ceased to exist or were intending to do so.

An overall positive attitude towards the process of subdivision and plot allocation was recorded among the Olkinos and Embolioi ranchers. Approximately 1 out of 5 households, however, had mixed to negative feelings concerning the size of the plots allocated. The group of non-registered group ranch members, mainly Maasai up to 30 years of age, also protested as they did not receive their own plot of land.

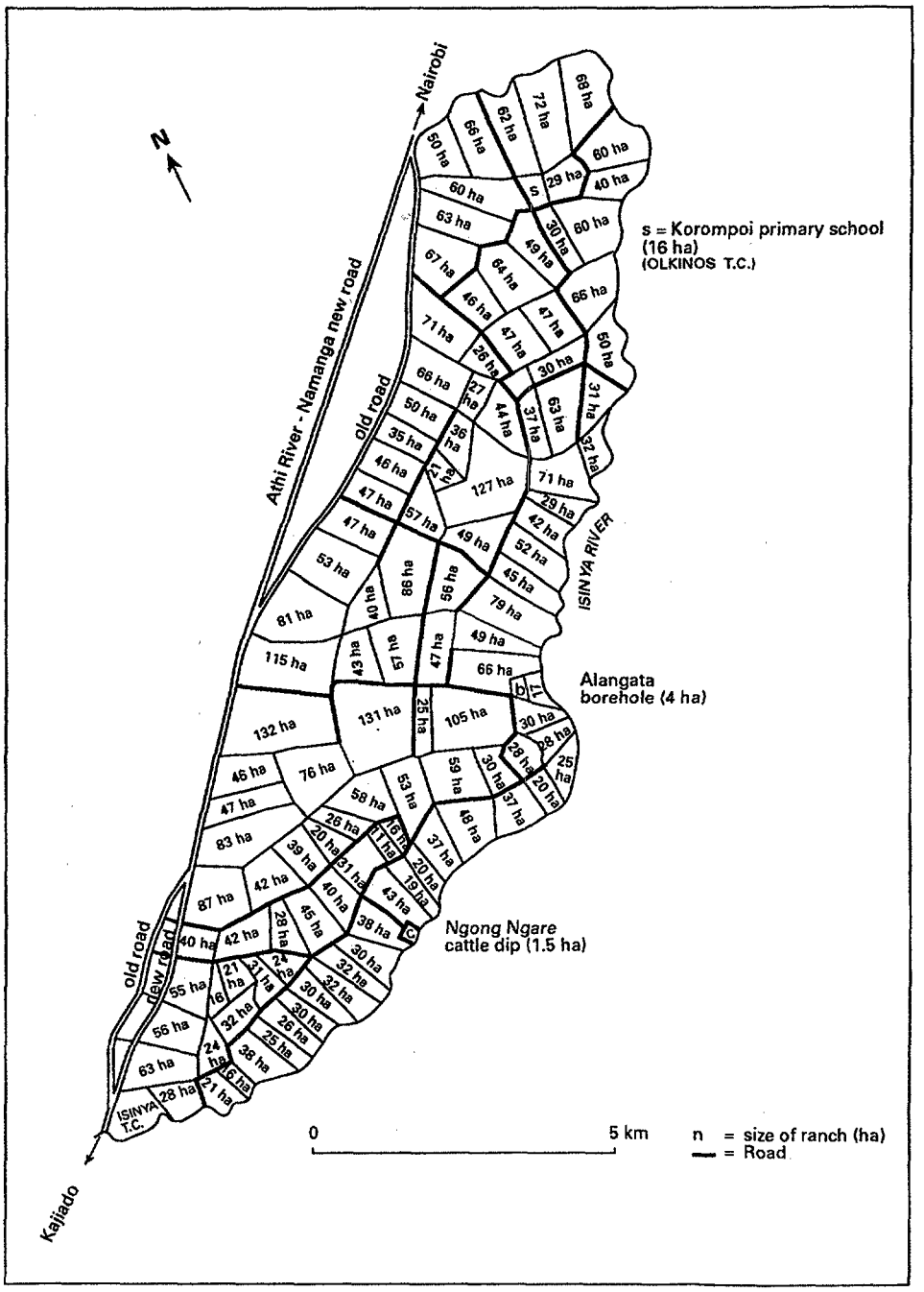


Figure 3. Olkinos subdivided group ranch 1986, 1990.

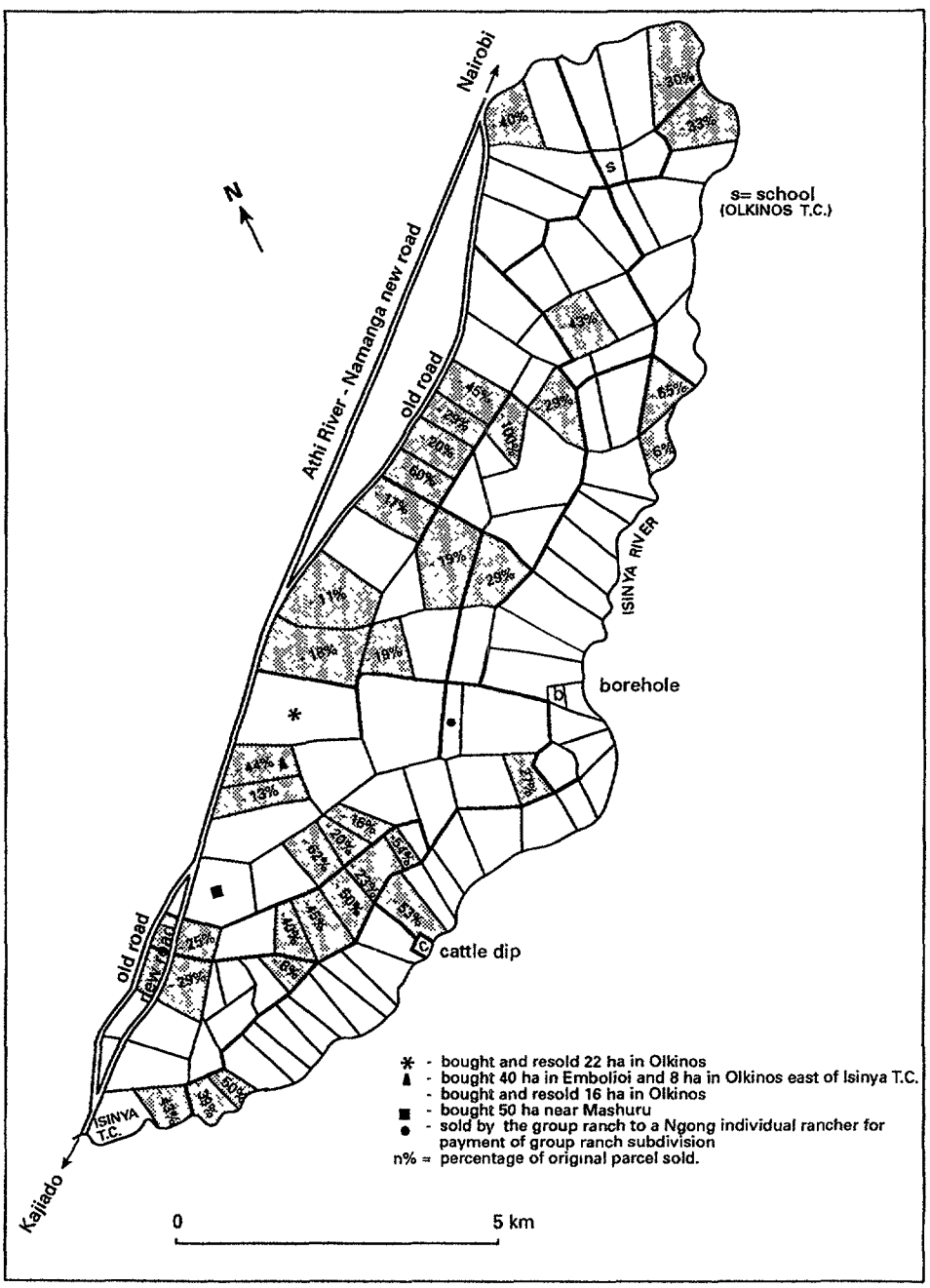
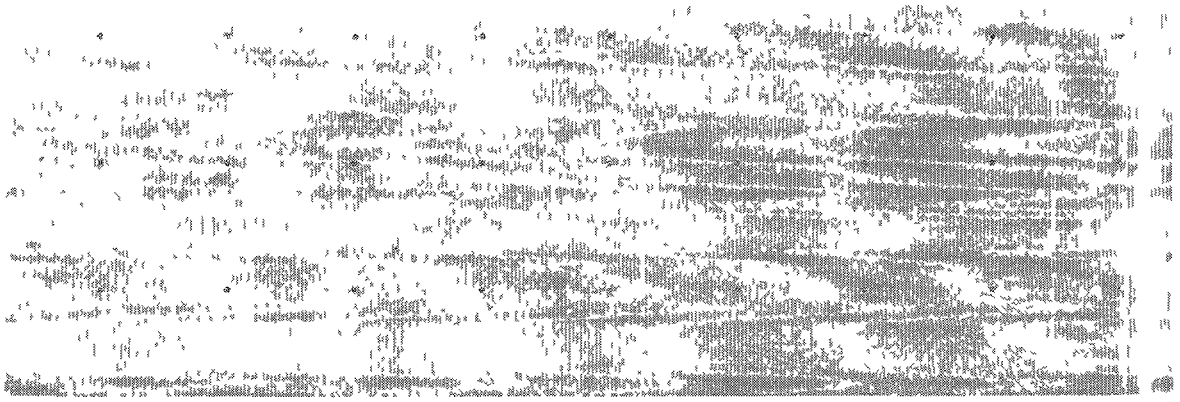


Figure 4. Olkinos selling of land, up to February 1990.

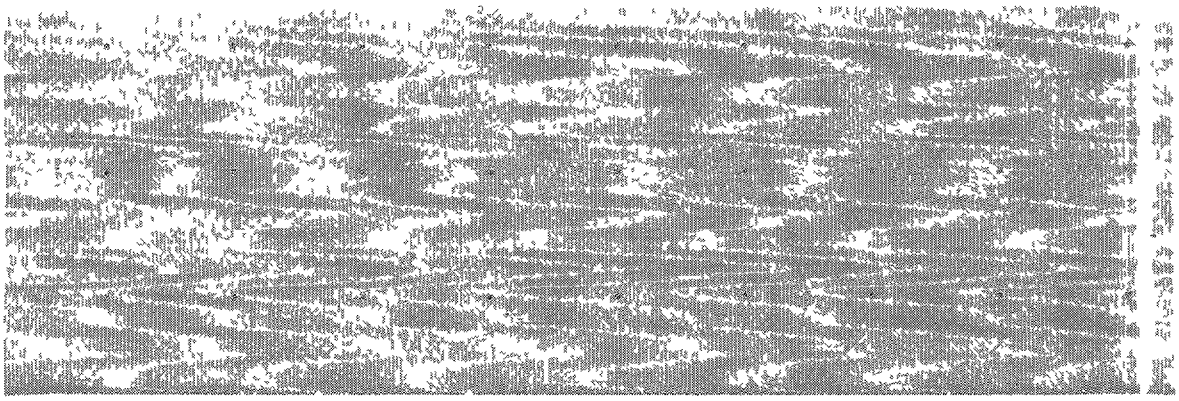


The former Olkinos group ranch members possessed after subdivision ranches with a size ranging from 11 to 132 ha per parcel, 46.7 ha on average (see Figure 3). The process of subdivision had been most favorable for the most powerful within the Maasai group ranch constellation. Plot sizes obtained by the committee-members averaged 81.8 ha.

Landownership per person decreased over the 1986–90 period, due to natural population growth and the sale of land. The average availability of land for Olkinos ranchers was reduced from 8.4 ha/person in 1986 to 7.1 ha/person in 1990, a 16% drop.

I investigated the outcome of the group ranch subdivision in Kajiado District with respect to transfers of land and improvements made in the 1986–1990 period. The main conclusions drawn from an analysis of the fragmentation, sale or mortgage of the subdivided areas are as follows:

- No distinctive set of characteristics could be assigned to the group of sellers. However, former group ranch committee members, who were relatively rich, were foremost among the group of non-sellers.
- Maasai pastoralists prefer to sell rather than mortgage (part of) their newly acquired parcels. Their rationale is that the selling of land is a much faster, less obstructive and more comprehensible way of obtaining money than mortgaging one's plot. Financial institutions also seem to be somewhat reluctant to provide loans, except in the case that the prospective borrower has been formally educated to a high level and has other more important sources of income besides livestock keeping.
- The proceeds of the sale of land, as well as loans, were mainly invested in infrastructural improvements of a non-productive nature such as the building of a modern house, fences, sprayraces and water pans. Repaying a debt as an instigation for selling land should also be mentioned.
- Land sales were also used to purchase more livestock. The higher stocking densities resulted theoretically in unviable ecological ranch sizes. This outcome questions the postulation that individual land ownership will lead to a destocking of the ranch at carrying capacity levels. In general, no significant change in natural resource management occurred. The fact that land could still be used in a communal way is most likely the main explanation for this observation. Most recently, however, the influx of outsiders involved in other land use activities created obstacles for the accessibility of pastures and mobility of herding patterns. The renting of land is also increasing, especially during times of stress.
- The group of land buyers is foremost composed of non-Maasai. (Inter)national companies, rich business men, politicians, civil servants, as well as less wealthy people are among this group. Maasai buyers were mainly well-off former com-



mittee-members, individual ranchers, civil servants, and politicians. Another group of informal buyers are Indians who practice strip gypsum mining in the Embolioi group ranch. Buyers of land, in contrast to the original Maasai owners, showed a preference for mortgaging land rather than reselling it.

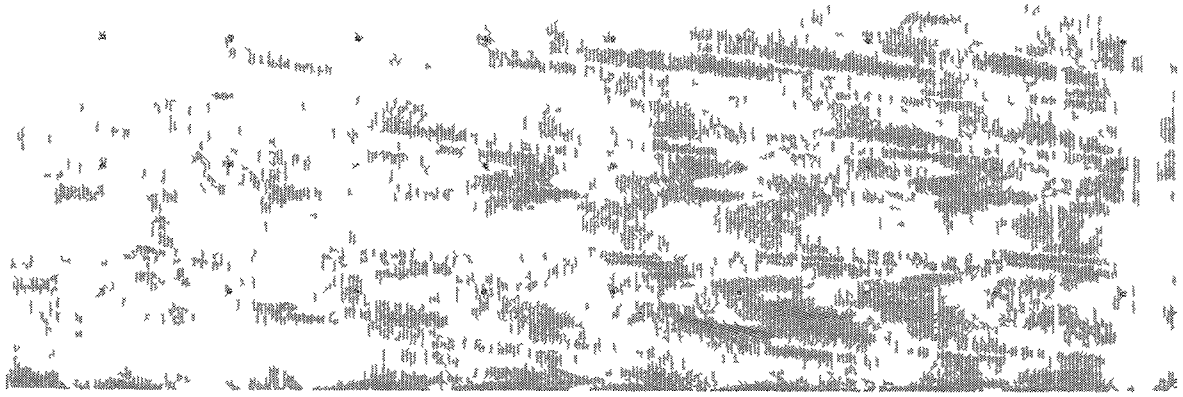
Land Tenure Changes and Food Security: Concluding Remarks

If their strategies of risk aversion fail, pastoral households are faced with a temporary food shortage or transitory food insecurity (Salih, 1994:6). All pastoral societies have been living for centuries with this temporarily phenomenon. However, pastoralism seems to have become increasingly marginalized and many pastoral households are at present facing a kind of chronic food insecurity. It becomes more and more evident according to Schwartz and Schwartz (1985:5) that nomadic societies 'show a decreasing selfreliance in terms of food production'. Pastoralists are leaving the livestock economy as a result. Reports from all over Africa indicate the loss of pastoral areas for a growing group of pastoralists. This loss of land threatens to undermine access to and control over a resource which is crucial in securing food for many pastoral households.

Maasai pastoralists have experienced a drastic reduction in their land availability in the last century, foremost as the result of the arrival of the European colonizers. Moreover, African land laws were overruled and a closed Reserve was created. This enlarged control over mobility patterns hindered the Maasai's ability to market livestock in exchange for grains and ended the Maasai tradition of acquiring improved breeds from northern Kenya. The spread of European rule also meant a barrier to Maasai pastoralists in their bid to recapture herd losses after periods of crisis by raiding neighboring groups. Finally, the creation of a Reserve indulged the taxation of the Maasai to an extent that they became the heaviest taxed group in Kenya (Rutten, 1992). The colonial government also interfered with the Maasai land use patterns by introducing (unfit) grazing regulations and preserving certain (high potential) areas for game parks and agriculture.

After independence the Kenyan government and international donors introduced the group ranch concept. Land came into private hands, though still communally owned, except for some parts of the district where an educated elite had been able to grab large individual ranches. Corrupt committees, misuse of group ranch grazing by neighboring individual ranchers, and a growing population paved the way towards individual land ownership in the whole of Maasailand.

Land tenure changes might directly result in a change in the control over, access to and availability of this fundamental resource. *Access* denotes the ability to get and use a resource while *control* means power that goes beyond use (Sigot, 1995:6). Negative as well as positive effects can be distinguished from the individualization of landownership in Maasailand.



DIRECT NEGATIVE EFFECTS OF LAND INDIVIDUALIZATION

The viability of the system is undermined by removing (high potential) land out of the pastoral migration cycle. The loss of dry season grazing areas (*e.g.* Amboseli, Tsavo, the slopes of Kilimanjaro and Ngong) forces Maasai pastoralists to concentrate in less favorable places, such as the Chyulu hills, or to trek far into Tanzania. The risk of losing animals due to tsetse fly and exhaustion are much higher as a result.

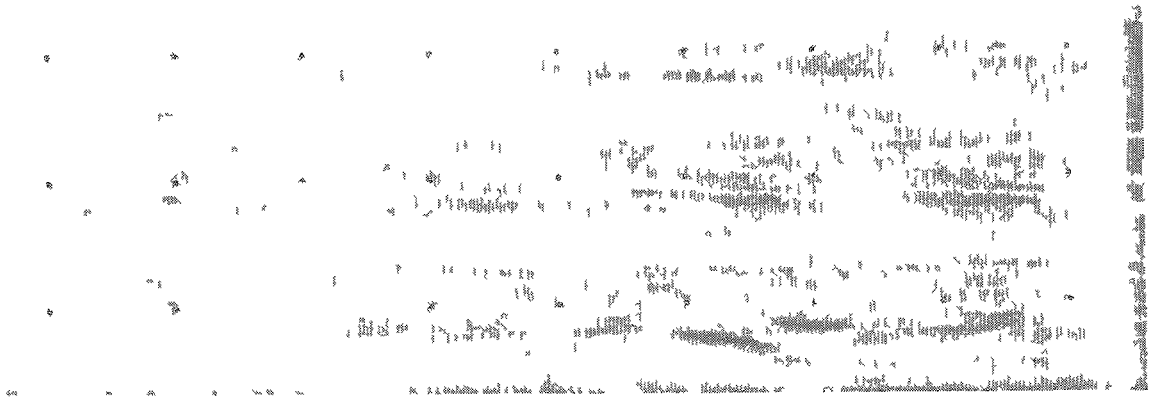
The individualization of land ownership further reduces access to land due to landsales, fencing of private land and the request for grazing payments. Several cases are reported of Maasai households in disarray after the selling of land, with or without approval of the family members. Some Maasai men subsequently started living a luxurious life, including alcohol abuse. Rutten and Tonkei (1995) state that some of these husbands have fled their homes, leaving women and children in extreme poverty and hunger. Sons are taking their fathers to court to stop them from selling the remaining piece of land. Most of these 'young' Maasai, some in their thirties having families of their own, were not allowed to register as a group ranch member and were left out of the subdivision process. Conflicts over land allocation resulted in a large number of costly court cases, draining away much money and leaving some individuals bankrupt.

Officially the Land Control Board will not allow the selling of land without the consent of the wife, but daily practice differs. The gender biased access and control over land has acquired a profound negative effect after the commoditization of this basic resource. After subdivision of the group ranches only a few Maasai widows were given a title deed. Kenyan law does not bar women from ownership or control of land (Thrupp & Green, 1995:112), but Maasai women have limited hereditary rights and resources for acquiring land. Usually non-Maasai women (groups and rich individuals) are able to buy land.

In the past Maasai destitutes could always try to rebuild their herds by engaging in wage labor or through help from stock-friends. The loss of the land, however being of a more structural nature, is a direct negative effect of the commoditization of land in a arid to semi-arid region.

INDIRECT NEGATIVE EFFECTS OF LAND INDIVIDUALIZATION

Households are splitting up as a result of subdivision, in order to settle on their own plot. Labor availability for herding is decreasing (Rutten, 1992). One of the most important investments by land sellers is the purchase of livestock, which has often resulted in higher stocking densities on already overstocked farms (Rutten, 1995a).



Moreover, some of the new activities threaten the environment and thus the carrying capacity of the area. For example, high water use for flower production has lowered water tables, causing rivers and shallow wells to become dry (Rutten, 1995b). The use of pesticides and the application of agricultural techniques unfit for semi-arid regions cause erosion and threaten Maasai food sources. Influx of outsiders may also cause tensions between ethnic groups. Political patrons sometimes manipulate these tensions by instigating clashes.

The sudden loss of a secure access to land is pushing many Maasai into new directions, such as wage employment. However, they are usually not well prepared to compete in this market as a result of the lack of formal education. The process of marginalization and stratification has a detrimental effect on the environment (*e.g.* charcoal burning) and puts additional strain on cooperation. In the past, Maasai used to steal animals from neighboring groups to rebuild a herd. Today structural impoverishment has led Maasai to steal animals from fellow (poor) Maasai.

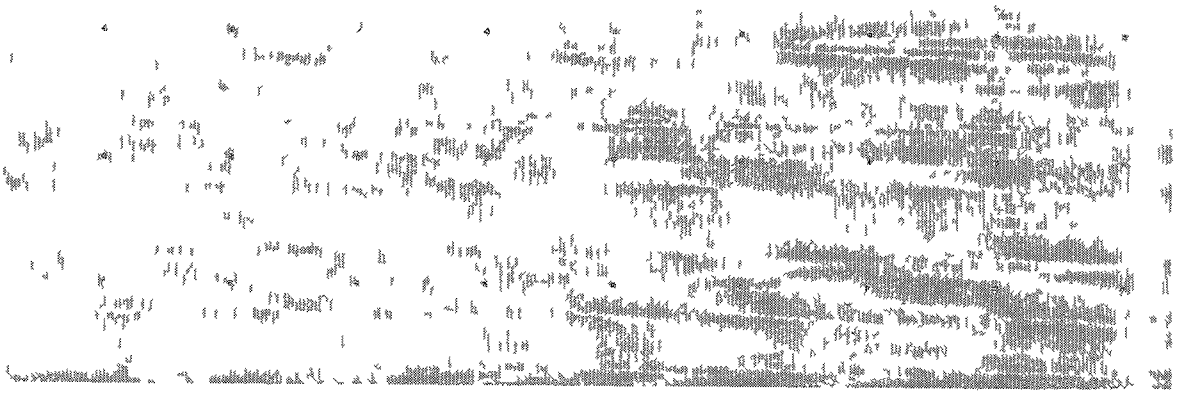
DIRECT POSITIVE EFFECTS OF LAND INDIVIDUALIZATION

A direct positive effect of the individualization of group ranch land is the ability of individuals to restrict misuse of grazing land by neighboring individual ranchers. They used to distribute their animals to relatives registered in the group ranch during the wet season. In this way they were able to rest their own individual ranches until the onset of the dry season when the animals returned to them. Nowadays wealthy herdowners are renting land from poor pastoralists which enables the latter to invest the profits in rebuilding their own herd.

Another positive outcome of land individualization: misuse of loans by corrupt committees is no longer possible. Individuals are now free to select their own friends and invest in (physical) improvements such as wells. Flexibility in pasture management is in a sense reintroduced with the dissolution of the group ranches.

INDIRECT POSITIVE EFFECTS OF LAND INDIVIDUALIZATION

The commoditization of land has resulted in an increase of non-Maasai entering the district and a subsequent boom in non-livestock activities. Agricultural groups have moved the cultivation frontier further into pastoral areas, which increased the availability of agricultural products such as maize and beans. However, the chances of a successful crop in rainfed agriculture are modest, especially in times of drought. Maasai can barter livestock and livestock products for maize. The purchase of cereals using the money obtained from selling animals is a lucrative trade for pastoral groups as the benefit in caloric terms is 7:1 (Zaal & Dietz, 1995). The rationale trading maize when the exchange rate is best from the livestock keeper point of view is slowly advancing. More Maasai buy and store some food. They also increas-



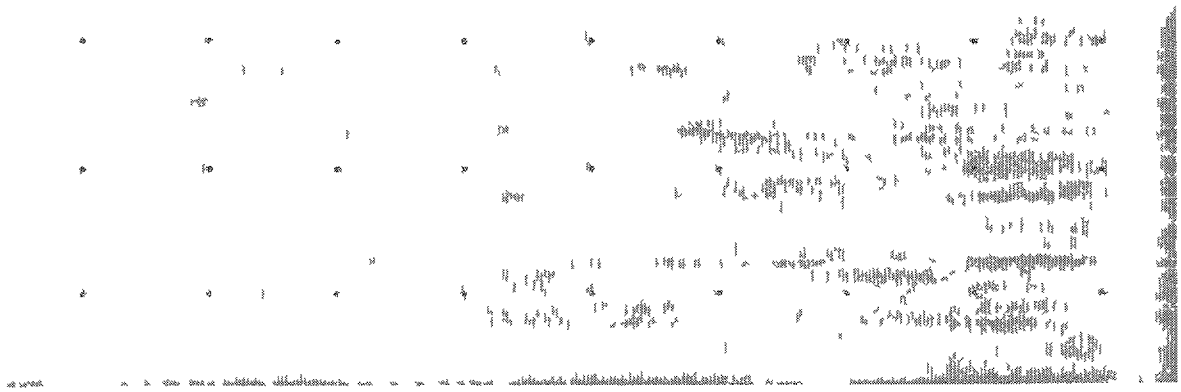
ingly try to cultivate by themselves. Moreover, fields can be grazed in case of crop failure, or as stubble after harvesting. The influx of outsiders has also brought more job opportunities in the mining and flower industries. However, the participation by Maasai in these activities is minimal.

Another indirect positive effect of group ranch subdivision is the recorded increase in (informal) small and effective self help groups who invest money and labor in shallow wells, steer fattening, breed improvements and the like without interference by corrupt group ranch committees (Mwangi & Rutten, 1995). The investments in water facilities, *e.g.* rain water catchment from the roof of modern houses and shallow wells in the compound allows (kitchen-garden) cultivation, which boosts food availability. These investments also save time, money and labor to collect water from a distant borehole or river. Still more could be done such as the growing of napier grass as extra fodder for animals. This could increase milk production substantially.

The subdivision of group ranches threatens the access for wildlife to dispersal areas in case the new ranches would be fenced. The Kenyan Government tries to prevent such fencing by offering money to the Maasai living nearby Amboseli National Park to be used for the benefit of the community. Therefore, the Maasai profit more directly from the large sums of money earned by the tourist industry. They also participate themselves, as some tent camps have been built outside the park to earn money from tourists. Thus (the threat of) individualization of land might also result in an improvement of food security.

The main conclusion, however, is that the livelihood of individual Maasai families has become more vulnerable to changing property rights and the commoditization of the land resource. Access and control over grazing land—which allows for a flexible mobility pattern—is less assured at present. Water resources are depleted or diverted away from pastoral production by newly introduced activities operated by outsiders or elite Maasai. Stress-coping and survival strategies are under threat especially for the less fortunate within Maasai society. Levels of wealth are no longer merely expressed in ownership of cattle but foremost in the size of land holdings. This land reform process is solidifying Maasai society in a more permanent arrangement of poor and rich members.

One might argue that this is an unavoidable process. However, if no creative solutions are implemented one might encounter the destruction of these fragile environments to the detriment of the local human population. In the end the Kenyan society at large might be less well off. There is a need to strengthen ways of resource management intensification and diversification for both livestock rearing and agricultural development, preferably starting from initiatives taken by the Maasai, themselves, as shown in the field of water development. Moreover, labor-intensive job alternatives need to be developed, based on the livestock sector or upon other opportunities.



Notes

1. Behnke (1994) presented an excellent outline about the management characteristics of these non-equilibrium environments as compared to the equilibrium grazing systems in more temperate zones. The latter are characterized by high levels of climatic stability resulting in rather constant levels of primary production.

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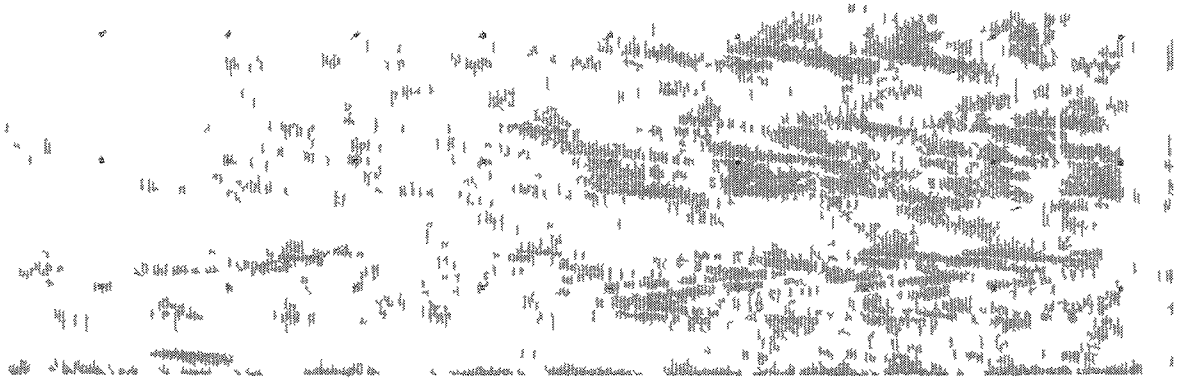

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