

# Desertification Control Bulletin



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## COVER PHOTOGRAPH:

*Firewood is becoming a scarce resource in many parts of Rendille land in Northern Kenya, particularly around permanent settlements. (UNEP/Daniel Stiles)*

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# Ecological villains or economic victims: the case of the Rendille of northern Kenya

Michael O'Leary

## Introduction: the Rendille and their herds

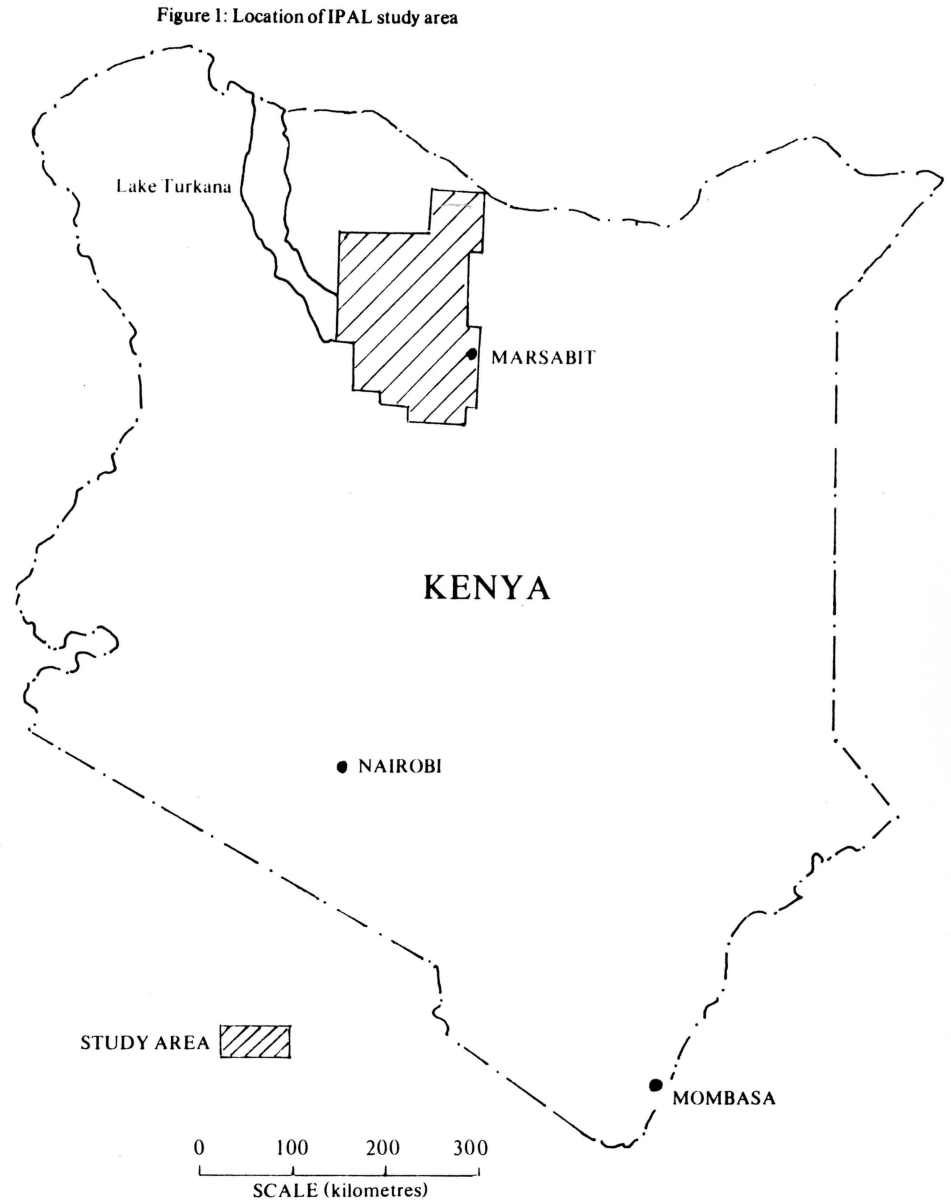
The Rendille occupy mainly arid lands with an average annual rainfall between 200-300 mm. They obtain their livelihood principally from keeping camels, sheep and goats, and in recent years cattle. The Rendille one-humped camel is smaller and more robust than the Somali dromedary (Musaka-Mugerwa 1981:8). Their sheep are of the Somali fat-rumped breed and their goat is the small East African species. Borana and Zebu breeds constitute their cattle herds. In 1919 the population of all the Rendille people was 5,474. According to the national population census of 1979 their population was 21,749. This gives an annual increase of 2.3% between 1919-1979. Due to droughts in the late 1960s and early 1970s the Rendille lost large numbers of livestock of all species either through forced slaughter for meat, forage shortage from depleted rangelands or animal diseases frequently caused by inadequate feeding. Famine relief programmes helped to provide sustenance for the human population. The net result was an overall drop in the ratio of animals to people. Livestock numbers have not kept in pace with even a modest population increase. The mean size of Rendille household herds and flocks are as follows (1):

camels .....	14.1	(S.D. =12.8)
cattle .....	7.9	(S.D. =12.4)
sheep .....	86.9	(S.D. =77.4)
goats .....	70.2	(S.D. =64.8)

The Rendille have access to at least 14,259 sq. km (2) of range which according to IPAL range and livestock scientists is able to provide adequately for their stock (IPAL 1982 Vol. 1:E-G).

### Truncated Use of the Range

Over an area of 11,300 sq. km of Ren-



dille country the following mean densities have been calculated:

camels .....	1.65 per sq. km
cattle .....	2.17 per sq. km
small stock .....	9.52 per sq. km

(IPAL 1982: 236)

It has been estimated for the IPAL study area (3) that 16-21% of the area is overstocked and 11% of usable rangeland contained no domestic livestock between July 1976-August 1979

(Field *et al* 1983: 105). This imbalance in the grazing use of the range is paralleled by a similar skewness in the utilization of the range for building material and livestock enclosures, and for firewood. The areas surrounding trading centres have long lost an adequate tree cover due to local demands for firewood and fencing material. In addition, areas surrounding regularly used sites for main and satellite (*forr*) camps are greatly denuded of tree cover.

### Following a Path of Least Effort

The uneven grazing use of the range is related to two main factors. Firstly, the Rendille follow the line of least effort when seeking out dry season grazing sites and thereby overuse certain areas year in year out. For example, in dry seasons they tend to opt for sites which are close to either springs (viz. Korole), relatively shallow waterholes (viz. Bagazi) or waterholes in or close to settlements (viz. Korr). This strategy makes the task of watering all the more easy. For example, at Korole no labour is involved in watering beyond the supervision of animal traffic to and from the springs. At Bagazi shallow waterholes lighten the work load of the herders and livestock owners. In settlements such as Korr livestock owners who normally reside there and are not themselves herders add their labour to that of the herders in establishing waterholes and in watering livestock from them. Herders only move their livestock to areas where waterholes are deep and where they themselves must contribute most of the necessary labour when their stock have used up the forage at grazing sites of easy water. At present the Rendille cannot financially afford to install and maintain more advanced water technology which would find water at deeper levels and make their task of watering livestock easier.

Another major concern of livestock owners and herders is providing security for themselves and their animals. In this they also opt for the easier way. They continue to remain in areas that are least likely to be attacked by raiders and will only move to areas more vulnerable to attack when either the water or forage supplies of the former areas become inadequate.

Preoccupation with how best to provide water and security is heightened in households who for one reason or other rely mainly on girl or women herders. In many instances labour migration and schools have taken boys and young men away from herding to be replaced by girls and young unmarried women.

#### The Impact of Settlement on Range Use

The emergence of permanent settlements is the second factor which has



*Kargi town, a barren spot that has been desertified by permanent settlement of pastoralists around it. The pastoralists settle because of available water, shops and security. (UNEP/Daniel Stiles)*

contributed to the uneven use of the range. The celebration of family rituals such as the *sorio* and *almadho* are important events for the Rendille. Usually it involves bringing back to the settlements most of the livestock for periods of one to four weeks. At other times where possible livestock owners like to keep some milch animals near at home in the settlement. These two practices lead to the over-use of the range surrounding the settlements. The damage to the range is all the more devastating when the settlement is also a major water source for livestock. This in part explains why the range surrounding Korr is more extensively denuded than that which encircles Kargi (4). However the Rendille minimise the adverse ecological effects of sedentarisation by sending most of their stock most of the year to satellite camps.

In Rendille country there are four major permanent settlements, namely, Kargi, Korr, Loglogo and Laisamis. Approximately 45% of the Rendille live in or close to these settlements. Minor settlements exist

at Ngurunit and Ilaut. These settlements are a permanent feature of the landscape and can be construed as mixed blessings. On the one hand they provide their inhabitants with easy water which lightens the task of women who are primarily responsible for drawing water for domestic use, shops in a time where reliance on shop bought food is increasing, schools and dispensaries (or health centres). In addition major settlements are important centres for government and church administration and this provides "town" residents with security from attack and a promise of food in drought years. The latter consideration is highly important to destitute and poor households who have few stock and are unable to live solely off their drought depleted herds.

#### Resource Management Perspective/Anthropological Approach

The statement of the problem so far is double-edged. On the one hand those who view affairs mainly from a resource management perspective can

quickly point to how the truncated use of the range is devastating the vegetational cover of over-used areas, particularly those which surround settlements (permanent or semi-permanent) and/or permanent waterpoints. In this perspective the Rendille pastoralist can be easily viewed as a villain and his actions towards his natural resources as irrational. On the other hand one can attempt to view matters through the eyes of the Rendille and assess how rational his choices and actions are from his point of view. This may be referred to as the anthropological approach. It has nothing to do with paternalism (kind or unkind) and does not in any way question the concern of those committed to the proper management of natural resources. Rather it casts a different light on these concerns (5). Outside of the question of sedentarisation the main problem is to ascertain the rationality (or irrationality) of the herding strategy of pursuing "the line of least effort". Since this brings up issues relating to the nature of the Rendille pastoral economy and its links with the wider economy as well as the impact of national policy on pastoral societies, these must be dealt with first before proceeding.

### **The Peasantisation of the Rendille Pastoral Economy**

In a sense it is mystifying to refer to the Rendille pastoral economy as a subsistence economy. It begs the question and releases the researcher all too easily from the task and responsibility of examining the conditions which maintain the Rendille at subsistence level (or at a low standard of living). It is more illuminating to view their economy as a peasant economy. A peasant economy has the following characteristics: a heavy reliance on household labour in production, production for home consumption as well as for the market, variation in household land and livestock holdings and hence a variation in household wealth. Peasant economies are not isolated entities but are linked with national economies and politics which normally dominate them.

The day when the Rendille could totally and directly depend on livestock production for their livelihood has long past. The decline in the livestock/human population ratio first

moved them to an indirect reliance on their stock. In other words, livestock were sold on the open market in order to purchase cereals. This shift in their economy took place in the 1940s. Nevertheless they continued to rely totally (although indirectly) on livestock and its products. However, this indirect mode of reliance proved inadequate in the late 1960s and early 1970s when the livestock/human population ratio further declined. Supplementary sources of livelihood were sought in labour migration, cultivation, the sale of milk and firewood, particularly to the residents of Marsabit Town, the district headquarters.

Since the Rendille depend greatly on the wider economy (both district and national) for their livelihood it is necessary to examine the nature of their links to it. Lack of education tie the majority of Rendille job seekers to low paid jobs. Poor market facilities frequently condemn them to selling cattle and small stock at between a half and a third of the going price fetched for these livestock in Nairobi and Mombasa (6). To cover their risks local livestock traders monopolise the market and thereby keep prices at a low ceiling. The Rendille have no market outlets for their camels (cf Njiru 1983). They have to pay for foodstuffs at price levels similar to that pertaining in urban areas, while at the same time they are forced to sell their own products at price levels much lower than that which exists in urban markets. In other words, terms of trade with the wider economy are unfavourable to the Rendille. Under such circumstances they refrain from placing their livestock on the wider market except as a last resort and in times of great need when cash is required for necessities. This reluctance to sell is primarily caused by the state of the market and not by cultural considerations. Those who say that pastoralists are reluctant to sell because their needs are few are putting the cart before the horse. In a situation where the market is uncertain and prices low the pastoralist learns to aim only for a subsistence standard of living, otherwise he would risk the very livelihood of his household. Sufficient evidence exists to indicate that once pastoralists are guaranteed a stable market and good prices they do not hesitate to sell and indeed im-

proved marketing can cause major changes in the life style, social organisation, herd management practices and economy of pastoralists (cf. Barfield 1981).

The tendency for pastoralists to maximise their herds is motivated mainly by the desire to reap gains in good years as a buffer to losses in drought years. It is encouraged in circumstances where market facilities are inadequate and alternative sources of investment are lacking. Where rich pastoralists can invest in agricultural land, trade, permanent property etc. they do so (cf. Dahl 1979, Barth 1961). Already there are signs that the Gabra and Rendille are investing in agricultural land on Marsabit Mountain. This gives them an opportunity of investing other than on the "hoof". However, as long as livestock prices remain low this tendency will be inhibited due to lack of ready cash.

### **Government Policy**

It is unnecessary here to examine colonial policies towards pastoral groups in Northern Kenya. Between 1963-67 the new independent Kenya Government was preoccupied mainly with quelling guerilla activity in Northern Kenya. It could only concentrate on development activities after 1967 when the Dar-es-Salaam agreement brought the conflict to a formal end. Somali and Maasai pastoralists have benefitted to some extent from the First Livestock Development Project (1968-1973) and the Second Livestock Development Project (1974-1982). However, the main focus in these national projects was on ranching and cattle production. The development needs of the pastoral economies of the Rendille and Gabra were not considered. Their only role in the national plan was to contribute immature cattle to the ranching community and even this operation was conducted on an irregular basis and sometimes even in an haphazard fashion. Little cognisance was taken of the fact that the Rendille kept mainly camels and small stock, animals which are most suited to their arid lands. The exclusion of the Rendille from the main thrust of the livestock projects means that they still lack adequate veterinary services and a suitable network of waterpoints, and adequate markets for their livestock have yet to

be developed. A restrictive policy towards the export of livestock coupled with a cheap meat policy for home consumers keeps livestock prices low and denies the Rendille adequate return on what they produce and sufficient funds to develop their livestock economy.

#### Lack of Incentive in the Local Economy

This discourse on the pastoral economy of the Rendille and its linkages with the wider economy and policy

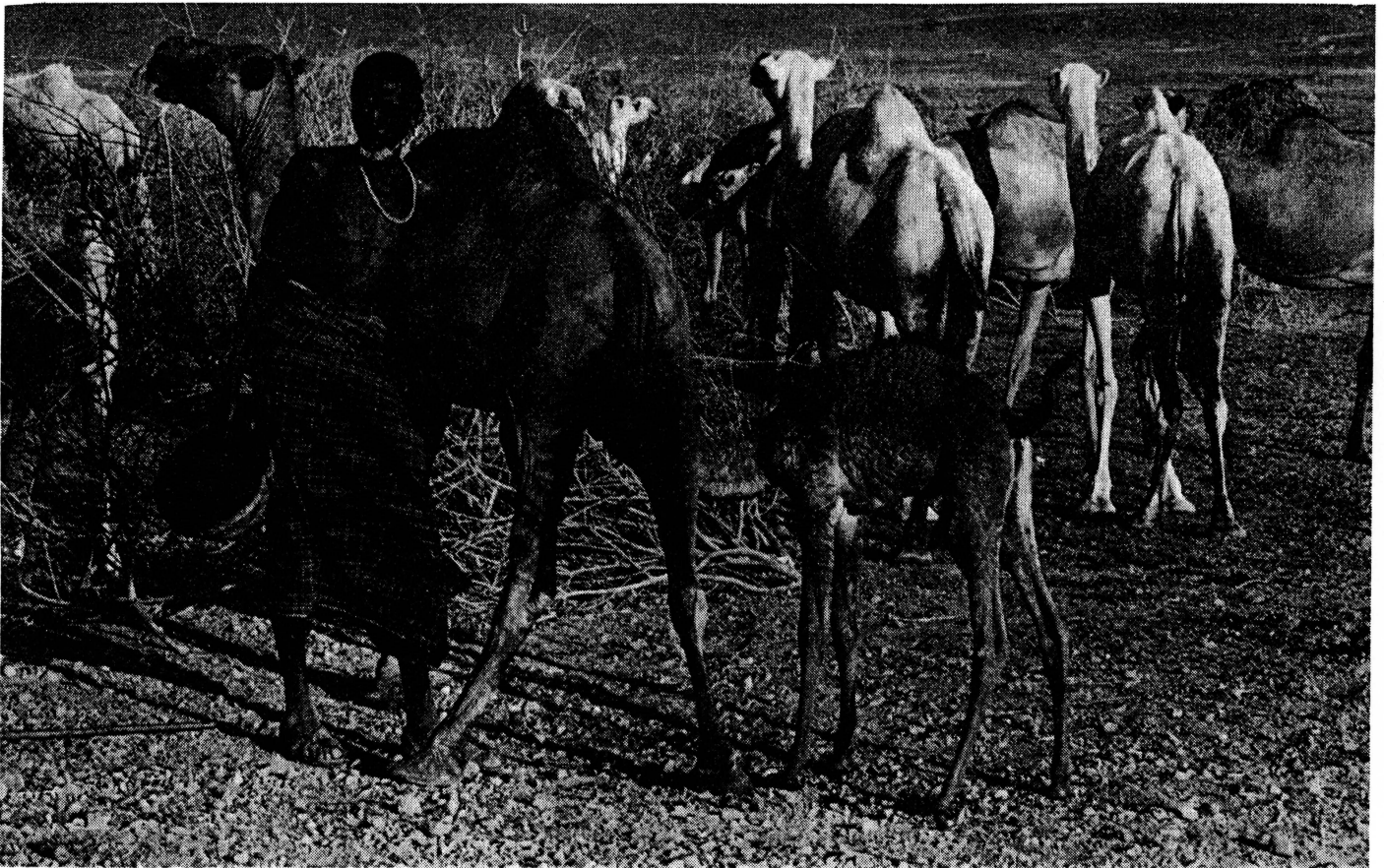
their young, leaving some milk for home consumption, he finds it unnecessary to move to better grazing sites which involve an increased watering work-load and greater risks of losing animals to raiders. In this view the law of diminishing returns applies. Under present marketing conditions the marginal improvement to the condition of his animals does not justify the increased work load or the greater risks involved.

In conclusion, poor market facilities and low prices have stunted growth in

to maintain water pumps, commercial wood-cutters capable of transporting fuel and building material long distances etc.

#### Dependent or Self-Sustaining Development

The above arguments lay the basis for reconciling and integrating the management of natural resources viewpoint with the anthropological approach. The adherents of both perspectives aim at a more rational use of the range. The problem is how best to



Camel's milk is the most important food item for the Rendille. Here a man prepares to milk a camel. (UNEP/Daniel Stiles)

sets the context for understanding their herding strategy of pursuing a line of least struggle.

Increasing livestock numbers rather than maximising in terms of meat and milk production of individual animals or of the whole herd is his primary goal. No doubt he is concerned with the condition of his animals but he knows that it is subject to seasonal fluctuations. As long as the lactating animals' supply of milk is close to average and is adequate to sustain

the Rendille pastoral economy and prevented any take-off above subsistence level. As a result the economy is poorly monetised and little specialisation occurs. There are no inbuilt incentives to maximise production through investing extra labour in opening up new waterpoints and grazing sites, and in investing in veterinary services other than in a limited way. Their economy is unable to afford specialists in non-herding occupations such as tradesmen to build cement lined and permanent wells, mechanics

achieve this goal. One solution is to forbid the Rendille from using overgrazed range and to open up alternative grazing for them by extending the present network of waterholes. Wood harvesting could be regulated and limited to those areas with sufficient woodland, and the wood transported to major Rendille settlements. This solution would undoubtedly have a measure of success but it lays an emphasis on having an outside agency to do things for them and hence perpetuates dependency. What happens when the

agency withdraws as it eventually must?

An alternative way suggests going beyond an examination of the symptoms of range mismanagement and sets the problem in a wider context. It recommends that the Rendille be provided with a functional market system which would guarantee good prices on a regular basis. This in the long run would maximise production by providing livestock owners and herders with incentives to go beyond a strategy of least effort in seeking suitable grazing sites, in extending the network of waterpoints, and in treating sick and weak animals. It would also greatly monetise their economy, improve their standard of living, and open the door for specialists such as tradesmen, veterinary technicians, mechanics, commercial wood-cutters and hauliers. In such a setting the Rendille could mobilise local resources while having the wherewithal to operate according to principles of proper livestock and range management. This would also enable them to relate to the wider economy not as dependents but as equal trading partners. This solution has the advantage of being self-sustaining and is workable even after the external agency has left.

\*I wish to acknowledge my indebtedness to Messrs Peter Geikuku, Leiti Galborana, Augustine Nyayaba and John Rigano who acted as my field assistants amongst the Rendille. All are themselves Rendille and were employed as field assistants by the Integrated Project in Arid Lands, Unesco.

(1) The figures on livestock densities on the range were derived from the research of the IPAL livestock ecologist who used well established aerial and statistical techniques in his work. His results give a measure of the livestock use of the territory surveyed but may not provide a true measure of what numbers of livestock Rendille households own for two reasons. Firstly, frequently the livestock of non-Rendille also use what is regarded as Rendille rangeland. For example the Samburu of Karare send many herds of cattle on to the north-western slopes of Marsabit during wet seasons. Secondly, Rendille owners at times move out of their home rangelands (and the area surveyed by the livestock ecologist) large numbers of livestock. This happens particularly in dry years and hence these stock go uncounted in the aerial surveys. On the other hand the human ecology team counted on the ground the livestock holdings of individual Rendille households using anthropological techniques. The team followed up all herds of households studied even when these herds were grazing outside the boundaries of the aerial surveys. The team did not include the herds of non-Rendille households using the Rendille range. The results of the human ecolo-

gy programme provide a measure of the stock holdings of Rendille households but not a true measure of the stock use of the range. It follows that there are no inherent contradictions between the two sets of statistics presented in this paper as may appear to be the case at first glance.

(2) This figure was obtained by deducting from the total area of Laisamis Division the areas of Loyangalani and Mt. Kulal locations mainly occupied by non-Rendille, although these locations are occasionally grazed by the Rendille (Kenya Population Census, 1979, Volume 1, p.71). The resultant figure of 14,259 sq. km can be regarded as a minimum because the Rendille frequently and particularly in drought periods move their livestock to areas outside Laisamis Division.

(3) The study area is 22,500 sq. km in size. The southern half is in Rendille country while the northern half is situated in the homelands of the Gabra.

(4) The Kargi wells and borehole provide only limited supplies of water. As a result the majority of animals in the area water at either the Korole springs or Bagazi wells. On the other hand the majority of cattle and small stock in the Korr area are watered at Korr trading centre.

(5) A number of authors refer to the adverse effect on range management policy and planning when issues are viewed mainly in physical terms to the exclusion of the concerns of the people who use the range. (Hjort 1982, Johnson 1980).

(6) While the Kenya government has assisted in establishing marketing facilities for agricultural products such as coffee and tea (export crops), and maize and beans (subsistence crops) it has yet to assist in creating adequate marketing facilities for livestock in spite of the finance invested in the Livestock Marketing Division (L.M.D.) which at present is not operating.

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Figure 1: Location of IPAL study area