PASTORAL PEASANTS:
HOUSEHOLD STRATEGIES IN MUKOGODO DIVISION
LAIKIPIA DISTRICT

BY

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ABSTRACT

Recent reviews of pastoral development in Africa have invari-
ably deplored the lack in understanding about pastoral socio-
economic systems. The paper argues that this is related to
the fact that pastoral studies, a field dominated by anthro-
pologists until the late 1970s, have been largely shielded
from the dynamic developments in the analysis of peasant
societies. It is maintained that there is a need to firmly
relink pastoral and peasant studies, as most pastoral
societies in Africa have been thoroughly peasantized over the
last two decades.

More specifically, there is a need for studies starting from
a microecomomic analysis of the basic production units (the
households), in order to understand the processes involved in
the rapid internal differentiation of pastoral societies. The
major contention of the present study is that differences
between households, in wealth but also other factors like
education and the position in the domestic cycle, translate
into qualitatively different options and constraints. These
again make households adopt diverging strategies that need to
be understood for planning development interventions.

The paper reviews the methods used for data collection in
Mukogodo Division, Laikipia District. Special attention is
given to a rapid sample selection method, called "informant
wealthranking", as the establishment of a small but reliably
representative sample is crucial for studying highly mobile
and dispersed pastoral households.

Based on data collected in the first seven months of field-
work, the large disparities in wealth between Mukogodo
households are exemplified. It is then shown how wealth-
related differences in management and marketing strategies
are reflected in herd structures, drought recovery rates,
pastoral labour inputs, the rate of labour migration and the
specific development of dependency relations.

of absentees whose place and type of work was also recorded.
At the same time, information on the ageset, the number of
wives of household heads and the relation of households shar-
ing one boma was collected.

The next step was to write the names of the household heads
on small cards. A local set, in my case those living within
the boundary of a group ranch or of a neighbourhood subunit
was then presented to 3-5 local informants. They were asked
to sort the cards into piles of people that are equal or sim-
ilar in wealth. Of course, the local vernacular concept had
been explored beforehand. It proved to be helpful to select
informants of different wealth and age, as wealthy people
were more discriminating in the upper ranks, while poor peo-
ple differentiated other poor people more finely. Packs of
roughly 80 households were most manageable; if they were
larger, problems of interview fatigue increased. The cards of
people whose independence was unclear (brothers, fathers and
sons) were kept together by a clip and the decision left to
the informant to rank them together or separately. Difficul-
ties of placing individual cards were immediately discussed
and proved to be extremely fruitful. The "outsiders" or
"newcomers", about whom rankers were uncertain became quickly
apparent as well, allowing for a discussion of their status.
In Mukogodo most rankers sorted the cards into 6-8 piles. I
only intervened when a subpile seemed too large, asking them
whether it was possible to subdivide. The ranker wass then
asked to explain what makes the difference between the piles,
yielding local "poverty lines", differences in strategies
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and to draw up viable, more formal questionnaires in a short
time.

Finally, the cards were indexed by a very simple method. If a
card was in the 1st pile of 8, the index is 1/8 x 100 = 12.5
etc. The result was written onto the card immediately. As the
ranking was repeated with other rankers, disagreements be-
came easily visible and could be discussed immediately.

I chose the method because of its rapidity but also because
of the known reluctance of Maasai to count livestock, merely
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that those in the second pile had 3 or 4 cows and maybe 20 to
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rately again. The data provided by the wealthranking thus
allow for a rough assessment of the distribution of livestock
within the community, for the determination of poor and

affluent areas, and finally for a rough assessment of total
livestock numbers and their spatial distribution after the
rains of May/June, when most people resided in their perma-
nent homesteads.

Ranking the whole Mukogodo community west of the forest, i.e.
roughly 1,270 households on roughly 800km2 with one assistant
took only about 6-7 weeks, including the basic survey. It is
obvious that even a sampled livestock census would have been
much costlier, and probably no more precise, while loosing
out on much qualitative data.

Based on informant wealthranks I originally chose a sample of
one rich, medium, poor and very poor household in each of 9
areas, thus including 36 households, opportunistically
selecting those willing to cooperate. Subsequent objective
assessment of the sample households' wealth made the moving
of 2 households necessary. A further 5 had to be dropped for
various reasons, so that the final sample for intensive study
contains 31 households. Table 1 summarizes the sample charac-
teristics.

TABLE_1:_Sample_charcteristics

	rich	medium	poor	very poor
Livestock units per household	>20	10-20	5-10	<5
Sample households	9	9	6	7
% of sample	29	29	19	22
Total households 1)	250	320	250	450
% of total	20	25	20	35

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1) estimates based on informant wealthranking of 1,270
households

The overrepresentation of rich and the underrepresentation of
the very poor households has resulted mainly from the uneven
"drop-out" rate. It is compensated for by giving special
attention to the very poor among the 28 households sharing
bomas with the core sample.
Each stratum further contains a roughly equal number of
household heads from the four active agesets, which means
that the households represent different stages in the domes-
tic cycle. Unfortunately, female-headed households and those
of migrants are underrepresented due to the difficulty
involved in interviewing women. Unfortunately it has been
impossible to find a female research assistant to improve
this situation.

long run through the redistribution networks so well de-
scribed in many monographs. This underrates disparities in
access to resources (livestock, water, labour) that may al-
ready have existed in precolonial or early colonial times and
that have been persistently resulting in different options
and constraints for various types of households. Being rich
or poor means more than just a difference in scale (Grandin,
1983). Obviously, such differentiation may have been thor-
oughly transformed by more recent developments; few anthropo-
logical studies have however taken e.g. wealth stratification
into account, even when looking at herd management, herd or
household composition or transaction behaviour.

Third, we also have little information on the often consider-
able non-pastoral components of "pastoral" strategies
(hunting, beekeeping, gathering and even farming), again
varying with wealth. The typical "selfsufficient" pastoralist
relying on his herds alone is also rather a reflection of the
ideal propagated by these societies (Dyson-hudson, 1972 for
an early warning). Specially, labour migration (in colonial
days often in the form of military service or work in the
police) has often been mentioned but its effects have not
been studied.

Fourth, it is also noteworthy that despite frequent hints of
patron-client relationships in many reports, the topic has
rarely been systematically explored in East African pastoral
societies (with the exception of Baxter, 1975 and Dahl,
1979), while in other areas, like Botswana or the Middle East
this has been done more often (Barth, 1981).

1. The framework of the present study

The present study rests on the conviction that in order to
plan viable development interventions, it is necessary to
have more smallscale studies of pastoral systems on the lines
set out below, specially as recent studies have shown that it
is impossible or misleading to extrapolate findings from one
situation to another (Migot-Adholla and Little, 1981). it is
felt that discussions on pastoral development are still too
often framed in ethnic terms, e.g. discussing development for
"the Maasai" or "the Turkana", thereby overlooking the fact
that different Maasai or Turkana might have radically differ-
ent needs, options and constraints.

To call for detailed studies of specific situations can how-
ever not mean to fall back into particularism. There is
therefore an urgent need for a theoretical and methodological
relinking of pastoral studies and peasant studies. The cur-
rent research argues that there is no insurmountable barrier
against subsuming East African pastoralists under the current
peasant debates. Most African pastoralists have indeed been

rapidly peasantized over the last 15 years. As Asad has
pointed out in a different context years ago, similarities
between pastoralists and farmers are more important than the
differences, in as far as they are integrated into the same
wider structures (Asad 1979; Ensminger 1984).
Like other peasants they simultaneously produce for subsis-
tence needs and for the national market, and comply in many
other ways with peasant definitions even if there are differ-
ences in the continuity of labour inputs, the degree of mo-
bility, in the systems of ownership of the major resources
(especially land) or the long-term effects of drought (de
Haan, 1983).

The current research therefore tries both to look 'below', to
the level of the basic production unit, in this case the
household, and also 'beyond' to the wider regional and
national structures. The basic assumption is that:
- there exist differences between pastoral households in
  access to strategic resources which result in qualitatively
  different strategies to cope with their total physical,
  social and economic environment, and
- that these strategies have been thoroughly transformed by
  market integration, land tenure reforms etc. as well as the
  disastrous droughts of the last decade.

The focus on strategies on the household level needs two
short qualifications:
- There has recently been a discussion on the utility of the
  household as a unit of study, given the difficulties in
  defining it as a unit (Guyer, 1981; Wong, 1984). The
  arguments have some appeal, especially in pastoral
  societies with their complex rights over livestock that
  extend beyond the household, their multiple lines of
  conflict linked to the slow devolution of stock to the next
  generation and the individual networks that cut across kin
  ties. Recent research has also shown that households are
  rarely selfsufficient in meeting the labour demands for a
  complex pastoral enterprise (Sperling, 1984). On the other
  hand, there can be no doubt that in most cases the
  household remains the basic decisionmaking unit, so that
  working with the household as a unit of study while keeping
  the limitations in mind does not pose severe theoretical
  problems.
- Cossins (1985) among others has recently raised some
  questions on the term of "strategy", asking how to
  differentiate between tactics and strategies, the former
  involving shortterm, the latter longterm decisions. While
  plausible, the distinction is as impossible to
  operationalize as in football or military affairs. The term
  "strategy" is therefore employed in a rather large and
  colloquial sense, rather than as a defined theoretical
  concept.

Within peasant studies, there already exists a long tradition
of research into differences of decision-making and socioeco-
nomic strategies between households, and a similar disaggre-
gation is needed for pastoral production systems.
Development-related work in this line has over the last years
often been produced under the label of 'Farming Systems Re-
search (FSR)' (Shaner et al., 1982; Barlett (ed.), 1980;
Gilbert et al., 1980). FSR has proved very popular with
International Agricultural Research Centres, so that it is
not surprising that it was ILCA that has taken important
steps in the indicated direction, therby coining the term
pastoral systems research (ILCA, 1983). Other studies within
Kenya that draw from similar sources are Little, 1980, 1985;
Ensminger, 1984; Hogg, 1980, 1983.

The current research further assumes that the most important
factor behind different socioeconomic strategies is wealth,
in our case mainly in livestock. The studies just cited above
have clearly shown that there are important wealth-related
differences in social networks, in livestock management
(grazing, milking etc.) and therefore productivity, in trans-
action of livestock (offtake rates, marketing behaviour), in
the importance of side-activities (agriculture, trade, char-
coaling) and labour migration, and in consumption patterns.
Studying these differences at the grassroots level will also
allow us to understand better how social and economic change
is actually happening (Helland, 1977).

Two further aspects need consideration. The first is access
to education. While certainly linked to wealth, it is a
partly independent variable which again strongly shapes (and
shaped) the access to roles within the political-administra-
tive system and to resources and advantages provided through
it.
The second is the domestic cycle, which has rarely been taken
into account in FSR. Households face different options and
constraints throughout their career, especially regarding the
availability of labour and the need to invest. The influnece
of the domestic cycle on decision-making has been shown among
farmers and pastoralists as far apart as Canada (Bennett,
1980) and Botswana (Gulbrandson, 1980).

The type of microeconomic analysis proposed here was mainly
the domain of agricultural economists until the 1970s, while
anthropologists were for some time locked in a fierce debate
over the appropriateness of neoclassical models in
'traditional' contexts (the formalist-substantivist debate).
When the sterility of the debate became increasingly obvious,
agricultural economic techniques were widely adopted by
anthropologists. The field of pastoral studies however has
remained comparatively unaffected by this development.
Today I see an implicit agreement that peasants (and pas-
toralists) behave no less rationally than other people and do
what pays, albeit under often severe constraints. As a conse-

quence, "soft" models of resource and labour allocation of
peasant households have been produced over the last years.
They do not dogmatically imply profit-maximation and rigorous
quantification, but take risk-minimization, social security
networks etc. into account (Low, 1982; Kempel and Lobdell,
1985). It has been shown that where market conditions exist,
it is possible to do cost/benefit analysis, linear program-
ming and sensitivity analysis and evaluate oportunity costs
(Ortiz, 1983; Barlett, 1980; Little, 1981; Cossins, 1983;
Upton, 1986). Similar modelling will be attempted on the
quantitatative data produced in this study. Its relevance
lies in the possibility of predicting how different segments
of the population will react to and be affected by planned
development inputs.

While a focus on the household is deemed important, it is
clearly not sufficient. There are two levels beyond the basic
production unit that cannot be left out: one is the
macrostructural, political economic level that is usually be-
yond the influence of the household (Little, 1985), the other
is the more immediate socioeconomic field, the community to
which the household belongs (Ortiz, 1980).

As far as the first of these levels is concerned, this study
draws from the debates on the articulation of modes of pro-
duction (see e.g. Foster-Carter 1978 for a review) and on the
"development of underdevelopment". Specially stimulating have
been the insights on the effects of monopolistic market
structures, of the stratification of production, of changes
in the division of labour and of labour migration on the
reproduction of the peasant household (Meillasoux, 1976).
Specifically, it is important to quantify the role of non-
pastoral sources of income in the overall reproduction of
pastoral peasant formations in order to plan development
interventions that are adapted to the multisectoral nature of
the households' strategies.
Earlier studies in the pastoral sphere which have tried to
integrate a similar view have been Hedlund (1979) and Bonte
(1981). Both Little (1980, 1985) and Ensminger (1984) have
successfully shown that the integration of micro-level stud-
ies and macrostructural concerns are possible.

Somewhat more difficult to study is the integration of house-
holds in sociopolitical systems like ethnic units, kin- and
ageset networks, villages, cooperatives etc. that are impor-
tant when making decisions. These structures are not fully
exogeneous, as household strategies articulate on this level.
Decisions do not just fall back on their makers alone; some
peoples' strategies may become other peoples' constraints. We
cannot therefore avoid questions of kinbased loyalities, fac-
tions, relations of power and influence that do not rest on
the economic field alone but are rooted in sociocultural
norms. Investment in social ties may ultimately shape access
to critical resources, like water points, stock for recovery

after losses, labour in difficult times (like droughts). As
has been noted above, the lack of attention to dependency
relations and their development is especially unfortunate.
Further investigations are needed on how egalitarian ideolo-
gies, phrased in a kinship or ageset idiom, are mobilized in
situations of growing economic differenciation.

The mutual but not necessarily balanced interdependence of
households is even more true in pastoral situations, where
important resources (pasture, water) are communally owned and
where rights in the most important asset, livestock, are
overlapping and diffuse. While this has been well described
in anthropological monographs, we need more attention on how
different household strategies aggregate when collective
action is necessary. In many pastoral areas in Kenya this
means giving special attention to decision-making within the
group ranch framework, through which important inputs are
actually or in intention channelled and where collective
decisions on land and water management are expected. Given
the fact that within Kenya the establishment of group ranches
is the major program for socioeconomic change in pastoral
areas, amazingly little is known on its microlevel function-
ing (exceptions are the studies of Doherty 1981, Galaty,
1980; Bekure, de Leeuw and Grandin, 1987).

2. Mukogodo Division - the setting

Mukogodo Division covers roughly 1,100 km2 in the northeast-
ern edge of Laikipia District. It also constitutes the north-
eastern edge of the Laikipia plateau. On its fringe, eleva-
tion drops from between 1,800 to 2,200 m to the lowlands of
Isiolo District. The eastern third is characterized by a
range of mountains, largely demarcated as a forest reserve of
c. 300 km2. The higher parts are Juniperus forest, while
lower parts are mainly dominated by Teclea nobilis. Central
Mukogodo is rugged hilly terrain with an accacia savanna
vegetation (A. mellifera, A. tortilis, A. etbaica, A. seyal).
In the west, the relief is less steep; gently undulating
hills, again with an acacia-savanna and open grasslands
decend towards the Euaso Nyiro river which forms the western-
most boundary of the Division.
Rainfall declines from east to west, from c. 700 to 400mm
with a bimodal distribution. Rainfall reliability is fairly
low. Apart from the Euaso Nyiro and the Ngare Ndare which
constitute the easternmost and westernmost boundaries, there
are no perennial rivers in Mukogodo.
In the south, the Division is bounded by largescale ranches,
still partly in white hands, which maintain a closed fence
along the Division's perimeter. On the northern and eastern
side, the land is officially a Livestock Marketing Division

(LMD) holding ground which is however defunct and now largely
settled by Samburu pastoralists.

Mukogodo Division in the present boundaries came into exis-
tence in 1936 with the demarcation of a "Native Reserve"
intended to cater for a "Dorobo" population left behind on
the northern Laikipia plateau after the northern Maasai had
been deported from the area in the famous "moves" of 1914.
Although the demarcation of the Reserve secured land rights
for the Mukogodo groups, they lost two thirds of the land
they had still utilized in 1920, mainly the higher potential
areas.
From its inception, the main concern of the colonial adminis-
tration was to keep the boundary towards the white highlands
tightly controlled. Inside the Reserve, colonial policy
struggled with the problematic definition of who was a
"Dorobo", and was therefore a rightful resident, which re-
sulted in recurrant and naphazard deportations of
"undesirable elements".

For most of the time, the administration was unaware of the
complexity of the ethnic composition in Mukogodo. In short,
the population consists of 5 ethnic groups: the Ngwesi, the
Mukogodo (or Yaaku), the Digiri, the Mumunyot and the Leuaso.
They differ in historical background and social and ritual
organization, although there exists a common "maasai" denomi-
nator. As the "Dorobo" label has derogatory implications,
they prefer to be called Mukogodo Maasai today. There is no
room here to dwell on their anthropological and historical
background or on the "Dorobo" problematic, about which a
separate paper has been produced (Herren, 1987).

There exists only one short published account of the situa-
tion within Mukogodo, the short appendix of Spencer in his
book on Samburu and Rendille (1973), based on a visit in
1959. His picture is one of utter neglect, severe confinement
and isolation and of growing unrest due to the mentioned
deportation politics. Basic educational and health facilities
were only provided sparsely and late, mainly in the 1950s.
There is no evidence that with Independence the situation
changed radically, although a number of dams were provided
under ALDEV. The main government intervention since indepen-
dence has however been the demarcation of 13 group and 34
individual ranches in three steps (1974/1979/1985).

Since the 1950s administration reports have reiterated concern
on the development of the ecological situation, deploring
overgrazing and soil erosion. A more direct alarm signal came
in the 1965 drought when for the first time food aid had to
be provided in Mukogodo. Since then, famine cycles seem to
have shortened, food aid being necessary again in 1980 and
1984. There however remains a dearth of basic information on
what is really happening. This is drastically examplified by

the Laikipia District Preinvestment Study (Rep. of Kenya,
1983), where missing data on the Mukogodo pastoral system had
to be estimated by "importing" data from research in Kajiado
District.

The Mukogodo situation had originally been brought to my at-
tention by the joint Laikipia Rural Development Project/
Laikipia Research Program (LRDP/LRP), both operating from
Nanyuki within the ASAL framework. While there are strong
reasons for an ASAL project to get involved in the Mukogodo
situation, as already the appraisal mission had noted, it was
clear at the same time that better baseline data were ur-
gently needed (Winiger, 1983).

A short survey in 1986 then convinced me that there was con-
siderable interest in a Mukogodo study on the lines set for-
ward above, because of:
- lack of previous material, both on socioeconomic change as
  well as on history, social organization and culture of five
  former "dorobo" groups of considerable comparative interest
  to Maasai studies
- the possibility of cooperation with LRDP/LRP, and specially
  with a range management specialist within LRP.
- apparent social economic and ecological problems due to a
  long history of confinement, isolation and marginalization
- rapid market integration, particularly since the last two
  droughts
- widespread outmigration, both permanent and as temporary
  labour migration.
- the possibility to look at group and individual ranches
  established at different times
- the generally small size and comparatively tight road
  network would reduce problems associated with pastoral
  studies elsewhere.

3. Methodology and data to be gathered

The methodology employed in the current study is a mix of
quantitative (economic survey) and qualitative
(anthropological participant observation) approaches.

The first are routinely used by agricultural economists and
project appraisal/evaluation missions, the main method being
questionaire surveys administered once or recurrently to a
sample of farmers (or whatever the target group). When used
alone such surveys have been criticised increasingly for
their cost-ineffectiveness, their propensity to sampling
errors and their tendency to miss out important non-
quantitative factors, compex social patterns linking
production units, actors' views and meaning systems etc.
(Chambers, 1985).

The quantitative approach is equally routinely used by social
and cultural anthropologists. The main method is the immer-
sion of the researcher in the local community, producing
first-hand knowledge on farmers' behaviour, intentions, prob-
lems and views. It is obvious that this approach is more apt
to catch complex networks and interdependences within the
community and therefore allows one to verify survey data and
provide explanatory background for them. Conversely the ap-
proach is also criticised for its slowness and fuzzyness,
resulting in large unreadeable reports without any quantita-
tive data necessary for planning interventions.

The advantages to be gained from combining both have been
succintly stated by Haugerud in preparation for a similar
research in Kenya and need no repetition here (Haugerud
1979). As I believe that this combination can still be
refined, the current research shoul also be seen as an
excercise in methodology. A variety of techniques is used to
gauge the amount and quality of data that can be gained
within the relatively short period of 13 months and with
costs that seem bearable for development projects.

Generally, the mobility and the dispersal of the population
in pastoral areas has made quantitative data collection, es-
pecially by conventional survey methods difficult. A good
example are two recent studies within the South Turkana
Ecosystems Project (STEP) where quantitative data collection
proved difficult even for a sample of four households
(Wienpahl, 1984; McCabe 1985).
As samples need to be smaller, it is advantageous that they
are highly stratified and non-random. Proportionally more
care is necessary to insure their representativeness.

3.1. "Informant wealthranking". A method for rapid sample selection

To produce a four-tiered sample of rich, medium, poor and
very poor households, an unconventional rapid appraisal
technique was used. "Informant wealthranking" was fist used
in pastoral settings by Barbara Grandin in the ILCA-study of
Kajiado Maasai. Its advantage is that it is lightning quick
compared to even a one-factor objective assessment, which in
a pastoral society involves counting livestock, something
known to be fraught with difficulties. As the method is not
well-known, it is given more space here.

The basis is a complete enumeration of the households of the
community under study. Given the paucity and unreliability of
basic data (like the population figures) it was decided to
cover the whole of Mukogodo, except for the areas to the east
of the forest. This was done within roughly three weeks with
the help of few informants while generally familiarizing
myself with the area. In the process, roughly 1,200 house-
holds were recorded. Care was taken to include the households

of absentees whose place and type of work was also recorded.
At the same time, information on the ageset, the number of
wives of household heads and the relation of households shar-
ing one boma was collected.

The next step was to write the names of the household heads
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Livestock units per				
household	>20	10-20	5-10	<5
Sample households	9	9	6	7
% of sample	29	29	19	22
Total households 1)	250	320	250	450
% of total	20	25	20	35

1) estimates based on informant wealthranking of 1,270
households

The overrepresentation of rich and the underrepresentation of
the very poor households has resulted mainly from the uneven
"drop-out" rate. It is compensated for by giving special
attention to the very poor among the 28 households sharing
bomas with the core sample.
Each stratum further contains a roughly equal number of
household heads from the four active agesets, which means
that the households represent different stages in the domes-
tic cycle. Unfortunately, female-headed households and those
of migrants are underrepresented due to the difficulty
involved in interviewing women. Unfortunately it has been
impossible to find a female research assistant to improve
this situation.

Given the east-west ecological gradient, the division of the
population in five (possibly diverging) groups and the uneven
distribution of infrastructure, it was decided to spread the
sample over the whole of the area. This increases logistical
difficulties but on the other hand provides a net that allows
to hear "what is going on" over most of Mukogodo.

3.2. The household study
Given the difficulties of a regular tracing of households in
a seminomadic pastoral setting, the sample has been kept
rather small. It is however felt that the small size is com-
pensated for by higher quality of the data due to close per-
sonal aquaintance with the sample households. Statistical
analysis will therefore suffer less from "noise" in the
database.

Of the sample households the following basic data were
recorded:
- the full genealogy of the family, including the place of
  residence, occupation etc. of all those enumerated
- schooling of members
- size and structure of both cattle and smallstock herds
- the "progeny history" of the complete cattle herd (see
  below)
- boma layout and age, relation to the other households
  within the same boma and in the immediate neighbourhood
- major possessions

The 31 sample households are being studied by a monthly
recall interview, yielding information on:
- changes in household composition
- herd management: grazing and watering patterns, labour
  allocation and recruitment, disease prevention and
  treatment, breeding practices
- milking strategy and milk yields
- livestock transactions: sales, buying, lending, borrowing,
  gifting, exchanges etc.
- changes in the herd: births, deaths, losses, pregnancies
- household budget, giving special attention to livestock-
  related expenses and expenses on food.

Between the monthly interviews, the households are visited as
frequently as possible to "truth" data (like milk yields),
get information on domains difficult to ask (beer-brewing,
gifting of food, milk or small sums of money). These visits
also serve to discuss emerging results of the survey, talk
back over transactions and herding decisions, discuss prob-
lems, plans, the state of the pasture, the movement of
friends and neighbours etc. Intermittently, data are col-
lected on:
- food consumption of the previous day

- time spent on different tasks by all household members on the previous day
- calf growth

Slowly, life-histories are accumulated for both men and women in the sample and a series of more formal interviews is carried out on "things-I-want-to-do", on the conceptions of "good life" etc (Alverson, 1978).

3.3. Further data gathered

Beside the anthropological work of "being there and listening", further surveys are conducted for special questions:
1. the "progeny history" method records what has happened to all the calves of a given cow. Then the same is then done for the cow's mother and its offspring. The data should allow a discussion of transaction behaviour since the drougnt of 1980/1 and the calculation of mortality, calving and offtake rates since that time. Special emphasis was here given to richer owners who tend to transact more actively.
2. current labour migration and permanent outmigration is studied by fully genealogically enumerating both an area (group ranch) and two extended lineages.
3. labour history interviews are conducted on a stratified sample as large as possible to gauge time depth of migration, length of migration, reasons for leaving or coming back and of the level of reinvestment in livestock within Mukogodo.
4. the basic survey is seasonally controlled to record households that have migrated, changed boma, set up a new one or sent livestock to grazing somewhere else. It is attempted to discuss boma-rearrangements with those involved as far as possible, again opportunistically.
5. all owners of individual ranches are interviewed about the reasons for aquisition, plans and intentions and asked to assess what it means to have an individual plot.
6. informal interviews are conducted with important traders on the development of market integration.
7. interviews are done with all the group ranch chairmen (and other committee members) on group ranch development. Group ranch and other barazas are attended if possible.

4. Preliminary findings

This report has been written after 7 months of fieldwork. The data presented in this section have the aim to show that there are indeed large differences in wealth between households in a society that looks homogeneous in many aspects to an outsider. Although the emerging picture is necessarily sketchy, some main lines can already be discerned that are relevant to development planning in the area.

Data are organized into four sections, dealing with the fol-
lowing domains:
1. Basic data on the population and its spatial and social
organization.
2. Basic data on pastoral production in Mukogodo. Beside data
on the total herd and its spatial distribution, the main
issue is the social distribution of livestock wealth. Herd
sizes, herd structure, post-drought recovery and labour
inputs into livestock production are then discussed according
to wealthrank, giving clues to the total strategies of the
different wealthstrata.
3. Possibilities for non-livestock incomes. Thereby special
attention is given to labour migration.
4. Dependency and clientship relations.

4.1. The Population

4.1.1. Current density and distribution
For a semiarid area, Mukogodo is densely populated. The cen-
sus of 1979 gave a population of roughly 14'000. As there
have been two major droughts since, a recalculation was done,
based on my own survey and that of Lee Cronk for the forest
area (personal communication). A total of 1,271 households
were recorded. This figure excludes a number of Ngwesi house-
holds to the east of the Forest Reserve and possible Samburu
residents in the northern lowland fringes. Their number was
only estimated. Based on the average household size
(residents only) in my smaller sample (n=52) I estimate the
total population to be roughly 11,000. This confirms the
residents' contention that after the drought of 1984, the
Mukogodo population has indeed declined.

The average population density is therefore 9.8/km2. As the
population is fairly mobile, areal densities may however vary
greatly with the seasons and the condition of the range and
water ressources. Some areas are virtually devoid of perma-
nent settlement and are only used by seasonal grazing camps;
further, a sizeable portion of Mukogodo Division lies in low-
land areas only used in emergencies. If we look at the dis-
tribution of permanent homesteads, their density increases
from west to east, corresponding to the ecological gradient,
and from north to south, corresponding to the topography and
the concentration of roads and infrastructure in the south.
The following table illustrates the extremely dense settle-
ment compared to other pastoral areas.

TABLE 2: Population densities in Mukogodo and in other
pastoral areas

Mukogodo, west and north   11.7 /km2
Mukogodo, central   21.6 /km2
Mukogodo, Doldol area and southeast   23.9 /km2
Mukogodo, forest area   4.2 /km2

Narok Maasai 1)   6.1 /km2
Kajiado Maasai 2)   6.5 /km2
Samburu 1)   2.7 /km2

Sources: 1) Arhem, 1986
         2) Bekure, de Leeuw and Grandin, 1987

While the southeast definitely has a higher potential than
the rest of Mukogodo, the density in the centre remains high
despite limited grazing potential because of its nearness to
the Doldol centre, the road to Nanyuki and permanent water.

4.1.2. Social and territorial organization
In Mukogodo, the basic production and consumption unit is
clearly the household. Normally, it consists of an indepen-
dent adult man and his dependents. In Mukogodo, the large
majority of members come from the nuclear family of the head.
Depending on the position in the domestic cycle, households
frequently include the mother of the head and young unmarried
siblings. Other dependants that are not closely agnatically
linked are however rare. Each household has a clearly defined
herd over the management of which it (i.e. mainly its head)
can decide autonomously. It is therefore the basic production
and consumption unit. The following table gives the average
size of households (residents only).

TABLE 3: Household size (residents) and polygyny rate of
sample households according to wealth rank (n = 53)

                 Size   Polygyny rate

Rich   11.2   2.2
Medium   8.1   1.4
Poor   6.3   1.2
Very poor   4.8   1.0

Average   7.7   1.4

Rich households are bigger due to a higher polygyny rate and
the inclusion of a few non-nuclear dependants. Generally,
Mukogodo households are fairly small, reflecting the general
poverty in the area.

The basic residential unit is the boma, a settlement with a
common fence, usually containing more than one household. In
Mukogodo the average is 2.3 households/boma. This figure com-
pares to data on the boma size in Kajiado groupranches with a
medium market integration (Bekure, de Leeuw and Grandin
1987). Bomas are clearly smaller than in the past and accord-
ing to older people, there were no single-household bomas
twenty years ago (an assessment of past boma sizes from
aerial photography is under way). Today, 37% of bomas are
made up of a single household, 33% of bomas contain house-
holds closely related agnatically (fathers and sons, brothers
or cousins), and 29% also contain in-laws, friends and depen-
dents. Households within one boma usually cooperate closely
in daily tasks and while remaining distinct, there is general
lending and borrowing of household items, food etc.

Traditionally, people recognize a number of named neighbour-
hoods (elatia, enkutoto), either a river catchment or an area
around a prominent hill. Although neither the territorial
boundaries nor the social composition are strictly circum-
scribed, people living within a neighbourhood feel that they
belong together and are referred to collectively (e.g. "the
people of Ilpolei"). Size varies considerably, roughly from 5
to 30 km2 and from 10 to 80 households.

On the next higher level there are both the ethnic group
(sing. oloshe, pl. iloshon) and the administrative structure
of locations and sublocations. Despite good contacts and fre-
quent intermarriage, the settlement areas of the iloshon are
distinct and correspond, through a long process of adjust-
ment, fairly precisely to the locational boundaries set up in
1936. A detailed discussion of the social organization of
the Mukogodo Maasai is outside the scope of this paper. It
must however be noted that both the clan and ageset relations
seem to play a weaker role than in other Maasai sections.

As has been noted above, group ranching was introduced in
Mukogodo in three steps. It is notable that in the first
round of adjudication, boundaries were drawn on the basis of
neighbourhoods. These ranches are therefore very small. In
the later adjudications, group ranch boundaries follow the
sublocational boundaries, leading to considerably larger
group ranches.
Although the interplay of traditional territorial and social
structures with these new forms of land tenancy is a very
interesting issue with high relevance to development plan-
ning, space forbids an extended discussion in this paper. It
may be sufficient to say that groupranches have not yet taken
root in Mukogodo, but their imprint on resource management
and socioeconomic decisionmaking is certainly growing.

4.2. Pastoral production

Pastoral production is clearly the mainstay of the Mukogodo economy and will remain so for the future as the potential for crop production (even with irrigation) is extremely limited (GESP, 1979). There can be no doubt that while subsistence production of meat and milk remains an important aim of almost all households, market integration is very high, especially with regard to small stock. Further, it must be kept in mind for the following discussion that the Mukogodo livestock economy is still in the process of recovery from the disastrous drought of 1984.

4.2.1. Size and species composition of the total herd

Calculations of the total herd of Mukogodo (excluding the area east of the forest), based on the absolute figures provided by the "informant wealthranking" excercise indicate an overall figure of 24,000 Livestock Units (LSU). LSU were calculated by using conversion rates determined for Maasai herds by an ILCA study. Thereby one head of cattle is counted as .71 LSU and one head of smallstock as .17 LSU (Bekure, de Leeuw and Grandin, 1987).

Of these 24,000 LSU, 45% are cattle and 55% are smallstock. Data are as yet unsufficient to determine the proportion of goats to sheep, but a reasonable estimate based on available dataestimate is 7:3. For all interventions it is however important to realize that more than half of the liveweight on the pasture is in smallstock, whose importance is especially great for poor people. Today, it is generally agreed that the smallstock have not received sufficient attention in pastoral studies (Wienpahl, 1984) and development research and intervention. The importance of smallstock will therefore recieve special attention in the on-going study.

4.2.2. Stocking densities

There is an inherent difficulty of calculating stocking rates, as the area actually utilized throughout the year varies greatly. In times of drought, stocking rates may be completely different from the "normal" pattern; yet it is at this moment when the actual stocking rate is most crucial, both for herd survival and the conservation of the range ressource. It must therefore be understood that the stocking rates presented here relate to a situation where almost all stock were grazed near to the permanent homes, where they stay about 8 months during years with average rainfall.

Stocking densities range from 1.1 ha/LSU in the eastern parts to 7.4 ha/LSU in the westernmost part, following the ecological gradient. There are however serious difficulties ino assessing, let alone calculating carrying capacities (see e.g. Walker and Noy-Meir, 1982); not surprisingly, there are no reliable figures for Mukogodo. Still, stocking rates in

Mukogodo seem high in comparison to other areas with similar
rainfall charcteristics. Whether it is critically overstocked
and by what factor however remains an open question. A short
visit with a range specialist indicated that, despite local
soil erosion (both sheet and gully), most areas are certainly
not "beyond recovery".

4.2.3. The distribution of livestock wealth
It is one of the basic assumptions of this research that
differences in wealth (mainly in livestock) result in quali-
tatively different household strategies, and therefore affect
herd structures, drought recovery, labour input, seasonal
movements, productivity etc. Therefore an assessment of
wealth distribution must preceed discussions of these
parameters.

The following table presents comparative data on the mean
holdings of different wealthranks of Mukogodo Maasai, Kajiado
Maasai and Galole Orma. The table contains a slight distor-
tion due to the different sampling procedures used in the
studies, yet the general orders of magnitude appear clearly
and highlight the general poverty of Mukogodo producers. An
owner with 32 LSU would be ranked as a wealthy man (olkarsis)
in Mukogodo, while this is the average holdings of the poor-
est sample stratum in Kajiado. Data on the highly market in-
tegrated households among Galole Orma are more similar to the
Mukogodo data, but again the rich households are much wealth-
ier. The table also shows the generally lower percentage of
cattle in Mukogodo holdings, respectively the strong reliance
of most households on smallstock.

TABLE 4: Mean livestock holdings by wealth strata.
Samples from Mukogodo, Kajiado and Galole Orma.

	Rich	Medium	Poor	Very Poor
Mukogodo				
Average holding (LSU)	41	16	7	3
Cattle LSU (%)	51	38	29	23
HH/stratum (%)	30	30	20	20
Kajiado 1)				
Average holding (LSU)	356	87	32	
Cattle LSU (%)	82	78	76	
HH/stratum (%)	33	33	33	
Galole Orma 2)				
Average holding (LSU)	130	23	6	
HH/stratum (%)	30	30	40	

1) Source Bekure, de Leeuw and Grandin, 1987
2) Source Ensminger, 1984. Data for highly market-integrated
households

Despite the general poverty, livestock holdings are neverthe-
less very skewed in Mukogodo. In all areas, the richest 10%
own more than 50% of the area herd (in LSU), while the poor-
est 20% own mainly little flocks of smallstock and an
insignificant number of cattle. Divisionwide figures are not
yet available, but Musul group ranch may serve as a represen-
tative example.

TABLE 5: Livestock wealth distribution in Musul group ranch

	Very Poor	Poor	Medium	Rich	Very Rich
Average herd-sizes (LSU)	<5	5-10	10-20	20-80	>80
% of all households	45	11	23	13	7
% of cattle owned	1	4	19	25	55
% of small-stock owned	4	4	23	28	41

Source: the data are calculated on the basis of the
wealthranking excercise and confirmed by herd censuses which
paid special attention to to the rich and very rich that own
the bulk of the livestock.

Several publications over the last years have tried to calcu-
late minimum herds necessary for subsistence or the covering
of basic needs. These are traught with methodological diffi-
culties; yet some results snall be indicated for comparative
purposes. Jewell (1980) calculates a minimum herd of 44
cattle and 100 smallstock for a family with 8 members to
subsist on livestock. Dahl and Hjort (1976) estimate a mini-
mal requirement of 67 cattle to feed 5 adult equivalents
throughout a year. A more sophisticated calculation by Kjarby
assuming high market integration and including terms of trade
for grain and livetock comes to 46 head of cattle for 7 adult
equivalents (Kjarby, 1979). While Mukogodo households paral-
lel the above figures for household or family size, it is
only the very rich that reach the calculated thresholds. If
we suppose that every of the 1,400 household in Mukogodo
would reach the minimum threshold indicated by Kjarby, the
area would have to support about 45,000 LSU or roughly the
double of the current livestock population. This number is

quite obviously beyond the carrying capacity of the area,
even under optimistic assumptions.
The quintessence of these calculations is that a majority of
Mukogodo households was left with insufficient herds after
the drought of 1984 and that therefore other incomes are of
paramount importance for the physical and social reproduction
of most households.

Before looking at the structure of today's herds, it is
interesting to have a closer look at the cattle losses in
1984 and at the rate of post-drought recovery. Data on the
sample are presented in Table 5.

TABLE 5: Losses in the 1984 drought and drought recovery.
Cattle only. Percentages

	Rich	Medium	Poor
Losses in 1984	-72	-81	-86
Recovery 1985-87	+110	+73	+61
Current nrs vs. predrought nrs.	-42	-68	-77

While rich households suffered smaller losses due to higher
mobility and better treatment of diseases in the drought,
they also recovered more quickly although not even they have
reached the predrought level again. On the other hand, recov-
ery of poor household has been very slow, reflecting high
cash needs even in more favourable years. Generally then, the
gap between rich and poor has been widening since the drought
despite three years with favourable rainfall.

4.2.4. Cattle herd structures
The following discussion is restricted to a discussion of
cattle herds. As several researchers have noted over the last
years, smallstock flock structures are difficult to collect
(McCabe, 1985; Wienpahl, 1984). Data on these are not yet
available. The following table presents the age and sex
breakdown of the cattle herds of the sample households as
recorded in June/July 1987.

TABLE 6: Cattle herd structures according to wealth strata.
A comparison of Mukogodo and Kajiado 1)

	Rich		Medium		Poor	
	Muk	Kaj	Muk	Kaj	Muk	Kaj
Males						
Calves	17.0	6.9	16.8	10.4	8.3	8.4
Immature steers	9.3		2.6		---	
Immature bulls	1.5		1.7		8.3	
Young steers		11.2		7.1		11.4
Immature steers		10.0		4.2		4.2
Oxen	3.4	1.9	.8	3.0	---	.5
Bulls	3.8	5.0	4.3	6.3	---	5.7
Total Males	39.0	35.0	26.6	31.0	16.6	30.2
Females						
Calves	14.4	9.3	17.6	10.8	29.0	10.7
Heifers	10.6	19.9	9.7	23.5	8.3	18.4
Cows	34.4	35.8	46.0	34.7	45.9	40.7
Total females	59.4	65.0	73.3	69.0	83.2	69.8

1) Source King et al., 1984

The table shows the distortions one could expect from a total
herd divided into small units and in a post-drought situa-
tion. Whereas the percentage of females of rich households
falls roughly within the normal pattern, medium and poor
households keep a very high number of females. The low pro-
portion of heifers is another post-drought characteristic and
a consequence of almost total calf mortality in the last
drought. A preliminary look at the age of cows suggests a
rather young average age, older animals having been culled in
1984.
Medium households dispose of their male offspring at an early
age, largely to richer producers. These animals show up as a
higher proportion of immature steers and oxen in the herds of
rich households. The rich households are able to keep a num-
ber of immature steers to the age of oxen, which fetch a pro-
portionally higher price than immature steers. Poor house-
holds have a comparatively higher proportion of immature
bulls as they try to keep at least one such animal, usually
with the intention to breed a working bull. These are
virtually absent in small herds. The number of breeding bulls
is rather low. Formal borrowing of bulls is however rare.
Many small owners just seem to rely on the mixing of herds
while out for grazing; future data will show whether this
practice results in a lower calving rate.

4.2.5. Pastoral labour inputs

Here, quantitative data are not yet available. It will also
have to be seen how for herding arrangements change with the
seasons. Given the small size of most herds, cattle of one
boma are usually combined for grazing. In most cases the
herder is a young boy, but quite a few medium and poor house-
holds leave cattle unherded if pasture conditions around the
boma are fair enough. The animals are just let out or brought
to a good spot nearby and then left to themselves.
Calves are herded seperately only by medium and rich house-
holds. The others either leave the calves to graze around the
boma or send them out with the smallstock. Smallstock are
always herded, but goats and sheep are never separated.
Again, herdsboys or -girls are very young, in many cases
restricting the possible movement. Young smallstock are just
kept around the boma and occasionally controlled by who-ever
is present. While cattle are often moved to temporary grazing
camps in the dry season, only few rich households can afford
to split dry and milking herds or to run goats and sheep
separately. In comparison to other pastoral systems, the
sophistication of herding management is low and declines with
wealth. The data being collected will allow to determine
whether this affects milk yields, calf growth and mortali-
ties.

A more detailled study of labour management and recruitment
of the different wealth ranks is still under way; yet some
general remarks are already possible. As has been demon-
strated for other pastoral groups (Sperling, 1984), house-
holds very often lack the necessary labour for specific
tasks, especially early or late in their domestic cycle. Like
elsewhere, the possibility to "borrow" a child exists in
Mukogodo, but it occurs rarely. Equally, hiring of a salaried
herdsman or -boy is only done by a few very rich households
that are engaged in cattle trade as well as production. This
is strong contrast to the upsurge in salaried labour in other
pastoral societies, e.g. among Galole Orma (Ensminger, 1984).
Generally then, labour problems are solved by combining
labour and livestock from households within one boma, while
other ways of recruiting labour are rare. This is true for
herding and also for other tasks, like fencing bomas. In
comparison to other areas, children engaged in herding are
younger and it is more common that household heads or wives
do herding labour.

4.3. Non-livestock income

Given the limitations of pastoral production and the distri-
bution of stock holdings, it is evident that other incomes
are essential for most households to supplement proceeds from
the herds.

4.3.1. Other local income generation

Even rich households engage in a variety of income-generating
activities, although they are clearly less dependent on them
than the rest of the population. Even the rich however feel
that it is a time to build up herds and so to restrict volun-
tary offtake if possible.

Charcoaling is definitely a poor peoples' activity. It is
moreover restricted to the area around Doldol and along the
road from Doldol to Nanyuki. While men may help to prepare a
kiln, it is mainly a female activity. Kilns are small and
often made from one tree; they yield 1.5 to 2 bags, that
currently sell for 30/- ksh per bag.

More widespread, both geographically and through wealth
strata is the brewing of beer (made from honey and/or sugar,
and spiced with roots from an aloe species) and the distill-
ing of liquor (made from fermented whole grain maize and
sugar). People are naturally reluctant to talk about these
illegal activities, but there is a considerable number of
poor households for whom the profit from brewing is the main-
stay of the budget.

In at least two of the five iloshon, there exists a tradition
of beekeeping, which is however associated with "Dorobo"
status. Data collection on this important side line is
however still under way.

Both poor and medium households (and both men and women)
engage in petty trade. One possibility is acting as a middle-
man in the trade of smallstock skins, mainly in the areas
more distant from the small centers of Doldol and Kimanjo.
The price the middlemen pay to the original sellers (always
the wives in this case) is about 3-4 sh below what shopkeep-
ers in the centers offer. The middlemen on the other hand get
a slightly higher "wholesaler" price from the shopkeepers,
allowing them to make a profit of about 7-10 sh per skin.
Other petty trade is less regular and is done as the
opportunity arises, like bringing tobacco or miraa or
saltlick from a trip to Nanyuki that was made for other
reasons. Here again, margins are very small, even for miraa.

4.3.2. Local jobs

Apart from the jobs in the administration, opportunities for
permanent wage labour are very limited. Moreover, not many
Mukogodo residents qualify for more than manual jobs within
government. Most locally employed people are in the adminis-
trative police, in MOTC or Forest Dept. jobs. The other local
jobs are with the missions and the few projects in Doldol.
A number of girls also work as maids in the houses of Doldol
employees, salaries being as low as Ksh 80/- per month plus
board.

Possibilities for casual work are equally limited and again
largely restricted to the centres of Doldol and Kimanjo.
These include digging latrines, loading and unloading of
lorries like those that come to collect sand in the dry

rivers in Mukogodo on an occasional contract when a building
is constructed.

4.3.3. Labour migration

Given the small livestock numbers and the limitations on
other income generation within Mukogodo it is obvious that
labour migration has become of major importance, especially
since the droughts of 1980 and 1984. Both more permanent
migration involving whole households and the migration of
individual members of households exist.

The scale of permanent migration can provisionally be gauged
from a survey of the member-lists of group ranches. The
proportion of medium term absentees has been calculated at
27%, ranging from 16% to 38% of registered members.
The scale of individual migration emerges from the sample and
the basic survey. In the sample, only 5 of 34 households do
not have a core member or a close agnatic relative (father,
brother) who is working downcountry. Of the household heads
of resident households, 27% are absent for work. This figure
does not include younger, unmarried men who are also away in
large numbers.

Of the recorded absentee household heads, 55% work in ranches
and farms within Laikipia District. There are clear streams
of labour migration. People from the southeast prefer ranches
near Timau (one of which has an offshoot in Coast Province
with a sizeable Mukogodo group), those from the center are
found in ranches towards Nanyuki while from the west, most
are around Rumuruti.
Of the 45% working outside Laikipia District, there is still
a large number in ranches around Naivasha, an association
that goes back into the 50s and 60s. Only a small fraction of
household heads are employed as watchmen and in other urban
jobs.
Most popular, decently paid and secure are the jobs in the
army, the stocktheft unit and the police. It is mainly these
employees who are able to remit sums regularly and in amounts
that occasionally allow substantial investments (like build-
ing a mabati-roofed house) or a significant herd build-up.
Ranch wages are usually not sufficient for this purpose. Re-
mittances to poor and medium households in the sample are
invariably used for food, clothes, school fees and other
pressing necessities.

4.4. Dependency relations and clientship

From the fact that a large proportion of households is poor,
one might expect widespread dependency relations or client
relations to richer households. Traditional forms do exist,
like giving out milking stock (nkilipat) or giving out stock

to look after, where the receiver has full usufruct of the
nerd and can expect a gift after a long relation (aitaaki).
By looking at the sample however, the more formal nkilipat
and aitaaki relations are much less frequent than informants
usually maintain. Within the sample cattle herd of 382 head,
there are only 12 cattle taken in as aitaaki and 1 given out.
All cases involve brothers and fathers and sons. In the same
nerd, 2 cows are given out for nkilipat and 3 are received.
Again the relations involve close agnatic and affinal kin.

More informal are relations where a poor household shares the
boma with somebody better off, whereby the clients perform
all kinds of tasks against unspecified "help", e.g. the
patron helping by paying the expenses of a circumcision
ceremony, or by just giving surplus milk to the client house-
hold. These relations are difficult to grasp as they are
couched in an egalitarian kinship idiom that obscures the
inequality involved. This is one of the research domains
where only longterm participant observation will allow to
gauge the quality of the dependency relation.
Finally there is the outright charity involving both kin and
more distantly related people. Destitutes might just been
given a goat to sell or the wife of a poor neighbour might
receive milk more or less regularly.

The relatively low frequency of dependency relations may also
be related to the fact that the number of households who can
afford to give out e.g. a milking cow has become very small.
But it also seems that both sides tend to shun longterm
involvements with open-ended conditions only loosely defined
by tradition. While the dependents usually complain that they
are constantly called up for the more onerous tasks (like
searching for a lost goat), the patrons complain about the
the never-ending demands for help, both for daily necessities
and special occasions like marriages, circumcision ceremonies
etc.
In contrast, a salaried job involves clear-cut expectations
on the part of the employer and provides a steady and fore-
seeable cash income that can be deployed independently.
Further investigations are however needed to determine
whether the traditional social security networks are being
replaced by labour migration.

5. Conclusions

Data presented so far show that due to a long history of
enclosure, the density of both human and livestock
populations is high compared to areas with similar climatic
conditions and production systems. Although quantification is
difficult, it is quite clear that it is impossible to support
the current population on a purely pastoral basis.

Although the the Mukogodo population is generally poor, both
absolutely and in comparison to other pastoralists, the dis-
tribution of the main form of wealth, livestock, is highly
skewed and has become more so over the last decade. While
still over 95% of Mukogodo households engages in pastoral
production, their stake in this sector is differentiating.

Rich households have been least affected by the heavy
droughts of 1981 and 1984 and have recovered more quickly.
For this recovery, they have profited from an incipient
stratification of production. Thereby, poor and medium house-
holds have transferred (by sale or exchange) male and occa-
sionally even female immatures to the richer households, who
are able to grow them to maturity or at least fatten them
before sale.

Poor but also medium households on the other hand have become
increasingly dependent on non-livestock income in order to
conserve or increase their small herds. This income is earned
by engaging in charcoaling, brewing or petty trade, but more
importantly by labour migration which is widespread and has
dramatically increased after the drought of 1984. Due to the
late arrival and inadequacy of educational facilities, a
large number of migrants are employed in low-salaried ranch
jobs that only allow for limited remittances. While some
medium households are able from time to time to reinvest
remittances into livestock, poor households rarely do so and
their herds tend to stagnate.

As the importance of non-pastoral income increases, there are
signs, especially among poor and very poor households, that
both the sophistication of livestock management and the
intensity of labour input into pastoral pusuits declines.
Further research must show whether this results in a lower
productivity of small herds (despite higher labour input per
LSU compared to big herds) and therefore lower returns for
the household. This decline can only be compensated for by
even more non-livestock income, or as it occurs, by selling
off the herd. Already, remittances from wage labour and
returns from charcoaling and illegal brewing dominate in the
budgets of a good part of poor and very poor families.

On the communal level, the absence of a quarter of the house-
hold heads is already making communal decisionmaking and
resource management more difficult and may eventually
undermine both the social network still carrying very poor
households and the group ranch approach advocated by the
government.

It is to be expected that the next drought will entrench the
trends outlined so far. The development planning for Mukogodo
(and other pastoral areas) therefore has to cope with a situ-
ation of increasing divergence of strategies and interests
between wealth strata and will involve some thorny policy

decisions. Given the importance of non-livestock income, a
policy mainly aimed at the pastoral sector (e.g. upgrading of
breeds, tick control, water development, range management)
will not be able to decisively improve the lot of the poorer
half of the population for who pastoral production is more
and more a sideline. They might therefore stay away even from
activities where their cooperation is crucial, like in
efforts to improve range management.
On the other hand, interventions to create (or enhance) local
income earning activities in order to slow down permanent and
labour migration must be assessed against the ecological
costs of a growing number of households keeping marginal,
unproductive herds. Being poorly managed and almost station-
ary, these may in fact exacerbate the problems of overgrazing
and soil erosion already apparent today. It is hoped that the
ongoing research will provide the data necessary for the
careful evaluation of the the future impact of development
interventions and policy decisions.

Acknowledgements

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