

Land Loss and Livelihoods

The effects of eviction on pastoralists moved from the Mkomazi Game Reserve, Tanzania.

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Abstract

The recent history of East African pastoralism is dominated by land loss. Much is written about it, but the attention focuses on the injustices and politics of loss; this risks obscuring the mechanisms people use to overcome adversity. Little research has explored the detail of change to livelihoods consequent upon eviction from land. Pastoralism has long proven precarious, but pastoralists had strategies to cope with difficult circumstances. Catalogues of loss may overshadow the resilience that characterizes pastoralists' livelihoods.

In 1988, the government of Tanzania evicted the inhabitants of the Mkomazi Game Reserve. This thesis examines the effects of eviction on the pastoralists who had lived inside the Reserve. It shows that Mkomazi's pastures were becoming increasingly important to pastoralists from several ethnic groups before the Reserve was established. Afterwards residence by some pastoralists continued, but government officials were unable to control illegal use by others. Stock populations grew, and the Reserve became important for the livestock economy.

The evictions displaced thousands of people whose distribution was mapped from a survey of sibilings. Evicted pastoralists dominate the populations of pastoralists who still live near the Reserve. A household survey conducted among the evictees shows that where herds have declined some families have become more dependent on farming and women's income. There is little to suggest that those evicted have gone to the towns. The effects of eviction are also visible in local livestock markets records, and its consequences are apparent in records of local opposition to the moves.

At Mkomazi the changes to livelihoods, and the long record of resistance to conservation policies, demonstrate considerable tenacity. By documenting the losses, and the responses to them, this thesis describes how impoverishment is challenged by the resolve of those dealing with unwelcome change.

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Abbreviations

AAME - Average Adult Male Equivalent
 APO - Assistant Political Officer
 BMR - Basic Metabolic Rates
 CID - Criminal Investigation Department
 CS - Chief Secretary
 DC - District Commissioner
 DFID - Department for International Development
 DO - District Officer
 DVO - District Veterinary Officer
 FAO - Food and Agriculture Organisation
 GAWPT - George Adamson Wildlife Preservation Trust
 IIED - International Institute for Environment and Development
 ILCA - International Livestock Centre for Africa
 Ksh - Kenyan Shillings
 KWLF - Kisiwani Ward Livestock File
 LU - Livestock Unit
 MGR - Mkomazi Game Reserve
 NCA - Ngorongoro Conservation Area
 NGO - Non governmental organisation
 ODA - Overseas Development Association
 PC - Provincial Commissioner
 PO - Political Officer
 PRA - Participatory Rural Appraisal
 PRO - Public Records Office
 PS - Principal Secretary
 PVO - Provincial Veterinary Officer
 RAE - Reference Adult Equivalent
 RC - Regional Commissioner
 RGS - Royal Geographical Society
 RH - Rhodes House, Oxford University
 SHL - Seeley History Library, Cambridge University
 SPSS - Statistics Package for Social Sciences
 SRF - Systematic Reconnaissance Flight
 SSU - Standard Stock Unit
 TF/GAAWPT - Tony Fitzjohn/George Adamson African Wildlife Preservation Trust
 TLMC - Tanzania Livestock Marketing Corporation
 TLU - Tropical Livestock Unit
 TNA - Tanzanian National Archives
 TPL - Tanganyika/Tanzania Packers Ltd
 TRA - Tanga Regional Archives
 TWPT - Tanzanian Wildlife Preservation Trust
 Tzsh - Tanzanian Shillings

UNICEF - United Nations Fund for Children

UNSO - United Nations Sudano-sahelian Office

UNU - United Nations University

URT - United Republic of Tanzania

WCMD - Wildlife Conservation and Management Department

WHO - World Health Organisation

WWF - World Wide Fund for Nature

Explanatory note on terms used

Quotations are given in the original language and translated in foot notes. All translations are my own, unless otherwise stated. In the main body of the text I have used a number of Swahili terms. These are:

mji - town

kijiji (pl: *vijiji*) - village

kitongoji (pl: *vitongoji*) - sub village

boma - compound

balozi - sub-village leader

I also sometimes refer to '*enkang*', which is the Maa word for households, '*enkaji*', which means sub-households, and '*murran*', which means men of the warrior age-group. Occasionally ethnic groups are prefixed with 'Wa', which means 'people' in Swahili, viz Pare becomes Wapare; Parakuyo, Waparakuyo etc. I have not used this prefix in the text, but it is used in some quotations. Similarly languages are sometimes prefixed with 'ki', the Pare language becoming Kipare and Swahili, Kiswahili. Again I have not used this notation but it is found in some texts.

The word 'Mkomazi' means 'source of water'. It was first, and still is, the name of a village on the banks of a river found in a dry area between the South Pare and Usambara mountains; I refer to this place as 'Mkomazi village'. The village named 'Kisiwani' is known as 'Kiswani' in South Pare. For consistency with maps and other documents we use 'Kisiwani'. I refer to two places called Kisima, one is a pastoral settlement in Lushoto District, the other a site inside Mkomazi Game Reserve.

Control over wildlife resources is split between different authorities. Tanzania's National Parks are administered by a parastatal, the Tanzania National Parks. Game Reserves and

Game Controlled Areas are controlled by the Department of Wildlife. This was called the Wildlife Division during the research period and I refer to it as such here. Both Tanzania National Parks and the Department of Wildlife are under of the Ministry of Tourism, Natural Resources and the Environment. Forest Reserves, another category of Protected Area, are controlled by the Department of Forestry, which is under the same Ministry.

Controls over Game Reserves have changed hands between central offices in Dar es Salaam and the Regions. Game Reserves were administered by the Department of Wildlife until the early 1970s when control over them was passed down to Regional authorities under decentralisation. Central control was reinstated in many Reserves in the late 1980s because of perceived inadequacies in their management under Regional Offices. Mkomazi Game Reserve is run by the Department of Wildlife as a National Project with the Manager reporting to central offices in Dar es Salaam.

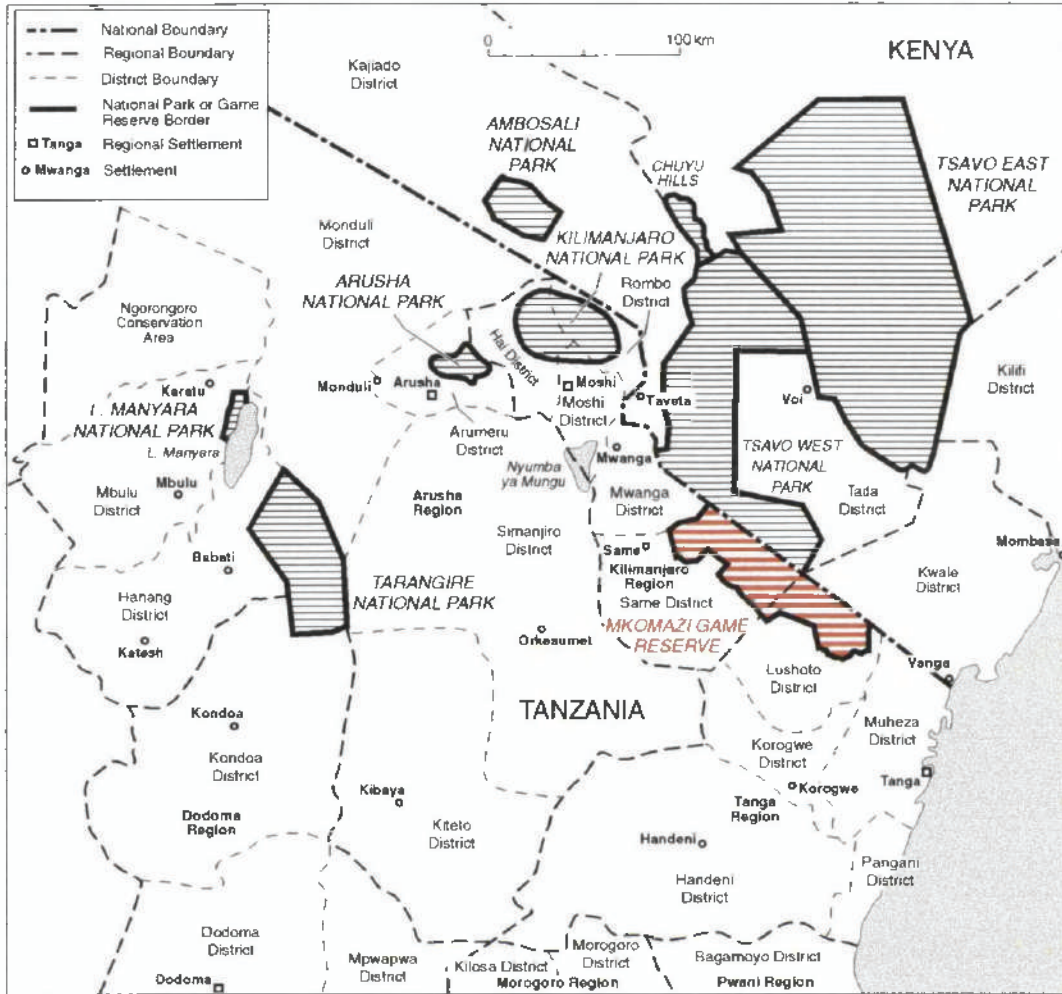
Tanzania has a strong system of local government. The country is split into Regions, and these into Districts, then Divisions, Wards, Villages, Sub-villages and finally 10-cell groups. All rural settlements do not have official village status: some are classified as sub-villages. Final authority rests in Regional headquarters with the Regional Commissioner. Much of the business of local government is done in the Districts by the District Commissioner and District Executive Director. Districts collect taxes, with which they fund some of their activities.

Mkomazi Game Reserve is found in Same and Lushoto Districts of Kilimanjaro and Tanga regions respectively. It is also bordered by Mwanga District to the north-west and Muheza District to the south-east. There have been numerous changes to these administrative boundaries. Lushoto District originally comprised present day Lushoto, Same and Mwanga Districts and was part of Tanga Province. In 1928 divided it into Lushoto and Pare Districts. In 1962, after independence, Provinces became known as Regions. In 1963 Pare District became part of the newly created Kilimanjaro Region. In 1978 Pare District was split into Mwanga District and Same District.

Maps showing the places referred to in this thesis are attached in the pocket at the back of the document. The maps are not referred to specifically in the text but may be helpful for general clarification.

People's names used in the examples have been changed.

Map P.1: The location of Mkomazi Game Reserve



Preface

In 1988 the last remaining residents of Mkomazi Game Reserve were evicted by the Wildlife Division of the Tanzanian Government¹. The moves had taken several years to complete and many more to set in motion. They were the culmination of long-running conflicts between residents and wildlife officials.

This thesis attempts to assess the impacts of eviction on pastoralists who were among Mkomazi's former users. It is a study of impoverishment following sudden and extensive loss of land.

Land dispossession has been a pre-eminent theme of recent East African history, yet we are rarely familiar with the detail of the consequent changes. People's predicaments, their responses and the wider economic effects tend to be blurred. Mkomazi is distinguished from other situations in that it has been possible here to measure and document the impact of eviction in greater detail than before.

The insights into the detail of changes from these particular circumstances may be relatively new. In other ways they are familiar, and part of an older story than land loss. This study is essentially about resilience and tenacity in the face of unwelcome change, and of adaptation and resistance to its imposition.

Introduction to Mkomazi

Mkomazi is located in north east Tanzania. It occupies 3,214 km² of Same and Lushoto Districts, in Kilimanjaro and Tanga Regions respectively (see Map P.1). When it was set up in 1951, continued residence was permitted to a small number of Parakuyo pastoralists who were living there. Residence and stock numbers increased steadily for the next thirty five years, notwithstanding opposition from wildlife officials. Eventually the Wildlife

¹ Mkomazi Game Reserve is subsequently referred to as 'Mkomazi', 'the Game Reserve', or 'the Reserve'.

Division decided to evict all pastoralists in order to restore the integrity of the Reserve as a wilderness. Operations to evict pastoralists began in the second half of the 1980s and by July 1988 they were complete².

Mkomazi is largely composed of semi-arid grass and bushland with some prominent hills³. It is bordered to the south and west by the Pare and Usambara mountains which rise steeply just beyond its boundaries (Map P.2). The area is mostly inhabited by the Pare and Sambaa people who have long histories of residence; Kamba, Maasai and Parakuyo peoples form significant minorities⁴. These peoples have pursued a variety of livelihoods, ranging from cultivation to hunting and honey-gathering to pastoralism.

The Reserve is a dry area with little natural permanent water⁵. Its main users have therefore been pastoralists, hunters and honey gatherers. Pastoralists of several ethnic groups dominated the users of the Reserve when it was established, and other pastoralists and agro-pastoralists subsequently lobbied to gain access for their herds. Resident stock populations grew considerably during the first few decades of the Reserve's existence, and came to dominate its pastures.

In dry areas like Mkomazi, herds require access to widespread resources to survive drought and to prosper in good years⁶. But since eviction, legal resource use has been limited to the narrow band of land between the Pare and Usambara mountains and the border of the Reserve. Law-abiding herders now face the choice of severely curtailing their herding practices or else moving themselves or their stock elsewhere. Others risk fines and stock confiscation by grazing inside the Reserve. The constraints on resource use mean that the evictions have greatly affected pastoralists; possibly more than any other identifiable category of people.

² URT GD/18/R/8/246. Director of Wildlife to the George Adamson Wildlife Preservation Trust, 10/10/88.

³ Anstey, 1955; Harris, 1972: 8-12; 43-67.

⁴ Kimambo, 1969; Feierman, 1974.

⁵ Harris, 1972: 13-25.

⁶ Behnke and Scoones, 1993: 12-17; Scoones, 1992: 304-7.

The organisation of this thesis

In chapter one I review work concerned with early records of change in East African pastoral society and on interactions between pastoralists and their neighbours. I then examine more recent responses to land loss, impoverishment, and conservation policies in chapter one. In chapter two I present my methods.

The central work of this thesis falls into three parts. Chapters three and four give an account of the development of herding patterns before eviction. Chapter five considers what livelihoods are like now. Chapters six and seven ask how pastoral livelihoods and the pastoral economy have changed because of eviction.

In conclusion I summarise my findings about the consequences of eviction for pastoralists at Mkomazi. I then examine the implications of these findings for our understanding of pastoral response to change. Finally I consider what this suggests about the way forced displacement is evaluated.

Chapter One

Responses to Impoverishment

In this chapter I review the historical responses of pastoral societies to impoverishment during the last century. I then give a brief outline of land loss in Tanzania and consider its present day importance to rural people. I discuss research on responses to land loss experienced under colonial rule and since Independence; the consequences of conservation policies on pastoralists and the responses observed to impoverishment following drought and war. Finally I set the Mkomazi case study in the context of this previous work and specify the issues that I will address in this thesis.

Introduction

Ideas about changes in pastoral society need to take account of two broad areas of scholarship. First, pastoralists form fluid and variable societies, and much has been written about their dynamics. As the evictions caused change, so I consider their impact in the light of these accounts. I focus particularly on Maa-speaking pastoralists who are prominent amongst those evicted from Mkomazi.

Second, these evictions are some of the latest in a long series of land losses experienced by pastoralists and other groups. There are many other cases where pastoralists have lost land to Protected Areas in other parts of Tanzania, East Africa and the continent as a whole. They have also forfeited land and resources to other causes, such as to settlers, government agricultural schemes, wars, regional conflict, development projects and droughts. Many other groups apart from pastoralists have been dispossessed or impoverished by these forces. Some were also dispossessed by pastoralists themselves. In the nineteenth century Maasai herders raided and invaded the lands of other groups to

expand their herds and pastures. Recently in Kenya thousands of 'non-Maasai' families have been evicted from some 'Maasai' lands following political and ethnic conflict over resources¹. I will consider the experience of evictions at Mkomazi in comparison with some of these other experiences.

Dynamics of pastoral society

Loss and impoverishment have been frequent occurrences in East African societies². People lived with the continual spectre of hunger from drought, diseases or conflict; families had to deal with these risks as well as pursue prosperity. They achieved this principally through ties of trade, exchange and kinship or friendship with groups following different livelihoods³.

Specialised pastoral groups were dependent upon more agricultural peoples for food, especially during the dry season and they acquired cultivated products through trade⁴. Pastoral patterns of transhumance or nomadism not only meant moving livestock to the remaining water and grazing in the dry season, but also moving closer to agriculturalists with whom trade for foodstuffs was possible⁵. At Mkomazi, trade between Maa-speakers and the Gweno people of the north Pare mountains is said to have replenished the latter's stock at the end of the nineteenth century⁶. Other goods were also important. Pare smiths were exchanging iron for livestock with Maasai pastoralists at Makanya during the middle of the eighteenth century⁷.

¹ Dietz, 1996: 7-10; Galaty, 1993c: 4, 6, 8.

² Waller, 1985a: 353; Sobania, 1993: 116; Hogg, 1980: 309; Iliffe, 1979: 13; Turton, 1977: 284; Fratkin, 1991: 8-9.

³ Histories of pastoral societies, and particularly Maa-speakers, contain numerous accounts and case studies of this. See Waller, 1976: 353, 357; 1979: 277-304, 320-352, 361-369; 1984: 252; 1985a: 353-4; 1985b: 83-94; 1993: 226; Galaty, 1993a: 185-90; Sobania, 1988a: 45-6; 1988b: 222-3; 1990: 7-9; 1993: 116; Anderson, 1988: 242, 250; 1989: 85, 88; Spear 1993a: 124, 131; 1993b: 4, 7-8, 12-3; 1997: 7, 52; Berntsen, 1976: 3-5, 6-7; 1979b: 109-110; 1980: 4; Broch-Due, 1990: 148, 154; Bonte and Galaty, 1991: 17-8; Conte, 1996: 103; Anderson and Johnson, 1988: 7; Lamprey and Waller, 1990: 24; Turnbull, 1973: 96-7, 102-6, 162, 279-80; Iliffe, 1979: 20; Turton and Turton, 1984: 184-9; Lamphear, 1993.

⁴ Bonte and Galaty, 1991: 15; Kenyatta, 1953 (1938): 68; Marris and Somerset: 1971, 23-47; Johnston, 1886: 407, quoted in Waller, 1985b: 115.

⁵ Berntsen, 1976: 1; 1979a: 18.

⁶ Kimambo, 1969: 177

⁷ Kimambo, 1991: 25; Kimambo, 1969: 21-22

As Maa-speaking pastoralists spread further west in greater numbers in the nineteenth century trade between the groups grew and other markets were set up between Mwanga and Same⁸. Feierman records a number of 'Kwavi' settlements north and south of the Usambara mountains which were regular stopping and trading places for coastal caravans⁹.

Provision of meals was the responsibility of women, and they traded with their neighbours to gain food for their households¹⁰. Women from agricultural groups played a similar role in their societies¹¹. Women's trade was facilitated by their safety from attack even when there were hostilities between groups¹².

Extended dry seasons, drought or stock disease could bring greater dependence upon agricultural neighbours¹³. For example, the rinderpest epidemic that struck East Africa in the early 1891 decimated herds and, in combination with other diseases, droughts and disruption caused widespread distress¹⁴. In such situations pastoral families would seek out their allies and relations in neighbouring communities for help and protection. They would adopt these livelihoods and become farmers or hunter-gatherers, or would leave children under their allies care for redemption later¹⁵.

Poverty also came through loss of stock and lands because of raiding and conquest by their neighbours. In the last century, one of the more sustained series of conquests in this area was known as the '*Iloikop* wars' and involved a series of raids and battles between Maa-speaking pastoralists. Some of the vanquished groups moved elsewhere, others simply ceased to exist, their members dispersed and were absorbed into the societies of

⁸ Kimambo, 1991: 25

⁹ Feierman, 1974: 124-5

¹⁰ Waller, 1979: 338, 347-8; 1985a: 360; 1985b: 101; 1993: 228; Berntsen, 1979b: 122-123; Talle, 1988: 65.

¹¹ Berntsen, 1979b: 122-123; House-Midamba, 1995: 86; Baumann, 1891: 108, 116 cited in Moore, 1986: 32.

¹² Thomson, 1885: 93, 178 cited in Waller 1979: 348; Marris and Somerset, 1971: 33 footnote 1.

¹³ Kimambo, 1969: 177.

¹⁴ Pankhurst and Johnson, 1988: 48-57; Waller, 1988.

¹⁵ Waller 1988: 94-101.

their conquerors or neighbours¹⁶. The networks of support and exchange that ensured mutual survival in times of hardship could also be used by people who had been displaced and dispossessed by fighting. Although these mechanisms ensured personal survival, they conceal many stories of personal tragedy and broken families¹⁷.

In the most serious disasters, the relationships of mutual support that constituted the fabric of these societies could break down¹⁸. In such situations, refugees were numerous and could be vulnerable; some were sold into slavery by those from whom they sought protection¹⁹. In the disasters that struck at the turn of the century some people sought help and employment in the nascent urban areas of Kenya²⁰. During these times the mechanisms of mutual support could fail; the consequences were widespread death and considerable dislocation²¹.

These relationships were not only a form of insurance. In happier times they served to enhance prosperity²². Agriculturalists and hunters were able to use links with pastoralists to trade and invest in livestock; pastoralists were able to use the extra labour that agriculturalists offered. The prosperity could result from favourable environmental conditions, trade, or raiding²³. The same links could afford access to pastures and cattle camps, and allow people, if they so desired, to turn or return to more pastoral lifestyles. The populations following different livelihoods fluctuated according to circumstance and economic status.

¹⁶ *Iloikop* wars see Waller, 1979: 305-318; 1985b: 114-117; Berntsen, 1979a: 47-48; Galaty, 1982: 10. Raiding see Sobania, 1993: 116; Spear, 1993a: 124-5; Spear, 1997: 43-4; Galaty, 1991: 192-5; Berntsen, 1979a: 136-9, 143; Getachev, 1996: 111. Raids also allowed the first European cattle farmers to build up their herds, see Newland, 1908: 265.

¹⁷ Waller, 1988: footnotes 17 and 83;

¹⁸ Waller, 1985a: 353; 1988, 104, 106; Lamprey and Waller, 1990: 24.

¹⁹ Waller, 1988: 96-8. Berntsen, 1979a: 138-9.

²⁰ Waller, 1976: 537; 1988: 100-1.

²¹ Waller, 1988: 103-5; Berntsen, 1979a: 282-4.

²² Sobania 1993: 116.

²³ Anderson, 1988: 250; Spear 1993, 129; Berntsen, 1976: 5; 1979b: 109; Sobania 1988a: 55. Waller, 1976: 550 and 552 details some of the raids that the Maasai conducted on behalf of the British which allowed them to build up their stock.

The economic connections operated in a context of variable and flexible ethnicity²⁴. Intermarriage and changing livelihoods meant that it was possible for people to become members of other societies. Ethnic identity was mutable²⁵.

The imposition of European control changed the dynamics of ethnic shifting. The colonial administrations perceived ethnic groups and their territories as distinct, and sought to divide each 'people' to its own land. Access to certain areas became dependent upon the group to which one was defined as belonging²⁶.

This conception of society, although inaccurate, took root. It was adopted and employed by African subjects to their own ends as they sought to exclude or allow people into certain areas²⁷. The current exclusiveness that characterises 'tribalism' in East Africa is a relatively recent phenomenon in ethnic relations. It is partly the product of contests between people who have found that access to resources had become intimately tied to claims to a particular ethnic identity²⁸.

Fixed boundaries did not preclude changing identities, but the state became included in their negotiation. The history of Mkomazi is infused with just such contests between local groups and the state, about who was who, and who had access to where²⁹. These contests took place against a background of continual movement of individuals between groups and identities.

Ethnic shifting remains a current reality, as Kiwasila described for societies around Mkomazi:

²⁴ Galaty, 1993a: 174-8; Waller and Sobania, 1994: 55-56; Fratkin, 1991: 19-25. Cf Turton, 1985: 338 for a contemporary example.

²⁵ Galaty, 1982: 13; Waller, 1985: 349; Spencer, 1997: 208.

²⁶ Sobania, 1988b: 227; 1990: 11-12.

²⁷ Iliffe, 1979: 324; Waller, 1984: 243; Waller and Sobania, 1994: 59.

²⁸ Waller, 1993: 236.

²⁹ Chapters three and four below.

‘... kuna Warangi waliamua kuwa Wamasai ... wakatoboa masikio, kuvaa lubega na kuwa wa mila hiyo. Vile vile Wapare na Wasambaa walifanya hivyo ... Wanawake wa Ki-pare na Ki-sambaa walioolewa na Parakuyo walivaa kama wale wa Ki-Parakuyo. ... Wapo ambao wameishi katika maeneo waliyohamia kwa muda mrefu bila kurudi makwao wakaamua kuchukua kabila la hapo. ... (B)aadhi ya wenyeji hao wao walituambia ya kuwa aidha wao ni Wapare (akiwa Msambaa au Mbughu) au ni Msambaa (akiwa Mkamba au Mpare).’³⁰

Society in East Africa was thus composed of complex congeries of different occupations and ethnic affiliations, mutually dependent upon each other. The varied environment of plains, hills, mountains, forests, lakes and valleys were each conducive to different modes of life, but each had limitations that necessitated dependence or predation on the other areas and the groups therein³¹. Movement between groups was not completely free and resorting to some occupations prejudiced, or influenced future trajectories³². Overall however, the consequence of individual and collective mobility was stronger bonds and alliances between groups³³.

As environmental change and social fluctuation have been the norm, in no sense have pastoral livelihoods been secure or stable³⁴. They thrived in conjunction with agricultural societies and made sense only as part of a wider, less pastoral whole³⁵. In this context it is necessary to offer two caveats to the material I present here. First, it is not a lament for a lost era, for pastoralism has always been precarious. The issue here is to document the

³⁰ There are Rangi people who decided to become Maasai ... they pierced their ears, wore the clothes and took on the customs. Likewise there are Pare and Sambaa people who did this also ... Pare and Sambaa women were married to Parakuyo people and took Parakuyo dress. ... There are some who have lived in an area to which they moved a long time ago without returning home and who have decided to adopt the local customs. ... residents of some areas would tell us variously that they were Pare, even if they were Sambaa or Mbugu, or that they were Sambaa, even if they were Kamba or Pare. (Kiwasila, 1998: no page numbers given).

³¹ Berntsen, 1976: 1; Waller, 1985a: 348, 365.

³² Adams and Anderson, 1988: 534.

³³ Waller, 1979: 321.

³⁴ Ogot, 1968: 131-33; Sutton, 1993: 49-59.

³⁵ Berntsen, 1979b: 109; Bonté and Galaty, 1991: 11.

nature of the changes and to assess the extent to which they can be attributed to eviction from the Reserve.

Second, the interconnectedness between pastoralism and other livelihoods may make it questionable to focus on impacts on pastoralism alone. This thesis, however, is not a general assessment of the impacts of eviction on all people connected to Mkomazi. It is still necessary to study instances of loss to one particular livelihood. It is largely through studying such losses that the flexibility of East African society has come to be understood. Livestock ownership is still an important measure of wealth and well-being and Mkomazi's rangelands were particularly important to pastoralists. It is therefore important to consider how pastoralists have been affected by their loss.

Land loss

Evictions of rural people from large areas of land have been a frequent occurrence in East Africa. They have dominated the region's history during this century. Writings about the current fortunes of pastoralists have routinely observed for some time that their pastures have diminished considerably through dispossession³⁶.

There are two forms of pressure on rangelands: first, there is direct dispossession by the state or private organisations, generally for use in large-scale farms or protected for conservation purposes; second, agricultural use by smallholders, some of whom are pastoralists, others who are immigrant agriculturalists and who may themselves have been evicted or excluded from their agricultural areas. The latter can be a relatively gradual process of evolution of land use. The former is relatively sudden and, where large areas are involved, can require large numbers of people to move or adapt their livelihoods.

³⁶ Arhem, 1986: 241-2; Horowitz and Little, 1987: 61, 75; Galaty and Bonté, 1991: 284; Galaty *et al* 1994: 9; Dahl and Hjort, 1979: 6; Campbell, 1993: 263-70; Galaty, 1994: 111-7; Fratkin, 1997: 236; Fratkin and Sher-Mei Wu, 1997; Ndagala, 1990: 52-3; 1992a: 82-3; Bonfiglioli, 1992; Igoe and Brockington, forthcoming.

Map 1.1: Protected Areas in Kenya and Tanzania (Does not include forest reserves)



Note: Marine Parks and Forest Reserves are not shown. Newly gazetted areas around Katavi also omitted. Together with the protected areas shown, these add up to >25% of Tanzania's land surface area. Source: Homewood, 1995, Wildlife Section Review, Task Force 1995

Patterns of large-scale land alienation of pastoral rangelands have differed in Kenya and Tanzania. In Kenya some of the most extensive areas of settler land were alienated before World War II, and much of the Protected Area land was alienated shortly after it. I will not detail the history of land alienation in Kenya but note in passing that the main concentrations of white settlement were established following the two 'Maasai moves' of 1904 and 1911. It is not clear how many people or livestock were involved in the first. In the second over 10,000 people, 200,000 cattle and 550,000 sheep were moved from the Northern Reserve (Laikipia) to an extended Southern Reserve³⁷. It was unsuccessfully contested by some Maasai elders in court³⁸. The Kenyan Land Commission of 1933 divided areas of the country into tribal reserves which could not be alienated, and Crown Land, which could. National Parks were set up on the latter. In Kenya they began in 1946 with the creation of Nairobi National Park. One of the largest gazettelements of land for conservation was the establishment of the Tsavo National Parks in 1948 which now join onto Mkomazi Game Reserve (see Map 1.1).

In Tanzania most of the alienation of rangelands has happened later. Relatively little land was alienated for agriculture before Independence³⁹. Since Independence, and particularly since the mid 1980s, the rate of land alienation for agriculture has increased. For Protected Areas the pattern is similar. They were well established by the British authorities with the creation of numerous Game Reserves and the Serengeti National Park. Following Independence, and in contrast to Kenya, alienation of land for conservation areas has continued apace (Table 1.1). Lands gazetted as Game Reserves, Forest Reserves or National Parks are now extensive. In all these areas residence is illegal and in total 25% of Tanzania's land is prohibited to human habitation⁴⁰. Since the data in Table 1.1 were compiled, plans have been finalised to gazette more land as National

³⁷ Sandford, 1919: 36. The number of sheep was thought to be a gross underestimate, other figures suggested 2,000,000 (Sandford, 1919: 32). Goats are not mentioned.

³⁸ Civil Case 91 of 1912, High Court of East Africa at Mombasa. Full details of proceedings are available in Sandford, 1919, Appendix 3: 186-222.

³⁹ URT, 1994: 13. British Authorities alienated 3.5 million acres in 35 years. This represents 1.5% of Tanzania's land (URT, 1994: 8, 14).

⁴⁰ Wildlife Sector Review Task Force, 1995: 20.

Table 1.1: Game Reserves and National Parks in Tanzania

Year	Reserve	Park	Area/km ²
1922	Selous	-	50,000
1928	Ngorongoro	1959*	8,292
1929	Serengeti	1951	14,763
1943	Gombe streams	1968	52
1951	Mkomazi	-	3,234
1951	Rungwa	-	9,000
1951	Ruaha	1964	10,380
1953	Arusaha	1960	137
1956	Kilimanjaro	1973	756
1957	Lake Manyara	1960	330
1959	Biharamulo	-	1,300
1962	Maswa	-	2,200
1964		Mikumi	3,230
1965	Ugalla	-	5,000
1965	Rubundo Is.	1977	450
1968	Saadani	-	300
1967	Tarangire	1970	2,600
1971	Uwanda	-	5,000
1971	Katavi	1974	2,253
1972	Burigi	-	2,200
1974	Ibanda	-	200
1974	Rumanyika	-	800
1980		Mahale Mountains	1,577
1981	Moyowosi	-	6,000
1982/70	Kizigo	-	4,000
1983	Kigosi	-	7,000
1992		Udzungwa	1,900
1994	Saa Nane	-	0.5
1994	Grumeti	-	2,000
1994	Ikorongo	-	3,000
1994	Kijereshi	-	300
1994	Muhesi	-	2,000
1994	Pande Forest	-	12
	Total area	-	150,575

After Wildlife Sector Review Force, 1995: 20-21.

* Became the Ngorongoro Conservation Area (NCA) and residence continued by pastoralists.

Parks or Game Reserves. These include the Rukwa National Park (about 4,000 km²); Katavi National Park (about 3,000 km²) and the Usangu Game Reserve (about 1,000km²)⁴¹. Creation of these areas collectively entails the displacement of thousands of people.

Dispossession for conservation is a major cause of land alienation in Tanzania⁴². Other causes include state enterprises, such as the ranching or agricultural parastatals. In addition, since the mid 1980s, new economic policies have made land alienation easier and more profitable for private and foreign investors. By the end of the 1980s the pressures on rural land had become so great, and the legislation and regulations governing land alienation so confused, that in 1990 a Presidential Commission of Inquiry into Land Matters⁴³ was set up. Its Chairman reported that :

‘The Land Commission received overwhelming evidence showing large-scale encroachment of customary individual land and village lands by parastatals, District Development Corporations (and) state organs such as the army, prisons, national service, parks and reserves. The story is varied, details are different but the theme is the same. Village and rural folks holding land under customary tenure have no security. Their lands are under constant threat of alienation by state organs ostensibly for ‘national projects’ or in the ‘public interest’ but very often in favour of high and middle echelons of the bureaucracy or well-connected ‘outsiders’⁴⁴.

Land loss then is a pressing issue for all rural people, not just pastoralists, in Tanzania and East Africa as a whole. Yet most of the attention on cases of land loss have focused on the fact, injustice or illegality of the dispossession and on the

⁴¹ Krischke pers. comm. November 1996; Hartley pers. comm. Feb 1997.

⁴² McCabe *et al*, 1992: 354.

⁴³ Hereafter ‘Land Commission’.

⁴⁴ Shivji, 1995: 10-11.

politics of disputes involved. There are few studies, in Tanzania at least, which detail the anatomy of the effects of sudden land alienation on the people evicted.

The impacts of land loss

Research on the consequences of land loss can be grouped into three types: studies of sudden large-scale alienation for agriculture; studies of numerous smaller but collectively serious land alienations, and alienation for conservation purposes. I include with the latter studies of conservation policies which permit people's residence, but restrict their land use.

Within these studies I discuss a number of themes which are useful for placing Mkomazi within the rest of the literature on land loss and pastoral impoverishment. These are:

1. The negotiations and contests between rural groups and the organisations alienating the land.
2. The size and significance of the pastures taken.
3. The synergistic consequences of combinations of land alienation, livestock disease, drought and other influences.
4. The consequences of land loss on livelihoods and coping strategies.

Sudden large-scale land alienation for agriculture

In Tanzania, there are two well known studies of large-scale alienation of pastoral land for agriculture: the Barabaig land losses and the Meru Land Case.

The effect of land losses on the Barabaig have been well documented by Kjaerby and Lane⁴⁵. They have lost large areas of land to wheat, bean farmers, and more than 100,000

⁴⁵ Kjaerby, 1979; Lane 1996.

acres of their productive wet season pastures to a Canadian-sponsored wheat growing scheme run by the National Food Corporation of Tanzania⁴⁶.

Kjaerby has documented how the gradual build up of pressure on Barabaig lands has progressively constrained their land use⁴⁷. He noted that many Barabaig now cultivate in order to reduce the sale of their cattle, or in order to ensure that they have sufficient food⁴⁸. This has caused problems for the household division of labour and restricts the mobility of herds and hence also their productivity⁴⁹.

Lane has described the importance of the lost pastures for the Barabaig herding strategies and land management. The alienated lands were highly nutritious wet season pastures which enabled stock to recover their health after the rigours of the dry season⁵⁰. Without these pastures livestock productivity declines. This concurs with other research on grazing and health patterns in wild and domestic animals⁵¹. Lane's informants estimated that one third of their cattle died between 1981 and 1987 as a result of land loss to the wheat schemes⁵². Cattle productivity also declined but no more details are given⁵³. Rather anomalously, he records that the average herd size of the Barabaig has increased in the long run⁵⁴. Without knowing more about trends in differentiation of livestock holdings or human migration from the area it is hard to interpret these data.

Barabaig resistance to the alienations has taken their representatives to Canada, to protest at the consequences of aid policies, and to court, to contest the legality of their eviction⁵⁵.

⁴⁶ Kjaerby, 1979: 31-4; Lane and Moorehead, 1995: 124. The Land Commission reports that in 1991 Lane estimated the acreage involved to be 70,000 acres (URT, 1993: 16). The difference is in part made up by the farms of individuals which have grown up in the area around the wheat scheme.

⁴⁷ Kjaerby, 1979: 42-5.

⁴⁸ Kjaerby, 1979: 47-8.

⁴⁹ Kjaerby, 1979: 48

⁵⁰ Lane, 1996: 109, 114.

⁵¹ Homewood and Rodgers, 1991: 182-3.

⁵² Lane, 1996: 161.

⁵³ Lane, 1996: 161.

⁵⁴ Lane, 1996: 47.

⁵⁵ Lane, 1996: 165-75.

Their case was thrown out on a technicality, but the Barabaig have appealed, and the case is still *sub judice*⁵⁶. In Tanzania such legal action against the state by rural groups is rare. Their action is part of a growing resistance by some rural people to state policies. This is especially true of pastoralists among who there are many local non-governmental organisations (NGO) campaigning for their rights as 'indigenous peoples'. The politics of these movements are coming to dominate the forms, and mediation, of resistance to land alienation⁵⁷.

The Meru Land Case, which occurred just after World War II, is perhaps the most famous case of land alienation in Tanzania. It involved the alienation of 2 farms from the Meru people for settlers in the heavily contested lands surrounding Mt Meru.

The alienations removed several thousand hectares of fertile land, and approximately 3,000 people, 7,700 cattle and 5,500 smallstock were moved⁵⁸. The effects were undoubtedly severe, but attention has focused on the political implications of the action, and of resistance to it. The Meru brought the case before the United Nations with momentous implications for resistance and opposition to colonial rule in Tanganyika.

Much has been written about the agricultural adaptations of the Arusha and Meru living on Mt Meru in response to land shortage, but relatively little has been said about how the Meru coped materially with the loss of these particular lands⁵⁹. Perhaps the greatest detail has been provided by the Meru themselves who documented some of the economic impacts of eviction. In a statement to the East African Royal Commission in 1953, Meru leaders reported that the lost land was vital grazing for livestock of families living higher up the mountain. The animals on these pastures were an important source of milk and

⁵⁶ Lane, 1996: 166, 168-9.

⁵⁷ Igoe forthcoming, Rogers, forthcoming.

⁵⁸ Official and local estimates vary. Spear (1997: 222) reports that the British authorities stated that 1000 people, 440 cattle and 1,200 smallstock were moved. He also notes that local estimates were considerably higher. They claimed that 2,993 people were evicted (*ibid*: 225). Luanda (1986: 305, footnote 3) cites evidence in favour of the latter. He reports that the Northern Province Settlement Committee recorded the figures cited above. A similar number of people were reported there by the Sub-Committee of the Land Settlement Board (*ibid*: 268, footnote 5).

⁵⁹ Luanda 1986; Gulliver 1961 and Spear 1997 amongst others.

butter which had been readily and cheaply available. After eviction the local price of butter rose from Tzsh 1/- per pound to between Tzsh 3/40 and Tzsh 4/50⁶⁰.

The leaders do not go into more detail about the coping strategies that the Meru adopted to deal with the changes. They do however give a good impression of the severity of the dislocation:

“The Meru that were removed from thence (the farms) are greatly afflicted by famine. Some have no cattle - they have been completely ruined. Other have been dispersed hither and thither; some into Maasai country, others have returned to Meru to live with their neighbours. Others again have gone in the direction of South Meru and Mbuguni and Karangai, which is an area heavily infested with mosquitoes and having a climate which does not agree with them.”⁶¹

Land alienation was an essential aspect of the shortages that people experienced, but the consequences were, for the large part, felt indirectly. It constrained the growing populations of the mountains and fixed the environment in which people had to adapt rather than causing displacement outright. The issue of social change in response to shortage of resources is well travelled ground, and not quite the same as issues of change following forced removal⁶².

Synergistic effects of small-scale land loss

Most of the literature on land loss refers to piece-meal loss of individually small, but collectively significant, alienations. These may be less monolithic than the sudden

⁶⁰ PRO CO 892/10/2 Memoranda from the public to the Royal Commission: Europeans in Tanganyika. This document was written by G.Sablak, President of the Meru Cooperative Union, Raphael Mbise, Vice President of the Meru Constitution and Ndetauliwa Sablak, Secretary of the same on 15/5/1953. It is attached to H.A.Fosbrooke's submission; parentheses added.

⁶¹ *ibid.*

⁶² I refer to debates surrounding Malthus' ideas on population growth (Malthus, 1796 {1798}), Boserup's work on agricultural change (Boserup, 1965; 1981), and Richard's work on agricultural innovation (Richards, 1983; 1985).

loss of large areas, but are often particularly damaging because they involve the wetter lands, and the key dry season resources, which make it possible to keep herds on these rangelands.

Much attention has focused on changes in Kajiado and Narok Districts in Kenya, where alienation follows the sub-division and privatisation of land in Group Ranches. Numerous pockets of land are being converted to agriculture, or cordoned off as private ranches, by Group Ranch members and immigrants.

The emphasis of research here has been on the changes to grazing and migration patterns that result. Initially, Group Ranches did little to obstruct large-scale migration patterns⁶³. Pastoralists were able to move far when they needed to, such as during drought⁶⁴. Current concern is focused on the privatisation of key resources to individuals. This offers the prospect of landowners denying neighbours access to their areas while continuing to exploit the remaining communal land⁶⁵.

The privatisation of small plots of land in Kajiado has occurred in conjunction with a considerable increase in the amount of land used for agriculture. This is not entirely the same thing as land alienation. On many occasions cultivation is initiated by residents, or they may sponsor the residence of agricultural friends and relatives in their area. The decisions not to use land for pastoralism can therefore be more locally based. Yet in general the effect is the same for livestock. Access to pastures and to key dry season grazing resources is reduced.

The privatisation of key dry season resources poses a new threat to pastoral migration patterns and cultivators. The pressures on resources, and the ethnic nature of Kenyan politics have combined, such that immigrant cultivators are being driven off their land⁶⁶.

⁶³ Galaty, 1980: 169

⁶⁴ Grandin *et al*, 1989: 251-55.

⁶⁵ Campbell, 1993: 263.

⁶⁶ Dietz, 1996: 7-10; Campbell, 1993: 267.

Pastoralists who have been unable to privatise a section of the land face the prospect of continued use of the wet season pastures but with increasing difficulty in reaching dry season resources, without which pastoral practice is impossible⁶⁷. This is the reverse of the problem faced by the Barabaig, and several Ngorongoro communities, where herders lost access to nutritious wet season resources but kept control of the dry season areas fundamental to any livelihood.

Detailed studies of how pastoralists are coping with these changes are less frequent. In part, the growth of agriculture is both a cause and an effect of the limits placed on pastoralism. Families turn to agriculture because their herds can no longer support them. Bekure *et al* suggest that in the mid 1980s much of the cultivation was an expedient to allow herds to recover, and much of the agricultural labour was hired by pastoral families⁶⁸. Southgate and Hulme report that since then agricultural land and output have increased enormously in Kajiado District. More of the cultivation is now being done by pastoralists themselves⁶⁹.

In Tanzania, pressures on rangelands have accelerated since the late 1980s. Little has been written about the problems faced there. The most recent and detailed account is provided by Igoe and examines alienation of rangeland for private farmers in Simanjiro District⁷⁰. He shows how piecemeal land alienation for large-scale farms combines with changing land use for farming or mining, and loss of land to tsetse infestation, to force a change in the grazing patterns practised by pastoralists resident there.

The study provides in-depth insights into the synergistic effects of land loss on the grazing patterns in particular villages and neighbouring communities, and detailed evidence of qualitative change in livelihoods that has resulted. Many families are turning to agriculture, and the use of water and grazing patterns has been disrupted.

⁶⁷ Southgate and Hulme 1996: 13.

⁶⁸ Bekure et al, 1991: 36.

⁶⁹ Southgate and Hulme, 1996: 16-8.

⁷⁰ Igoe and Brockington, forthcoming; Igoe forthcoming.

Once again local opposition to land alienation is considerable. The pressures on land have fuelled the development of local NGOs whose resistance takes the form of legal actions challenging the legitimacy of the alienations. Some of these have been successful, others are pending⁷¹.

Land loss and conservation

The impact of conservation policy on rural people has caused considerable concern in some circles⁷². In particular the impact of Protected Areas on pastoralists, especially Maasai pastoralists, is a *cause célèbre* amongst anthropologists and conservationists⁷³. The most detailed data come from the Ngorongoro Conservation Area, in Tanzania, which was established in conjunction with the Serengeti National Park⁷⁴. At least 1,000 Maasai pastoralists, 25,000 cattle and 23,000 small stock and donkeys were excluded from the Park and moved to the Conservation Area in 1959⁷⁵. Here they have been allowed to continue residence, but have subsequently lost access to areas around Olduvai Gorge, and important dry season pasture within the Ngorongoro, Olmoti and Empakaai Craters, and the forest reserve. These areas comprise over 940km² of the 8,292km² Conservation Area⁷⁶. They also face restrictions on rangeland burning and, until recently, the practice of agriculture⁷⁷. Promises to provide grain storage facilities, or improve veterinary services, which were made when the Conservation Area was established, were not fulfilled for many years⁷⁸.

With restrictions on agriculture, pastoralists at Ngorongoro were required for a long time to depend entirely upon livestock. Yet the productivity of their animals has suffered in a

⁷¹ Igoe and Brockington, forthcoming.

⁷² Turton, 1996: 109; 1985: 344; McCabe *et al.* 1992: 354; Anderson and Grove, 1987: 3.

⁷³ Collett, 1987; Brockington and Homewood, 1996; Enghoff, 1990; Deihl, 1985; Homewood, 1995: 335-6.

⁷⁴ Arhem, 1986; Homewood, Rodgers and Arhem, 1987; Homewood and Rodgers, 1991; McCabe *et al.*, 1999; Potkanski, 1997.

⁷⁵ Homewood and Rodgers, 1991: 71.

⁷⁶ Homewood and Rodgers, 1991: 182.

⁷⁷ Arhem, 1986: 246-7; Homewood and Rodgers, 1991: 73.

⁷⁸ Arhem, 1986: 247

number of ways. Livestock are now effectively excluded from the nutritious wet season grazing of the Salei plains by the growth of the wildebeest population of Serengeti National Park; the wildebeest breed on the Salei plains and their calves carry malignant catarrhal fever which is fatal to cattle. Since 1976 the wildebeest have been too numerous for the Maasai to risk using the plains⁷⁹. The restrictions on the plains are combined with a decline in the quality of the highland pastures which is probably the consequence of restrictions on burning⁸⁰. Problems with tick-borne fever have increased following the cessation of burning and due to lack of, and possibly rising resistance to, acaricides⁸¹.

It is difficult to say how or whether these problems have affected herd performance, for there is no baseline against which to compare recent data. Comparisons with other pastoralists in East Africa showed that calf mortality at a middle altitude site was high, as a result of tick-borne disease, but that milk yields were generally not lower than elsewhere⁸².

Stock populations at Ngorongoro have not risen since the 1960s, but human populations have more than doubled in the same period. The result is a decrease in the ratio of cattle to people. This, combined with the lower milk yields, increases dependence on grain relative to other pastoralists⁸³. The prohibition of agriculture meant that Ngorongoro pastoralists had to buy all their grain. This led to a high rate of offtake, indeed in the early 1980s it was unsustainably high⁸⁴. Pastoralists became increasingly reliant on smallstock, which breed more rapidly than cattle and provided a surer source of income⁸⁵. The relaxation of cultivation restrictions saw many turn to agriculture, not only to meet their immediate needs, but also to ensure that they would not have to sell stock⁸⁶.

⁷⁹ Potkanski, 1997: 48. The Maasai refer to this year as *Alari loo engati*: 'the Year of the Wildbeest'.

⁸⁰ Homewood and Rodgers, 1991: 108-110, 253-4.

⁸¹ Homewood and Rodgers, 1991: 134-5, 170-2; Waller and Homewood, 1997: 74.

⁸² Homewood and Rodgers, 1991: 168-172, 227-8.

⁸³ Homewood and Rodgers, 1991: 227-9

⁸⁴ Homewood and Rodgers, 1991: 167; McCabe *et al*, 1992: 358-9.

⁸⁵ Arhem, 1986: 247-8; Dahl and Hjort, 1976: 230-234.

⁸⁶ Potkanski, 1997: 79.

The information about Ngorongoro provides useful insights into pastoralists' adaptations to restrictions on their livelihoods, in the context of gradual decline of the sustenance available from livestock⁸⁷. It also concerns a slightly different type of impact from land alienation. The effects described above refer to a combination of practical and policy constraints on land use, rather than sudden land loss alone.

One of the more detailed political accounts of eviction in this region concerns the Maasai at Amboseli National Park in Kenya. This small (488 km²) National Park was gazetted in 1974 and vacated in 1977⁸⁸. Its size belies its importance, for it contains valuable water, dry season grazing and salt deposits. Indeed Amboseli was so important to Maasai pastoralists that some conservationists doubted it could ever be gazetted. One of the first Trustees of Kenya's National Parks wrote:

“The suggestion that National Reserves should become National Parks is to my mind fantastic. The Maasai are exceedingly touchy about one yard of their land being taken and to imagine that they could or would ever agree to Lake Amboseli and the Ngong Reserve being alienated to the Parks is wildest Utopia.”⁸⁹

The history of Amboseli National Park is a fiery one, with many conflicts between pastoralists, wildlife and Park officials⁹⁰. Attention has concentrated on the fact of the loss of grazing and water, the nature of pastoral land needs, the disputes and negotiations that have attended the Park's development, and the potential for compromise between conservation and local needs. However, the nature of the needs and the strategies that people adopted to cope with eviction from the Park have not been the subject of rigorous research.

⁸⁷ McCabe *et al.*, 1992: 362.

⁸⁸ Lindsay 1987: 156-8.

⁸⁹ Caldwell to Bates. PRO CO/822/314

⁹⁰ Western, 1994; Lindsay 1987.

In all this summary has shown that detailed knowledge about the consequences of displacement on pastoralists in this region is scarce. In particular there is little understanding about how people have coped with the changes brought to their lives by eviction from Protected Areas. This may be because government assessment reports have not found their way into the published literature. It may be because the issue was not properly investigated at the time.

Concern for the needs of people near Protected Areas is changing, as is apparent in a wealth of literature on 'Community Conservation'⁹¹. But they are also still not treated adequately in many proposed conservation projects. Turton, for example, has shown that plans for the Omo and Mago National Parks in Ethiopia by the Ethiopian Wildlife Conservation Organisation display as much disregard for the needs of the local Mursi in 1994 as they did in 1978⁹².

The situation partly reflects rural groups' political marginality. It is rarely important in political terms to pay attention to them. This does not mean that they do not vigorously resist the imposition of conservation measures. In the history of most conservation projects there are records of strong opposition to forced displacement or changes in land use. Igoe reports successful pastoral opposition to the establishment of a Conservation Area on the Simanjiro Plains⁹³. Less successfully, Maasai pastoralists have lobbied against their exclusion from the Serengeti, and Somali pastoralists resident in Nairobi National Park petitioned the King to protest against enforced stock reductions⁹⁴.

These aspects of the histories of most Protected Areas are rarely known. Often they can only be inferred from years of poaching and illegal incursion. The records largely remain to be found in the files of Protected Area authorities, conservation organisations and in

⁹¹ See Kiss, 1990; Wells, *et al* 1991; IIED, 1994; Western and Wright, 1994; Leader Williams *et al* 1994; ODA, 1996; Hartley, 1997; Hartley and Hunter, 1997; Homewood *et al*, 1997.

⁹² Turton, 1995: 32-6.

⁹³ Igoe and Brockington, forthcoming.

⁹⁴ RH: Mss. Afr.s.1237; PRO 533/551/2.

the local government offices. They have yet to make their way to the public domain. Just as the displaced people are marginal to the political processes involved in gazettelement, so their story is marginal to knowledge about Protected Areas.

There are also gradations of marginality within the displaced peoples. Among those affected by conservation policies, and land alienation generally, some groups have more negotiating power and are able to exert influence on the course of events. Shelter has shown that in the establishment of the Serengeti National Park, Maasai pastoralists were able to win more concessions, and attract more attention, from the British authorities than were other ethnic groups living to the west of the Park⁹⁵. The written record can be as silent about these groups as the official conservation records are about local people in general.

More general insights into responses to impoverishment

Detailed studies about change to pastoral livelihoods following dispossession are provided by Dahl and by Hogg's work on the Borana of Isiolo District in northern Kenya⁹⁶. Dahl describes how the Waso Borana lost much of their livestock during the *shifita* wars of the late 1960s and subsequent droughts in the 1970s⁹⁷. They also lost valuable camel pastures to Somali herdsmen. This impoverishment has combined with more general processes of modernisation, incorporation into the market economy and growth of wage labour to bring considerable change⁹⁸.

Dahl argues that loss of livestock has forced the poorer Borana out of a subsistence economy and made many dependent on wage labour and the sale of pastoral products⁹⁹. The increase in marketing is also a function of better access to markets, which has

⁹⁵ Shelter, forthcoming.

⁹⁶ Terminology is varied. Hogg refers to the same people as 'the Boran'. Dahl focuses on the case of the 'Waso Borana' (1979), who Spencer calls the 'Usao Booran' (1997).

⁹⁷ Dahl, 1979: 203; Hogg, 1980: 299, 301-4.

⁹⁸ Dahl, 1979: 255-6.

⁹⁹ Dahl, 1979: 204.

enabled poorer traders to market their own animals and cut out the middlemen, making trading more profitable¹⁰⁰.

Sales of animals, milk or butter are not sufficient to support poorer families who are also dependent upon wage labour. Hogg records that out-migration to seek work has grown rapidly since the Shifta wars and that between 1962 and 1969 there was a 240% increase (1,411 to 4,800) of Borana living outside their 'home' area, and a 450% increase of Borana living in Nairobi (194 to 1,062)¹⁰¹. He stated that most migrant labourers were men, and a significant proportion of them were bachelors who were earning enough money to get married. Dahl cites one situation where as few as 20% of the adult sons of one group of older Borana women are occupied with pastoralism; 73% have other occupations either within or outside the Isiolo District¹⁰². Favourite jobs are with the army or police, otherwise they seek jobs as herdsmen, agricultural workers or night watchmen.

Dahl records that stockless and poor families began cultivating on irrigation schemes¹⁰³. Hogg states that the trend is more general and argues that all but the very rich families valued the opportunity to cultivate maize to bolster food supplies and insure against possible misfortune. He also observed wealthy Borana investing in agriculture as a means of diversifying their livelihoods¹⁰⁴.

Dahl suggests that completely stockless families are likely to drift off permanently to the urban areas or to places where they can work on larger farms and plantations¹⁰⁵. Both authors note that in the towns there are a variety of activities which keep people alive. These include charcoal burning, selling *miraa* (a local stimulant), brewing beer, carpentry, ironworking or charity¹⁰⁶.

¹⁰⁰ Dahl, 1979: 205.

¹⁰¹ Hogg, 1980: 307-8.

¹⁰² Dahl, 1979: 212. Dahl does not say what the other 7% are doing, nor how large the sample was.

¹⁰³ Dahl, 1979: 213.

¹⁰⁴ Hogg, 1980: 307.

¹⁰⁵ Dahl, 1979: 213.

¹⁰⁶ Dahl, 1979: 251; Hogg, 308-9.

Dahl provides much detail on the strategies followed by women unable to depend on pastoralism. In rural areas single women maintain themselves through courtesanship or selling *miraa*¹⁰⁷. In urban areas they have more options. Formal or informal courtesanship is a possibility for younger, single women. Older women gather forest products or animal fodder, look after school children whose families live far away. Both old and young women trade¹⁰⁸. Women with families are charcoal burners, mat makers or basket weavers¹⁰⁹.

The impact of war and drought has been felt unequally. Wealthy families have not been so badly hit by the losses and have been able to build up their herds again. Poorer families have been pushed out of pastoralism. The differential fortunes of the Waso Borana have seen their society change from being generally prosperous and egalitarian to being stratified and unequal¹¹⁰.

Other work gives more general insights into the forces of impoverishment, and the way in which impoverishment both impinges on, and constrains, people's lives and yet is also a normal part of their experience, and integral to their history. Turton has written a series of papers on the changes to the Mursi of Ethiopia following long term climatic change, drought, war and the establishment of National Parks on Mursi territory¹¹¹. Migration and displacement are integral to the history of this people, and he sums up well the conditions that are both the dilemma and the norm for groups in this area:

‘They (the Mursi) see themselves as having made a journey, but the historical truth of the matter may be more accurately summed up by saying that a journey “made” them (Turton, 1979). By this we mean that Mursi

¹⁰⁷ Dahl, 1979: 218. The two are often associated (Hogg, 1980: 309).

¹⁰⁸ Hogg, 1980: 308.

¹⁰⁹ Dahl, 1979: 250-2.

¹¹⁰ Dahl, 1979: 255-6.

¹¹¹ Turton, 1977, 1985, 1987, 1988, 1995, 1996; Turton and Turton 1984.

society is the temporary outcome of a movement of cattle herding people, going far beyond the present day Mursi in both space and time and in the general direction of the Ethiopian highlands. Generated by ecological factors and, in particular, by the need to reduce the uncertainties of pastoral and agricultural production in an environment in which there is a wide range of fluctuations around mean conditions, this movement of herders into higher better watered land, unsuitable for cattle because of tsetse, gives rise, in the end, to new political and ethnic identities.¹¹²

As part of this experience involves confronting changes that pose problems and dealing with considerable difficulties. Turton argues that loss of territory and access to water have increased the Mursi livestock's exposure to tsetse fly and trypanosomiasis as stock are forced to trek through infected bush to reach water¹¹³. He also argues that the decline of flood retreat cultivation has made them more dependent on rain-fed agriculture¹¹⁴.

As with Lanes' work it is hard to provide statistical data that bears out the impact of these adversities on Mursi livelihoods. In particular, the statistics on changing cattle numbers are anomalous to the general pattern of marginalisation and impoverishment. The data Turton cites suggest that cattle populations have quadrupled between 1970 and 1994 whilst human populations have increased by only 10-20%¹¹⁵. Turton himself suggests that these data are suspect, particularly his own cattle population estimate of 1970. It is difficult to interpret these data without more detailed information.

Mkomazi in relation to previous land loss and impoverishment

I wish to situate the data on Mkomazi I present in this thesis in relation to the previous cases of land loss and impoverishment, using the themes outlined at the beginning of the section.

¹¹² Turton and Turton, 1984: 187. See also Turton, 1988; 1996: 105-6.

¹¹³ Turton, 1995: 30-1.

¹¹⁴ Turton, 1995: 13-4.

Negotiation and contest

In common with other Protected Areas, Mkomazi has long had a rich record of negotiation and compromise between conservationists, local villagers and the state. Currently Maasai and Parakuyo pastoralists at Mkomazi have joined their cause with the other pastoral NGOs, and indeed pastoral NGOs have sought out a constituency among displaced Maa-speaking pastoralists. These pastoralists are now contesting the legality of the evictions in court and are also seeking compensation for losses alleged to have been experienced as a result of eviction.

This however, is not the whole story. Mkomazi's history is characterised by silent or silenced groups who may well have had strong opinions and agendas, but of whom little is recorded. The debates about access to the Reserve reveal much about who has been listened to and noticed. In particular, Pare, Kamba and Sambaa pastoralists are not represented in these movements or in much of the national and international discourse that currently concerns the Reserve.

Size and significance of the lost pastures

Mkomazi is large. At 3,234 km² (323,400 ha) it is much larger than any of the recent cases of land loss to large-scale agriculture, although the loss was not as great as incurred during the Maasai moves or the establishment of the larger National Parks in Tanzania or Kenya.

The synergistic consequences of land loss

Mkomazi's rangelands were largely wet season pastures. Their loss is therefore likely to have a an effect on herd productivity comparable to that of the Barabaig alienations and the exclusion of livestock from the Salei plains in Ngorongoro.

¹¹⁵ Turton, 1995: 8, 30.

Eviction of people from Mkomazi was a single, monolithic land loss. Yet it has taken place in the context of more general land losses and pressures that are reminiscent of the synergistic consequences of piecemeal land alienation in Kenya. Igoe and I have previously argued that evictions from Mkomazi have increased the pressure on the remaining rangelands in this part of Tanzania. Similarly, the impact on pastoral families evicted from Mkomazi must be seen in the context of pressures in neighbouring Simanjiro District¹¹⁶.

The consequences of land loss on livelihoods

Eviction from Mkomazi has not stratified an egalitarian society, since pastoralists at Mkomazi were stratified before eviction. It does appear to have brought impoverishment and caused pastoralists to seek new livelihoods, although people were still able to provide for themselves during the times of good rainfall that I observed, and some were still relatively prosperous. Although impoverishment has occurred, it is not the whole story. This is a case of managing and adapting to change. The details of these adaptations are the subject of this thesis.

Goals of the thesis

The lack of attention to the specific changes brought about by land loss is, in part, because the general nature of the impoverishment is relatively obvious. With fewer livestock or land to rear them, pastoralists adopt other livelihoods and turn to farming or urban employment. There is little surprising here to explore. The fact of impoverishment and the injustices and politics of dispossession may be more important than its nature or consequences.

However there are dangers in focusing too much on the damage of dispossession. Bonfiglioli argues that pastoral societies are facing crises and rapid change, over which they have little control, and which leaves them marginalised, impoverished, destabilised

¹¹⁶ Igoe and Brockington, forthcoming.

and destitute. He argues that this reflects the cumulative effects of government policy, dependence on, and marginalisation by, the market economy, land loss and the effects of climate¹¹⁷. Although he notes that pastoralists 'show tremendous capacities in adapting themselves to changing social, ecological and economic circumstances' there is little indication in all this 'crisis-talk' as to how that is manifest¹¹⁸. The emphasis focuses on the ruin of traditional societies rather than their change.

At the other extreme there are those who disregard the changes to rural people following eviction for other reasons. They believe either that there is little significant change or else that it is unimportant. Hard-line conservationists are one such group, and at Mkomazi there are numerous examples of a lack of interest in the consequences of land alienation on rural groups.

There are, therefore, two reasons for presenting this thesis. The primary aim is to learn more about changes to pastoral livelihoods: to describe what these livelihoods are; to ascertain the extent to which they have changed recently as a result of eviction from the Reserve, and to consider how widespread such effects have been.

To this end I will address four tasks:

1. I will place pastoralism at Mkomazi in its historical and political context. I will detail the history of the plains around the Pare and Usambara mountains and document the gradual build up of livestock inside the Reserve. I will chart the development of conflicts and compromises that infuse the history of the plains before the Reserve was created and which result first in an increase of pastoralists in the Reserve and subsequently their eventual eviction.

¹¹⁷ Bonfiglioli, 1992: 1-17.

¹¹⁸ Bonfiglioli, 1992: 17.

2. I will examine the current livelihoods of former pastoralists. I will present data on the livelihoods of pastoralists at Mkomazi and will discuss the extent of their dependence on livestock, farming and other sources of income.
3. I will consider what aspects of current livelihoods can be attributed to changes consequent upon eviction, and examine resistance to eviction voiced by different groups.
4. I will examine the regional impacts of eviction. Here I will compare sales at livestock markets when the Reserve was grazed by pastoralists, with sales after livestock have left the area.

The second consideration motivating this thesis concerns the impacts of conservation policy on people. The circumstances of the study mean that this work is intimately connected with conservation and conservation policy. The situation at Mkomazi captures broader contradictions between conservation objectives in Africa and people's needs. It epitomises the tensions that characterise relationships between Protected Area authorities and their neighbours and former residents.

I have not attempted to offer recommendations for easing the conflict around Mkomazi. These have been suggested in more accessible works and on the basis of research upon a broader cross section of the community¹¹⁹. However the literature concerned with conflicts between conservation and local peoples' needs emphasises that, in part, reconciliation between them will be limited by the extent to which local peoples' points of view are appreciated¹²⁰. This will require the detailed studies and understanding that social science can afford¹²¹. By documenting some of the extent of the impacts of eviction on Mkomazi's pastoralists, this thesis attempts to make the kind of study that will be needed to assess the effects of conservation-induced displacement.

¹¹⁹ Homewood *et al* 1997; Rogers *et al* forthcoming.

¹²⁰ Murphree, 1996: 162; Western and Wright, 1994: 7; Wells *et al*: 63; IIED, 1994: 63-4; Homewood *et al*, 1997: 20-4; Waller and Homewood, 1997: 83 and endnote 72; Brockington and Homewood, 1996: 97; Adams and Thomas, 1996: 131-2; Anderson and Grove, 1987: 9.

¹²¹ Adams and Thomas, 1996: 140.

Chapter Two

Methods

In this chapter I outline the origins of this research. I then present the methods to achieve the tasks set out in chapter one and discuss the problems associated with them. Methods are grouped into three sections:

1. the survey of household economies;
2. demographic work, and
3. historical data.

Introduction

The research for this thesis was conducted as part of a project funded by the Department for International Development (DFID) called 'Researching Conservation with Development in East African Rangelands'¹. The research project was initiated following two requests. The first was made by leaders of a Royal Geographical Society (RGS) research team that was about to examine the ecology of the Reserve. They asked Prof. Homewood to undertake research examining the needs of people living near to the Reserve. The second, within two weeks of the first, was made by Saruni Ole Ngulay, the leader of a Maasai NGO called *Inyaat-e-Maa*, who was hoping to expand the organisation's operations from Simanjiro and Monduli to Mkomazi.

Control of resources is always contested and research on resource use therefore deals with sensitive political issues. This is particularly the case around Protected Areas where practices are additionally constrained by laws whose logic or benefits may not be

¹ The findings of the report are written up in Homewood, K, Kiwasila, H. and Brockington, D., 1997: 'Conservation with Development? The case of Mkomazi.' Report to the Department for International Development.

immediately apparent to the people most affected. At Mkomazi, things are worse because there has been considerable acrimony since the evictions. There are tensions both between the Government and local people and between different local groups themselves.

The requests for this research underline its political nature. On the one hand, in encouraging the RGS's work, the Wildlife Division was hoping to elevate the profile and status of Mkomazi from a relatively little known place to a Reserve of international importance. On the other, *Inyaat-e-Maa* which was working on issues of pastoralist land rights, wanted to build a constituency among dispossessed pastoralists at Mkomazi, and hoped that research might assist it.

In practice our project research was relatively distanced from both interests. We did not stay at the research camp inside the Reserve and we did not work through Maasai NGOs². Nonetheless the research process was, and still is, politically contested. The information we collected has been the subject of lobbying by conservationists, human rights activists, and different interest groups around the Reserve during its collection, processing and after its presentation. In particular, local people saw this project as an opportunity to emphasise how much they have been affected by current policies. They were aware that the output was to be sent to the government and seized the opportunity to voice their concerns. It is important to highlight this dimension of the work because this thesis seeks to examine how eviction from the Reserve has changed livelihoods. Given the context of the research it has been necessary to evaluate statements and claims about the past with the greatest possible care.

One of the principal differences of interest at Mkomazi was between the Pare and Maasai. Relations between livestock owners of this group are sometimes strained; Pare herders are often the victims of stock theft albeit conducted by alliances of Maasai and Pare youths. Two Maasai youths were killed in clashes arising from stock theft at Pangaro in

² *Inyaat-e-Maa* was scarcely active around the Reserve, the main force was another NGO called *Ilaramatek Lolkonerei*.

1994, and trouble flared up again there after the research was completed. There are also tensions when livestock graze on farms, and there have been numerous village government cases concerning this. In the course of the present work one youth was speared, and a herder shot with an arrow following one such conflict at Mkundi Mtae. There was potential for such conflict between Maa-speakers generally and their agro-pastoral neighbours. It undoubtedly occurred, but that between the Pare and the Maasai seemed the most severe.

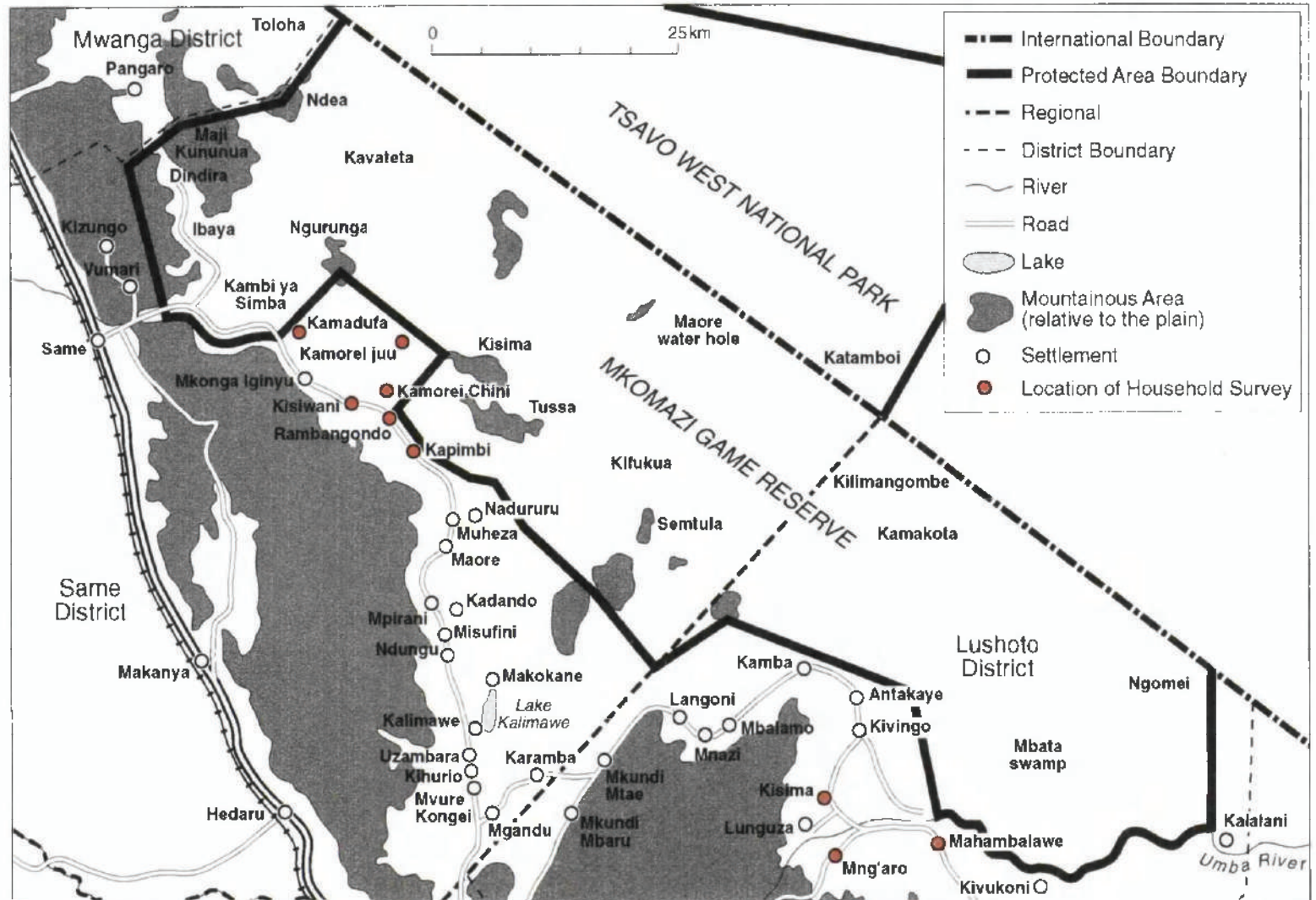
This research has most data on the Maa-speaking herders. This is for a number of reasons. First, the broader DFID research programme was, for practical and logistic reasons, divided between farming and pastoralist groups and largely between the Pare and Maasai/Parakuyo respectively. Second, the dominant group of pastoralists in the area were the closely related Maasai and Parakuyo people, and since this research concerned pastoralists, I focused on them. Third, the historical records focus on these two groups to the exclusion of others (see pages 67-9). Fourth, Maasai pastoralists dominate much of the literature about pastoralism in Tanzania and the emphasis has been carried over into this research. I am grateful to my colleague Hilda Kiwasila for emphasizing and elucidating the importance of Pare needs and those of other ethnic groups throughout this research project.

The survey of livelihoods

Selection of the sample

I first visited Mkomazi in 1994 for a pilot study and I traveled the perimeter of the Reserve recording the current locations of Maasai and Parakuyo pastoralists. Ms Kiwasila conducted a series of Participatory Rural Appraisals around the perimeter of the Reserve from Vumari (near Same) to Mnazi. We found pastoralists living in every settlement and

Map 2.1: The location of research activity



grazing needs identified as pressing issues in all villages close to the Reserve³. This endorsed previous findings⁴.

Following the pilot study work I selected two villages, Kisiwani, in Same District, and Mng'aro in Lushoto, where I planned to conduct my household survey. I chose them as they provided possible contrasts in livelihoods. Kisiwani, in Same District, is particularly constrained by the proximity of the Reserve borders, but around Mn'garo, in Lushoto District, there is slightly more room (Map 2.1). It later emerged that the two places also have different histories of pastoral presence and resource use.

To select the households for the survey I first identified places where pastoralists were concentrated. In Tanzania, villages (Swahili: *kijiji* singular, *vijiji* plural) are divided into sub-villages (Swahili: *kitongoji* singular, *vitongoji* plural). Pastoralists tended to live separately from the rest of the village in their own *vitongoji*, that was often some distance from the main concentration of settlement.

Pastoral *vitongoji* are not ethnically diverse. Different ethnic groups tend to live in different *vitongoji*. In Lushoto District where I worked in the three *vitongoji* closest to Mng'aro, these were Mazinde, Mahambalawe (both *vitongoji* of Mn'garo) and Kisima, a *kitongoji* of Lunguza. These were not Pare or Sambia pastoral *vitongoji*, which were further west near Mnazi, their residents were only Maasai and Parakuyo. At Kisiwani I worked in five *vitongoji*: Kamadufa, Kamorei Chini, Kamorei Juu, Rambangondo and Kapimbi. Kamorei Juu was exclusively the home to Pare pastoralists.

In both study sites I also administered the survey with Sambia and Pare agro-pastoralists who lived in the main villages. These data have generally not been presented here as these pastoralists were not, nor had been, users of the Reserve. However the survey work with

³ Homewood *et al*, 1997: 29-35.

⁴ Zachariah, 1990: 57-63.

them, and subsequent discussions, have informed my understanding of pastoralism and relations between pastoral groups in the area.

I met with leaders (Swahili: *balozi*) of the pastoral *vitongoji* to introduce the work and to identify suitable households for the survey work. Through these leaders I was introduced to the people living in the pastoral sub-villages either in group meetings or individually. Households were selected on a stratified-random basis within each *kitongoji* thus: the *balozi* listed the households of their survey and grouped them into different wealth categories according to divisions that they felt appropriate. We then selected families within those categories randomly. The number of families selected in each category was proportional to the size of that category within each *kitongoji*.

Random selection was constrained by practical considerations. We could not start work with families who were sick, nor if they did not want to take part in the survey. We also deliberately avoided surveying the household of the leader of the Maasai NGO *Ilaramatek Lolkonerei*, to avoid being too closely associated with him. On other occasions it proved advantageous to work with the household of the *balozi*.

Type and level of data collection

At Mkomazi, Maa-speaking, and Pare Muslim, families usually consist of a man, his wives and other dependents. Each woman runs her own home (called sub-household here or *enkaji* in Maasai)⁵. Sometimes families are grouped in compounds (Swahili: *boma*, the term used here; Maasai *enkang*) which consist of several households sharing a common livestock enclosure, to which each family has a separate entrance⁶. Families who share a *boma* together are generally closely related, often they are brothers, or a man and his grown up sons. Sometimes more distant relations and friends will share too. Dependents found in a *boma* are generally also relatives too poor, or otherwise unable, to care for themselves.

⁵ Spencer, 1988: 12-3; Fosbrooke, 1948: 43-8.

⁶ Spencer, 1988: 12-3; Homewood and Rodgers, 1992: 35-8

Table 2.1: Outline of data collection: location and sample size

District	Village	<i>Kitongoji</i>	Number of <i>bomas</i>	Number of households	Number of sub-households
Lushoto	Mng'aro	Mahambalawe	8	10	42
		Mazinde	3	3	4
	Lunguza	Kisima	7	7	13
Same	Kisiwani	Kamadufa	5	6	11
		Kamorei chini	2	2	19
		Kamorei juu	4	4	5
		Rambangondo	6	16	22
		Kapimbi	3	4	32
Lushoto Total			18	20	59
Same Total			20	32	89
Overall Total			38	52	148

The economies of sub-households within a *boma* and within one family can be quite separate⁷. Indeed for a large number of rural African societies, the concepts of ‘family’ and ‘household’ are problematic when researching resource use and economies. The physical space of settlements, compounds and houses can conceal a complex web of overlapping, but distinct, consumption and production units. Those who co-operate to produce food or earn income, may not unite to share it, or have equal power over proceeds⁸. Although ‘households’ structure data collection they may have limited analytical use. It is important to be specific about which ‘units’ data were collected from, and which consumption and production units the data refer to.

Sample size and timing of data collection

In all, the main body of data presented here is derived from twenty households in Lushoto District and thirty two in Same District (Table 2.1). These were grouped into 38 *bomas* and contained 148 sub-households. Of the sample, the five households in Kamorei Juu were Pare pastoralists, the rest were Parakuyo and Maasai. All households had been present at Mkomazi at the time of eviction.

To collect the data I visited the households with my research assistant, Lobulu Sakita. Where possible we stayed overnight; sometimes we split up and interviewed different families. We interviewed people in the *boma* on a number of aspects of the sub-households and household economy. Interviews were conducted in Swahili, or in Maasai with translation into Swahili where necessary.

Families were visited five times in the course of the survey: in May, September and November of 1995 and February and May of 1996 in Lushoto, and in June, October, December 1995 and March and June 1996 in Same. The repeated surveys allowed me to see seasonal variations in livelihoods and household dynamics, to build up a large number

⁷ Fosbrooke, 1948: 43-8

⁸ Guyer, 1986: 93-5.

Table 2.2: Sub-household food and economic data

District	<i>Kitongoji</i>	No of sub-households	Total days of milk yields	Total days of dietary records	Total weeks of market activity	Total weeks of selling activity
Lushoto	Mahambalawe	42	180	171	146	146
	Mazinde	4	18	15	10	10
	Kisima	13	51	53	35	36
Same	Kamadufa	11	33	39	49	49
	Kamorei chini	19	78	71	81	81
	Kamorei juu	5	20	25	18	20
	Rambangondo	22	83	127	99	99
	Kapimbi	32	130	75	123	124
Lushoto Total			249	239	191	192
Same Total			344	337	369	373
Overall Total			593	576	560	565

Note that there are relatively fewer records monitoring market and selling activity in Lushoto District because that question was only asked four times.

There are differing totals for the two sets of data because there were different patterns of cooperation for the two activities. Women who cooked together did not necessarily buy food together. Alternatively a woman may have been away visiting one day (and so cooked nothing in the previous 24 hours) and yet be present to tell us of her week's market activity and sales when we visited the *boma*.

of observations and to check continually on impressions and ideas formed during the course of the research. The survey also helped me to get to know a number of families in different areas, and of different economic status. Through the relationships that I established as part of the survey I came to understand more about the history and nature of pastoral resource use and economy in the area. These formed the basis for later work collecting oral histories around the Reserve.

Sub-household data

Sub-household data were collected by talking to the women who were in charge of them. Sometimes tasks were delegated to children or relations. If so we interviewed the people who had carried them out. We collected data on:

Daily milk yields

These were collected by weighing milk in the mornings or evenings. These data do not monitor the total milk produced as I have not measured the milk taken by calves as have other studies⁹. This measure is not therefore a measure of cow productivity, but of human need and consumption. Occasionally it was not possible to stay at a *boma* for both milkings; if so we weighed volumes of water equivalent to the quantities women indicated had been taken that day. Altogether 593 days of data have been collected (Table 2.2).

Food prepared in the last 24 hours

We asked each woman what food she had prepared over the last 24 hours, how much was prepared, and who had eaten it¹⁰. Recall data are not always reliable and data on the quantities of food used are particularly suspect, although simpler diets are more likely to be accurately reported¹¹. To reduce inaccuracies, only the food frequency data, rather than the quantities involved have been analysed here. In addition large samples were collected

⁹ Homewood and Rodgers, 1991: 172-3; Grandin, 1988.

¹⁰ Cf Nestel, 1986: 6-7; Nestel, 1989: 17-19.

¹¹ Dangour, 1995: 19-23; Nestel, 1986: 6.

which made it easier to discern meaningful patterns, if any were to be found. In this study 576 days of data were collected (Table 2.2).

The frequency of the study visits was not sufficient to detect gradations of seasonal change in diet, but they were sufficiently spaced to allow seasonal contrasts to be drawn, should any occur. More importantly they allow comparison of the dietary outcomes of different households with varying reliance upon pastoralism and other livelihoods.

The previous market activity

Here I monitored two things: the week's expenditure by each woman at markets and the revenue from the previous week's sales of goods - firewood, milk and/or medicine - made by each woman, either at market or from her home. Data on the income generated by women were not collected in the first visit in Lushoto District. A full record, of five visits, exists for Same (Table 2.2). In all, the study sampled 560 weeks of market expenditure data, and 565 weeks of selling activities.

The repeat visits were too widely spaced to monitor all occurrences of sporadic or infrequent sales and buying by individual women. However by sampling many households it is possible to estimate the overall scale of women's income and expenditure and gain some idea of the different frequency of market activity for different groups. Averages from a large sample provide a representative picture of events in groups of sub-households.

Gifts that the woman had given or received in the last month

Gifts were monitored following Potkanski's observation that gifts were vital to the economy of sub-households of Ngorongoro and that many women depended on mutual aid for their food¹². In the course of this survey it rapidly became apparent that around Mkomazi women were rarely receiving such gifts and instead spoke only of more

¹² Potkanski, 1997: 86-91.

Box 2.1: Reference adult calculations

There are two means of calculating reference-adult-equivalent (RAE) membership of households. For constructing per capita livestock ratios I follow Grandin who used Michael Little's estimations of adult male = 1.0 RAE; adult female = 0.86 RAE; children 0-5 = 0.52 RAE; children 6-10 = 0.85 RAE and 11-15 = 0.96 RAE (ILCA 1981, quoted in Grandin, 1988: 4). This measure allows comparison with other studies which have adopted the procedure.

For food data however a different estimate needs to be used. There are some peculiarities in this means of calculating reference adults (for example an 11 year old girl counts for more than an adult woman). They also take no account of the weight of the people involved. For comparison of food needs I have followed Homewood (1992: 67) in order to standardize household energy needs in a way which is more sensitive to variations in weight and which is perhaps more suitable for smaller samples. The calculations for this took five stages:

1. The average weight of each person was calculated from the weight data. Where no weight data were available, weights were estimated from the average age and sex of similar individuals in the survey.
2. Estimate Basic Metabolic Rates (BMR) according to equations given by the World Health Organisation (WHO, 1985: 71).
3. Estimate energy requirements according to equations suggested by the WHO. They suggest that rural women in developing countries have energy needs of 1.76 x BMR; that men with moderate work loads have energy needs of 1.78 x BMR; that boys and girls with moderate activity budgets have energy needs of 2.5 and 2.2 x BMR respectively (WHO, 1985: 78, 96).
4. Energy needs were totaled per *enkaji* and per household.
5. These totals were divided by the energy needs of a 'reference-adult male', of 2,638 kcal per day.

These calculations are not adequate for evaluating nutritional status. However the purpose of the exercise was to render the energy needs of the households comparable with each other, as well as allowing comparison with other studies based on similar criteria. These data were not used to make any nutritional evaluation of pastoral households.

Table 2.3: Number of people present

District	Village	Kitongoji	Number of people
Lushoto	Mng'aro	Mahambalawe	182
		Mazinde	23
	Lunguza	Kisima	72
Same	Kisiwani	Kamadufa	43
		Kamorei chini	58
		Kamorei juu	41
		Rambangondo	129
		Kapimbi	91
Lushoto Total			275
Same Total			326
Overall Total			601

significant gifts of money, clothes or utensils made by relatives. Although that would be a significant finding in itself, I decided instead to use monthly recall to get records of these more infrequent and substantial gifts, as they provided useful information on the extent of pastoralists' social networks. To do this I used monthly recall (which is not an appropriate timespan monitoring small-scale gifts of food).

A list of all the dependents of the sub-household

This was used to calculate the number of reference adults in each home (Box 2.1) and was cross-checked with the information given by household heads. In all, 601 people were covered in the study (Table 2.3).

A stock register of all the livestock controlled by that sub-household

This was a list of named cows that was drawn up at the beginning of the survey for each household. Thereafter the fate, and current state, of each animal was recorded in each visit. This technique is used to monitor cattle fertility and mortality although, for logistical reasons, it has to be a relatively small sample. Data was collected on 778 cattle (Table 2.4). Animals need to be followed for some time to build up a large body of data on fertility rates and patterns of offtake. However we did find the register useful as a means of cross-checking the sales reported to us by household heads. The livestock registers were only conducted with the Maasai and Parakuyo families as we found that the Pare herders did not name their animals.

Cattle histories of the named cows of the stock register

Cattle histories were established by talking to the women who were responsible for the animals. They were sometimes also collected with the help of the household heads, according to his ability, inclination, or presence. They were used to establish fertility and mortality rates prior to the study period based on a series of calculations on the probability of animals leaving the herd or giving birth. The strengths and weaknesses of this method are discussed below (page 62). A summary of the calculations necessary to estimate mortality rates and fertility rates are outlined in Box 6.1 (page 170) and a more

Table 2.4: Number of cattle monitored

District	Village	<i>Kitongoji</i>	Number of cattle
Lushoto	Mng'aro	Mahambalawe	403
		Mazinde	39
	Lunguza	Kisima	29
Same	Kisiwani	Kamadufa	31
		Kamorei chini	90
		Kamorei juu	-
		Rambangondo	146
		Kapimbi	40
Lushoto Total			471
Same Total			307
Overall Total			778

Table 2.5: Number of cattle histories collected

District	Village	<i>Kitongoji</i>	Number of histories
Lushoto	Mng'aro	Mahambalawe	103
		Mazinde	19
	Lunguza	Kisima	27
Same	Kisiwani	Kamadufa	11
		Kamorei chini	34
		Kamorei juu	-
		Rambangondo	14
		Kapimbi	18
Lushoto Total			149
Same Total			77
Overall Total			226

Table 2.6: Months of household livestock data

District	Village	<i>Kitongoji</i>	Months of data
Lushoto	Mng'aro	Mahambalawe	120
		Mazinde	37
	Lunguza	Kisima	89
Same	Kisiwani	Kamadufa	57
		Kamorei chini	19
		Kamorei juu	30
		Rambangondo	174
		Kapimbi	47
Lushoto Total			246
Same Total			327
Overall Total			573

detailed explanation is given in appendix one. In all, 226 cattle histories were taken (Table 2.5).

Household Data

Questions about the household were answered by the head of the household. We asked about:

The use of livestock

I asked household heads about the number of livestock sold, bought, given away, received as gifts or slaughtered, and expenditure on veterinary medicine since the previous visit. On the first visit I asked about offtake and acquisitions over the previous month. This gave a continuous record of 13 months for households that were present for the entire survey. Some households were not present for all of the time, and so the months of records available for each location can vary (Table 2.6).

These questions were designed to give some indication of the level of dependence upon livestock. The first was not popular. The absolute figures generated are not reliable but can be used to compare within the sample and can show how livestock are being used (see chapter five, page 133-5)¹³. Some of the intervals between visits were large. This makes recall data more questionable, particularly for wealthy households where a large number of transactions with animals may be involved. The effects of this will be to underestimate the sale and expenditure of the wealthy households, as poorer households, with fewer events to remember, are more likely to be able to recall more of them. This means that the differences within the sample are likely to be reduced as the wealthy households are more likely to under-report sales, rather than exaggerate them. Any contrasts that emerge are therefore likely to be robust.

¹³ Sieff, 1995: 43.

Household head's expenditure at market over the previous week

Taken together with the same question asked to women, this was designed to gain some idea about where food used by the household was coming from¹⁴. The problem with weekly recall is that it may miss infrequent, large-scale purchases of food. This problem was overcome for sub-households by taking a large sample. However, the number of households is smaller than the number of sub-households and it may be harder for general patterns, if there are any, to emerge from this sample.

Yields from farms and the size of the area cultivated by the household

Produce was measured by the sack or '*debe*' (a large tin, equivalent to 18-20 kilos and 1/6 of a sack). These are standard units for measuring produce at the local markets. Area under cultivation in acres was estimated by their owners, and they told us what crops they were growing¹⁵. Informants could be expected to have a good idea of how big an acre was and how many acres they had cultivated, as an 'acre' was commonly used to measure rates of pay for hired labour on dryland farms.

Other studies have relied on direct measurement of fields, yields and labour allocation. There are problems relying upon reported yields and acreage of cultivation¹⁶. This makes manipulation of the data by informants easier, and does not generate reliable information. As with other data the findings need to be considered in the light of other indices of dependence on different forms of livelihood. A more intensive study of farming activity, of time spent in the fields, employment of casual labour and monitoring harvests was not possible. There was not enough time to conduct this survey in both sites with sufficient frequency to be able also to monitor agricultural activity in such detail.

¹⁴ Sieff, 1995; 46.

¹⁵ Cf Trench, 1997: 186; Potkanski, 1997: 81.

¹⁶ Little, 1983

Table 2.7: Months of *boma* livestock counts

District	Village	<i>Kitongoji</i>	Livestock	Months of data
Lushoto	Mng'aro	Mahambalawe	cattle	35
			smallstock	38
	Lunguza	Mazinde	cattle	13
			smallstock	15
		Kisima	cattle	34
			smallstock	35
Same	Kisiwani	Kamadufa	cattle	15
			smallstock	20
		Kamorei chini	cattle	6
			smallstock	9
		Kamorei juu	cattle	14
			smallstock	8
		Rambangondo	cattle	13
			smallstock	23
		Kapimbi	cattle	10
			smallstock	10
Lushoto Total			cattle	82
			smallstock	88
Same Total			cattle	58
			smallstock	70
Overall Total			cattle	140
			smallstock	158

A list of all the dependents of the household

A list of people resident in the household was established when we first visited the household and updated on each subsequent survey. It was cross-checked with the people recorded in the sub-household; it allowed people who were not attached to a particular house, generally adult men, to be recorded. It was used when calculating the reference adults found in each home (see page 58). We weighed everyone in the household with a Salter scale in November-December 1995 and, after these broke, with ordinary bathroom scales in May-June 1996.

Boma data

The only data collected at the level of the *boma* were the stock counts, and even here we counted each household separately wherever possible. Each time the survey was conducted a head count of animals present at the *boma* was made. This was a single count of the number of animals, generally made as they left the gate in the morning. We did not record the number of animals in different age-sex classes or the number of lactating animals. 140 cattle counts and 158 smallstock counts were made (Table 2.7).

Conducting the counts was relatively easy. For large herds, my research assistant Lobulu Sakita and I stood either side of the *boma* gate and counted the animals as they left. In most counts the *murrán* (men of the warrior age group) would herd the animals out slowly to facilitate the count. Interpreting dependence on livestock from the data resulting is much more problematic. I discuss the difficulties associated with that in chapter five (page 129-132).

Analysis

Data were entered onto Excel data-bases after each period of survey work and were checked for gaps or unusual patterns. These would be followed up in the next visit. Analysis was conducted using the Excel and SPSS computer packages in England. Some of the analyses and calculations presented in this thesis require explanation. In most cases

the way measures were analysed and calculated is explained when they arise. Analysis of cattle population dynamics however is complex and requires more explanation

Cattle Population Dynamics

Cattle population dynamics are derived from the cattle history data. Cattle are the subject of intense interest and importance and women generally remember the fate and history of each named animal in the herd allotted to them for some time. This store of knowledge is a valuable source of information about the history of herds in an area. Using the cattle named on the stock registers, we traced the history of these animals, establishing when they were born and when they had died or were sold, slaughtered or given away, how many offspring they had and what was the fate of each animal. We were also able to ask about the fertility histories of the daughters of named cattle and the mothers of each named cow.

Dating events was easiest if the woman or one of her co-wives had been to school. Sometimes histories were worked out in conjunction with men, combining women's knowledge of the cows with men's knowledge of their timing. Dating births and offtake in Lushoto was helped by a large flood that hit Lushoto in 1993.

The eviction of pastoralists was a series of operations which took some time, with the final moves being completed in 1988. Observers at the time reported considerable stock death the following year; records of this are especially strong in Lushoto District¹⁷. Pastoralists sometimes told us that cattle died 'at the year of the operation' lumping together cause and effect in the same year when they may have been sequential. We found that we were able to date when animals had been born, died or were sold from the year of the eviction of pastoralists from Mkomazi Game Reserve, which occurred around 1988. Before that details were too hazy.

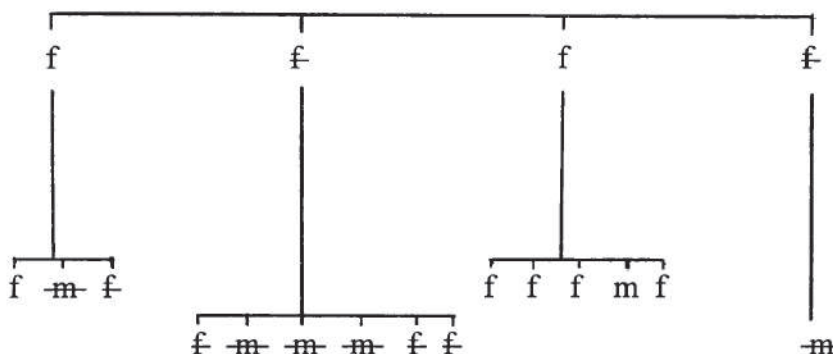
¹⁷ See chapter six, page 165-6.

There is a tendency in cattle reproductive history data to under-represent sterile cattle, and over-represent survivors. Sterile cattle are under-represented because the cattle population dynamics are only derived from named cattle and cattle are only named if they give birth. Infertile animals are therefore not included in the list of named animals about which we have information. It may be the case that a fertile, named cow has a daughter who is infertile. We would have a record of that daughter's sterile years, but it is not a long record. The period studied here goes back until 1988, thus only females born in the first few years will have had an opportunity to manifest their sterility by not giving birth. In practice the numbers of female animals born in these first few years are small.

Survivors are over-represented because we only asked about existing animals, their children and, where possible, their mothers. An animal has to have survived into adulthood to be present on the register and available for its history to be recorded. The problem is most severe where whole cattle families have died and there are no offspring left of whom histories can be asked. The diagram below illustrates the problem. In the bovine family trees below, asking about surviving cattle means that the deaths of some animals will be completely unrecorded. Only if one animal survives is it possible to ask about the fate of its siblings. Therefore this method is not good for recording large-scale die-off.

Figure 1: Cattle family trees

(Crossed letters indicate an animal that has died, been sold or otherwise left the herd.)



It is theoretically possible to find out about a cow's siblings' families by working laterally along bovine family trees. However we did not find it possible to get reliable data like this. A cow is named after its mother, and bovine sisters, aunts, cousins, nephews and nieces all had the same name. Discussions about a cow's aunts and cousins quickly became difficult and respondents and researchers confused. They did not generate reliable data.

The net effects of these distortions is to under-report mortality rates, and over-report fertility rates. Where these data are presented (chapter six, page 171), the mortality rates must be taken as minimum estimates, and fertility rates as maximum estimates. When I compare the performance of Mkomazi's herds with those elsewhere, the tendency of these errors will be to make these indices appear better than they really are. Where Mkomazi performs poorly compared to other areas, such differences are therefore not likely to have been created by these calculations, for the confounding trends would serve to obscure such a pattern. Poor herd performance relative to other areas is likely to be robust and not an artefact.

The sibling survey

I conducted all the household survey research close to Mkomazi. I therefore faced difficulties finding out about people who had moved far from the Reserve. In some countries it is possible to use census data and records of birth place or movement to find out about emigration. Where these data are not available indirect techniques have to be used.

Enquiry into the residence of relatives is one of the 'indirect' techniques used to find out about emigration from households in lieu of good census data¹⁸. There are two principal methods used to gather these data. Mothers are asked about the residence of their children, or people can be asked about the residence of their siblings. I used the latter technique as it

¹⁸ Zaba, 1985: 9-13.

Table 2.8: The number of sibling groups reported for Same and Lushoto District by gender of respondent

	Same	Lushoto	Total
Female	57	41	98
Male	14	11	25
Mixed	2	0	2
Total	73	52	125

Table 2.9: The gender of siblings by gender of respondent

	Sisters	Brothers	Total
Female respondents	412 <i>395.5</i>	354 <i>370.5</i>	766
Male respondents	109 <i>125.5</i>	134 <i>117.5</i>	243
Total	521	488	1009

Expected values are given in italics.

<u>Chi-Square</u>	<u>Value</u>	<u>DF</u>	<u>Significance</u>
Pearson	5.89068	1	p<0.02

The total does not include the 23 siblings reported by both men and women together.

Table 2.10: The number of evicted and non-evicted siblings reported from Same and Lushoto District used in analysis

	Same	Lushoto	Total
Evicted	341	248	589
Not evicted	243	200	443
Total	584	448	1032

allowed me to interview older pastoralists whose mothers were not alive but who, together with their siblings, have been affected by eviction.

The survey was carried out at two sites in the same place as the livelihood survey since I knew most about the family inter-relationships there. Similarly the exercise was carried out with Maasai and Parakuyo families only as I understood most about family relationships in that group and was able to eliminate duplication of reported siblings. I visited all the *bomas* in Kisiwani and all the *bomas* of the household survey in Lushoto.

I interviewed over 140 people. Some of these people were each other's siblings or half siblings and their responses have been cross-checked, sorted and pooled to provide data on 125 sibling groups, 73 from Same District, and 52 from Lushoto. Of these groups 98 were reported by women, 25 by men and 2 groups by both women and men (Table 2.8). The large number of women interviewees reflects the fact that they were more often available to interview than men. Over-representation of women in the sample of respondents is likely to affect results as men were more likely to report brothers and women sisters (Table 2.9).

In total the respondents reported 1,061 siblings. A few interviewees were not sure where some of these siblings were living, others were not sure whether or not the siblings had been evicted. The 'don't knows' are few in number and patterns in the analysis are robust with or without them. They are omitted here for clarity of presentation. 1,032 remain for analysis, of which nearly 60% had been evicted (Table 2.10).

In both sites I asked adults where their adult full and half siblings lived. I also asked whether these siblings had been evicted from the Game Reserve, who their mother was, whether the sibling was a brother or a sister, and what occupation they had, whether pastoral, agricultural, both, or not-rural. Siblings were defined as 'adult' if they were married (for women) or circumcised (for men). In practice this means that almost all siblings reported were about 15 or older.

These data were used to map the distribution of siblings. It was sometimes hard to get good data on where siblings lived, especially if they lived far away. Generally, people would have a good idea of the names of the places where these distant relatives lived, but locating them on a map proved harder. Village names may well have been accurately reported, but locating these in a particular District or Region was hard. Fortunately the precision in distant locations did not affect the analysis. Later discussion focuses on the broad categories of 'near' and 'far' and it is not important to know exactly where more distant siblings were located..

These data were also used to look for 'drop-out' from pastoral society. This used a series of calculations to look for 'missing' relatives amongst the siblings reported, by comparing the actual proportions of brothers and sisters reported with that predicted from the sample of siblings asked. The sample is first divided into male and female respondents of different maternal sibling group sizes, and the proportions of full brothers and sisters reported by respondents for different group sizes are calculated.

The calculations predict the expected proportion of brothers and sisters using a binomial expansion of the probabilities of different proportions of brothers and sisters in each sibling group size (see appendix two for a full explanation). I then looked for missing siblings by comparing the expected proportions of brothers and sisters to the actual proportions reported. The calculations assume that there is an even probability of men and women being born and then surviving to and through adulthood. This approximation is sufficiently close to the truth to allow a robust analysis.

Historical data

I drew on several sources. The earliest period is covered by a number of explorers who skirted the margins of, and in one case, walked right through, the Reserve. The main body of written records comes from the letters, notes and reports kept in the Tanzanian National Archives (TNA), Tanga Regional Archives (TRA) and Kisiwani Ward Livestock File

(KWLF). These I have supplemented with additional material available at the Public Records Office at Kew (PRO), the RGS, the National Newspaper Library at Collindale, the Cambridge University Seeley History Library (SHL) and the manuscript archive at Rhodes House of Oxford University (RH). These cover a period from 1920 until 1985. For the period after eviction there are the papers collected by the late Mr Henry Fosbrooke in 1992, the newsletters of conservation organisations, and the Tanzanian and English press. These afford an account of the evictions and their aftermath. Finally there are also a number of unpublished reports and published papers specifically about the Reserve.

A second major source are the oral histories, interviews and participatory rural appraisals (PRA) conducted with people now living around the Reserve. These provide explanations and many personal insights into the processes and events recorded in the archives. I conducted 70 taped interviews around the Reserve from Mahambalawe to Toloha and also in the Ruvu valley. Most of these were with one or two people; some were conducted in groups. I listened to the interviews shortly after they were taken and summarised them in a notebook. Most interviews were conducted in Swahili, some in Maasai. In each sub-village where I was conducting interviews, initial meetings were held with representatives of the village or sub-village government to introduce the research and specific questions that would be addressed. I also met and corresponded with former Reserve officials.

Certain groups are more visible in the records than others. Much of the attention of the archives and the more recent records has focused on the Maasai and Parakuyo peoples. These people are a minority in the area. They attracted attention largely because they controlled much of the cattle on the plains of Same and Lushoto Districts and because their patterns of transhumance proved so hard to administer. As this thesis focuses on pastoralists, the weight of detail about these groups is welcome. They, however, are but two among several pastoral, agro-pastoral and hunter-pastoral groups. The Pare, Kamba and Sambaa also own considerable numbers of stock here. The records about them at Mkomazi are not proportional to their numbers or the importance of their needs.

The sources of this bias in favour of the Maasai and Parakuyo are several. First, a number of sources suggest that the Maasai and Parakuyo groups appear to have been highly dependent on livestock and were therefore heavily hit by exclusion from their grazing grounds. They were motivated to protest against eviction accordingly, and there are numerous accounts of this process.

Second a number of colonial officials were particularly concerned with these groups and wrote much about them in the early 1950s. One of these, the late Mr Fosbrooke was concerned with Maasai issues for much of his life. As a colonial official when Mkomazi was first established, he had been particularly keen to speak up for the right of the Parakuyo and Maasai to use the Reserve, although he was prepared for Pare agriculturalists to be excluded¹⁹. He later became conservator of the Ngorongoro Conservation Area. He was employed as a consultant by the International Institute of the Environment and Development (IIED) to investigate the plight of pastoralists resident around Mkomazi shortly after pastoralists had been cleared from the Reserve. The data collected by him in 1992 shows characteristic concern for the Maasai and Parakuyo, again to the exclusion of the Pare, Sambaa and Kamba²⁰. The last three groups have been affected more than his records suggest.

A third source of bias comes from the politics of current opposition to the evictions, and the internationalisation of the opposition. The NGOs which are supporting the opposition to eviction are 'indigenous peoples' organisations. The constituency and operations of these organisations are strongly shaped by ethnic criteria. These organisations in turn derive their strength and funding from the growing international interest in 'indigenous peoples'. The international support has given a louder voice to some groups. That has in turn shaped the

¹⁹ TNA File 723/III - The Development of the Lower Areas, North Pare, Fosbrooke 1953; TNA File II/5 - 'The Masai in Same District with particular reference to the Toloha Maasai'.

²⁰ I am grateful to Charles Lane of the IIED and Kemal for letting me see the documents that Mr Fosbrooke collected. These papers have been written up and published in Mustafa (1997) 'Eviction of Pastoralists from the Mkomazi Game Reserve in Tanzania: An Historical Review.' Pastoral Land Tenure Series No. 8, IIED.

most recent instances of protest and resistance and participation in that protest such that other groups, interests have not been clearly heard.

It is not always possible to see through the gaps and silences to understand what was going on with these groups. In some ways this thesis is restricted to observations upon Maa-speaking pastoralists. Wherever possible I have broadened the scope to discuss the conditions and interests of other pastoral groups.

Livestock data

The final source were the National Livestock and Human census data and the records of livestock markets and grain prices. All were located in District and Regional Offices. Some records also have been recovered from District, Regional or National archives.

None of these data are problem free. Counts of livestock and people are notoriously unreliable. It is probable that the livestock censuses are underestimates, as people are generally wary about revealing the number of their cattle for fear that the government has designs upon their herds or on the tax returns from them. Counts were sometimes made by enumerators themselves, at other times they were reported by the household head. Both are vulnerable to manipulation for it is possible for a herd owner to direct his cattle elsewhere, should he need to, just as he may under-report his herd. In the same way, market data should not be taken at face value for similar reasons. These are discussed in more detail in chapter seven (page 207-9).

Sometimes livestock census data refer to the number of 'keepers' of the livestock recorded. However it is not clear whether they are referring to household heads, or the leaders of *bomas* comprising several households. Neither do they say how large the households are. It is also not always clear whether the herds, or their owners, are permanent residents or seasonal immigrants.

Such problems can be dealt with provided the data are not pushed too far. It is important to keep in mind the direction in which each of these biases is likely to push the results, and whether this directional bias acts to obscure predicted trends or artificially create them. If general trends are apparent, and if findings are supported by other data, and if the findings are unlikely to be the artefacts of acknowledged biases, then it is reasonable to suggest that the trends represent real changes.

Summary

The central goals of these methods are twofold. First, I have attempted to learn about the current forms of livelihood practised by pastoralists who were evicted from Mkomazi and who are now living around the Reserve. Second, I have tried to build up a picture of the region's past and of pastoralists' history. I try and combine the two sets of data in order to set Mkomazi's pastoralists into the context of pastoralists elsewhere, and in order to learn more about the way in which pastoralism here has changed as a result of eviction. In the next chapters I present the findings of the historical research, and give an account of the history of pastoralism on the plains before and after the gazettelement of the Reserve.

Chapter Three

The history of the plains

In this chapter I consider the history of the plains up until the time of the gazettelement of the Reserve. I outline the nature of pastoral occupation before the colonial period and then consider colonial dealings with the pastoralists found there. I show that initial attempts to control pastoralists arose from administrative requirements restricting ethnic groups to certain areas. I suggest that these attempts foundered as they denied pastoralists' need to move widely, and because they assumed an inappropriate rigidity to ethnic divisions. I argue that the history of the area before Mkomazi's gazettelement meant that its resources would inevitably be contested once it was created. Maps showing places referred to in the text are at the back of the thesis.

Introduction

The history of use and government of the plains is characterised by continuity. Pastoral presence has varied according to the availability of water and grazing and the restrictions of warfare, disease and raiding. Colonial and Independent governments, have been continually keen to restrict the movement of pastoralists and change the nature of the herding they practised. Contests between the two sides dominate the records of the twentieth century.

In some ways, the establishment of Mkomazi in 1951 just added another layer of regulations to those already restricting the movement of people and livestock. The Reserve became instrumental in imposing the government's will on pastoral practice; pastoralists continually opposed, resisted and evaded that will. However, just before gazettelement, there occurred a well documented sequence of events that make it convenient to treat the history of this area in two parts: that of the plains (this chapter) and that of the Reserve (chapter four). The events prior to the establishment of

Mkomazi highlight the disjunctions between pastoral needs and government plans. They provide the setting against which the history of the Reserve can be understood.

Residence on the plains before colonial control

The early occupants of the Mkomazi plains were part of a mixture of groups collectively called the *Iloikop*¹. In this region they were generally known as the Kwavi or Kwafi, although more specific terms for particular societies employ a variety of names including Lumbwa, Humbwa, Mbaravui, Mbarawue, Barabuyu or Baraguyu². Their descendants in this area are now called the Parakuyo, which literally means 'well off in terms of livestock'³. The Kwavi share a common history with the Maasai but they fought each other in the *Iloikop* wars that dominated the plains for much of nineteenth century⁴.

There are several references to Kwavi occupation in this region. Fosbrooke, citing Lemenye, wrote that the Parakuyo entered the Toloha area near the current Kenya - Tanzania boundary at the beginning of the nineteenth century, and that the Maasai followed a few years later⁵. In the late 1840s Krapf noted that the wilderness between the coast and Teita had recently 'become infested with Wakuafi and Galla' and that the Kwavi 'infested the countries adjacent to the sea coast'⁶. He recorded they had resolved to occupy the Kadiaro hill (also known as Kisigau) a little before he travelled there⁷. Guillain, on the basis of traders' accounts in the late 1840s, labelled a similar hinterland as 'Oua-Kouavi', and reported that the same group had formerly occupied 'Bomboui' and 'Kidangga-dangga', dry places two and three days journey behind Vanga respectively⁸. Similarly Thornton noted that a place called Sogoroto, near the

¹ Waller, 1979: 145.

² Waller, 1979: 152-156; Rigby, 1985: 7.

³ Rigby, 1985: 7.

⁴ Berntsen, 1979; Waller, 1979.

⁵ TNA File II/5 - 24/4/53, H.A Fosbrooke's report 'Maasai rights in the Kenya border area'. For location of places see maps attached at the back of this thesis.

⁶ Krapf, 1860: 222; 1854: 5.

⁷ Krapf, 1860: 362.

⁸ Guillain, No Date: vol II, 289. Meyer, (1891) marks Kidangadanga on his route map as about one day's journey east of Kilimang'ombe.

‘Dalooni River’ two days journey from Vanga had ‘formerly been a station of the Wakuafi’⁹.

The main area of Kwavi occupation was probably in the western part of the coastal hinterland. Krapf recorded their homeland proper to be a land called Kaptei, or Kaputei, north of Kilimanjaro¹⁰. Thompson wrote that in the first decades of the 1800s the Kwavi occupied:

‘the large district lying between Kilimanjaro, Ugono (Ugweno) and Pare, the hills of Teita and Usambara. This large region is known to the Maasai as Mbaravui’¹¹.

New noted that:

‘The Wakuavi formerly occupied the whole of the plains around the base of Mount Kilima Njaro, also the extensive tracts lying between Taveta and Jipe, on the one hand and the Taita mountains, on the other’.¹²

Waller recorded that between the Pangani and the Tana river there lived, amongst others, a loose alliance of the Iloogolala, Baraguyu and *Enkang e Lema*¹³. Berntsen stated that the area north-east and south east of Kilimanjaro was called Mbarawui, and was probably the original home of the Baraguyu¹⁴.

Residence on these plains was constrained by aridity, disrupted by wars and interrupted altogether by outbreaks of disease. The lack of water meant populations were low and barred most areas from all except seasonal use. Access to the plains depended on controlling the dry season grazing areas. Guillain wrote of a trading route

⁹ Thornton, diary entry 4/10/1861.

¹⁰ Krapf, 1860: 236, 361.

¹¹ Young, 1962: 128.

¹² New, 1873: 355.

¹³ Waller, 1979: 152-156, Map 2. *Enkang e Lema* are also called *Ekang Lema*

¹⁴ Berntsen, 1979b: 119.

to Lake 'Guipé' (Jipe?) which approximately followed the line of the current international boundary¹⁵. He described it as:

' .. un pays désert où l'on ne renouvelle que difficilement ses provisions.'¹⁶

He specifically mentioned 'Kerima-Ngombe' where there was a hill and a seasonal pool¹⁷. It probably referred to 'Kilimang'ombe', a hill found at the junction of the present Lushoto - Same District boundary and the international border. He noted that the place is frequented by elephant hunters but that otherwise:

'Le pays est inhabité et sans cours d'eau.'¹⁸

Similarly Thornton, who travelled from Kasigau to Gonja in July 1861 (the dry season) with Von der Decken, and who was guided by an elephant hunter who knew the place, described that part of the country as without water¹⁹. These explorers nearly succumbed from thirst in an area that was probably within the present day Same section of the Reserve and near the present international boundary²⁰. Later Meyer had beat his porters who were faint from thirst near Gonja, and was disappointed that areas which could teem with animals could become so dry and barren without sight of a single hoof²¹.

A major disruption to pastoral residence in these plains was the *Iloikop* wars in the early nineteenth century. Initially displaced Kwavi groups may have moved nearer the coast, as Krapf reported, but the other accounts of vacated residences suggest occupation there did not last. The wars resulted in the eventual emigration of the

¹⁵ Cf PRO FO 925/156.

¹⁶ 'a desert land where one can only replenish supplies with difficulty.' Guillain, No date: vol II, 290.

¹⁷ Guillain, No date: vol II, 290.

¹⁸ 'The country is unoccupied and without rivers or streams.' Guillain, No date: vol II, 290.

¹⁹ Anon, 1865: 18.

²⁰ Thornton, diary entries 12-15/7/1861.

²¹ Baumann, 1890: 88-89.

occupants of the 'Wakwafi wilderness', to the north and to the south, where they took refuge with other groups²². Most explorers' accounts come after this evacuation.

The Kwavi who fled south took refuge in the Pangani river valley and along the southern edge of the Usambara mountains alongside cultivators and other refugee pastoralists expelled from the Simanjaro plains²³. Waller reported that Erhardt described the plains between the Pare and Usambara mountains and between the Mkomazi and Pangani rivers as an area where 'all Kwafi, Zigua and Maasai battles are decided'²⁴. Krapf noted that the *Enkang Lema* were driven out of their lands and fled to Taveta and thence the Pangani River²⁵. New gave an account of the process for the Kwavi generally and also illustrated the flexible ethnicity which we have seen characterizes the region:

'In the course of time the Masai, emerging from the west, swept over the open plains, smote the Wakuavi and scattered them to the winds, leaving, however, the Wataveta in their forest fastnesses in perfect security. The Wakuavi, robbed of all and completely broken up, some wandered this way and some that, while many turning to their friends the Wataveta, asked and found refuge with them. Ever since the two peoples have lived together, assimilating more and more to each other's habits and modes of life. The Wataveta, however, seem to have been far more influenced by the Wakuavi than vice versa; for they have become Kikuaviized (*sic*) in almost everything but the giving up of agricultural pursuits, whereas the Wakuavi remain Wakuavi still, except that from necessity they have turned to the cultivation of the soil.'²⁶

²² Waller, 1979: Map 6.

²³ Waller, 1979: 312; Jacobs, 1965: 82; Hurskainen, 1984: 71-82; Beidelman, 1960: 247-8; Baumann, 1891: 276-7.

²⁴ Erhardt diary entry No. 5. October 1853. Cited in Waller, 1979: 57.

²⁵ Krapf, 1854: 4-5, cited in Galaty, 1993b: 74.

²⁶ New, 1873: 355-6. Cf Meyer 1891: 86-7.

From these refugee areas, populations appear to have recovered somewhat and by the late nineteenth century there are explorers' accounts of encounters with numbers of pastoralists. On the eastern side of the Mkomazi gap, Archdeacon Farler, who was stationed in the Usambara in the late 1870s, heard that caravans were wont to stop at a 'large Maasai town' called 'Mkomazi', where they could trade livestock with its Maasai residents. This was probably at the site of the present Mkomazi village²⁷. Johnston recorded meeting around 1,000 Maasai at Ngurunga, at what seemed like a large meat feast, in 1884²⁸. Meyer met a group of Maasai warriors with a troop of donkeys close to the south-west corner of the Usambaras, and reported good relations between the Maasai and Kamba residents of a village there called Mkumbara²⁹. Le Roy reported seeing thousands of Maasai cattle on the plains between Mnazi and Gonja and visited a Maasai *boma* one hour's walk from Gonja in the second half of 1890³⁰. The Imperial British East Africa Company's map of East Africa marks some sort of settlement at 'Gurunga-ni' (Ngurunga); another map drawn by boundary surveyors in 1892 records waterholes there³¹.

However occupation of the plains was again disrupted, this time by disease when rinderpest struck. In 1892 Smith travelled along the same route as Le Roy, surveying the Anglo-German boundary. Although he marked the waterholes at Gurungani, he also labels the Umba Steppe as:

'Nearly level country with gently rolling surface; thorn scrub; no paths.
No water. No inhabitants'.³²

Similarly the area north-east of Lake Jipe is labelled '(r)olling plains covered with thorns, apparently wilderness'. In contrast to Le Roy and Johnston, he met no

²⁷ Last, 1883: 540.

²⁸ Johnston, 1886: 302-5.

²⁹ Baumann, 1890: 94-5.

³⁰ Le Roy, 1928: 120-1.

³¹ PRO FO 925/156; PRO FO 925/228/A.

³² PRO FO 925/228/A

pastoralists on the plains, although he did report that villages in the area were stockaded against the threat of Maasai raiding³³.

Between Le Roy's visit and Smith's rinderpest hit the region³⁴. The first clear record of rinderpest in East Africa actually comes from Von Wissman's campaign up the Upper Pangani, west of the Pare Mountains, in early 1891. Troops passing north in February noted healthy herds, and returning south in the same month 'found the disease raging'³⁵. Smith observed that game populations were small and much less than Thompson had reported; there was neither sight nor sign of buffalo. He speculated that this was because of the ravages of the recent cattle disease³⁶.

The difference between the accounts of the visits of 1890 and 1892 could in part reflect the effect of rinderpest which had killed off the cattle and forced pastoralists to flee elsewhere. Pastoral communities at Mkomazi may have fled south to friends or relatives in Handeni or Bagamoyo, or dispersed into adjacent agricultural communities³⁷.

In repeating this pastoral history of the plains I do not want to lose sight of other groups³⁸. There were many ties of trade and movement between agriculturalists and pastoralists on the hills and plains. Trade provided particularly strong connections³⁹. There were several large markets which became increasingly important as trade with the coast grew. In the Mkomazi area these markets were below the Pare mountains, at Kihurio, Gonja, Kisiwani (Pare settlements), and near the Usambara mountains, at Dongo Kundu (a Kwavi settlement), Kitivo and Mbaramu (Kamba dominated)⁴⁰.

³³ Smith, 1894: 427. Other authors note that these raids could originate from some distance away (Spear 1997: 33, 40).

³⁴ The effects were devastating. See Lemenye, 1955: 41-2; Waller, 1988; Bernsten, 1979: 283.

³⁵ Waller, 1988: 76-7 and footnote 11.

³⁶ Smith, 1894: 427, 429.

³⁷ Evidence for the southern connections is inferred from links of current and past residents with that area. An oral history taken in 1952 from one elder states he moved to Mnazi from Handeni (TNA 723/III Nov/1952); in 1953 the DC of Lushoto referred to Kwavi pastoralists moving to Handeni and Bagamoyo to flee the effects of drought (TNA File 962/1953 Lushoto District Annual Report page 14) and there are records of stock movements and marriage ties to Bagamoyo (TNA 69/1 vol II 13/10/53; 13/12/53). The possibility of dispersal into neighbouring agricultural communities is inferred from other literature, see discussion in chapter one, page 25-6.

³⁸ For a thorough account of these groups, particularly the Pare, see Kiwasila's forthcoming doctoral thesis.

³⁹ Kimambo, 1996: 81-5.

⁴⁰ Feierman, 1974: 124-5; Kimambo, 1991: 3.

Kimambo records that Maa-speaking pastoralists exchanged livestock for iron and food with the Pare, others traded salt for the same⁴¹. Explorers also noted the importance of these markets. In the early 1860s Thornton travelled through the area and bought provisions at Gonja and Kisiwani, and was offered livestock as presents; Meyer bought many provisions there also⁴². Johnston noted that the main traders in Gonja spoke the Pare, Zigua, Maa and Swahili languages⁴³.

Mountain dwellers were well accustomed to the plains through which they often moved. The plains were also the site of some economic activity. One of the main activities of Pare people on the plains was hunting. The Pare plains fuelled a trade in *Mpaa* antelope skins which were important for a Sambiaa ritual connected with the birth of the first child. Some Pare specialised in providing these skins for the Gonja market and markets in the Usambaras⁴⁴. Kiwasila has recorded histories of a number of hunting families, who had lived for some time in Tussa and Kisima hills, now found inside Mkomazi Game Reserve⁴⁵.

Cattle were a vital part of the Pare economy and society, but appear to have been kept in the hills rather than the plains, and were stall-fed because the space for grazing diminished with time⁴⁶. Fear of raids probably restricted Pare, Sambiaa and Mbugu (mountain pastoralists living in the Usambaras) from herding on the plains⁴⁷. Maghimbi suggests that Pare herding on the plains only began in the twentieth century, having been kept in the mountains for fear of Maasai raids⁴⁸. Equally however, the Maasai avoided well protected agro-pastoral settlements. Johnston noted that the Maasai kept away from Kisiwani because they had suffered previous defeats there⁴⁹.

⁴¹ Kimambo, 1969: 22, 177; 1996: 84.

⁴² Thornton, Diary entries 16th and 18th July 1861; Baumann, 1890: 90.

⁴³ Johnston, 1886: 307.

⁴⁴ Kimambo, 1991: 26.

⁴⁵ Homewood *et al* 1997: 94-5.

⁴⁶ Kimambo, 1991: 22-23.

⁴⁷ Kimambo, 1969: 177; Maghimbi, 1994: 10; Feierman, 1974: 76, 111; Conte, 1996: 105.

⁴⁸ Maghimbi, 1994: 10.

⁴⁹ Johnston 1886: 306.

German rule

The main German policy towards Maa speakers on the plains was to keep them south of the Arusha - Moshi road and west of the Pangani river. Their action combined with the effects of rinderpest to keep the Maasai away from the Mkomazi plains. In 1891, following Maasai harassment of trading caravans, and a declaration of war on the Germans at Masinde by the local Maasai, German troops attacked kraals on the east of the Ruvu river and expelled them all to the west bank⁵⁰. They undertook further expeditions to clear the Maasai from what Ekemode terms 'the Pare plains' after caravans were again harassed in 1892 and 1894, and after Arusha and Maasai raids on the North Pare mountains⁵¹. The Germans also strengthened their garrisons in towns on both sides of the mountains, at Kisiwani, Kihurio and Masinde⁵².

In 1905, a Maasai Reserve was declared that lay south of the Arusha - Moshi road, west of the Pangani and east of the Great North Road⁵³. Controls were strict. The area north of the road contained valuable grazing for the Maasai who were now cut off from Maa speakers in Kenya; relations there between the Maasai and Europeans were far from peaceful⁵⁴. The Germans also threatened to shoot on sight Maasai whom they found west of the River⁵⁵.

It is not certain how effective the German policy was, nor for how long it was rigorously applied. Fosbrooke suggests that Maasai were resident in the Toloha area throughout the German occupation⁵⁶. It is also not certain whether the German law extended to Parakuyo pastoralists. Their leader, Matei, was well established at Hedaru by the time of British rule, although it is possible that he moved back after German controls were relaxed⁵⁷. The period after the expulsion of the Germans, and before the

⁵⁰ Berntsen, 1979: 302-3; Ekemode, 1973: 103-4.

⁵¹ Ekemode, 1973: 157-60.

⁵² Ekemode, 1973: 136, 157.

⁵³ Iliffe, 1969: 59.

⁵⁴ Iliffe, 1969: 60.

⁵⁵ Waller, pers. comm. March 1998.

⁵⁶ TNA File 11/5 - October 1951, report entitled 'The Masai in Same District with particular reference to the Toloha Maasai'. Page 3-4.

⁵⁷ TNA File 35/3, 13/4/23. Lushoto DO to CS, Dar es Salaam.

establishment of British control after World War One, saw tremendous migration of displaced Maa-speaking families⁵⁸.

British rule

The first available records of British rule relevant to this area appeared in the 1920's. The earliest is an ethnographic map of all of Tanganyika territory that labels the entire Mkomazi area as inhabited by Hamitic people with a small Mbugu enclave. The map is drawn 'after Prof K. Weule', but it is not clear on what Prof. Weule based his work⁵⁹.

Initial records concern hunters. In 1924 the District Commissioner of the Usambara District recorded that the 'great waterless wilderness' north of the Usambara mountains was the domain of Kamba poachers who hunted elephants and rhinoceros, selling the tusks and horn to Arabs⁶⁰. An honorary Game Warden, Mr Hophan, who travelled to Kivingo in 1934, gives an idea of the antiquity of this practice. He reported that because of the hardships of the period the

'natives are willing to get rid of their stocks of old ivory, which date sometimes from grandfathers, fathers, and at least the main lot from the German time of the war'.⁶¹

These reports tally with the history of one Kamba family now living in Mng'aro, Lushoto District. The head of the household explained to me that there was a long history of hunting in his family. His grandfather had come over from Kenya in the early years of this century and hunted elephants for ivory. He invested the money raised in cattle and goats which his family herded near the Uмба river⁶².

In 1932 Mr Hophan, this time visiting the North Pare mountains, passed through the Lake Jipe area. He records people living in the Maji Kununua hills who had until

⁵⁸ Waller, pers. comm. March 1998.

⁵⁹ PRO MPG 975/1.

⁶⁰ TNA File 1733 (28). Annual report for 1924.

⁶¹ TNA File 451/II - 8/12/34. Letter to the PC, Tanga.

⁶² Interview: AM 19/5/96.

recently been hunting extensively on the plains⁶³. A year later, a Game Ranger used some of his annual leave to go elephant hunting north of the South Pare mountains. He travelled around 200 miles on foot reaching the Kenyan border and was dismayed by the paucity of wildlife. The ranger blamed this on the activities of local hunters. He found pit traps in the Tussa hills and came across hunting parties. Elders in the area told him that the quantity of game was much diminished by the practice of 'native hunting', and that thirty years earlier game was in abundance⁶⁴.

The Ranger's concerns were repeated a year later when the Provincial Commissioner of Tanga complained of an increase in native hunting in the Uмба steppe and the 'uninhabited bush between the Pare hills and the frontier'. He blamed 'wandering bands of WaNdorobo and the groups of WaKamba and other alien natives along the Kenya border'⁶⁵. In 1937 Popplewell went on a hunting trip in the Semtula area, which lay between the Usambara and Pare mountains and extended towards the Kenya border. He met no people, but noted that the names of the hills and valleys that dotted the plains, including Kilimang'ombe, without saying who was doing the naming⁶⁶.

Not all observers accepted that local hunters were responsible for the depletion of game there. In a strongly worded letter to the Provincial Commissioner of Tanga, the Pare District Agricultural Officer laid all the blame for the lack of wildlife on 'the white man', whose licences permitted him to hunt a vast number of animals⁶⁷. Shortly after Popplewell's visit, it was decided to extend the area of the Uмба Steppe Game Controlled Area to include Semtula. This area was closed to shooting for three years because of the impact of European hunting⁶⁸.

⁶³ TNA File 451/I - 21/1/32. Letter to the Chief Game Warden, Arusha.

⁶⁴ TNA File 451/II - 13/2/33. Letter to the Acting Game Warden Arusha.

⁶⁵ TNA File 451/II - 8/10/34. Letter to the CS.

⁶⁶ RHO Mss.Afr.s.1980; Mss.Afr.s.2156.

⁶⁷ TNA 451/II - 18/5/34.

⁶⁸ TNA File 451/III - 30/11/37, note to the CS from the Governor's secretary. 22/7/38, letter to the PC, Tanga from the Game Warden, Arusha.

Table 3.1: Livestock in Pare District - 1936

	Cattle	Goats	Sheep	Small stock	Small stock / Cattle
Same	2,062	6,255	1,454	7,709	3.7
Mbaga	6,546	12,533	3,658	16,191	2.5
Mamba	5,695	2,747	1,122	3,869	0.7
Suji	1,116	1,868	446	2,314	2.1
Chome	2,376	5,253	1,096	6,349	2.7
Gonja	4,273	4,061	1,993	6,054	1.4
Usangi	16,400	9,418	3,784	13,202	0.8
Hedaru	4,444	5,594	2,389	7,983	1.8
Ugweno	12,852	5,796	4,316	10,112	0.8
Masai	6,255	3,395	3,051	6,446	1.0
Total	62,019	56,920	23,309	80,229	1.3

Source: RH. Micr Afr. 472. Same District Books.

Pastoralism at Mkomazi during British rule

The archives and oral histories suggest that there were three main pastoral groups using the Mkomazi area in the early 1900s. First, there were Pare, Sambaa and Kamba pastoralists who grazed their stock around the base of the Pare and Usambara mountains and out onto the plains in the wet season. Second, a group of Maasai, Parakuyo and other groups in the north-west of the Mkomazi area based their transhumance around Lake Jipe; this group was known to government officials as the 'Toloha Maasai'. Finally there was a group of Parakuyo pastoralists at Mnazi who spent the dry season close to the mountains and the Umba river and went out onto the plains as far as Katamboi (in Kenya) in the wet season. In the files these pastoralists are called the Kwavi, I refer to them as the Parakuyo.

Pare, Sambaa and Kamba pastoralists

The archives are relatively silent about these groups. As the deterrent of Maasai raids subsided, their herds on the plains increased. Yet the threat remained and people had to be cautious. Pare elders recall the heightened dangers of keeping livestock on the plains and had to send many herders with the cattle to avoid the threat of theft⁶⁹. Similarly, in 1934, a report of a Maasai raid on Pare pastoralists at Gonja describes well-used practices to guard against theft⁷⁰. As we have seen, the risk remains. During my field work, there was a spate of thefts of Pare and Sambaa stock by alliances of Maasai and Pare or Maasai and Sambaa youths⁷¹.

Herders who could establish themselves below the mountains prospered. The 1936 cattle census for Pare District show that there were large herds of cattle at Usangi and Ugweno, around the south and north of the North Pare mountains respectively. There was a smaller concentration at Gonja and Mamba, north of the South Pare mountains and east of Kisiwani (Table 3.1). The low small stock:cattle ratios indicate that these herds are dominated by cattle which is an indication of wealth. It also probably reflects a predominance of plains-based cattle herding as opposed to agro-pastoralism, which tends to have more small stock.

⁶⁹ Interview OA 19/3/96.

⁷⁰ TNA File 10273/II - 17/11/34. PC, Tanga to the CS.

⁷¹ OA 19/3/96; MN 15/10/96; MF 15/2/96. Cf chapter 2, page 51-2.

The census specifically separates Maasai-owned herds from other groups and this probably refers to the Toloha Maasai. It is not possible to tell which ethnic groups owned the other cattle. Most, but probably not all, were owned by Pare herders. There were a variety of ethnic groups in the District, including a number of prominent herders such as the Arusha, Nyamwezi and Parakuyo⁷². It is not certain whether these groups' cattle were counted with 'the Maasai' or with the local totals. There are no comparable data on herd size or ownership in Lushoto District.

Pare pastoralists below the Southern Pare mountains were linked to those in Lushoto District by their common patterns of transhumance. They sent their stock some distance eastwards at the beginning of the short wet season, as the rains came earlier around the foot of the Usambara mountains⁷³. Some moved eastwards permanently⁷⁴. The seasonal movement brought the herders into conflict with limitations on the movement of stock between Districts. In 1957 one official noted:

'The Field Officer said that it was not uncommon for Same District cattle to graze across the border for short periods and then to return but, having only one veterinary guard for work on the plains, he found it difficult to control this practice.'⁷⁵

The Toloha Maasai and the Parakuyo

There are many more records about the two Maa-speaking groups. Although they resided in different places, they were thrown together by a series of events that overlapped with, and included the establishment of the Mkomazi Game Reserve. These incidents illustrate the complex evolution of patterns of transhumance and pastoral networks as they became increasingly constrained by loss of access to land.

⁷² TNA File 11/5 Vol II - 7/11/44, letter from Pare leaders to the DC, Pare. The population census of the early 1930s lists nearly 100 Kwavi resident at Gonja (Maore) and Hedaru, the latter being the seat of the Kwavi laibon Maitee; cf footnote 57.

⁷³ Interview JM 22/5/96.

⁷⁴ Interview HM 15/6/96.

⁷⁵ TRA File V.10/22 - 1/4/57, Extracts from the minutes of the meeting of the Lushoto District Committee.

The Toloha Maasai

Most attention has been paid to the Toloha Maasai. For years the colonial governments of Kenya and Tanganyika struggled to control these pastoralists who were variously transgressing the borders of states, National Parks, Crown Land, private farms, Districts, Regions and the areas designated for other ethnic groups. The establishment of the Mkomazi Game Reserve in 1951 merely set up an additional control upon them.

The origins of the Toloha group are obscure. Fosbrooke maintained that they had been there since before 1890 and during the German period between 1890 and 1916⁷⁶. He also noted that a number of the Maasai and Parakuyo seem to have left Toloha in the early twentieth century and went to Nyumba ya Mungu, in the Ruvu valley returned there between 1928-31⁷⁷. He cited Willoughby who noted that Maasai raiding parties and herds could be found a little north-east of Lake Jipe⁷⁸.

Pastoralism here could be related to the refuge for pastoralists at nearby Taveta. Inhabitants at this village who had moved there following the ravages of the last century may have prospered with trade and, reversing the sedentarisation that New described, may have been able to move back into pastoralism, as they did at Baringo or Pagasi⁷⁹. Further evidence in support of Fosbrooke's argument is found in the Imperial British East Africa Company's map of East Africa. This names the Toloha area 'Kisong-go', the name of the Maasai section that was victorious in the *Iloikop* wars in Tanzania⁸⁰.

Other estimates suggest different dates and locations of origin. A report in 1938 observes that Tanganyikan pastoralists had been allowed to graze and water on Kenyan land at Lake Jipe for 25 years⁸¹. One official recorded the Maasai as having

⁷⁶ TNA File 11/5 - October 1951, report entitled 'The Masai in Same District with particular reference to the Toloha Maasai'. Page 5.

⁷⁷ *ibid.* page 4.

⁷⁸ Willoughby 1889: 73.

⁷⁹ Spear, 1993a: 131-2; Anderson, 1988: 253; Berntsen, 1979b: 115-120.

⁸⁰ PRO FO/925/156.

⁸¹ TNA File 6/1 - Annual report of the Pare DC 1938.

come out of Tanganyika Territory to settle north of Lake Jipe in 1924⁸². A letter written in 1948 specified that they had been given grazing concessions at Lake Jipe since 1923⁸³. A Maasai interpreter from Monduli who visited the area in 1951 to report on the make-up of the group claimed that he knew nearly all the Maasai there (but not the Parakuyo) and stated that they had come from Losogonoi (on the eastern side of the Ruvu valley, now in Simanjiro District) in 1927-8⁸⁴. Conversely, the annual report of Teita District in 1937 states that some of the Lake Jipe Maasai originally came from Loitokitok, north of Kilimanjaro⁸⁵. Similarly in 1952 the District Commissioner of Voi noted that some of the Toloha Maasai had originated in Kenya⁸⁶. In these varied accounts there are some indications that the extent of pastoral use of Jipe increased in the late 1920s. But if anything, the confusion illustrates the difficulties of establishing fixed origins for mobile peoples.

Whatever their origins, the Toloha Maasai presented problems for colonial officials. Their annual migrations crossed the international boundary. They were dependent upon Kenyan grazing and watering because the only access point to Lake Jipe in the dry season was found on the Kenyan side; reeds and mud on the lake shore made it impossible to water stock elsewhere⁸⁷. In the wet season they would move south and east making use of temporary sources of water along the border with Kenya and in areas that were to become Tsavo National Park and the Mkomazi Game Reserve⁸⁸.

The Tanganyikan government was also concerned because they felt that these Maasai families were in the 'wrong place'. The government had resolved in the 1920s to place

⁸² TNA File 723/1 - 27/4/38. Letter from District Officer Taveta to DC Pare; SHL Kenya microfilm reel 55: AR 2338 Annual report, Teita District page 2.

⁸³ TNA File 11/5 vol II - 18/8/48. Letter from the PC, Coast to the PC, Tanga.

⁸⁴ TNA File 11/5 vol III - April 1951, report to the DC of Pare.

⁸⁵ SHL Kenya microfilm reel 55: AR 2336 Annual report, Teita District page 9. This recalls Krapf's and New's remarks that the Kwavi were driven out of lands which included Loitokitok and fled south east to Taveta. It is possible that the DC of Teita was referring to Kwavi who had sought refuge at Taveta and since gone on to build up herds of cattle around Lake Jipe.

⁸⁶ TNA File 723/III - April 1952 (Document 363), notes on the Katamboi impounding.

⁸⁷ TNA File 11/5 vol II - 26/6/45, letter from the Veterinary Services Department, Tanga to the Director of Veterinary Services, Mpwapa.

⁸⁸ TNA File 11/5 vol II - 7/3/49, letter from the DC to the Director of Agriculture, Dar es Salaam; TNA File 11/5 vol II - 6/5/51, letter from Kisiwani Mbagga native court to the DC, Pare; TNA File 451/IV - 25/4/49, letter from the DC Pare to the PC, Tanga.

all Maasai families in the Maasai Reserve, which meant that all were to be kept west of the Ruvu river⁸⁹. Although officials later made temporary concessions to allow grazing east of the river⁹⁰, they firmly believed that Maasai District was where the Maasai ought to be. They were perennially concerned that the Maasai were leaving 'their' land and encroaching on other people's.

Pare leaders also wanted to control and limit the Maasai presence. It appears that at one point Maasai families lived at Toloha with the agreement of the Chief of Usangi⁹¹. However, the Pare were not able to control the immigration of more Maasai families and frequently suffered from stock theft. A strongly worded letter of complaint from the District Commissioner of Pare reports one Pare leader's protest that:

' ... you of the government are fond of saying that one of the blessings of your rule is that the Masai can raid us no longer. That is not true. You, the government, brought the Masai here. Before you came the Masai only dared to make occasional raids when they seized a few cattle and ran away. And when that happened every young man in the hills came down and gave chase.'⁹²

In another letter, a number of Pare leaders wrote to the District Commissioner of Pare to complain at incidents of cattle theft by the Maasai and Parakuyo. They asked that the troublemakers be moved back across the Ruvu and that none be allowed back without proper certified permission⁹³.

Although the plans to control Maasai presence in the area were welcome to the Pare, the idea of keeping the Maasai west of the Ruvu river was difficult to implement. A

⁸⁹ TNA File 35/3 - 6/12/20, Letter from the CS to the Usambara District Political Officer and see Hodgson 1992.

⁹⁰ TNA File 35/3 - 9/9/22, Senior Commissioner Arusha to the District Political Officer, Usambara.

⁹¹ TNA File 723/1 - 9/5/33, letter from the DC, Pare to the District Officer, Moshi.

⁹² TNA File 723/1 - 15/5/34, letter from the DC, Pare to the PC, Tanga.

⁹³ TNA File 11/5 vol II - 7/11/44, letter from Pare leaders to the DC, Pare.

number of observers at the time observed that it was an unsuitable border reflecting neither current nor past grazing patterns⁹⁴.

A further difficulty faced by colonial officials trying to move the Maasai back to 'their' land was that not all of the Toloha Maasai were 'Maasai'. Rather they claimed allegiance to, and identity with, a number of different ethnic groups. The government was aware from the start that the Toloha Maasai included Maasai and Parakuyo and took steps to differentiate between them⁹⁵. However more groups were involved. When the government came to move the Toloha 'Maasai', they discovered that others among them were variously from Arusha-Chini, or were Kahe (a group related to the Pare and Chagga people generally found west of the North Pare mountains and south of Kilimanjaro)⁹⁶. It was not possible to move these individuals 'back' to the Maasai Reserve. A further complication was caused by 'Maasai' families who had moved to be with the Parakuyo in Lushoto District switched allegiance and began calling themselves Parakuyo (see page 95-6 below).

The problems of defining suitable boundaries for ethnic groups and of deciding who belonged to which group reflected the basic misunderstandings the British Administration had of East African society. Discrete territories or ethnicity imposed rigid boundaries on the region's essentially fluid and flexible cultural economy⁹⁷.

Maasai immigration into Pare District

The plans to keep the Maasai west of the Ruvu arose at a time when the Maasai and Parakuyo were recovering from the depredations of the last century's drought and disease. Officials in the 1920s found few Maasai east of the River⁹⁸. Justin Lemenye recalled that it was not common for Maasai families to come east of the Ruvu river

⁹⁴ Hodgson 1995: 49, footnote 11; TNA File 35/3 - 2/4/22, Assistant Political Officer, Maasailand to Deputy Political Officer, Arusha; TNA File 723/1 - 7/1/35, Director of Veterinary Services to the Veterinary Officer, Arusha.

⁹⁵ TNA File 11/5 vol III - 16/1/51, letter from the DC, Pare to the DC, Masai.

⁹⁶ TNA File 11/5 vol III, April 1951, report to the DC, Pare; TNA File 11/5 vol III, 7/7/53, report from the DC, Lushoto; TNA File 723/III 16/11/55, letter from Political, Lushoto to Provincer, Tanga.

⁹⁷ Cf chapter one, page 27-8.

⁹⁸ TNA File 35/3 - 25/3/22, District Political Officer Usambara to District Political Officer, Arusha.

Table 3.2: Livestock in Pare District, 1936 and 1953

	1936	1953a	1953b
Same	2,062	15,075	19,683
Mbaga	6,546	11,064	7,962
Mamba	5,695	5,817	5,588
Suji	1,116	1,396	1,758
Chome	2,376	14,152	13,151
Gonja	4,273	10,048	11,211
Usangi	16,400	16,196	16,257
Hedaru	4,444	5,637	4,674
Ugweno	12,852	15,076	13,868
Masai	6,255	-	-
Total	62,019	94,461	94,152

Source: RH Micr. Afr. 472. Same District Books.

Table 3.3: Livestock censuses in Pare District 1935-1953

	Cattle	Goats	Sheep	Small stock	Small stock/Cattle
1935	59,535	79,055	20,668	99,723	1.7
1936	62,019	56,920	23,309	80,229	1.3
1948	99,838	41,484	38,515	79,999	0.8
1949	92,677	67,370	27,826	95,196	1.0
1950	110,088	70,782	32,992	103,774	0.9
1953(1st half)	94,461	58,764	29,947	88,711	0.9
1953(2nd half)	94,152	68,811	34,418	103,229	1.1

Source: RH Micr. Afr. 472 Same District Books.

when he was a child at Mombo⁹⁹. Yet in the early 1920s Maasai families claimed to have used the grazing east of the river for many years¹⁰⁰.

As pastoralists recovered there appears to have been a general movement east of the river. Some officials recognised early on that little could be done to control the waves of Maasai who left the Maasai designated area¹⁰¹. Yet Maasai emigration still remained a bone of contention. In 1934, the District Commissioner of Pare complained that the Maasai had overrun the grazing east of the Ruvu river and west of the railway line¹⁰². There are often reports of movement of families with their stock from Losogonoi, Naberera, Nyumba ya Mungu and other places west of the Ruvu river into the Toloha area and the Parakuyo grazing grounds east of the river¹⁰³. There are also reports of Maasai families leaving stock with Parakuyo residents east of the river¹⁰⁴. In 1955, the Provisional Veterinary Officer of Tanga complained that there was an annual invasion of 30,000 head of cattle and as many small stock into Lushoto and Pare Districts from Maasai District¹⁰⁵.

The extent of the increase can be seen by comparing the cattle census data for 1936 and 1953. Two censuses were conducted in 1953, one before June, the other later in the year (Table 3.2). The data for 1953 show that the greatest increases have occurred on the west side of the Pare mountains in the Ruvu valley (Same); Kilometa (Same); Mvungwe (Chome); and Upune (Mbagu)¹⁰⁶. The only other major area of increase was at Gonja, east of the Pare mountains, then inside the recently gazetted Mkomazi Game Reserve. A summary of livestock census data for the whole of Pare District shows that cattle numbers had been higher in 1950 (Table 3.3). The decrease after that may

⁹⁹ Lemenye 1955: 37

¹⁰⁰ TNA File 35/3 - 2/4/22, Assistant Political Officer, Maasailand to Deputy Political Officer, Arusha.

¹⁰¹ TNA File 723/1 - 3/7/35, Provincial Officer, Dodoma to the CS, Dar es Salaam.

¹⁰² TNA File 723/I - 15/5/34, DC, Pare to PC, Tanga.

¹⁰³ TNA File 11/5 vol II - 7/2/44, Veterinary Officer, Usangi to the DC, Pare; TNA File 11/5 vol II - 13/4/44, report of three Maasai families crossing the river to stay at Makanya; TNA File 11/5 - 23/1/46 - report of movement of Maasai families from Northern Province into Pare District; TNA File 11/5 vol II - 3/7/46 complaint from the Usangi Court that Maasai from Arusha Chini are finishing their grazing; TNA File 11/5 vol II - 21/10/46, request for grazing on the east bank of the Ruvu for Maasai families at Losogonoi and Makweni.

¹⁰⁴ TNA File 11/5 vol II - 23/12/47, report from the Hedaru native court.

¹⁰⁵ TNA File 962/15 - 16/12/55, Annual report of the PVO, Tanga to the Director of Veterinary Services, Mpwapwa.

¹⁰⁶ RH Micr. Afr. 472 Same District Books and see appendix three.

Table 3.4: Change in the small stock:cattle ratio 1936-1953

	Cattle			Small stock			Small stock:Cattle		
	1936	1953a	1953b	1936	1953a	1953b	1936	1953a	1953b
Same	2,062	15,075	19,683	7,709	12,137	15,930	3.7	0.8	0.8
Mbaga	6,546	11,064	7,962	16,191	13,371	18,138	2.5	1.2	2.3
Mamba	5,695	5,817	5,588	3,869	3,964	6,370	0.7	0.7	1.1
Suji	1,116	1,396	1,758	2,314	1,991	2,891	2.1	1.4	1.6
Chome	2,376	14,152	13,151	6,349	9,142	10,802	2.7	0.6	0.8
Gonja	4,273	10,048	11,211	6,054	7,379	8,011	1.4	0.7	0.7
Usangi	16,400	16,196	16,257	13,202	19,029	15,681	0.8	1.2	1.0
Hedaru	4,444	5,637	4,674	7,983	2,707	3,658	1.8	0.5	0.8
Ugweno	12,852	15,076	13,868	10,112	18,991	21,748	0.8	1.3	1.6
Masai	6,255	-	-	6,446	-	-	1.0	-	-
Total	62,019	94,461	94,152	80,229	88,711	103,229	1.3	0.9	1.1

Source: RH Micr. Afr. 472 Same District Books.

reflect the movement of the Toloha Maasai out of Pare District and into Maasai and Lushoto District¹⁰⁷.

The table also shows a decline in the small stock:cattle ratio probably reflects an increase in the importance of plain-based cattle herding over agro-pastoralism, which favours small stock. A more precise breakdown of the changes in small stock:cattle ratio shows that it decreased in all areas except the North Pare (Ugweno and Usangi) and Mamba (see Table 3.4). This decrease occurred even where cattle populations did not significantly increase, suggesting that the increased dependence on the plains may be an *in situ* change in livelihoods involving greater dependence on cattle. However this ratio fluctuates too much to draw definite conclusions.

Plans to move the Toloha Maasai

Notwithstanding the pressure eastwards, government officials were determined to keep the Maasai back in their designated lands¹⁰⁸. The details of the moves provides insight into the official mind-set and pastoralists' response that both clarifies the history of the Reserve and foreshadows its present dilemmas.

The first attempt to move Maasai pastoralists from Toloha came in the late 1930s. A number of Maasai families resident on Crown Land in Kenya, and using Lake Jipe for their dry season watering, were identified as having come from Tanganyika in 1924¹⁰⁹. They were moved across to the Ruvu valley in 1938 and eventually west over the Ruvu river in 1939¹¹⁰. The pastoralists involved were strongly opposed to the move and wanted to remain east of the river¹¹¹. Many returned during the war years¹¹².

After World War Two Kenyan officials became particularly keen that the remaining Maasai at Toloha, and those who returned to join them, should not use Kenyan land

¹⁰⁷ See page 91.

¹⁰⁸ File TNA 11/5 vol II - 12/11/47, DC, Maasai, Monduli to the DC, Pare.

¹⁰⁹ TNA File 723/I - 27/4/38, District Officer, Taveta to the District Officer, Pare.

¹¹⁰ TNA File 723/I - 21/9/37, District Officer, Taveta to District Officer, Pare; TNA File 723/I - 4/3/40, Assistant Livestock Officer, Monduli, report on the movement of Maasai stock across the Ruvu.

¹¹¹ TNA File 723/I - 5/12/39 - District Officer, Pare to the PC, Tanga.

¹¹² TNA File 723/II - 25/7/51, PC, Arusha to the PC, Tanga.

Table 3.5: The number of cattle in the Toloha area in the late 1940s

Date	Pare cattle	Pare small stock	Maasai cattle	Maasai small stock
26/6/45 ^a	4,000	ND	9,000	ND
12/2/46 ^b	7,000	ND	14,000	ND
20/8/48 ^c	8,000	ND	12,000	ND
21/1/49 ^d	5,098	4,517	8,832	3,178
13/12/49 ^e	3,105	1,091	10,374	1,860

^a TNA File 11/5 vol II - PVO Tanga to the DVS Mpwapwa.

^b TNA File 11/5 vol II - PVO Tanga to PC Tanga.

^c TNA File 723/II - DC Same to PC Tanga.

^d TNA File 723/II - PVO Tanga to PC Tanga.

^e TNA File 11/5 vol II - DC Same to the PVO Tanga.

for watering at Lake Jipe. They frequently complained that the Maasai really wanted grazing, not just water, and would be found miles to the north of the Lake, encroaching on Kenyan soil¹¹³. The officials determined to end the concession to all Tanganyikan pastoralists, to preserve the land for their own people and to prevent the Maasai from encroaching on the newly formed Tsavo National Park¹¹⁴.

The end of the concession to use Lake Jipe would deny pastoralists water in the dry season. This would be a serious problem because a large number of livestock depended on it. Although estimates vary, the number of stock was large (Table 3.5). It was not possible for the existing Tanganyikan water sources to provide for them.

Tanganyikan officials resolved to provide a new source of water for the Pare pastoralists at Toloha. They decided to move the Parakuyo pastoralists to the Ruvu valley where they would occupy the Northern Railway Game Reserve, which was to be degazetted, and to send the Maasai herders back across the Ruvu river where they would be part of the Maasai development plan¹¹⁵.

The difficulty with the Tanganyikan plan was that it moved too slowly for Kenyan officials. Their Tanganyikan counterparts could not decide whether to pump water from the hills or Lake Jipe, whether to improve access to Lake Jipe or to dig boreholes¹¹⁶. They were also unable to move the Maasai until the Maasailand Development plan created room and water for them¹¹⁷. Furthermore they met opposition to the idea of degazetting the Northern Railway Game Reserve¹¹⁸.

¹¹³ TNA File 11/5 vol II - 18/8/48, Provisional Commissioner, Coast to Provisional Commissioner, Tanga.

¹¹⁴ *ibid.*; TNA File 723/II - 30/12/50, Deputy CS, Nairobi to the CS, Dar es Salaam.

¹¹⁵ TNA File 11/5 vol II - 26/10/50, Honorary Member for Agriculture and Natural Resources to the Provisional Commissioner, Tanga; TNA File 11/5 vol II 20/11/50 - notes for a meeting about the Toloha Maasai. The Northern Railway Game Reserve is also referred to as the Pare Game Reserve.

¹¹⁶ TNA File 723/II - 19/7/46, DC, Pare to PC, Tanga; TNA File 723/II - 25/1/50, PC, Tanga to the Honorable Secretary, Dar es Salaam; TNA File 723/II - 6/3/51, Water Development Officer, Pare to PC, Tanga.

¹¹⁷ TNA File 723/II - 11/1/49, report of a meeting of various senior officials in Dar es Salaam including the acting CS and the Member for Agriculture and Natural Resources; TNA File 11/5 vol II - 6/5/50, Director of Veterinary Services to the PC, Northern Province.

¹¹⁸ TNA File 11/5 vol II - 17/12/48, Game Warden Lyamungu to the Provisional Commissioner, Tanga.

Tanganyikan officers were able to negotiate temporary concessions from the Kenyans but could not pursue this strategy indefinitely. The land containing the Lake Jipe watering point was alienated to Colonel Grogan in 1937¹¹⁹. He had already demonstrated a willingness to keep out pastoralists with his own hands, and was determined that Maasai use of his land should cease¹²⁰. In early 1951 Tanganyikan officials learnt that continued use of the water point must end soon¹²¹.

This timing gave just seven months to prepare a pipeline to carry water from the hills to Toloha before the pastoralists returned to Lake Jipe to water their stock¹²². The abruptness also put paid to the scheme of moving the Maasai and the Parakuyo to separate destinations. Some pastoralists, however, coped with the change without any of the preparations that government officials had hoped to make. Facing continued pressure on their grazing, a number of them moved to seek grazing and water elsewhere¹²³. One group of Maasai travelled down to the Katamboi waterholes, found just across the border in Kenya near the Lushoto-Pare District boundary, in early 1951¹²⁴.

The migration to Katamboi

The Katamboi waterholes had long been used as watering points for wet season grazing by Parakuyo pastoralists who were based at Mnazi¹²⁵. It is not clear how long these particular Parakuyo families had been there. We have seen that pastoralist's presence in the area was disrupted by rinderpest, and that Maasai herders were kept out by the Germans. Although records of pastoral occupation extend well into the last century, records of current occupation begin comparatively recently. Oral histories taken during this research date their arrival to 1907¹²⁶. One Parakuyo elder interviewed

¹¹⁹ PRO CO/533/484/11.

¹²⁰ Residents of the area still recall the time when Grogan shot cattle who had entered his land. The archives record this, and a number of other incidents when he took an active part in controlling cattle movement. These include demarcating roads and boundaries to limit movement and bulldozing a temporary compound for impounded cattle (TNA File 11/5 vol II - 24/11/46; TNA File 723/II - 19/5/51; TNA File 11/5 vol II - 16/5/45). See also TNA File 11/5 vol III - 11/7/51, DC, Pare to PC, Tanga.

¹²¹ TNA File 11/5 vol III - 15/1/51, DC, Pare to PC, Tanga.

¹²² TNA File 11/5 vol III - 18/1/51, Husbandry, Dar es Salaam to PC, Tanga.

¹²³ TNA File 11/5 vol III - 9/2/51, Member for Agriculture and Natural Resources to PC, Tanga.

¹²⁴ TNA File 11/5 vol III - 22/3/51, letter from the leader of the Kisiwani-Mbaga native court to the DC, Pare.

¹²⁵ TNA File 11/5 vol III - 20/7/51, DC, Lushoto to the DC, Pare.

¹²⁶ Interview - VC 26/11/95.

in 1952 stated that he left Handeni and went to Gonja first and then Mnazi arriving there at the time of the German war¹²⁷. In a meeting in 1964 Parakuyo elders estimated that they arrived fifty years earlier¹²⁸. One cannot rule out continued Parakuyo presence after rinderpest on the basis of these accounts, for some pastoralists may have joined neighbouring agricultural communities, but they point at least to a substantial return movement from elsewhere¹²⁹.

The Parakuyo opposed the entry of the Maasai onto their grazing grounds¹³⁰. Since the *Iloikop* wars the Parakuyo and Maasai had had hostile relations for some time, particularly in the early years of this century¹³¹. Yet the tradition of hostility alone cannot explain their reaction to the Maasai incursion.

It is clear that there was mixing between the two groups in this area before the move of the Toloha 'Maasai' to Katamboi. Colonial officials knew that they were dealing with a mixture of Maasai and Parakuyo pastoralists at Toloha¹³². One man evicted from Kenya in the move of 'Maasai' pastoralists in the late 1930s specifically claimed that he had originally come from Mnazi¹³³. Colonial officers later discovered that the 1951 migration of the Toloha Maasai had been preceded by an earlier move of Toloha pastoralists to Mahambalawe in Lushoto District and that these 'Maasai' had been allowed by the Parakuyo to stay with them¹³⁴. Local elders also recalled that the Maasai had begun to come into the area in 1948¹³⁵.

¹²⁷ TNA File 723/III - November 1952, interview of deputy leader Tembo Kasima.

¹²⁸ TNA File G1/7 - 30/1/64, meeting of pastoralists of all ethnic groups with the Lushoto District Development Committee.

¹²⁹ It is interesting to note that the Parakuyo leader Matei (cf page 79), resident at Hedaru from the beginning of British rule, was the first cousin to Kamunyu, who is the patriarch of those initially allowed to live in Mkomazi (Fosbrookes papers, 1/1/67). Hurskainen reports that Kamunyu and Maitei disputed the succession to *Laibon*. Kamunyu, favoured his son Saito, Matei supported Saito's older brother, Keiya (Hurskainen, 1984: 185-6). In the event Matei's own son Moreto took over after Maitei's death in 1925 (cf chapter four, page 104). Kamunyu's descendants feature in the household survey conducted for this research.

¹³⁰ TNA File 11/5 vol III - 11/9/51, Political Pare to Political Lushoto; TNA File 11/5 vol III - 29/2/52, DC, Lushoto to the DVO, Lushoto.

¹³¹ There are a number of reports of stocktheft between the Maasai and Parakuyo in the archives and of Parakuyo protest at being made to join the Maasai Reserve (TNA File 35/3 - 14/4/23; TNA File 10273/II - 3/5/33).

¹³² TNA 11/5 vol II - 7/11/44, Pare elders to the DC, Pare; TNA 11/5 vol II - 26/11/46, DO Taveta to PC Mombassa; TNA 723/II - 31/5/50, DC Pare to PC Tanga.

¹³³ TNA File 723/I - 13/11/39, complaint of Loita bin Mganga to the DC, Korogwe.

¹³⁴ TNA File 723/III - 3/5/54, DC, Lushoto to the PC, Tanga.

¹³⁵ Interview - VC 26/11/95.

Table 3.6: Cattle counts for the Mnazi/Katamboi area in the early 1950s

Date	General Count	Toloha Maasai	Kwavi
11/9/51 ^a	-	4-5,000	-
Dec 1951 ^b	The DC, Lushoto notes that cattle populations on the Uмба steppe have increased by more than 25,000 since the last count in 1950. He did not state the new or old totals.	-	-
26/2/52 ^c	-	11,950	-
19/5/52 ^d	-	-	5,000 cattle estimated going to Katamboi cattle camps
May 1952 ^e	-	14,000	-
23/6/52 ^f	-	18,000	8,000 cattle in 13 <i>bomas</i> , exclusive of 2 <i>bomas</i> at Katamboi.
3/7/52 ^g	-	14,000	The Kwavi own 19,000 cattle and 6,000 small stock.
Aug 1952 ^h	15,000 cattle and 5,000 small stock are total stock population of the area.	ND	Wet season grazing in Kenya is requested for 6,000 Kwavi stock units to relieve the pressure on the range.
late 1952 ⁱ	-	13,486	-
Dec 1952 ^j	-	9,700	-
Dec 1952 ^k	11,690 Kwavi, Kamba and Sambiaa cattle at Mnazi and Kivingo,	-	-
1952 ^l	17,829 - 30,564	-	-
Jan 1953 ^m	-	9,500	-
Feb 1953 ⁿ	-	10,635	-
Oct 1953 ^o	-	-	10,000 stock units
1953 ^l	16,503 - 28,291	-	-
20/4/54 ^p	-	11,162	-

^a TNA File 11/5 vol III, Political Same to Political Lushoto.

^c TNA File 723/III, DC Lushoto to PC Tanga.

^e TNA File 962/15, annual report of the Lushoto DVO, 1953.

^g TNA File 11/5 vol III, meeting of K'yan and Tang'an off'ls.

ⁱ TNA File 723/III, DC Lushoto to DC Masai Monduli.

^k TNA File 962/15 Annual District Veterinary Report, 1952. Figure estimated from rinderpest vaccination data. Young calves were vaccinated and these commonly constitute 20% of the herd size (see Table 6.3). This figure has been obtained by multiplying the number of vaccinated calves by 5.

^l TNA File 6/1, Lushoto District Annual Report, 1953. Estimated from District census data. In Lushoto District, the plains north of the Usambara mountains lie entirely within Uмба Division. The proportion of the cattle of Lushoto District found in Uмба Division varies between 28% and 48% between 1960 and 1984. These figures in this table represent just under 28% and 48% of the Lushoto District Cattle populations. They have been further modified to reflect the fact that, according to the 1984 census, 2% of Uмба Division's stock were not located on the plains, but on the hills on the northern slopes of the Usambara mountains.

^m TNA File 962/15, Monthly District Vet'ary Rep., Feb '53.

ⁿ TNA File 962/15, Monthly District Vet'nary Rep., Mar '53.

^o TNA G1/7 - 17/10/55, reported to the Member for Agriculture and Natural Resources by the PC, Tanga.

^p TNA File 723/III, DC Lushoto to DC Masai Monduli.

ND - No Data.

The opposition of the Parakuyo to the Maasai seemed to stem less from the tradition of hostility than from the fact that the Maasai came in suddenly, despite having been asked not to come by the Parakuyo leader¹³⁶. They also seem to have arrived with so many stock that the resources of the area were over-stretched. 1952 brought drought, and veterinary staff record hundreds of Maasai and Parakuyo animals dying of starvation in early 1952¹³⁷.

Estimates of the numbers of cattle involved are diverse. Table 3.6 summarises the counts that were made and gives estimates from other sources. It is possible to reconcile some of the Kwavi cattle counts by noting that the estimate of 5,000 Kwavi cattle in May 1952 and the request for grazing for 6,000 stock units in August of the same year refer to cattle going to wet season camps only. Likewise the estimate of 8,000 of June 1952 excludes animals at Katamboi.

Nevertheless it is difficult to reconcile some of the more divergent figures. The estimate of 10,000 Kwavi stock units, made in October 1953, is considerably lower than that made in July 1952¹³⁸. It is possible that the latter is an exaggeration made to impress Kenyan officials who were at the meeting where Kwavi needs were being discussed. The Lushoto District Commissioner's estimate that the total cattle population of the area was just 15,000 animals in August 1952 is not supported by numbers mentioned in 1951 or the census estimates for 1952 and 1953.

All that can be said from these data is that a large number of livestock were established in Lushoto District when a similarly large number of stock descended on the area. These estimates are all considerably higher than later Game Department reports (see Table 4.1, page 106).

¹³⁶ TNA File 11/5 - 11/9/51, Political Pare to Political Lushoto.

¹³⁷ TNA File 962/15 - 11/11/52, Lushoto DVO to the Tanga PVO.

¹³⁸ At that time 1 stock unit was equivalent to 1 cattle or 5.5 smallstock.

Contest and reconciliation between the Maasai and the Parakuyo

The result of the incursion was persistent lobbying by Parakuyo leaders of the Lushoto District government to have the Maasai expelled from the District¹³⁹. The Lushoto District Council agreed to the request and tried to ensure that the Maasai left the area¹⁴⁰. It was decided to send the Maasai 'back' to five different areas on the Maasai steppe - Losogonoi, Naberera, Orkesumet, Londergess and Talamai¹⁴¹.

The desire to remove the Maasai was assisted by the recent establishment of the Mkomazi Game Reserve in the area for it provided another reason to control the number of people there. The Game Ranger of Tanga Province, David Anstey, was particularly determined to exclude the Maasai from the Reserve on the grounds that this was not their normal place of residence¹⁴². He also resolved to allow some Parakuyo families access because it was their normal home¹⁴³.

In other government departments, the desire to move the Maasai was similarly accompanied by a strong desire that the Kwavi should stay in the new Reserve and also continue to use the water holes in Kenya, which were in the Tsavo National Park. The Lushoto District Commissioner wrote in 1953:

‘The legitimate occupants of the Reserve, with their stock, (e.g. Wakwavi, Wakamba and Wasambaa but excluding Masai) should be allowed to remain.’¹⁴⁴

In 1953 he prepared a formal request to the Kenyan Government for grazing rights at Katamboi to be granted to the Kwavi¹⁴⁵.

¹³⁹ TNA File 11/5 vol III - 16/5/53, DC, Lushoto to the PC, Tanga.

¹⁴⁰ TNA File 11/5 vol III - 3/7/52, minutes of a meeting of Tanzanian and Kenyan officials to discuss the Katamboi affair.

¹⁴¹ TNA File 11/5 vol III - 6/6/53, DC, Masai Monduli to the DC, Pare.

¹⁴² TNA File 723/III - 23/6/52, DC, Lushoto to the PC, Tanga.

¹⁴³ TNA File 6/1 - 1952 annual report by David Anstey, Game Ranger of Pare; David Anstey pers. comm. 25/2/96.

¹⁴⁴ TNA File G1/7 - 7/7/53, DC Lushoto to PC, Tanga. Parentheses in the original.

¹⁴⁵ TNA File 723/III - Aug 1952, DC, Lushoto's request for grazing in Kenya.

The Provincial Commissioner of Tanga took up the matter with the East African Royal Commission. He stated that:

‘Grazing and watering concessions across the border in the Kenya Tsavo National Park are essential for correct management of stock on the plains on the eastern side of the Usambara-Pare range: such concessions would be no more than a recognition of traditional rights of the Kwavi and Maasai in this area.’¹⁴⁶

The mention of Maasai rights is obscure. It may be a reference to the continuing needs of the Maasai pastoralists who had remained at Toloha. It was also made in the context of wider debates between officials as to whether National Parks should take priority over people’s rights at all¹⁴⁷. In any event, both the District and Provincial Commissioners’ requests were refused¹⁴⁸. Access to the Katamboi waterholes was denied to the Parakuyo who had to make do with the pastures of the Reserve. The Maasai were to be returned to Maasailand.

Moving the Maasai proved extremely difficult as they tried every form of passive opposition to the moves between 1952 and 1954. They pleaded to be allowed to remain, hired lawyers, tried to bribe officials, and fled the attentions of veterinary guards sent to supervise the moves¹⁴⁹. The Tanganyikan efforts were not helped by the Kenyan officials who seized and sold cattle present at Katamboi without sufficient warning or due process. The man complained and the Tanganyikan government took up his case, but he had to remain in Lushoto District until it was resolved¹⁵⁰.

¹⁴⁶ PRO CO/892/12/3 - 19/5/53.

¹⁴⁷ See Neuman, 1991: 153-9 and 1995a: 155-7 for similar debates over the Serengeti.

¹⁴⁸ TNA File 723/III - 23/12/52, Chief Secretaty, Nairobi to CS, Dar es Salaam.

¹⁴⁹ TNA File 723/III - 17/11/55, Political Lushoto to Provincer, Tanga.

¹⁵⁰ The Kenyan officials arrested 14 men for illegal incursion and impounded and sold 500 cattle. All these belonged to one man, but the proceeds were used to pay the fines for the other 13. The Kenyan courts later declared the fines *ultra vires* and the plaintiff received Ksh 97,098/- compensation. Much to the consternation of the Tanganyikan officials the plaintiff refused to receive the money in instalments and walked off with the entire sum, then worth a considerable amount, in cash (TNA File 723/III - April 1952, Notes on the Katamboi raid by the DC, Voi; - 5/4/53; - 20/3/53; - 9/11/53.)

In 1954 the Lushoto District Commissioner reported that the Maasai had been moved out but also noted that there had been a return movement of Maasai back into the area¹⁵¹. This time, however, the Parakuyo were not complaining about the Maasai infiltration. In the face of Parakuyo resistance to them, the Maasai tried more peaceful measures to try to gain access to pastures in Lushoto District. The Parakuyo in turn found it difficult to sustain the hostilities. One Parakuyo leader of the time described the process like this:

'Basi walipoingia kwa wingi; sasa ni ubinadamu tu. Tukaongea, tukapatana. Tukapatana, tukaoana, tukapeana ngombe ... Sisi tukanyamasa, hatukupiga kilele tena, hatukulalamikia serikali tena. Tukaacha tu, tukakaa wote.'¹⁵²

Initially the return movement did not involve a large number of stock. The Lushoto District Commissioner had only a vague impression that the return movement was occurring, without being able to say how many livestock were involved. In 1960 cattle census recorded just under 22,000 animals in Uмба Division¹⁵³. However the links and alliances formed in this period were of great significance for the Reserve's later history.

The alliances formed made it harder for colonial officials to continue to separate the Parakuyo and Maasai. Lushoto District officials found that the lines between them were blurred. The Maasai sought Parakuyo identity, or set up strong links with the Parakuyo in order to avoid eviction. In early 1954 Government officers found themselves dealing with some Maasai families who refused to leave the area; others who had left the area but whose stock remained in Parakuyo *bomas*; some who were allowed to stay on the condition that they had no more than 10 cattle and took up

¹⁵¹ TNA File 11/5/vol III - 29/2/52, DC, Lushoto to the PVO, Tanga; TNA File 11/5 vo III - 7/5/53, DC Lushoto to the PC, Tanga; TNA File 723/III - 17/11/55, Political Lushoto to Provincier, Tanga; TNA File 723/III - 3/5/54, DC, Lushoto to PC, Tanga; TNA File 962/1954 - annual report of the DC, Lushoto for 1954.

¹⁵² Well, when they started coming here in large numbers, it's just human nature. We talked to each other; we understood each other. We understood each other, we married into each other's families, we exchanged cattle ... We (the Parakuyo) kept quiet, we did not raise the alarm any more, we did not complain to the government. We just left it. We all lived here together. Interview KK 5/10/96.

¹⁵³ Lushoto District Livestock Office Wallchart, modified according to note 1 of Table 3.6.

cultivation, and a fourth group, which the officials termed 'pseudo-Kwavi', who had been accepted as Parakuyo by the Parakuyo leaders¹⁵⁴. The Game Department later realised that the Maasai were also buying the right to use the names of dead Parakuyo pastoralists recorded on the lists in order to be allowed to use the Reserve¹⁵⁵.

These events are reminiscent of Waller's account of Kikuyu immigration into the Maasai Reserve in Kenya in the 1930s and 1940s¹⁵⁶. He reports Kikuyu petitioning the government to be allowed to stay, offering to pay higher Maasai taxes and seeking out Maasai sponsors who could give them a place to stay or vouchsafe their Maasai credentials or history¹⁵⁷. Waller writes:

'None of these claims and pasts were inherently implausible; nor were they necessarily false - though some probably were. But this is to miss the point. They were not intended as 'real' life histories. They represented attempts on the part of the immigrants to accommodate themselves to what they understood to be the dominant concern of the colonial administration, to speak the prescribed language of ethnicity and tradition upon which their interrogators insisted and to make themselves acceptable to their prospective neighbours.'¹⁵⁸

Ironically, at Mkomazi, Maasai pastoralists were lobbying to 'become' Parakuyo.

Summary

The early history of the Mkomazi area shows that it was coming under increasing pressure from pastoralists. Use of the plains west of the mountains was growing as Maasai pastoralists expanded eastwards and as residents themselves turned to cattle rearing. Land alienations to the Tsavo National Park and a settler in Kenya further restricted pastoralist migration systems.

¹⁵⁴ TNA File 723/III - 8/11/54, DC, Lushoto to the Game Ranger, Pare.

¹⁵⁵ TNA File G1/7 - 17/4/68, meeting of pastoralists and Game Department staff. Referred to in other publications as TA/GD/D10/16/22/193.

¹⁵⁶ Waller, 1993.

¹⁵⁷ Waller, 1993: 235-6.

¹⁵⁸ Waller, 1993: 236.

As cause and consequence of these changes, Maasai and Parakuyo set up links that ensured there was to be continued pressure on, and illegal use of, the Reserve from its inception. The plan to allow controlled use of the Reserve by a few Parakuyo families foundered from the outset. The requirement of separation and limited access ran against the very nature of pastoral society. The continual pastoral practice of creating networks and links and expanding options for grazing meant that this period saw the initiation of increasingly close links between the Parakuyo of Mnazi and the Maasai from the Ruvu valley, Toloha and the Maasai steppe.

The arrangement also ignored the presence of numbers of Kamba, Sambaa and Pare pastoralists who were present in Lushoto District and who were accustomed to use the Reserve's resources. The focus on one ethnic group was to cause dissension early on in the history of the Reserve and has coloured developments in it ever since. The next chapter charts the evolution of conflicts over the Reserve and the growth of pastoralism within it.

Chapter Four

The history of the Reserve

In this chapter I trace the growth of pastoralism inside the Reserve. I explore how immigration led to tensions and contests between pastoralists, between pastoralists and wildlife officials, and between different government departments. I show that the rangelands of Mkomazi grew in importance for a large number of people, and describe the geography of the pastoral social network of which the Reserve was part. Finally I give a brief account of the final years of the Reserve's occupation, describe the current location of some of the ousted pastoralists, and outline developments since the eviction of the pastoralists.

Introduction

Mkomazi was established against a background of continual concerns to shepherd pastoralists to different sections of north-east Tanzania. Pastoralists continually resisted control of their movements. The history of the Reserve was set to follow the same pattern.

There were several issues that beset Mkomazi. There were complaints by Pare, Sambia and Kamba pastoralists that the permission to the Parakuyo to live in the Reserve was tribalist and that current boundaries did not give them enough room. This was accompanied by illegal immigration by Maasai and Parakuyo pastoralists into the Reserve. There were also disputes between different government departments about the continuation of pastoralists' residence in and around the Reserve. Finally, there were complaints by pastoralists that there had been too much immigration and that their grazing management strategies had been weakened.

Throughout this period, as earlier in the century, government officials were concerned to limit the numbers of livestock below levels which pastoralists are accustomed to keep, and to constrain the movement of their livestock. The continual government concern was overgrazing and overstocking, while the pastoralists strove to maintain access, and control over access, to grazing resources. These contests result in the evictions of 1988 and persist through to the present.

I divide the history of Mkomazi into two periods. From 1951 until 1970, residence inside the west of the Reserve was slight, if it occurred at all, but there was considerable immigration into the eastern half, into Lushoto District. After that date, there was a remarkably rapid build up of stock inside the western half of the Reserve.

1951 - 1970: pressure on the borders and immigration into the east

The idea of gazettement Mkomazi Game Reserve was first mooted by Mr. Bates, the District Commissioner of Pare, in 1949. He suggested that the Uмба Steppe Game Controlled Area be extended to include a large area of Pare District, and the whole become a Game Reserve. In justifying his proposal he said:

'First and foremost the area provides a sanctuary for game without in any way interfering with the legitimate present and future needs of the local population.'

Bates insisted that this issue was separate from the pressure to degazette the Northern Railway Game Reserve that accompanied plans to move the Toloha Maasai. He said that the recommendations stood regardless of whether the latter was degazetted or not.

Bates' assurance used a stringent definition of 'legitimate'. In the same letter he noted that the area was used seasonally by Maasai in search of water along the Kenyan border and

¹ TNA File 451/IV - 25/4/49.

he also recorded the presence of two huts in the Maji Kununua hills. Moreover the concept of 'legitimate use' depended on certain ideas of good land use to which many pastoral groups did not subscribe.

The District Commissioner of Lushoto was more aware of people's needs, suggesting that:

'There is no objection to the continued existence of the Reserve if it is felt to be worthwhile, provided that the existing human interest within the Reserve (except the Masai) are not prejudiced.'²

David Anstey, the first Game Ranger of Mkomazi who made a safari through the area shortly after its gazettelement found more people. He recorded 20-30,000 cattle grazing east of the Kambaga river and west of the Pare Lushoto border and also a large number of Parakuyo stock watering at Katamboi, together with the incursions of Maasai people and livestock³.

Anstey insists that the Reserve was gazetted with due process and that local leaders certified that there were no tax payers resident inside it except the Parakuyo⁴. However, many of the tax payers living outside the Reserve made considerable use of resources within it. On two occasions the Reserve boundaries had to be redrawn to ensure that all local people were resident outside the Reserve, and so could mount no legal claim to graze inside it⁵.

An exception was made for the Parakuyo living in the area. It was felt that their strong tradition of using the gazetted pastures made it unfair to exclude them. Anstey drew up a

² TNA File 962 Lushoto District Annual report page 14. Parentheses in the original.

³ TNA File 6/1 - annual report of the Game Ranger, 1952. Pers. comm. 25/2/96.

⁴ Anstey pers. comm. 25/2/96; 26/8/97.

⁵ TNA File G1/7 - 8/12/56, DC, Pare to the PC, Tanga; TNA File G1/7 - 7/12/57, Game Ranger to Political Lushoto.

Box 4.1: The needs and claims of the Pare and Sambia pastoralists

‘... when the government came to put Game Reserve borders here there’s not one citizen who was asked or informed where the borders would go; now several citizens have received severe fines ... We bring our request that the borders be placed far away (up to Kifukua) so that there will not occur again other complaints which cause disagreements between the government and the citizens. But this request is disregarded by the Game Ranger. Now what is your decision now that the dry season has come?’

The Gonja branch of the Tanganyika African National Union writing to the DC of Same on behalf of Pare pastoralists. The Kalimawe Game Controlled Area was subsequently excised east and south of Gonja to provide room for these pastoralists. 1st July 1956. TNA File G1/7.

‘We are residents of Kizungo (the Pare people); we are not businessmen or office workers but we get our food and tax for the government from our herds, our farms and our beehives since a long time ago ... All these lands have been the dwelling places of people (our grandfathers until our fathers) since 300 years ago. ... People have been moved suddenly and left their farms or been evicted from their watering places and houses have been burnt. This was done by armed game guards who evicted people like animals. People moved to areas which for a long time have not sufficed for living, much loss is incurred from the death of goats and sheep and from the lack of water. Moreover the beehives which were hung the Game Ranger decided should be cut down and split, and they were cut down and split and all the honey was eaten by the vandals ... Since the tribulation we face is great we have no other purpose except this need: that we want help quickly to get our rights which have been lost and to be given our freedom as are the other citizens of the realms of this kingdom.’

The Pare people of Kizungo to the District Commissioner of Same. 24th January 1957. G1/7.

‘ Under instructions from Huseini Mane, Musa Kirewasha and 25 Africans of Baramu in Usambara District I have to address you the following: 1. My clients are African herdsmen and have their cattle *bomas* in Mnazi - Kamba near Kivingo. 2. Until recently they were grazing in the Mkomazi area but owing to the said area being declared a game reserve, my clients have been prohibited to enter this area and they have been ordered to graze only in the Bambo near Kamba area. 3. The area allocated near Bambo is a small piece of land infested with tsetse flies and the grass appears poisonous. This area has no water supply as the river dries up in the hot season and the insufficiency of pasturage has put my clients who own about (a) few thousand cattle, sheep and goats into a very awkward situation. 4. The pasturage in the Bambo area has taken a heavy toll of my clients’ cattle in that they have lost about 150 heads of cattle recently and they are convinced that the reason is because of the poisonous grass. 5. My clients desire to petition the government for excising a sufficient land from the Mkomazi Game Reserve for their cattle and at which place in the past they had acquired grazing rights.’

Barrister writing to the District Commissioner of Lushoto on behalf of Pare and Sambia herders following the clearing of Reserve boundaries in the late 1950s. 4th February 1960. TNA G1/7.

list of legal residents who were to be allowed to stay⁶. This list was an attempt to fix the number of people inside the Reserve and prevent further infiltration in order to limit pastoral presence and movement in accordance with officials understanding of what constituted good herding practice⁷.

Evidence of local opposition to the Reserve's existence is seen in letters written in protest against its restrictions (summarised in Box 4.1). In 1953, Pare people petitioned to be allowed to graze around the Maji-Kununua area. Anstey rejected the request, saying that 'they have no traditional claim on the area at all'⁸. In 1956 and 1957 Pare agro-pastoralists in Same District wrote to the District Commissioner complaining about the restrictions facing their use of the area. One letter, from the Gonja branch of the Tanganyika African National Union, later resulted in the degazettement of part of the Reserve to form the current Kalimawe Game Controlled Area⁹. The other, from agro-pastoralists in the Kizungo - Vumari area, detailed several complaints about the behaviour of game guards and loss of livelihood¹⁰. The District Commissioner of Same dismissed the complaints as factually untrue, missing the underlying message that these people wanted to use the Reserve's resources¹¹. Finally, just before Independence, a number of Pare and Sambia herders at Mnazi hired an advocate to protest at the loss of grazing after the demarcation of borders in the late 1950s cut off some of their pastures¹².

Local concerns were reflected in a debate within the higher circles of government over whether or not to maintain the Reserve at all. Although all were concerned to control what were perceived to be bad environmental practices, some felt that the excision of the Reserve placed to great a constraint on people's resource use. At an early stage the

⁶ Anstey pers. comm. 25/2/96; TNA File 723/III - 3/5/54, DC, Lushoto to the PC, Tanga.

⁷ TNA File 6/1 - annual report of the Game Ranger, 1952.

⁸ TNA File 6/1 - annual report from the Game Ranger, Same, 1953.

⁹ TNA File G G1/7 - 1/7/56, Chairman of the Gonja branch of the Tanganyika African National Union to the DC, Pare and the PC, Tanga; TNA File G1/7 - 8/12/56, DC, Pare to the PC, Tanga.

¹⁰ TNA File G1/7 - 24/1/57, Kizungo, Vumari agro-pastoralists to the DC, Pare.

¹¹ TNA File G1/7 - 11/4/57, DC, Pare to the PC, Tanga.

¹² TNA File G1/7 - 4/2/60, FS Khambalia, Advocate, to the DC, Lushoto.

Provincial Commissioner of Tanga made a cautious proposal that it be used for controlled grazing schemes:

‘Animal husbandry (is) to be encouraged by permission to ranch on an economic basis within Game Reserves, including seasonal use of grazing and water across the Kenya border. In this connection, however, detailed information is required regarding the number of stock already within the Mkomazi Game Reserve, and the area of this Reserve which is unusable as being semi-desert.

The conflicting claims of the Game and Veterinary Departments in respect of the Mkomazi Game Reserve require to be examined possibly with a view to arranging an easily controlled use by stock of suitable areas within the Reserve. The protection of flora and fauna which is provided by a Game Reserve might be maintained if homesteads were not permitted within the Game Reserve, thus limiting the range of stock permitted to graze within it.’¹³

Later a team of District officials from Pare debated the issue, but were unable to agree on the merits of Mkomazi. The Reserve was large, occupying a third of Same District, and three members of the team thought it would make good grazing land whilst the other three thought it would make a valuable contribution to wildlife conservation¹⁴.

The debate was a little controversial and attracted the attention of the press¹⁵. At a meeting of the Tanga Provincial Advisory Council veterinary staff argued that the Game Reserve was concentrating herds elsewhere and parts of Tanga District were becoming

¹³ PRO CO/892/12/3. Submission to the Royal Commission by the PC, Tanga, page 5.

¹⁴ TNA File G1/7 - 9/10/53, extract from the minutes of the District Team.

¹⁵ Standard Correspondent, Tanga, 1955.

badly overgrazed. The meeting decided to review the status of the Reserve with the object of restoring it to agricultural interests¹⁶.

Mr Anstey, however, who was also at the meeting argue that the stocking rate possible in the Reserve was too low for it to solve the overstocking problems beyond its borders¹⁷. An influential local settler, who had a farm at Gonja, also wrote to the government and press, arguing that dereservation would just lead to the place becoming overrun by Maasai and Parakuyo herds. He felt that the leading Pare would support his fear and that the Maasai and Parakuyo had 'too large a slice of Tanganyika' already¹⁸.

In 1955, Mr Trotman, the Secretariat Member for Agriculture and Natural Resources, resolved the situation in favour of the Game Department. Once again the state's concept of the environment held sway. He declared that proper use was not being made of the area outside the Game Reserve, and the problem of over-grazing outside the Reserve had not been curtailed. He felt that degazettement was pointless if wanton use of resources outside Mkomazi induced a need for the resources inside it¹⁹.

Legitimate or not, the needs of local people to use the Reserve gradually increased over the next two decades. The pressure was particularly strong in the east of the Reserve, in Lushoto District. Here the pastoral networks built up between the Maasai and the Parakuyo grew and intensified²⁰.

The Reserve authorities tried to combat the incursions and those who were part of the networks, but outside the Reserve, complained. In 1960, Paul Moreto, *Laibon* of the Kwavi and resident at Hedaru in Same, wrote to the Minister of Natural Resources to

¹⁶ Standard Correspondent, Tanga, 1955.

¹⁷ Standard Correspondent, Tanga, 1955.

¹⁸ Bradstock, 1955; TNA File G1/7 - 15/11/55, Le Maitre to Member for Agriculture and Natural Resources, the Secretariat.

¹⁹ TNA File G1/7 - 21/12/55, Member for Agriculture and Natural Resources to the PC, Tanga.

²⁰ TNA File G1/7 - 17/4/68, report by the Uмба Game Officer on the new list of legal residents of Mkomazi Game Reserve; Interviews VC 26/11/95, MM 26/11/95, KK 10/5/96.

complain that there was not enough grazing and that there was no opportunity to visit friends inside the Game Reserve because of the prohibitions on entering it²¹. In response, the government replied that they were concerned about the impact of grazing and that some 10,000 head of cattle had moved into the plains area around Mnazi in the last 12 months²².

In addition to the continual pressure from plains pastoralists south of Mkomazi, there was also pressure from Sambaa pastoralists based in the Usambara mountains. The Usambara Development Scheme encouraged the movement of stock from the highlands to the plains²³. In 1959 the Game Ranger refused to allow dry season grazing inside the Reserve for pastoralists living around its boundaries because, he alleged, cattle had been brought down from the hills by the Sambaa deliberately to put pressure on the Reserve²⁴.

In the early 1960s during a period of lax management of the Reserve, the number of users and pressure on it increased²⁵. The Game Department tried to control the situation later but it met increasing opposition from an alliance of local pastoralists and government officials who wanted the Reserve used by people.

In 1964, a meeting of pastoralists from a number of different ethnic groups with the Lushoto Development Committee tried to establish why the Parakuyo were allowed to use the Reserve but other ethnic groups were not. The participants condemned such discrimination and resolved that either all pastoralists should be given grazing rights or the borders of the Reserve should be moved back to allow more room for grazing²⁶.

²¹ TNA File G1/7 - 27/12/60. Moreto was the son of Matei who was the Parakuyo Laibon in 1922 cf chapter three, page 79. This family was closely related to those allowed to live in Mkomazi Game Reserve.

²² TNA File G1/7 - 9/1/61, PC to the Permanent Secretary, Ministry of Agriculture and Co-operative Development.

²³ TNA File 6/1 - annual report for Lushoto District 1952; TNA File 723/III - 26/2/52, DC, Lushoto to the PC, Tanga; TNA File G1/7 - 2/12/65, Regional Game Warden, Arusha to the Game Warden, Tanga.

²⁴ TRA File V10/10 - 22/8/59, Game Ranger to Political Lushoto.

²⁵ TNA File G1/7 - 67/1/67, Principal Game Warden to the Director of Game, Dar es Salaam.

²⁶ TNA File G1/7 - 30/1/64, minutes of a meeting of pastoralists with the Lushoto District Development Committee.

Table 4.1: Cattle resident in Umba Division 1951 - 1968

Year	Location	District Records	Game Ranger reports	Aerial Count
1951 ^a	In the Reserve	-	'A few thousand Wakwavi cattle and a small number of herdsmen lived in the Reserve and on the south bank of the Umba outside the Reserve near Mnazi and Lelwa. There were a small number of Sambaa and Kamba etc., cattle owners at Kivingo, Mnazi, Kamba and Lelwa.'	-
1952 ^b	Umba Division plains	5,000 - 30,564	-	-
1960 ^c	Umba Division plains	21,984	-	-
1960 ^d	Mnazi, Kivingo and Lelwa	16,000	-	-
1963 ^e	In the Reserve	-	4,300	-
1964 ^f	In the Reserve	-	-	3,235
1964 ^g	Plains north of Usambaras	14,000	-	-
1964 ^h	Reserve-adjacent villages	32,721	-	-
1965 ⁱ	Mnazi and Kivingo area	30,000	-	-
1965 ^j	Outside the Reserve.	38,561	-	-
1966 ^c	Umba Division Plains.	45,245	-	-
1966-7 ^k	In the Reserve	-	-	1,350 - 3,000
1968 ^l	In the Reserve	-	21,080	-

^a Reported by David Anstey to Director of Game. TNA File G1/7, 24/1/67.

^b Table 3.6.

^c District Census, Lushoto District Livestock Office wall-chart. Modified according to note 1 to Table 3.6.

^d DC, Lushoto to a lawyer hired by Pare and Sambaa people. TNA File G1/7 - 15/2/60.

^e Reported by the Game Ranger. TNA File G1/7 - 14/4/68.

^f Counted by the Game Warden. TNA File G1/7 - 17/1/64.

^g Estimated by the Regional Veterinary Officer. TNA File G1/7 - 11/5/64.

^h A count reported by the Regional Agricultural Officer. TNA File G1/7 - 11/7/64.

ⁱ Estimated by the Regional Veterinary Officer. TNA File G1/7 - 9/9/65.

^j Reported by the District Agricultural Officer. TNA File G1/7 - 2/1/68.

^k Harris, 1972: 113.

^l Reported by the Game Ranger. TNA File G1/7 - 14/4/68.

At roughly the same time David Anstey, who was by then the Principal of the College of African Wildlife Management, met with the Regional Commissioner of Tanga and complained that illegal grazing was rife in the Reserve and that land was deteriorating outside and inside the Reserve²⁷. The Game Department's eventual solution to this problem was to propose the entire relocation of Parakuyo and Maasai livestock found there²⁸. However the Regional Commissioner was unable to endorse the suggested movement of an estimated 31,000 Maasai stock²⁹, and, when the same notion was later proposed by the Regional Development Committee, he was again not sure how it was to be put into practice³⁰.

In part, the disagreements centered upon how many stock should be, and had originally been, inside or around the Game Reserve. The Game Department consistently maintained that there were originally relatively few animals using the Reserve (Table 4.1). Other data suggest that there were many more animals in the area and dependent upon grazing inside it. It is not easy to reconcile the count of cattle for 1951 that Anstey reports in 1967 with the large numbers debated during the Katamboi affair (Table 3.6, page 93).

The refusal to destock the area was accompanied by increasing conflict on the ground at Mkomazi and conflict between the Lushoto District Officials and the Game Reserve staff. The District Commissioner of Lushoto instructed Game Scouts to stop harassing Maasai in the area, and was angry when people arrested for illegal entry in the Reserve were sent to Same³¹. At one point the Regional CID officer instructed that a Serious Crime File be opened under the heading of Arson, following allegations that the Game Warden had burnt down houses inside the Game Reserve³².

²⁷ TNA File G1/7 - 14/3/64, David Anstey to the RC, Tanga.

²⁸ TNA File G1/7 - 29/12/65, minutes of a meeting of the sub-committee of the Regional Development Committee Team.

²⁹ TNA File G1/7 - 16/7/64, Regional Administrative Secretary, Tanga to Regional Game Warden, Tanga.

³⁰ TNA File G1/7 - 23/3/66, RC, Tanga to the PS of Agriculture, Forest and Wildlife.

³¹ TNA File G1/7 - 27/10/66, DC, Lushoto to Divisional Executive Officer, Mbaramu; TNA File G1/7 - 30/1/67, DC, Lushoto to PC, Tanga.

³² TNA File G1/7 - 1/12/66, Regional CID, Tanga to District CID, Lushoto.

The opposition to the Reserve on the ground led eventually to suggestions at higher levels of government to degazette it. In 1967 the Principal Secretary to the Ministry of Agriculture and Co-operatives asked the Senior Research Officer, Dr. Anderson, of the Northern Research Centre, to carry out a land use survey of the Mkomazi Game Reserve. He informed Dr. Anderson that the Minister was under considerable pressure to degazette the Game Reserve and that the Minister could only do that if he was satisfied that the best use of the land was for agriculture or pastoral use³³.

Dr. Anderson's report is one of the few reports on Mkomazi that I have been unable to locate. However its principal findings were discussed in other literature. It appears that he thought that the Reserve had poor arable potential and that pastoralists were destroying their habitat and causing large-scale erosion. He recommended that the Reserve should not be opened up for pastoralism but noted that it had potential for game viewing³⁴.

There are no more records of further plans to degazette the Reserve after that date. In early 1968 the Game Warden of Same and Tanga pressed for the removal of all Maasai and Parakuyo stock back to Maasailand³⁵. There are patchy records of an attempt to move the Parakuyo back to their 'original' dwelling place in Handeni³⁶. David Anstey recalls that he deposited in Arusha money raised from the culling of elephants in order to pay for the move³⁷.

Ultimately local government officials seem to have been extremely reluctant to endorse any large-scale movement of people. They seemed to prefer to endorse the status quo of limited access to some, combined with frequent and inevitable illegal use by others. A large meeting of pastoralists and Game Department officials agreed to an expansion of

³³ TNA File G1/7 - 16/8/67, PS of the Ministry of Agriculture and Cooperatives to the Senior Research Officer, Northern Research Centre.

³⁴ Parker and Archer 1970: 37,49; Ibeun 1976: 48.

³⁵ TNA File G1/7 - 7/3/68, Game Warden, Same to the Regional Agricultural Officer, Tanga.

³⁶ TNA File G1/7 - 24/8/68, Principal Game Warden, Arusha to the RC, Tanga.

³⁷ David Anstey, pers. comm. 25/2/95; Anstey to Mrs Fitzjohn 14/6/97.

the original list of pastoralists established by David Anstey³⁸. The number of cattle allowed to be in the Reserve was increased to 21,080.

1970 to the late 1980s: increasing pressure on the west of the Reserve

After 1968 there appear to have been staff changes at Mkomazi Game Reserve and the trouble and conflicts between the pastoralists and the Game Department ceased³⁹. This period also saw the initiation of further pressure on the Reserve. For the first time since the early Pare complaints of the 1950s, the western half of the Reserve experienced pressure from pastoralists trying to use it.

There are no livestock census data for Same District between 1953 and 1978, but there are a number of reasons for suggesting that stock counts in the western half of the Reserve were low. Maps of cattle distribution in Tanganyika in 1933 show that that this part of the Reserve was dominated by tsetse⁴⁰. Local residents recall that the first time a Maasai herder came to Kisiwani he was forced to leave because of the losses he experienced from Trypanosomiasis⁴¹. The threat of the disease kept herders away for some time.

Since the west was also closest to the main Reserve and District headquarters, it was easier to police than the east. The threat of tsetse and the stricter controls combined to keep cattle out for some time. In the absence of cattle census data, this is apparent from other reports of the Reserve. Mr. Larry Harris mounted intensive ground based observations of the west of the Reserve but ended up recording that there were only 1,350 - 1,650 cattle inside the Reserve⁴². Parker and Archer mapped the approximate extent of cattle in the Reserve in 1970. The only occurrence in the west is in the top north west

³⁸ TNA File G1/7 - 17/4/68, meeting of pastoralists and Game Department staff. Referred to in other publications as TA/GD/D10/16/22/193.

³⁹ KWLf - 23/4/76, minutes of a meeting between the Parakuyo and Ward and Divisional Secretaries and Game Reserve officials.

⁴⁰ PRO 691/141/12.

⁴¹ PRA Mkonga Ijinyu 4/7/95

⁴² Harris, 1972: 113.

corner of the Reserve near Toloha⁴³. Finally, there is an absence of official concern over pastoralism in the west of the Reserve. This occurred at a time when pastoralists were an active issue in the east of Mkomazi. If there had been problems I would have expected records of them to be in the files.

There were several reasons for the extra pressures experienced in the west after 1969. During the 1950s and 1960s, the Department of Wildlife had invested in water development for the area and had built 3 dams, at Ngurunga, Kavateta and Dindira. This made these rangelands more attractive, as they had previously lacked sufficient watering points for extensive use⁴⁴.

Herders were also attracted by the success of Pare agro-pastoralists living in the southern borders of the Reserve in defeating the tsetse challenge. Three Pare families came to Kisiwani to herd in the early 1950s. They came from Lembeni where they had found water supplies inadequate. They were attracted mostly by the agricultural benefits of the village. The disease constraints on their cattle were a problem and they recalled experiencing losses due to East Coast Fever and Trypanosomiasis when they first arrived. To combat that, they engaged in a systematic programme of bush clearance and burning to clear out the tsetse fly, the vector of trypanosomiasis⁴⁵.

The impact of these measures was to make the area around Kisiwani much more favourable for cattle. One of the families reported that they came with just 34 cattle and managed to build up a herd of 1,500⁴⁶. Although this seems a large figure, it is backed by records from the Kisiwani Ward Livestock Office where a report prepared for the District Commissioner of Same in 1983 reports the same individual as having 1,500 cattle⁴⁷. The

⁴³ Parker and Archer, 1970: 48.

⁴⁴ Mangubuli 1991: 12

⁴⁵ PRA Mkonga Ijinyu 4/7/95; Interview - IRM 4/7/96.

⁴⁶ Interview - IRM 4/7/96.

⁴⁷ KWLF 11/10/83, notes on deliberations by the DC, Same concerning Mkomazi Game Reserve.

evident success of these pastoralists at Kisiwani caused renewed interest in the area from other pastoralists.

The other factor which provoked attempts to use the Reserve were the dry times experienced at the end of the 1960s and early 1970s. Residents of Kisiwani recall that they petitioned to be able to use the Reserve in order to cope with the drought⁴⁸. In Mnazi, Pare pastoralists went to Dar es Salaam to ask for permission from the Ministry of Natural Resources and the Environment to herd their cattle inside the Reserve⁴⁹. After that, permits were available from the Game Reserve Manager in Same. In the same year a private report volunteered by Parker and Archer advocated ranching within the Reserve; this may have swayed opinions.

Permission was only intended to be temporary and in the early 1970s the Game Department resolved several times to stop the giving of permits. Nothing, however, appears to have been done. Management of the Reserve was severely weakened in the 1970s when the decentralisation policy saw considerable authority devolved from Dar es Salaam to the Districts and Regions. Responsibility for the west and east of the Reserve was divided between Same and Lushoto District respectively. The two halves were renamed Mkomazi (in Same District) and Uмба (in Lushoto)⁵⁰.

Maasai and Parakuyo pastoralists who had been permanently living in the east of the Reserve also began to move westwards into Same District⁵¹. They were drawn by the water and grazing made available by the developments of the water supply. Many of them settled at Kisima where a spring was created following seismic disturbance⁵². With water available, they were able to dig wells and set up permanent dry season bases⁵³.

⁴⁸ PRA Mkonga Ijinyu, 4/7/95.

⁴⁹ Interview JM - 22/5/96.

⁵⁰ Mangubuli, 1992: 12.

⁵¹ KWLF - 23/4/76, minutes of a meeting between the Parakuyo and Ward and Divisional Secretaries and Game Reserve officials.

⁵² Parker and Archer 1970: 12, citing Anstey, pers. comm.

⁵³ Interview MM 10/5/96; MY 18/9/96

Box 4.2: Problems of pasture management

'I received a complaint from these comrades who herd their animals in the Game reserve of Mkomazi and who live at Njiro and Takita, that there are Maasai who have entered this Reserve and are outsiders from Gujuka and Makanga, and Pare from Makanye and many other places. Therefore these citizens have asked me to give help to expel these herders.'

The Ward Secretary of Kisiwani writing to the District Commissioner of Same following a complaint from Parakuyo herders inside the Game Reserve. 6th January 1976, KWLF.

'Our problem is our places for herds ... we ask we be given help, for our herds do not have grazing because thousands of other animals are brought by other herders from outside this village. And if they finish the grazing they leave and go back to their place; they await the monsoon and other rains that bring grass, they return and thus they have their benefits and our herds are very sick. Comrade, until now we are looking for your best help.'

The Pare people of Igoma sub-village to the Ward Secretary of Gonja Ward. 8th June 1977, KWLF.

'Since this reserve was gazetted by the government, Kwavi have lived in the areas of Mnazi, Kamba, Mabili, Mnyandege and others stayed at Muheza, Gonja, Makongoanzege etc. ... In 1963 here in this Reserve there began serious problems between the Kwavi and employees of the Game department. People were arrested night and day. This dispute carried on until 1967 when the government decided to return these people and to write a new list of names ... But in the years 1968-9 herds from Ngajuka began to come and gather at Mkundi, Mangara Mbili outside the borders and, after a few months, we saw these cows had entered that Reserve which had been forbidden .. Straight away the Reserve began to be damaged/disturbed and to fill up with people from outside with permits from cash ... In the meeting of the 20th we heard the Game Warden say that the list of people allowed to stay will not be used; what will be used is a Mkomazi Game Reserve card. Here the leaders ... do not refuse to comply but the matter to be heard is why have we not been given these cards? ... Comrade Secretary there are strangers here but I cannot name them.'

Local leader of Parakuyo and Maasai pastoralists to the Ward Secretary of Kisiwani following proposed changes in the procedure of gaining permission to use the Reserve. 18th July 1977, KWLF.

'Resulting from troubles which we got in this time of the short dry season which were caused by various cows from outside the Reserve. Therefore I have called a meeting to debate this question from which we reached the conclusion that all the section west of the Korongo la Msara should be a reserved grazing area. All this area which we are setting aside is a store area for the future need of dry season grasses or all people with difficulties. Respected comrade in the meeting we agreed that from the beginning of 1/1/1981 the reserved grazing area will be closed until 25/8/1981 each year until another law is enacted.'

Local leader of the Maasai and Parakuyo pastoralists setting aside a dry season grazing area. 20th December 1980, KWLF.

One of the more interesting indications of the scale of immigration and its consequences in the western half of the Reserve is the letters written in protest at the arrival of these immigrants by the pastoralists themselves (see Box 4.2). These letters are unusually well preserved in the Kisiwani Ward Livestock File. Doubtless other letters were written at the time of other incursions of livestock (such as when the Toloha Maasai descended on Mnazi in 1951); but the files of these letters have not been found. To some extent they appear to bear out Bradstock's fears, (page 104) except that both Pare and Parakuyo leaders wrote in complaint at the incursions of livestock.

In January 1976, officials from Kisiwani wrote to District officials to complain of the illegal entry of Maasai livestock from Ngujuka (the northern end of the Ruvu valley) and Makonga and Makanya (on the western side of the Pare mountains)⁵⁴. In 1977, the Pare people of Igoma village (near Gonja) complained to the Gonja village officials that their grazing grounds had been occupied by outsiders who finished off their grazing and then left⁵⁵. In the same year Parakuyo pastoralists wrote an angry letter of complaint to the Ward Secretary of Kisiwani complaining that Maasai immigrants from the Ruvu Valley were bribing their way into the area and finishing off the grazing⁵⁶. The letter is a little ironic as the authors, who were based at Kisima, had themselves come into the area three years ago from Lushoto. They felt that this was long enough for them to call themselves residents.

These letters are a sporadic record of the permanent and seasonal influx of pastoralists into Mkomazi from other areas. They help illustrate the distances that people were prepared to travel in order to reach the Reserve and provide some evidence of the spatial extent of pastoralists who used Mkomazi's pastures seasonally. However it is not possible to deduce any rate or intensity of movement from these letters.

⁵⁴ KWLF - 5/1/76, Kisiwani Ward Secretary to the Same District Secretary.

⁵⁵ KWLF - 8/6/77, Mkunza, on behalf of the citizens of Igoma to the Ward Secretary of Gonja Maore.

⁵⁶ KWLF - 28/7/77, Parakuyo leader to the Ward Secretary, Kisiwani.

It is also not possible to learn much from these letters about the environmental damage done by pastoralists. The complaints voiced are that immigrant herders have 'finished off that year's grazing'. There is no indication that the incoming herds had damaged the potential of the area to produce grass.

Pastoralists generally use some form of grazing management which involves reserving 'calf pastures' close to water in the dry season. These are designated for use by young or sick animals who are unable to travel far to graze and water⁵⁷. Around Mkomazi, these calf pastures are called *olalili* or *ololopoli* in Maa and *mlimbiko* in Chasu, the Pare language; the Sambaa also call them *mlimbiko*, the Kamba, *kilwa*.

The problems over calf pastures may have arisen because of the duplication of authorities giving access to the rangelands inside Mkomazi. Pastoralists could enter by buying permission from Game Department staff, or by approaching their friends and relatives in the Reserve. The dual controls made entry into the area difficult to administer.

Some of the complaints in the letters were occasioned by the damage done to those reserved pastures. In 1974, when the Parakuyo and Maasai first came over in large numbers from Lushoto to Same, the immigrants grazed the Pare calf pastures out of season. New pastures had to be set up separately for the Maasai and Parakuyo⁵⁸.

In 1980 the last recorded complaint about excessive immigration into the area was voiced. The Parakuyo leader of Kisima (Same District) again wrote to say that immigrants had used up certain pastures with the consequence that there was a lack of grazing in the dry season. He announced that, with the co-operation of the Ward and District Livestock Officers, nine areas would be set aside for use only between 25th

⁵⁷ Potkanski 1997; De Souza and De Leeuw 1984; Peacock 1987

⁵⁸ Interview EK - 17/4/96.

Table 4.2: Cattle populations in and around Mkomazi Game Reserve

Year	Lushoto	Same	Total
1978	28,219	39,539	67,758
1984	48,233	39,977	88,128

Source: District Livestock Census (Appendix 3).

Table 4.3: Small stock populations in and around Mkomazi Game Reserve

Year	Lushoto	Same	Total
1978	19,572	29,104	48,676
1984	17,742	16,033	33,775

Source: District Livestock Census (Appendix 3).

Table 4.4: Cattle sold in Kisiwani and Makanya markets

Period	Kisiwani	Makanya
Apr 1977 - Jun 1977	139	266
Jul 1977 - Jul 1978	No	Data
Aug 1978 - Jan 1979	433	567
Feb 1979 - Jul 1979	279	183
Aug 1979 - Jan 1980	763	886
Feb 1980 - Jul 1980	602	1,064
Aug 1980 - Jan 1981	1,025	957
Feb 1981 - Jul 1981	852	1,054
Aug 1981 - Jan 1982	424	980
Feb 1982 - Jul 1982	448	811

Source: District Livestock records.

August and 31st December each year, and that they would be closed off outside those dates⁵⁹.

The importance of Mkomazi Game Reserve for pastoralism can be estimated from the numbers of livestock involved. In 1978 and 1984 two livestock censuses were conducted that provide some indication of the scale of pastoralism prior to eviction, and hence the importance of the Reserve to pastoralists. These data suggest that nearly 90,000 animals were based inside or near the edges of the Game Reserve. There were also large numbers of goats and sheep (Table 4.2 and Table 4.3).

The economic significance of these livestock, and an indication of the rapidity of their immigration, can be gauged by examining the records of the Kisiwani livestock market. This was first opened in April 1977, after a brief attempt to start a market at Gonja. It rapidly rose to prominence as the leading market in the entire district, at times superior even to Makanya, with its good road location (see Table 4.4, and chapter seven for more consideration of livestock markets).

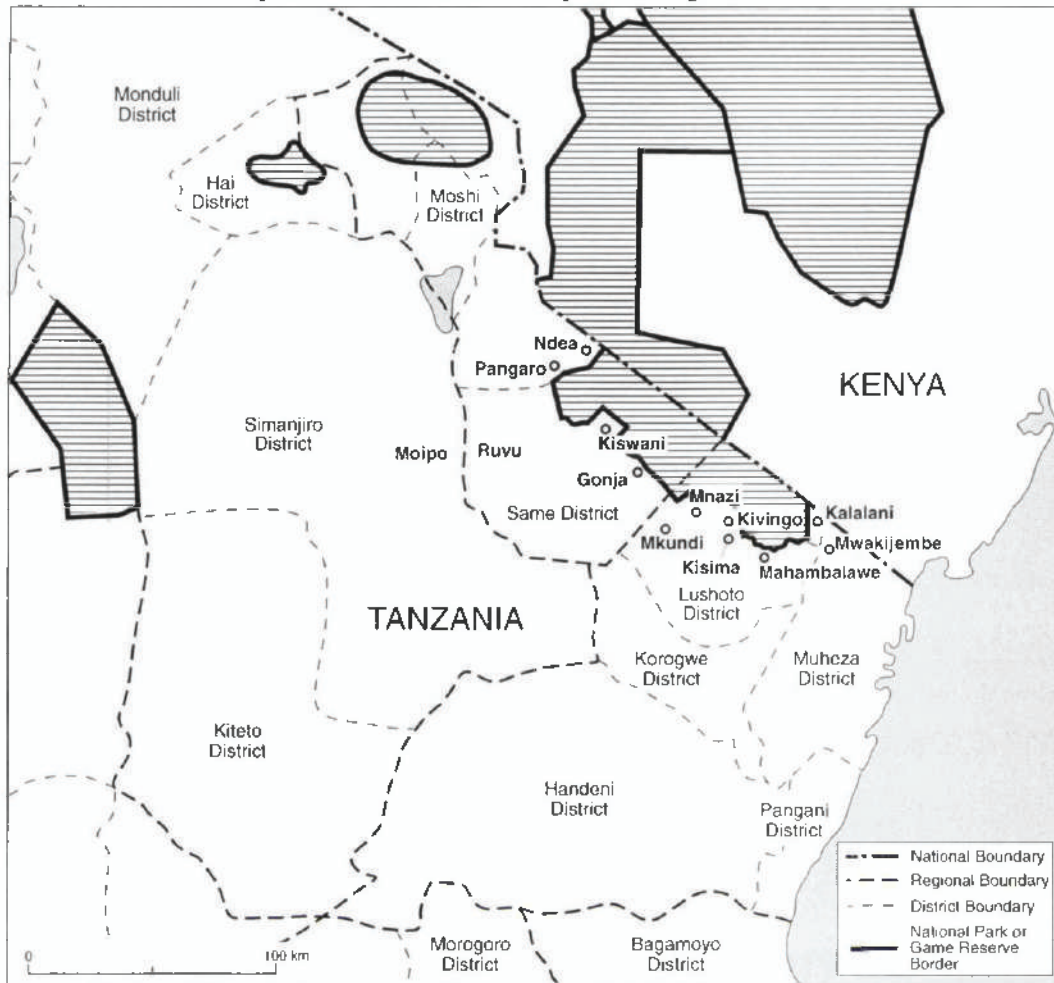
Mkomazi and the broader pastoral network

By the early 1980s pastoral presence at Mkomazi was at its zenith. It was regularly used by a large number of permanent residents and seasonal immigrants. Access to its pastures had been sought for decades by pastoralists otherwise excluded from it. Its use was now well incorporated into pastoral economy and society.

An illustration of the extent to which pastoralists at Mkomazi had become incorporated into wider pastoral social networks is available from the data collected on the location of pastoralist siblings. Pastoralists' current whereabouts were mapped using the sibling survey (see chapter two, page 64-6). For presentation of the data, locations of siblings have been divided into the two groups. First, there are a set of accurately located villages

⁵⁹ KWLF - 20/12/80, Leader of Kavateta sub-village to the Ward Secretary, Kisiwani.

Map 4.1: Locations used to plot sibling distribution



near to and around, the Reserve. Second, there are a group of much more general, distant locations. Map 4.1 shows all the locations used to identify the whereabouts of siblings.

Table 4.5 and Map 4.2 shows the distribution of all siblings reported in this survey. It shows that there is an extensive social network of families with links to the Game Reserve. This reflects the historical processes of relationship building between pastoralists described in this and the preceding chapter. The network is also but an indication of what it might have been during the occupation of the Reserve. This survey was conducted amongst pastoralists who remained around the Reserve. Those who have left, and who left behind no siblings are not represented. Nevertheless the results show that the geographical spread of the people who could count on Mkomazi directly for its resources permanently or seasonally, and indirectly for the support of their relatives was considerable.

Map 4.2: Map of Sibling Distribution

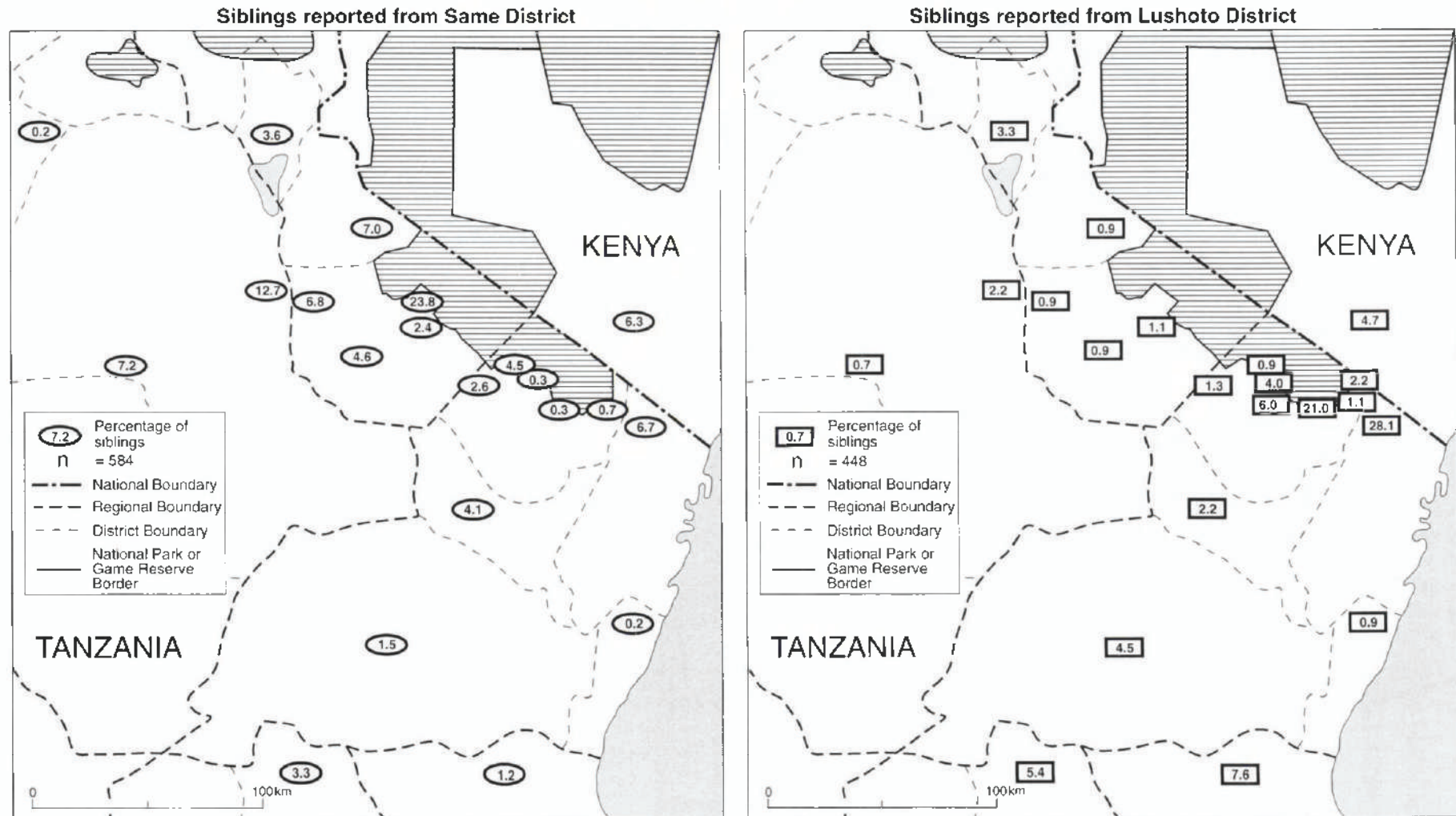


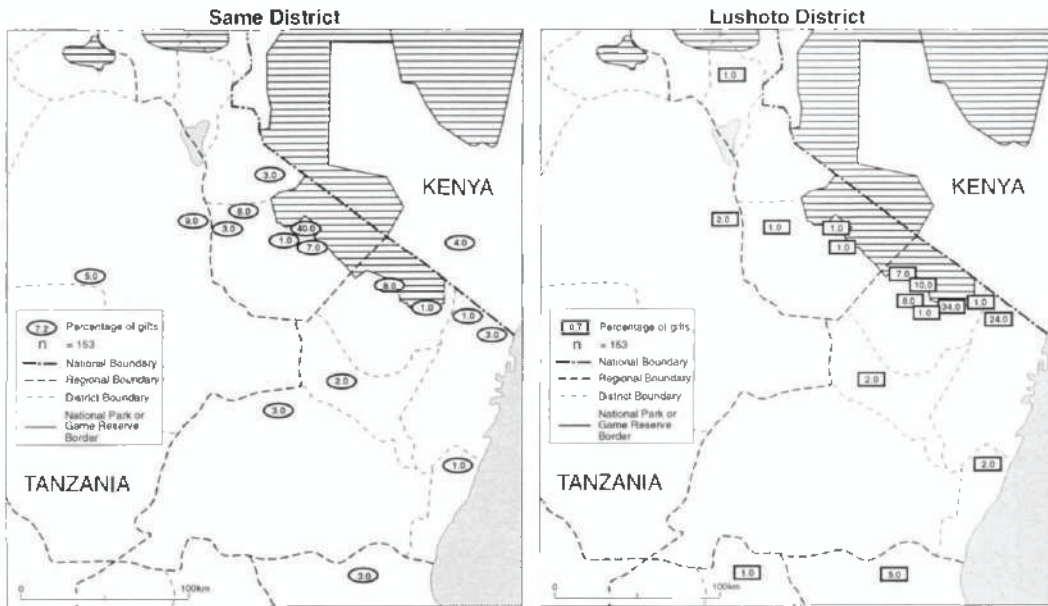
Table 4.5: Current location of siblings according to where they were reported from

	Place	Same	Lushoto	Same	Lushoto	
<u>Near</u>	Gonja	14	5	2%	1%	
	Kalalani	4	5	1%	1%	
	Kisima	0	27	0%	6%	
	Kisiwani	139	0	24%	0%	
	Kivingo	2	18	0%	4%	
	Mahambalawe	2	94	0%	21%	
	Mkundi	15	6	3%	1%	
	Mnazi	26	4	4%	1%	
	Mwakijembe	0	10	0%	2%	
	Ndea/Pangaro	41	4	7%	1%	
<u>Far</u>	Bagamoyo	7	34	1%	8%	
	Handeni	9	20	2%	4%	
	Kenya	37	21	6%	5%	
	Kiteto and Simanjiro	42	3	7%	1%	
	Korogwe	24	10	4%	2%	
	Moipo, Simanjiro	74	10	13%	2%	
	Monduli	1	0	0%	0%	
	Morogoro	19	24	3%	5%	
	Moshi and Hai	21	15	4%	3%	
	Muheza	39	126	7%	28%	
	Pangani	1	4	0%	1%	
	Ruvu, Same	40	4	7%	1%	
	Same (excluding Ruvu)	27	4	5%	1%	
	Total		584	448		
	Total near		243	173	42%	39%
Total far		341	275	58%	61%	

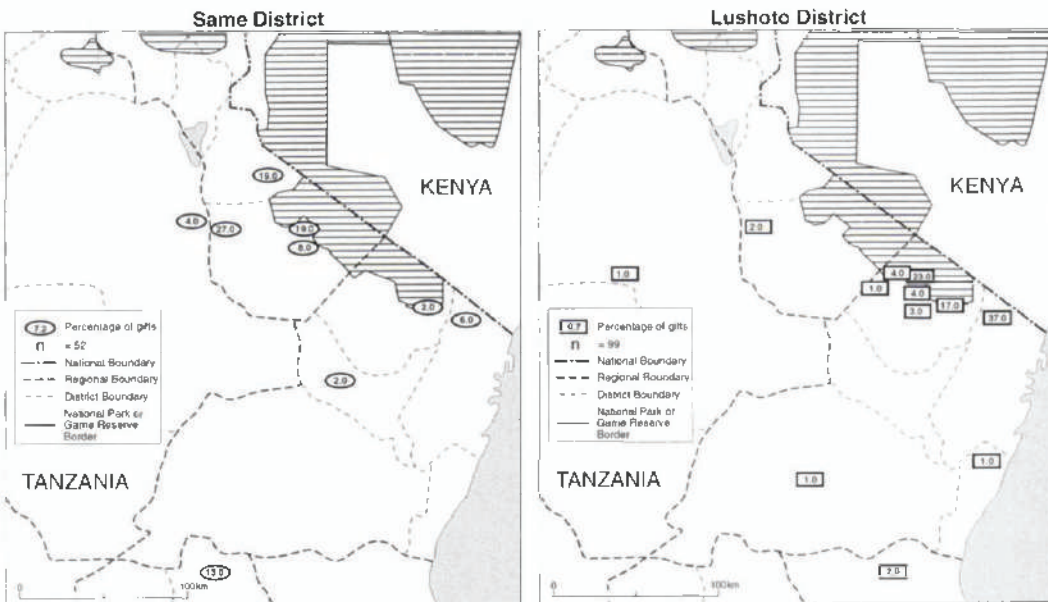
For the distant locations it has only been possible to give District level data and not locate the siblings more precisely within districts. The dichotomy, between 'near' and 'far' siblings is crude, but reflects the geographical reality of the mountain barriers to the south and west, and Tsavo National Park and the paucity of water to the north.

Some of the locations require more explanation. 'Moshi and Hai' refers to areas in and around the northern part of Kilimanjaro District, mostly around Hai District. 'Ruvu' refers to the Ruvu valley in Same District, 'Moipo' refers a division of Simanjiro District on the west bank of the Ruvu river parallel to the 'Ruvu' section of Same District. 'Same' refers to all other places in Same exclusive of the Ruvu valley and places close to the Reserve. Kiteto District split into Simanjiro and a smaller Kiteto District in 1994. 'Kiteto and Simanjiro' refers to the present day Kiteto District and all parts of Simanjiro exclusive of Moipo.

Map 4.3: The Geography of women's gift giving



Map 4.4: Geography of stock gifts and loans



N.B. 3% of gifts reported in Lushoto could not be located

These social network still powerfully shapes people's lives and activities. As part of the household survey, I collected data on the places from where women had received presents and gifts from in the last month. Women commonly reported being given household goods: cups, bowls, milking gourds and clothes from friends and relatives who were visiting them or whom they were visiting. The geography of these gifts shows that women are still actively involved in pastoral social networks that extend far beyond the Reserve's borders (Map 4.3).

Another record of the extent of the links that pastoralists have across the region is afforded by the record of the names that pastoralists give their cattle. Gifts and exchange of animals are a vital source of stock. The most frequently occurring name was 'Nondoyie', 'Nongera' or 'Tiito' which referred to a cow that had been given to a family following the marriage of one of their daughters. 'Sotua' is another common name, meaning 'gift', 'peace', or 'good relations'⁶⁰. Stock gifts received or given by men in the year of the survey extend across a large area (Map 4.4).

Cattle names also testify to wider geographical and social connections. Some animals are named after the person from whom they were obtained, such as 'Marabui' (an Arab); 'Kamba' (a Kamba person); 'Ngambarei' (a Pare person) or 'Meeki' (from an *olmeek* individual, ie not Maasai). Numerous cows are named after locations in Kenya or Tanzania whence they came - such as 'Kenya'; 'Kinango' (in Kenya); 'Ndapaya' (also Kenya); 'Dodoma' (from central Tanzania⁶¹); 'Kereri' (in the Dodoma area); 'Singida' (also in central Tanzania). The cows names give an idea of the extent of the networks of trade and exchange which link pastoralists. Another example of the extent of trade is one archival reference of a request from one pastoralist for permission to send his nephews to Machakos (Kenya) from Mnazi (in Lushoto District) in order to buy cattle⁶².

⁶⁰ Cf Waller, 1988: 78; 1993: 238; Berntsen, 1979b: 309; 1979a: 288; Perlov, 1987: 141, 169; Little, 1983: 186; Last, 1883: 539.

⁶¹ Dodoma cows are prized because of their ability to withstand drought and dry times, Interview MK 14/5/96.

⁶² TNA File 69/1 vol II, 11/3/53: Kopera to the stock inspector, Mnazi.

Eviction and exclusion

Government officials variously contested or accepted the growing use of Mkomazi Game Reserve but ultimately the Wildlife Division resolved to fight it. There are records of attempts to evict pastoralists in 1974 and 1976⁶³. Both resulted in pastoralists being returned to the Reserve⁶⁴. In 1977 a Same District Committee meeting resolved that people should not be allowed to stay in Mkomazi because it was against the law, against the villagisation policy and against what was perceived as good herding practice⁶⁵.

It is difficult to tell from the records what happened to this resolve to move people out. Elsewhere in Tanzania Reserves were cleared when villagisation was applied⁶⁶. This did not happen at Mkomazi. Available documents suggest that there was a mixture of pragmatic management of the residents of the Reserve and continued, if rather weak, efforts to evict the people. With the effects of villagisation, the Ugandan war and the consequences of state socialism beginning to tell, it was difficult for the Tanzanian state to take much effective action.

The records of Government debates about the Reserve become increasingly sparse from then until 1987. In 1981, discussions were held in the Same District Offices between District Officials and pastoralists. The pastoralists, who were all representatives of the Parakuyo and Maasai communities, were told that their petition to stay inside the Reserve had been refused by the Prime Minister. They were invited to choose alternative areas to stay in Hedaru, Makanya, Ruvu Mferejini and Mkata⁶⁷. There are no further records of the outcome of those discussions. Then, in 1983, the Game Reserve Manager wrote to the leader of pastoralists resident at Kavateta to state that pastoralists had illegally built their

⁶³ KWLF - 25/10/74, Kisiwani Ward TANU Secretary to the Same District TANU Secretary; KWLF - 13/3/76, Letter to pastoralists from the Mkomazi Game Reserve Project.

⁶⁴ The latter case in 1976 is the same as reported in Mustaffa, 1997: 7-8 involving Losina Ledenye. The same name appears in other records of the area in previous files. He was variously involved both in the troubles in Toloha in the 1940s and at Mnazi in the early 1950s (TNA File 11/5 vol II - 16/7/45; TNA File 723/III - 8/11/54.)

⁶⁵ KWLF - 14/1/77, minutes of a meeting of the Same District Development Committee.

⁶⁶ Hartley, pers. comm.

⁶⁷ KWLF - 13/6/81, minutes of a meeting held at the DC's Office, Same.

bomas across the Kavateta valley and that they must be removed⁶⁸. The pastoralist leader later appealed for help from the Ward Secretary because he was unable to control these unruly residents and felt physically threatened by them⁶⁹.

It is difficult to tell what happened later in the 1980s which so strengthened the government's resolve, and ability, to evict pastoralists. Watson attributes the change to determined government officials⁷⁰. Certainly the Regional Wildlife Officer of Kilimanjaro, Mr. Mungure, was resolute in his conviction that the Reserve should be cleared and he later became the Project Manager of the Reserve. Mangubuli notes that the pastoralists had strong allies in local government and that it took a long time for the Department of Wildlife to build up the alliances necessary to carry out the evictions⁷¹.

In 1986 all permits for residence and grazing issued after the gazettelement of the Reserve were revoked⁷². Local residents report that the evictions were a gradual process. First to go were those who were illegally present without any form of permit. Then those with false and forged permits were moved out. Finally, in December 1987, the decision to evict permit holders and those named on the lists of 1950 and 1968 was announced⁷³. This decision took a while to be confirmed and enforced. In early 1988 the Wildlife Division and local authorities agreed that pastoralists in the Reserve should be moved to the Ruvu valley and Kiteto District⁷⁴. In April 1988, the Principal Secretary of the Ministry of the Environment, Natural Resources and Tourism confirmed the revocation of all permission to live inside the Reserve⁷⁵, by July 1988 the Reserve had been cleared⁷⁶.

⁶⁸ KWLF - 17/8/83, Game Reserve Manager to sub-village chairman, Kavateta.

⁶⁹ KWLF - 18/12/83, sub-village chairman, Kavateta to the Ward Secretary, Kisiwani.

⁷⁰ Watson, 1991:14

⁷¹ Mangubuli, 1991:12

⁷² Mangubuli, 1991: 12.

⁷³ Fosbrooke's papers: URT/G/C/MGR/77/91.

⁷⁴ Mangubuli, 1991: 13. Kiteto is now divided into two Districts named 'Simanjiro' and 'Kiteto'.

⁷⁵ Fosbrooke's papers: URT GD.18/R/8/226.

⁷⁶ Mangubuli, 1991: 13; URT GD/18/R/8/246, Director of Wildlife to the George Adamson Wildlife Preservation Trust, 10/10/88.

Table 4.6: Aerial survey counts of livestock in and around the Reserve after eviction

Date	Livestock	Count	Standard Error
February 1988 ¹	cattle	14,275*	no data
June 1991 ²	cattle	11,305	5,626
	small stock	6,426	1,920
October 1991 ²	cattle	30,811	11,422
	small stock	1,792	986
April 1994 ³	cattle	23,557	12,530
	small stock	4,739	2,356

¹ WCMD 1988.

² Huish *et al* 1993.

³ Inamdar 1994.

*For inside the Reserve only

All data are derived from Systematic Reconnaissance Flights (SRF)

The eviction left large numbers of pastoralists concentrated around the edge of the Reserve. The Same District Authorities gave orders that these people be moved, by force if necessary, in November and December of 1988⁷⁷. In all estimates of the total number of people evicted range from 5 - 10,000⁷⁸. From the attendance records of the minutes of displaced pastoralists I calculated that some 8,000 Maa-speakers were evicted from the Reserve⁷⁹.

Eviction and exclusion were final. There has been continued illegal use of the area, but most estimates suggest that some 75% of the livestock numbers present in and around Mkomazi in the 1980s have gone. Those which remain are legally confined to the narrow band of land between the Reserve boundary and the mountains to the South and East. Illegal grazing is common, and cattle are still to be found in the Reserve, but aerial counts suggest that their presence is greatly reduced, compared to previous ground counts (Table 4.6). Note that the higher counts of 1991 correspond to a relatively dry time when there were a large number of cattle seeking access to water near the Reserve's perimeter (there were similar developments in 1997, see chapter six, page 194-5). This period is also associated with renewed efforts to keep pastoralists out of the Reserve and subsequent distress sales at local livestock markets (chapter seven page 216-7).

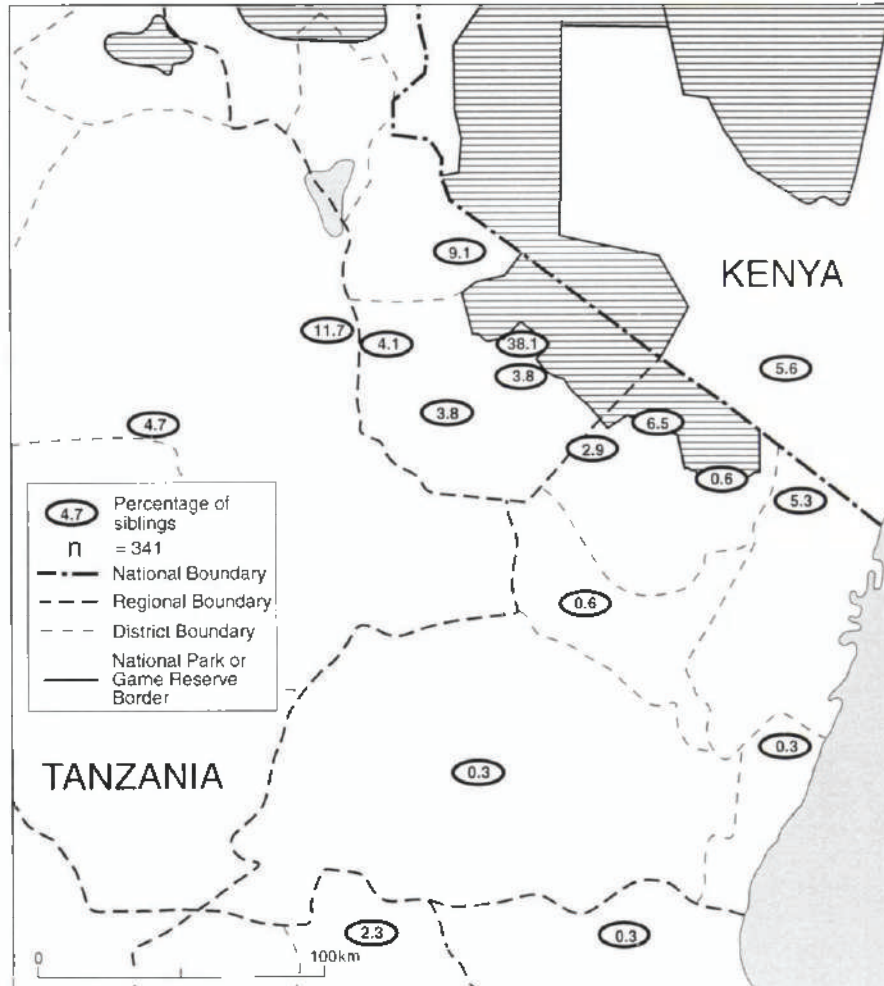
⁷⁷ Fosbrooke's papers: URT G.10/4/111/123.

⁷⁸ Neumann 1995: 367; Johnston, 1997.

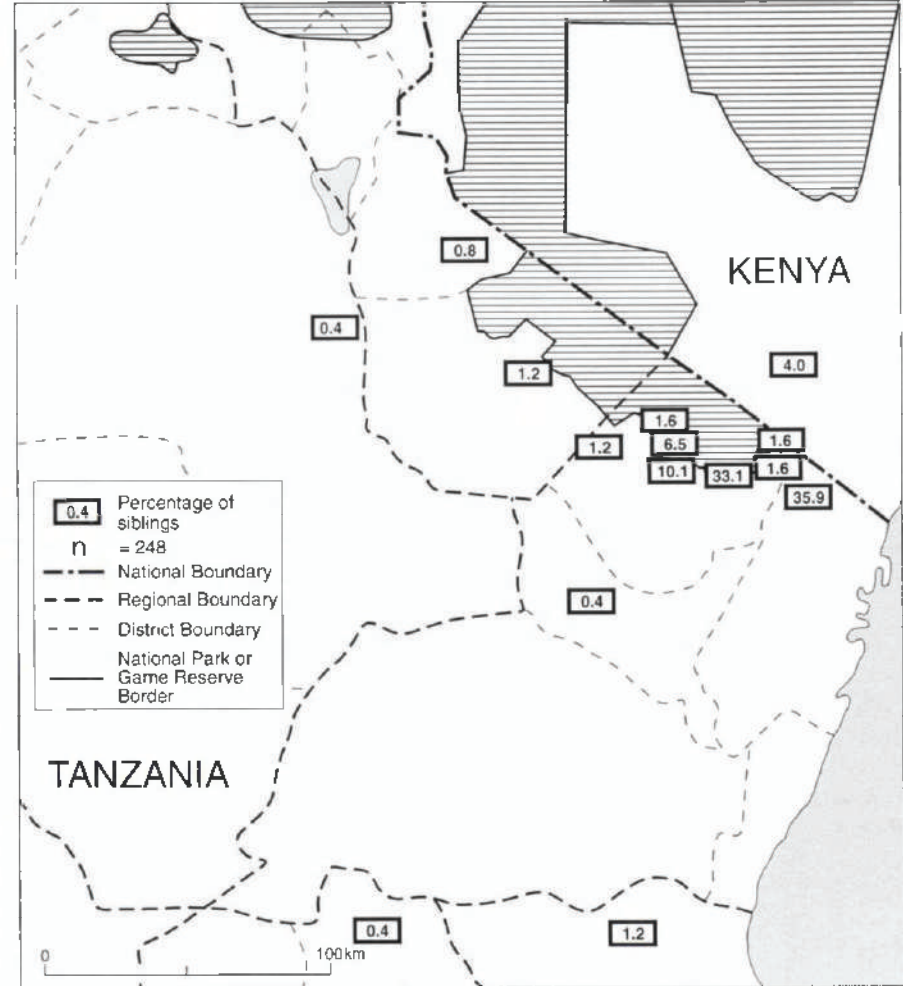
⁷⁹ This figure is derived by listing the adult men present at the various meetings around Mkomazi and multiplying the total by the average family size recorded during a 1992 census of pastoralists at Kisiwani (Source: Fosbrooke's papers).

Map 4.5: Distribution of evicted siblings

Evicted siblings reported from Same District



Evicted siblings reported from Lushoto District



The current locations of pastoralists

The distribution of siblings described above (Table 4.5 and Map 4.2) is strongly influenced by the evictions. Almost all siblings living close to the Reserve have been evicted, few non-evicted siblings live there (Table 4.7 and Map 4.5). The lack of unevicted pastoralists close to the Reserve is probably due the lack of space and resources immediately around the Reserve. The common account from the oral histories gathered in different villages was that people had been gradually and steadily leaving after eviction as they found the conditions too hard⁸⁰.

This result is not a reflection of sampling. The Kisiwani survey covered all the Maa-speaking households in the village. In Lushoto I worked with houses that had been stratified by wealth, not according to their history of residence. There is so little room between the mountains and the borders of the Reserve that it was difficult to find pastoralists who were not affected by eviction.

Siblings living near to the Reserve are clustered in the few locations where the survey work was conducted. Map 4.6 shows that of the siblings who were reported to live close to the Reserve, most are found in the places where the research was conducted. The lack of siblings in the other settlements is not because no pastoralists live there. I visited these settlements during the pilot study and the course of later fieldwork. They contained pastoral populations of comparable size to those where the research was conducted.

It is possible that these unstudied settlements may contain relatively few evictees. However I predict that, given the lack of space available, the other settlements will resemble those sampled here both in terms of the concentration of related siblings and the concentration of evicted pastoralists. These populations are probably made up of clusters of different family groups from those recorded by this survey.

⁸⁰ Group Discussion, Antakaye, 20/5/96.

Map 4.6: Evicted siblings close to the Reserve

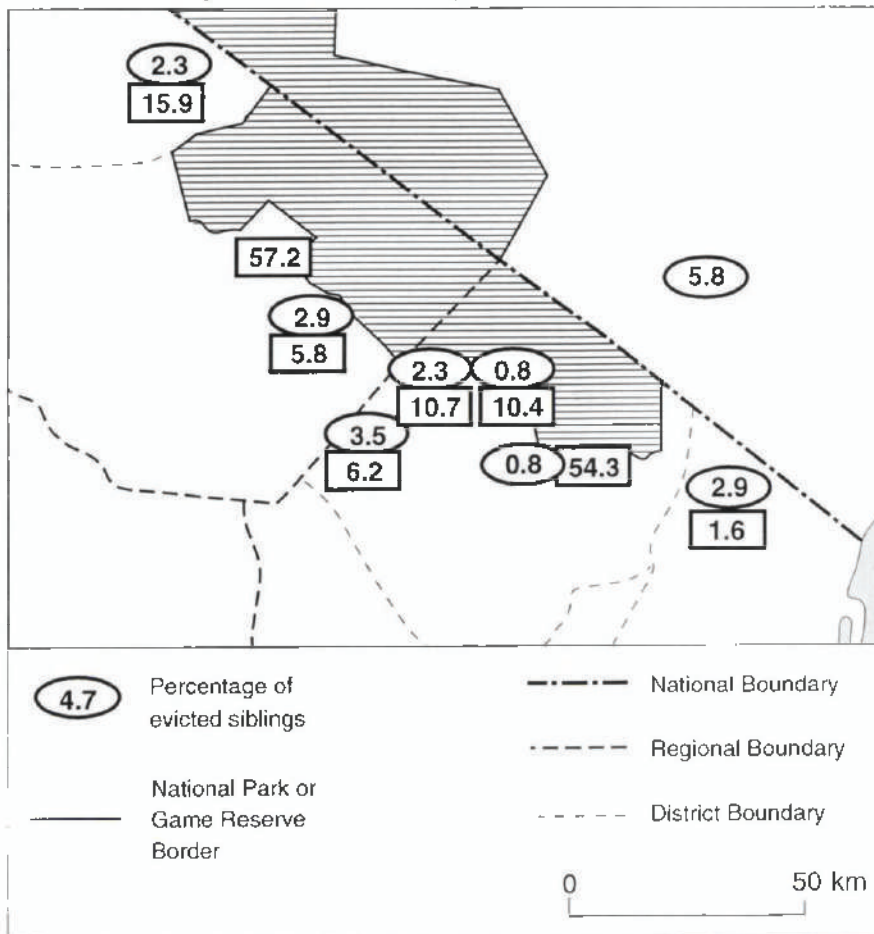


Table 4.7: The proximity of evicted and non-evicted siblings to the Game Reserve

	Near	Far	Total
Evicted	352 <i>237.4</i>	238 <i>351.6</i>	589
Not-evicted	65 <i>178.6</i>	378 <i>264.4</i>	443
Total	416	616	1032

Expected values are given in italics.

<u>Chi-Square</u>	<u>Value</u>	<u>DF</u>	<u>Significance</u>
Pearson	212.03187	1	p<0.00001

To some extent the wider diaspora of evicted siblings beyond the Reserve appears to have been structured by the distribution of non-evicted siblings. Pastoralists related to respondents from Kisiwani moved west into the Ruvu valley, Moipo and Simanjiro. Pastoralists reported by respondents in Lushoto District moved east, into Muheza District and towards the coast. These movements reflect the historically strong links of the Lushoto Parakuyo with other Parakuyo groups towards the east⁸¹. The westward links of pastoralists in Kisiwani reflect similar historical connections with Maasai and Parakuyo families in the Ruvu valley and Maasai steppe, as the history of the 'Toloha Maasai' showed.

Developments since eviction

There are three issues in the history of the Reserve since eviction which we will examine in more depth in the thesis. First, grazing still continues inside the Reserve, though at a much reduced level. Incursion is seasonal with some herders risking arrest and fines in the wet season. At the end of extended dry seasons there can be large concentrations of cattle east of the mountains where they depend on the mountain streams which are still running. This has been observed in 1991 and 1997.

Second, some pastoralists have gone on to contest the evictions at a number of levels nationally and internationally. These groups have challenged the legality of the evictions in court and judgement is expected in June 1988. In the process, indigenous NGOs have become involved, and not all the pastoralists have been represented in these protests. Aspects of this are further explored in chapter six, page 198-9.

Third, a group of conservation organisations, the George Adamson Wildlife Preservation Trust (GAWPT) and the Tony Fitzjohn/George Adamson African Wildlife Preservation Trust (TF/GAAWPT) have channelled funds into a Tanzanian Trust, called the Tanzanian

⁸¹ Beidelman, 1960: 253; Ndagala, 1990: 58.

Wildlife Preservation Trust (TWPT) in order to rehabilitate the Reserve. These Trusts' Field Officer, Mr Tony Fitzjohn, asked to be invited to work at Mkomazi shortly after the Reserve was cleared⁸². He and the Trusts have since been actively involved in restoring roads and fences, an Outreach Programme, a Wild Dog programme and a rhino sanctuary into which five black rhino from South Africa were transported in late 1997. The work has been the subject of some controversy both within Tanzania and internationally. The Outreach Programme was problematic and has since been abandoned, and a team from the Wildlife Division has recommended the Wild Dog programme be discontinued⁸³. Generally however, the project has grown considerably in its scope and ambitions since it first began, it has a smooth running publicity programme and now attracts considerable international and media attention⁸⁴. Some of the implications of this project are examined in the conclusion to this thesis.

Summary

This chapter has shown that Mkomazi has been under continual pressure from a number of groups of pastoralists who were increasingly successful in their attempts to gain access to the Reserve's resources. By the middle of the 1980s the Reserve supported nearly 90,000 cattle and a large number of people who were part of an extensive pastoral network. Excessive immigration from other herders became more of a problem to pastoralists than did Wildlife Department restrictions, and they too became keen to limit immigration.

Eviction has denied herders access to extensive pastures. A large number of cattle and small stock have had to move elsewhere, together with the families who depended on them. In the rest of this thesis I examine the impacts of this upon pastoralists. I begin, in

⁸² URT GD/18/R/8/246. Director of Wildlife to the George Adamson Wildlife Preservation Trust, 10/10/88.

⁸³ Kiwasila and Brockington, 1996: 9; Wildlife Division, 1997: 41-2.

⁸⁴ Maxwell, 1990; Page, 1990; Lou Loper, 1990, 1991, 1992; Powell, 1993; Anon 1994a, 1994b, 1994c; Munoz, 1995; Msechu, 1995; Konga, 1995; Godwin, 1995; Times Reporter, 1996; Kilimwiko, 1996; Fitzjohn, 1996; Jackman, 1996; R.Leaky to B.Babbit (U.S. Secretary of the Interior) 22/3/1996; Johnston, 1997; Koch, 1997; Kiwasila, 1997a, 1997b; Kasumuni, 1997; Lugoe, 1997; Johnston, 1997; Mihanji, 1997; Joel, 1997; Tairo, 1997a, 1997b; Mpinga, 1997; Rogers, 1997.

the next chapter, by considering what livelihoods pastoralists now living around the edge of Mkomazi follow.

Chapter Five

Livelihoods around the Reserve

This chapter examines the current livelihoods of pastoralists who were evicted from Mkomazi. I describe the sites of the survey work and then examine variation in their reliance upon livestock, farming and other sources of income. Data are used first to rank families according to their wealth in, and reliance upon, livestock. Then the importance of agriculture for families in different locations is discussed. Finally I examine women's income and expenditure at markets. I discuss how patterns here reflect differences in livestock and farming strategies and how they are manifest in household diet.

Introduction

The evictions have left a remnant of Mkomazi's pastoralists scattered around the edge of the Reserve. Their legal resource use is limited to a narrow strip between the boundary of the Reserve and the Pare and Usambara mountains. Their previous patterns of transhumance are constrained, their residence is more settled, and they are pursuing diverse livelihoods.

In this respect the Reserve's pastoralists are little different from other pastoral groups. Current research on pastoralists' livelihoods depicts constellations of different activities, strategies and household economies. Pastoral societies may be distinguished from agricultural neighbours by an ideological commitment to pastoral livelihoods, but otherwise there may be little to distinguish the business of their day-to-day lives from other groups. Equally we have seen there are parallels for this diversity in pastoralists' history.

The changes are partly a function of demography. Human population increases, but, where long term data are available, there appears to be no matching long term

increase in livestock populations¹. These tend to fluctuate within certain parameters. Increases may be possible following improved veterinary conditions but recurrent high mortality during droughts limits the extent of increase possible.

This underlying pressure is, as we have seen, augmented by loss of land and access to resources, and of livestock through alienation, drought, war and conservation measures². As a result migration patterns and herding strategies are abandoned or adapted to meet the new circumstances. These changes are occurring at the same time as commercialisation and urban growth are providing additional pressures. The latter also furnish new opportunities in towns, agriculture and trade. Residence in settlements can provide advantages that nomadism or transhumance denies. Farming or wage labour can provide opportunities to invest in the herd, or preserve animals³.

The actual form that the new livelihoods take varies according to the local histories of resource use and trade in the area, the availability of market opportunities and land for farming, the relations between different groups in the area, the precise reasons for and manner of the change. For individual families changes are mediated through intra-household relations, the age of the household and its stage in the pastoral lifecycle. In diverse cases across pastoral societies, common patterns emerge in the way in which pastoralists manage, invest in, and cope with herds, farms and income earning opportunities in order to ensure survival or enhance prosperity. As we examine various aspects of the livelihoods of pastoralists at Mkomazi, I try to set them within the context provided by these other studies of pastoral groups.

Description of the study sites

Lushoto District

The study site in Lushoto District was a relatively remote area on the plains beneath Mlalo and Mbaramu. It was accessible by dirt roads from Tanga, Lushoto District

¹ Kajiado: Western, 1994: 24; Zaal and Dietz, 1995: 14. Ngorongoro: Homewood and Rodgers, 1991: 146-7, 212, 216; McCabe *et al*, 1992: 357. West Pokot: Zaal and Dietz, 1995: 8-10. Baringo: Homewood, 1994: 314. Lushoto District, this thesis. General: Ndagala, 1994: 23.

² Galaty and Johnson, 1990: 27-30; Galaty and Bonte, 1991: 276-73; Fratkin, 1997: 235-6.

³ Fratkin and Smith, 1995: 433-4; Dahl, 1979: 246; Ensminger, 1987: 38-43; 1992: 90; Fratkin, 1997: 246-8.

and Korogwe. Mng'aro was becoming something of a growth pole following the establishment of a large irrigation scheme at Mng'aro that was funded by the African Development Bank. It was not, however, much larger than other villages in the area.

The locations studied are shown in Map 2.1. Three families lived at Mng'aro, in a sub-village called Mazinde, but kept most of their stock in *bomas* near to the Reserve. Ten families had homes near to the Reserve boundary with most of their stock in a sub-village of Mng'aro called Mahambalawe. A further seven families lived at Kisima, a sub-village of Lunguza. Several families at Kisima kept stock at Mahambalawe or further north at Kivingo and Kamba. Families at Mahambalawe tended to keep their stock at their *boma*, without sending it out elsewhere, although sometimes stock numbers were reduced when animals were sent to wet season camps. In the dry season they sometimes move to locations nearer the main Mng'aro to Tanga road.

Kisima, which means 'well' in Swahili, is a wet swampy area which is good for farming, close to Lunguza village, but avoided by cattle herders as it is thought to house diseases. Mahambalawe is much more remote and dry. It is at least an hour's cycle ride from the nearest village. Dry-land farming is possible but rarely ventured; some pastoralists are also irrigating plots next to the Uмба River. It does not have the same problems with cattle diseases.

Mazinde is an exception to these contrasts discussed above. Mazinde sub-village was built to provide for people left homeless after this area was hit by floods in 1993. People living here are well placed to sell milk and medicine in the village and to use the services offered by the village such as schools, the clinic, churches and shops. The cattle of these families are kept with those of pastoralists at Mahambalawe, in cattle camps in or near the Reserve. A small milk herd is usually kept at Mazinde, particularly in the dry season, when livestock have freer access to fields and the disease threat is less.

The location of the families studied influences and reflects the relative importance of livestock, farming and women's income to the household economy. We shall see that the remote locations which were good for livestock tended to be difficult places for women to earn money. Conversely homes nearer to the village centres, where the women can more readily generate income, and where farming was less risky, were not favoured for cattle rearing. The differences are visible in the patterns of reliance upon livestock, farming, women's income and in their diet.

Same District

Kisiwani village, where the survey was carried out is 45 minutes from Same Town and the main Arusha - Dar es Salaam road. It is a large village, almost a township, and is locally called '*mji*' (town), not '*kijiji*' (village). Formerly it was a stopping point for caravans and explorers and a military station for the German army. Here the Game Reserve boundary is close to the road and there is little space between the mountains and the Reserve for people to live and graze their cattle.

In contrast to Lushoto District geographical differences between *vitongoji* are not apparent. Pastoral settlements are much more concentrated around Kisiwani village than they are around villages in Lushoto. The transport difficulties and distances that constrain women's economic activity in Lushoto District do not operate here. It is possible for women of all households to get to market relatively easily, to sell and buy goods.

Cattle husbandry is more constrained than in the Lushoto study area. Because of the lack of space, it is difficult to keep large herds of cattle close to the *bomas* in Kisiwani. Those with numerous cattle do not like to keep them around the village because of the high incidence of disease. Many animals are kept in *bomas* elsewhere, often at a considerable distance from the households. We were told that cattle and smallstock owned by Pare herders who live in Kisiwani were kept in the Ruvu valley, and in Lushoto and Muheza Districts. Maasai and Parakuyo pastoralists normally resident in Kisiwani additionally kept cattle at Ndea and Pangaro and in and around the Tsavo National Park in Kenya. The absence of animals affected household livelihoods as well as my measurement of them. In particular households

that appeared to have many animals do not have such ready access to milk as do wealthy families in Lushoto District. much more reliance on purchased vegetables for relish.

In these circumstances it was difficult to get an accurate idea of the importance of livestock for pastoralists. Although households may be highly dependent upon livestock, many of the interactions and decisions involving livestock, and much of the offtake and investment in them, occurred at distant locations. It was beyond my ability to monitor closely some of what was going on.

There are other features about work in Same District that distinguishes conditions from Lushoto. There was little good quality well-watered land available to new farmers in Same District compared to Lushoto District. There was no equivalent to the Kisima site where pastoralists who hoped to be able to depend on farming could move.

The importance of livestock

The evolving pastoral strategies revolve around changes to the importance of livestock sale and sale of milk for the household economy. The former is generally the men's domain, the latter traditionally the women's, although men may well seek to control the income it generates. The dynamics between the two has given rise to a number of practices which seem to be common to several areas and which are visible at Mkomazi. I set out below the extent of people's dependence on livestock and livestock products and identify a number of patterns which match strategies identified elsewhere

Four indices have been used to evaluate dependence on livestock. These are:

1. the number of livestock counted;
2. the amount of money raised from sale of livestock;
3. the amount of money spent on veterinary medicine; and,
4. the amount of milk taken for household consumption.

The problems associated with collecting such data were reviewed in chapter two, page 56-61. Here I discuss the problems of evaluating the meaning of these data, and describe the central patterns of the households' dependence on livestock.

Stock counts

Inferring reliance on livestock from stock counts is problematic. In part this is because controls over livestock are multiple and complex, with several people having different claims and interests in the same animal⁴. Potkanski writes that:

‘Individual property rights exist hand-in-hand with the diffused collective rights of fellow clan members.’⁵

He distinguishes between primary users, who normally exercise these rights, and secondary users with whom control over the animals are renegotiated during times of drought, illness or need⁶. Llewelyn-Davies observes that women have some controls over livestock and their produce and can decide who is to inherit some animals, but that men have the authority to dispose of them⁷. Livestock counts which ignore these complex webs of relations and joint ‘ownership’, cannot provide a full understanding of the nature of a household’s, or sub-household’s, dependence on livestock.

Even as proxy measures of dependence, they can suffer practical limitations. Herds are often split up, or sent away to distant pastures, and can range across a large area; the animals recorded in any one household may be only a small proportion of the actual numbers over which they have control⁸. Equally animals present may not belong to a particular household but could have been sent there by other families. Finally in some cases herds were grouped together in a *boma* such that it was not possible to differentiate an individual household’s herds.

⁴ Broch-Due, 1990: 147; Potkanski, 1997: 31-2

⁵ Potkanski, 1997: 31

⁶ Potkanski, 1997: 32

⁷ Llewelyn-Davies, 1981: 333. These powers are respectively termed *a-itodol* ‘to point, allocate’ and *a-itore*, ‘to be in charge of’.

⁸ Spencer, 1988: 11; Homewood and Rodgers, 1991: 53-55; Potkanski, 1997: 39-48.

Table 5.1: Boma stock counts in Lushoto District, 1995-6

Location	Household	AAME	Animal	Mean	Range	TLU	TLU Rank	TLU per capita	TLU per capita rank
Mahambalawe	L11	14.3	cattle s'stock	222.2 253.5	202-281 238-277	243.3	3	17.0	1
Mahambalawe	L19	30.2	cattle s'stock	402.3 125.5	389-425 104-142	423.3	1	14.0	2
Mahambalawe	L1	10.5	cattle s'stock	107.2 with L11	99-118 with L11	128.3	5	12.3	3
Mahambalawe	L9	1.9	cattle s'stock	12.8 34.8	10-16 26-44	18.5	8	10.0	4
Mahambalawe	L3	38.1	cattle s'stock	289 98	239-396 85-116	305.3	2	8.0	5
Mahambalawe	L12	23.2	cattle s'stock	146 70	105-183 32-101	157.7	4	6.8	6
Mahambalawe	L15	8.1	cattle s'stock	34 28.7	13-66 25-31	38.8	6	4.8	7
Mazinde	L8	1.0	cattle s'stock	4.5 0.6	3-8 0-3	4.6	17	4.6	8
Mazinde	L2	9.6	cattle s'stock	28.4 13.4	25-32 10-15	30.6	7	3.2	9
Kisima	L10	7.0	cattle s'stock	14.6 11.4	13-18 8-16	16.5	10	2.4	10
Mahambalawe	L20	4.3	cattle s'stock	6.8 5	5-8 0-10	7.6	14	1.8	11
Kisima	L6	5.8	cattle s'stock	3.8 30.4	3-4 26-34	8.9	13	1.5	12
Mazinde	L14	9.9	cattle s'stock	11.8 13.4	4-16 0-23	14.0	11	1.4	13
Mahambalawe	L17	17.4	cattle s'stock	13 29	11-15 21-33	17.8	9	1.0	14
Kisima	L5	11.4	cattle s'stock	9.6 8	8-10 0-21	10.9	12	1.0	15
Kisima	L4	6.3	cattle s'stock	4.3 8.6	4-5 0-13	5.7	16	0.9	16
Kisima	L18	15.3	cattle s'stock	5.2 13.4	5-6 6-26	7.4	15	0.5	17
Kisima	L7	6.5	cattle s'stock	0.8 5.8	0-3 3-10	1.8	18	0.3	18
Kisima	L13	6.9	cattle s'stock	0.8 1.4	0-4 0-7	1.0	19	0.2	19

No data are available for household L16. Italic figures are estimated.

Calculation of TLU follows Buhl and Homewood (forthcoming) who use Little's (1985) measure of 1 TLU = 1 bovine or 6 small ruminants. There are other measures. Fratkin and Roth (1990: 393, footnote 5) state that Dahl and Hjort follow the FAO production yearbook of 1 TLU = 1 camel, 0.8 cattle or 11 small stock, but that the UNESCO Integrated Project in Arid Lands use 1 TLU = 1 cattle, 0.8 camel or 10 small stock. Homewood and Rodgers (1991: 212) cite formulae for Standard Stock Units (SSU) of 1 mature bovine = 2/3 SSU; 1 immature bovine = 1/3 SSU; 1 small ruminant = 1/10 SSU and 1 donkey = 2/5 SSU. Grandin (1988: 4) also gives a formula for Livestock Units (LU), which are equivalent to one 250kg animal.; accordingly one cattle = 0.71 LU and 1 sheep or goat = 0.17 LU. Potkanski (1997: 71) uses 1 LU = 1 cattle or 7 small stock. Ensminger (1992: 82-3) takes 1 TLU to be equal to 1 cattle but converts either 5 or 6 smallstock to 1 TLU according to their value. I follow Buhl and Homewood as this measure is closest to those used in the 1950s which were cited in chapter three. This measure of TLU will make the sample appear richer than others as it maximises the number of units of livestock for any given herd.

In this survey livestock counts were confronted by several such problems. Livestock of several households are often herded in one *boma* and it was not always possible to disaggregate their ownership. Stock were sometimes sent away to wet season camps far from the dry season areas where the survey was conducted. Conversely, herds were sometimes inflated by the inclusion of neighbours' or relatives' animals. In Same District there was a particularly high incidence of absent herds, and complex deployment of livestock to several localities. Livestock counts are, on their own, not entirely reliable and need to be considered in conjunction with other data.

Table 5.1 and Table 5.2 summarise the data gained from stock counts in Lushoto and Same respectively and express overall counts in terms of Tropical Livestock Units (TLU). Table 5.1 shows a highly skewed distribution of livestock ownership in Lushoto with nearly half the households having less than 2 TLU per capita, and only three having more than 10. Most of the poorer households are found at Kisima and all of the richest ones are at Mahambalawe. Counts in the former location are partly low because cattle were not kept there. In Same District, Table 5.2 shows a similar distribution but with generally poorer families and no clear geographical division of wealth, although there is a concentration of wealthy households at Rambangondo and Kamorei Juu. De Leeuw and Wilson have also observed that cattle ownership is highly skewed among Maasai pastoralists. They found that 65% of the cattle were owned by the richest 10% of households, and that the poorest 40% of households owned less than 10% of the animals⁹.

Data for Same District cannot really be used to deduce dependence on pastoralism as herds were too often absent, or amalgamated. I later compare these data to other studies, and to past data for Mkomazi. The effect of the absenteeism, however, is to exaggerate contrasts between livestock rich households and the current Same sample. The extent of differences must therefore, in the first instance, be read as an artefact of the absenteeism, rather than representative of real change.

⁹ De Leeuw and Wilson, 1987: 378.

Table 5.2: Stock counts for *bomas* in Same District, 1995-6

Location	Household	AAME	Animal	Mean	Range	TLU	TLU Rank	TLU per capita	TLU per capita rank
Rambangondo	S4	5.1	cattle	60.5	57-64				
			s'stock	150	143-157	85.5	2	16.8	1
Rambangondo	S1	2.4	cattle	64	64				
	S34	7.0	s'stock	143.5	136-151	87.9	1	9.4	2
Kamadufa	S29	7.1	cattle	27	18-36				
			s'stock	79.5	74-85	40.3	8	5.6	4
Kamorei juu	S31	8.2	cattle	36	17-53				
			s'stock	53.5	12-95	44.9	4	5.5	5
Kamorei juu	S3	7.9	cattle	33	33				
			s'stock	34	34	38.7	9	4.9	6
Rambangondo	S15	6.0	cattle	15.5	2-29				
Rambangondo	S21	6.5	s'stock	155.5	135-176	41.4	6	3.3	7
Kamorei juu	S33	14.0	cattle	43.8	42-45	43.8	5	3.1	9
Kamadufa	S16	8.1	cattle	19.7	19-20				
				19	19	22.8	11	2.8	10
Rambangondo	S18	18.0	cattle	no data	-				
			s'stock	272.5	235-302	45.4	3	2.5	11
Kapimbi	S25	18.5	cattle	32.2	24-41				
			s'stock	53	47-65	41.0	7	2.2	13
Rambangondo	S13	6.0	cattle	23.4	14-47				
	S26	10.0	s'stock	91.2	79-102	38.6	10	2.2	14
	S35	1.9							
Kamadufa	S36	5.9	cattle	11	11				
			s'stock	6	5-7	12	15	2.0	17
Kamadufa	S8	8.0	cattle	9.5	9-10				
			s'stock	36.5	34-41	15.6	14	1.9	18
Rambangondo	S10	3.2	cattle	no data	-				
	S24	5.6	s'stock	115.4	93-128	19.2	13	0.9	19
	S30	13.1							
Kamorei juu	S37	6.1	cattle	4.25	4-5				
			s'stock	4.25	4-5	5.0	20	0.8	22
Kamorei chini	S12	11.2	cattle	5	2-12				
			s'stock	21.4	14-32	8.6	18	0.8	23
Kamadufa	S19	4.7	cattle	1.4	1-2				
			s'stock	10	6-16	3.1	21	0.6	24
Rambangondo	S9	9.6	cattle	2	2				
			s'stock	18.3	4-27	5.1	19	0.5	25
Kamorei chini	S11	39.1	cattle	15	15				
			s'stock	26.5	25-29	19.4	12	0.5	26
Kamadufa	S28	3.2	s'stock	9.6	7-13	1.6	23	0.5	27
Kapimbi	S5	50.8	s'stock	67.4	47-109	11.2	16	0.2	28
Kapimbi	S6	9.4	cattle	1.8	1-2	1.8	22	0.2	29
Rambangondo	S20	5.2	cattle	no data	-	-	-	-	-
Rambangondo	S20		s'stock	no data	-	-	-	-	-
Rambangondo	S7	5.5	cattle	no data	-	-	-	-	-
Rambangondo	S7		s'stock	no data	-	-	-	-	-

(Italics show minimum estimates.)

Table 5.3: Percentage of pastoral societies found in different wealth categories

Stratification	Fratkin and Roth ^a	1976 : pre-drought	1985 : post-drought	Grandin ^b	Kajiado 1982	NCA 1989 ^c	Potkanski 1997 ^d	NCA: Endulen 1991-2	NCA: Nayobi 1993	NCA Salei: 1991-2
poor	<4.5	18	39.5	<5	33	34	<3	59	84	45
medium	4.5-9	32	39.5	5-13	38	57	3-6	27	13	27
rich	>9	50	21	>13	29	9	>6	14	3	28
Sample size		38	38		80	70		437	85	233

Stratification	(Fratkin and Roth)		(Grandin)		(Potkanski)	
	Lushoto	Same	Lushoto	Same	Lushoto	Same
poor	68	93	74	93	53	69
medium	16	0	21	3.5	21	21
rich	16	7	5	3.5	26	10
Sample size	19	29	19	29	19	29

^a Fratkin and Roth, 1990: 394,8. 1 TLU = 1 camel, 0.8 cattle or 10 small stock.

^b Grandin, 1988: 4. 1LU = 0.71 cattle or 5.88 small stock.

^c McCabe, Schofield and Pederson 1989, recalculated by Homewood, 1992: 70. TLU as per Grandin.

^d Potkanski, 1997: 74-5. 1LU = 1 cattle or 7 small stock.

In other research Potkanski, on the basis of survey work in the early 1990s in Ngorongoro, divided Maasai pastoralists into five categories: destitute (0-2 cattle per *enkaji*); very poor (2.01-5); poor (5.01-10); medium (10-20) and rich (>20)¹⁰. As an *enkaji* averages 4 'people', or approximately 3 reference adults, this could be condensed down to 0-3 TLU per capita for poor, very poor and destitute families, 3.01-6 for medium families and >6 TLU *per capita* for wealthy families¹¹. These provide similar categories to studies by Fratkin and Roth, and Grandin. It is also reasonably similar to Sieff's work on the Datoga where poor households had 1.6 TLU *per capita*; medium households 4.4 TLU *per capita* and wealthy households 6.2 TLU *per capita*, and Muguleta's study of the Ethiopia Borana which found mean cattle per holdings of 14.2 for wealthy households and 2.3 for poor families¹².

In order to situate the Mkomazi pastoralists within the context of other pastoral societies I have compared the TLU *per capita* ratios of this sample to other areas in Table 5.3. The high degree of absenteeism at Same makes it difficult to comment on those data. The Lushoto District data, which are more reliable, suggest households are poorer than the post-drought Ariaal and Kajiado Maasai, and fit within the range of variation that Potkanski and McCabe *et al* recorded for Ngorongoro.

Predictions of the minimum number of TLU *per capita* required for subsistence have variously been 12.8, 8.7, 6.5, 4.5 or 4 TLU *per capita*¹³. Taking the lower estimate it is apparent that more than half of the families here would not be able to subsist from their herds. This means we can expect farming and other sources of income to be an important part of their livelihoods.

¹⁰ Potkanski, 1997: 74

¹¹ 4 'people' per *aji* could variously be 3 murrans and 1 woman (3.85 reference adults) or 1 adult and three small children (2.4 reference adults). I have taken 3 as an approximate mid-point.

¹² Sieff, 1995: 63; Mulugeta (1990) cited in Holden *et al*, 1991: 39-40.

¹³ Dahl and Hjort (1976: 175-6) suggest that the minimum herd for self-sufficient subsistence is 12.8 animals. Kjaerby (1979: 58-60) suggest that a family of 7.1 reference adults may be able to get by with a herd of 43 cattle. McCabe *et al* (1992: 357) cite Harris' (1980) calculations that each member of a pastoral needs 5.5 cattle, 9.5 goats, 10 sheep and 0.7 donkeys; not counting the donkeys this reduces to 8.7 LU per reference adult (Calculations of reference adults and LU both follow Grandin 1988). Pratt and Gwynne (1977: 34-43) cited in Fratkin and Roth (1990: 394) estimate 4.5 TLU *per capita* in arid lands; for a brief comment on these estimates see Fratkin and Roth (1990, footnotes 6 and 7). Zaai and Dietz (1995: 3) suggest 4 head of cattle could suffice for each person but note that this is based on average yields in environments where the variability of productivity is the main constraint. It also does not take into account problems of social obligations or disease.

Table 5.4: Mean Monthly Income from selling livestock, and expenditure on veterinary medicine in Lushoto District

Mean monthly income				Mean monthly expenditure			
Location	H'hold	Mean monthly income	Rank	Location	H'hold	Mean monthly expenditure	Rank
Mahambalawe	L3	201,231	1	Mahambalawe	L19	52,462	1
Mahambalawe	L19	178,069	2	Mahambalawe	L11	30,077	2
Mahambalawe	L11	142,000	3	Mahambalawe	L12	19,708	3
Mahambalawe	L12	104,731	4	Mahambalawe	L3	18,115	4
Mahambalawe	L15	86,308	5	Mahambalawe	L1	15,400	5
Mahambalawe	L1	72,038	6	Mazinde	L2	12,615	6
Kisima	L20	42,923	7	Mahambalawe	L15	8,917	7
Mahambalawe	L17	28,000	8	Mazinde	L14	3,800	8
Mazinde	L2	25,077	9	Mahambalawe	L17	2,700	9
Mahambalawe	L9	23,154	10	Kisima	L10	2,077	10
Mazinde	L14	22,000	11	Kisima	L4	1,620	11
Kisima	L4	17,700	12	Kisima	L18	1,538	12
Kisima	L6	15,269	13	Mazinde	L8	1,409	13
Mahambalawe	L20	14,923	14	Mahambalawe	L9	900	14
Kisima	L18	11,115	15	Kisima	L5	523	15
Kisima	L7	9,054	16	Mahambalawe	L16	520	16
Mahambalawe	L16	8,000	17	Kisima	L6	177	17
Kisima	L13	5,538	18	Kisima	L13	123	18
Mazinde	L8	5,091	19	Kisima	L7	15	19
Kisima	L5	1,000	20	Mahambalawe	L20	-	20

Spearman's Rank Correlation: $R_s=0.854$ $n=20$ $p=0.001$

Income from, and investment in, livestock

More information can be gleaned from a record of the sale of livestock and investment in veterinary medicine (Table 5.4 and Table 5.5). Monitoring livestock sales is an important part of much research on pastoral households economies¹⁴. However, asking about financial returns from livestock sales does not generate accurate information. Respondents are likely to under-report their gains. The data nonetheless have value for comparing within the sample and for combining and cross-checking with other indices.

Elsewhere purchase of stock has been used as an indicator of investment in livestock¹⁵. This measure does not necessarily provide an indication of the size of the current herd, so here investment in the herd was monitored through recording expenditure on veterinary medicine. Respondents are likely to over-report expenses, as a continual complaint was that eviction from the Reserve had rendered livestock more susceptible to disease.

Both measures of returns from and investment in livestock are individually unreliable, but together they can be used to compare within the sample. This is borne out by the fact that despite confounding factors both sets of data yield similar rank correlations of pastoralists' income from sales and expenditure on livestock (Table 5.4 and Table 5.5).

The amounts of money earned and spent are much smaller in Same District than Lushoto. It is not possible to conclude that the pastoralists in Lushoto District have more stock, only that more of the business of selling animals and buying medicine happens at the *bomas* visited. More may be earned and spent on the herds in Same District, but I have been unable to capture it here. The quantities in these data are most useful for internal comparison within each community rather than for comparisons between sites. Similarly, comparisons with other pastoral societies are not really possible.

¹⁴ Bekure *et al*, 1991: 105-8.

¹⁵ Bekure *et al*, 1991: 105-6.

Table 5.5: Mean monthly income from selling livestock, and expenditure on veterinary medicine in Same District

Location	H'hold	Mean Monthly income	Rank	Location	H' hold	Mean Monthly Expenditure	Rank
Kamorei	S11	88,077	1	Kamorei	S11	11,173	1
Rambangondo	S13	86,889	2	Rambangondo	S24	9,423	2
Rambangondo	S30	76,692	3	Kamorei	S3	7,250	3
Kapimbi	S25	69,415	4	Rambangondo	S30	6,923	4
Rambangondo	S24	62,538	5	Kamorei	S31	6,519	5
Kamadufa	S29	60,769	6	Rambangondo	S22	4,375	6
Rambangondo	S26	57,615	7	Rambangondo	S1	4,269	7
Rambangondo	S10	55,769	8	Rambangondo	S13	4,167	8
Rambangondo	S18	51,538	9	Kamadufa	S16	3,815	9
Rambangondo	S34	47,308	10	Rambangondo	S26	3,769	10
Rambangondo	S1	41,077	11	Kamadufa	S29	3,423	11
Kamorei	S31	32,462	12	Rambangondo	S34	3,400	12
Rambangondo	S4	26,857	13	Kapimbi	S25	3,315	13
Rambangondo	S9	25,750	14	Rambangondo	S35	2,573	14
Kamadufa	S36	25,714	15	Kamorei	S12	2,250	15
Rambangondo	S22	22,750	16	Kamadufa	S8	2,170	16
Kapimbi	S32	20,000	17	Rambangondo	S4	2,143	17
Rambangondo	S20	19,620	18	Rambangondo	S9	1,913	18
Kamadufa	S16	18,308	19	Rambangondo	S10	1,800	19
Kamorei	S12	17,550	20	Kamadufa	S36	1,311	20
Kamadufa	S8	16,800	21	Kamorei	S33	1,254	21
Rambangondo	S21	12,071	22	Rambangondo	S21	1,143	22
Rambangondo	S35	11,077	23	Rambangondo	S7	1,138	23
Kapimbi	S5	8,204	24	Kapimbi	S5	541	24
Rambangondo	S15	5,857	25	Kamadufa	S19	538	25
Rambangondo	S7	5,769	26	Kapimbi	S6	375	26
Kamadufa	S19	2,846	27	Kapimbi	S32	333	27
Kamadufa	S28	1,923	28	Rambangondo	S20	223	28
Kamorei	S3	0	29	Rambangondo	S15	0	29
Kapimbi	S6	0	29	Rambangondo	S18	0	29
Kamorei	S33	0	29	Kamadufa	S28	0	29
Kamorei	S37	0	29	Kamorei	S37	0	29

Spearman's Rank Correlation: $R_s = 0.612$, $n=32$, $p=0.001$

Table 5.6: Average per capita milk availability per enkaji in Lushoto District

Location	Household	Average milk per capita (l)	Standard Deviation	Range	Rank
Mahambalawe	L15	1.52	0.87	0.65 - 2.72	1
Mahambalawe	L19	1.27	0.98	0.41 - 3.42	2
Mahambalawe	L11	1.14	0.66	0.41 - 2.34	3
Mahambalawe	L12	0.81	0.27	0.5 - 1.35	4
Mahambalawe	L9	0.71	-	0.71	5
Mahambalawe	L3	0.65	0.34	0.29 - 1.45	6
Mahambalawe	L1	0.59	0.18	0.42 - 0.76	7
Mazinde	L2	0.53	0.00	0.59	8
Mahambalawe	L20	0.41	-	0.41	9
Mahambalawe	L17	0.38	-	0.38	10
Mazinde	L14	0.36	0.05	0.31 - 0.41	11
Mahambalawe	L16	0.18	-	0.18	12
Kisima	L6	0.16	-	0.16	13
Kisima	L18	0.10	0.09	0.09 - 0.26	14
Kisima	L4	0.08	-	0.08	15
Kisima	L5	0.01	-	0.01	16
Kisima	L7	0	-	0	17
Kisima	L13	0	-	0	17
Kisima	L10	0	-	0	17
Mazinde	L8	absent	absent	absent	-

	Mean of household means	Standard Deviation.
Overall	0.47	0.45
Kisima	0.06	0.06
Mahambalawe	0.77	0.4

In Lushoto District the geographical distinction observed in livestock ownership is also found with investment in and expenditure on livestock. There is a clear pattern that people in Mahambalawe are earning more from, and spending more money on, their herds than are pastoralists at Kisima (Mann-Whitney U test on combined ranks of income and expenditure $U=59$, $n_1=7$, $n_2=10$, $p=0.05$). However in Same there is no obvious geographical division of the pastoralists. Rich and poor pastoralists live in the same sub-villages.

Milk yields

A further indication of the importance of livestock to families' day-to-day needs is the amount of milk they take and use. This is less open to dissimulation than are cash sales of animals because it does not involve sensitive questions about income and it was measured directly as the milk was taken. The data can be compared with those from a number of other studies which have collected comparative data on milk in the pastoral diet.

The milk yields shown here represent the milk used for consumption in the home; Table 5.6 and Table 5.7 shows the amount of milk available *per capita* for different families in the sample. Overall average milk yields in Mkomazi are also low compared to other locations. Milk availability averages 0.42 and 0.16 kg/reference adult/day in the wet and dry seasons respectively in Lushoto District and 0.41 and 0.26 kg/reference adult/day in Same. This corresponds to low contributions to the recommended calorie intake levels compared to other pastoral populations. If the recommended calorie intake per day is 2530 k/cal, these figures translate to 4.7%-12.4% of the recommended intake in Lushoto and 7.7%-12% in Same. This can be compared with Ngorongoro, where dry season values average 34% and with Kajiado where annual averages were 48% of the recommended calorie intake¹⁶.

There are noticeable differences within the study sites. For Lushoto District Table 5.6 shows that households in Kisima get little, if any, milk for daily use. Those in Mahambalawe can take considerable quantities. Talle observes that lack of milk for

¹⁶ Homewood 1992: 71.

Table 5.7: Average per capita milk availability per enkaji in Same District

Location	Household	average milk per capita per enkaji	Standard Deviation	Range	Rank
Kapimbi	S25	0.90	0.62	0.49-2.14	1
Rambangondo	S10	0.81	0.30	0.47-1.14	2
Rambangondo	S1	0.72	-	-	3
Rambangondo	S34	0.71	0.31	0.38-1.19	4
Rambangondo	S24	0.67	0.42	0.26-1.32	5
Kamadufa	S16	0.66	-	-	6
Rambangondo	S4	0.64	-	-	7
Kamadufa	S29	0.52	-	-	8
Rambangondo	S30	0.50	0.08	0.35-0.57	9
Rambangondo	S18	0.48	0.23	0.15-0.88	10
Kamorei	S11	0.43	0.68	0.03-2.98	11
Kamorei	S3	0.30	-	-	12
Kamorei	S2	0.30	-	-	12
Rambangondo	S13	0.29	0.07	0.21-0.37	14
Rambangondo	S26	0.24	0.14	0.08-0.39	15
Kamadufa	S8	0.23	0.07	0.13-0.31	16
Kamadufa	S19	0.21	-	-	17
Kamadufa	S36	0.20	-	-	18
Rambangondo	S21	0.16	-	-	19
Rambangondo	S20	0.15	-	-	20
Kamorei	S33	0.15	-	-	20
Kamorei	S31	0.14	-	-	22
Rambangondo	S7	0.11	-	-	23
Kamorei	S12	0.11	0.04	0.05-0.16	24
Kapimbi	S5	0.07	0.10	0.01-0.38	25
Kapimbi	S6	0.06	-	-	26
Kamadufa	S28	0.04	-	-	27
Rambangondo	S15	0.02	0.02	0-0.04	28
Rambangondo	S9	-	-	-	29
Rambangondo	S22	no data	no data	no data	-
Rambangondo	S35	no data	no data	no data	-
Kamorei	S37	no data	no data	no data	-

Overall Household mean: 0.34

Standard Deviation: 0.26

children and visitors is a serious problem for Maa-speaking women. Their status is closely connected to their ability to provide milk and its scarcity is 'not only material deprivation, it also makes (women) feel intimidated and socially inferior'¹⁷.

In Same District, yields are generally lower than in Lushoto, and pastoralists who earned much from their herds and bought a good deal of veterinary medicine did not necessarily take much milk (such as Faustin, household number S11). These pastoralists kept most of their animals far from Kisiwani, although some would keep a milch herd at the *boma* and would occasionally bring stock back to the *bomas* at Kisiwani in order to feed their families. Generally, however, they said they were reluctant to keep animals in the village because of the risk of disease. Women in these households would complain to us that they were unable to milk animals because they were kept so far from the home.

This strategy has been reported elsewhere. For example, Grandin has shown that rich and poor households tend to take similar amounts of milk from the herds, even though the rich have many more animals¹⁸. She concludes that the richer households are effectively investing in the herd and leaving the extra milk for their calves. Sikana *et al* report other examples, and note that when wealthy households reside in towns they leave their herds in more distant camps and the dairying economy declines in importance¹⁹. The shortfalls in food supply resulting are made up by sale of stock and purchase of grain. This strategy entails splitting herds: while some animals may be retained to meet household milk needs, the rest are sent away. It allows pastoralists to take advantage of the greater productivity that mobile herds can enjoy. The strategy depends on having access to considerable labour and animals.

The strategy reflects the fact that men and women control different spheres of economic activity²⁰. Men have the final decision over the disposal of livestock and control the proceeds of their sale. In contrast, milk is entirely controlled by women,

¹⁷ Talle, 1990: 85.

¹⁸ Grandin, 1988: 11-6.

¹⁹ Sikana *et al* 1993: 10-12.

²⁰ Guyer, 1986: 83; Hay, 1976: 90; Maddox, 1991: 40.

Table 5.8: The concordance between ranks in Lushoto District

Location	Household	Medicine	Sale	Average milk	Stock	Average Overall	
		Expenses	Totals	yield		Rank	Rank
				per capita per	holding		
				<i>enkaji</i>			
Mahambalawe	H19	1	2	2	2	1.8	1
Mahambalawe	H11	2	3	3	1	2.3	2
Mahambalawe	H3	4	1	6	5	4.0	3
Mahambalawe	H12	3	4	4	6	4.3	4
Mahambalawe	H15	7	5	1	7	5.0	5
Mahambalawe	H1	6	6	7	3	5.5	6
Mazinde	H2	5	8	8	9	7.5	7
Mahambalawe	H9	14	9	5	4	8.0	8
Mazinde	H14	8	10	11	13	10.5	9
Kisima	H10	9	7	17	10	10.8	10
Mahambalawe	H17	10	11	10	14	11.3	11
Mahambalawe	H20	20	13	9	11	13.3	12
Mazinde	H8	13	19	no data	8	13.3	13
Kisima	H6	17	12	13	12	13.5	14
Kisima	H4	12	14	15	16	14.3	15
Kisima	H18	11	15	14	17	14.3	16
Mahambalawe	H16	16	17	12	no data	15.0	17
Kisima	H5	15	20	16	15	16.5	18
Kisima	H7	19	16	17	18	17.5	19
Kisima	H13	18	18	17	19	18.0	20

Kendall coefficient of concordance = 0.839, df=17, p=0.001; L16 and L8 are omitted because data on all indices was not available for these families.

who are responsible for milking the beasts and allocating the product, to their children, guest and husband²¹. With this division of responsibility men may attempt to oversee the milking and rebuke women whom they believe are taking too much milk from the calves for their children²². We will return to the distinctions between men's and women's economies later in the thesis.

Other pastoralists who still had cattle at Same would keep animals near to the *boma*, and had higher milk offtake for people's use. Again this is similar to other pastoral societies where poorer pastoralists who have insufficient herds to survive from their sale, or labour available to send their herds to distant locations reside near settlements and live off sale of the milk²³. This strategy is discussed in more detail below.

Amalgamating results

The various indicators of the importance of pastoralism to households have been combined to give an assessment of the overall importance of cattle in both Districts. Data for Same does not include the livestock counts.

Table 5.8 compares the ranks for all indices used in Lushoto. The concordance of the rankings obtained from these different data sets is statistically significant. A combined ranking of the extent of dependence on pastoral products can be obtained by pooling and averaging scores. This procedure clearly identifies the pastoralists in Mahambalawe as richer in livestock than those at Kisima (Mann-Whitney U test: $U=84$, $n_1=7$, $n_2=10$, $p=0.001$). Pastoralists in Mazinde are too few to allow generalisation. There are exceptions to this general rule. These tend to reflect the stage people are at in their lifecycle, and the fact that there is poverty in wealthy areas, as wealthy households may have poor dependents or clients.

Table 5.9 shows the results of the same procedures for Same District. Once again, there is statistically significant concordance between rankings for income from

²¹ Rigby, 1985: 148; Talle, 1988: 205, 211.

²² Grandin, 1988: 12; Talle, 1990: 82. Similarly Waters-Bayer notes that Fulani women in Nigeria do not milk cattle because it is believed that they will take too much milk from the calves (1985: 7).

²³ Sikana *et al* 1993: 21.

Table 5.9: The concordance between ranks in Same District

Location	Household	Expenditure	Income	Milk	Total	Average	Overall
		Rank	Rank	Rank		Rank	Rank
Rambangondo	S30	4	3	6	13	4.33	1
Kapimbi	S25	13	4	1	18	6.00	2
Rambangondo	S24	2	5	13	20	6.67	3
Kamadufa	S29	11	6	5	22	7.33	4
Rambangondo	S1	7	11	7	25	8.33	5
Kamorei	S11	1	1	24	26	8.67	6
Rambangondo	S13	8	2	17	27	9.00	7
Kamorei	S31	5	12	12	29	9.67	8
Kamadufa	S16	9	19	2	30	10.00	9
Rambangondo	S34	12	10	8	30	10.00	9
Rambangondo	S26	10	7	16	33	11.00	11
Rambangondo	S4	17	13	4	34	11.33	12
Kamorei	S3	3	29	3	35	11.67	13
Rambangondo	S10	19	8	11	38	12.67	14
Rambangondo	S22	6	16	23	45	15.00	15
Rambangondo	S18	29	9	9	47	15.67	16
Rambangondo	S35	14	23	14	51	17.00	17
Kamadufa	S8	16	21	20	57	19.00	18
Kamadufa	S36	20	15	22	57	19.00	18
Rambangondo	S21	22	22	15	59	19.67	20
Kamorei	S33	21	29	10	60	20.00	21
Kamorei	S12	15	20	26	61	20.33	22
Rambangondo	S9	18	14	30	62	20.67	23
Rambangondo	S20	28	18	19	65	21.67	24
Rambangondo	S7	23	26	21	70	23.33	25
Kamadufa	S19	25	27	18	70	23.33	25
Kapimbi	S32	27	17	30	74	24.67	27
Kapimbi	S5	24	24	29	77	25.67	28
Kapimbi	S6	26	29	25	80	26.67	29
Rambangondo	S15	29	25	30	84	28.00	30
Kamadufa	S28	29	28	28	85	28.33	31
Kamorei	S37	29	29	27	85	28.33	31

Kendall coefficient of concordance $W=0.62$, $df=31$. $p=0.01$

In order to compare ranks statistically for Same District, the household categories used need a little adjustment. Some people appear in the records of sales and veterinary medicine but their wives do not appear in the record of milk yields. Conversely S2, S33's son, appears only in the milk yields table as his wife sells much milk, however he and his father buy veterinary medicine and sell stock together. Data have been amalgamated to allow comparisons. S5 and all his sons, S27, S23, S17, S14 are grouped together, as are S2 and S32.

livestock, expenditure on veterinary medicine and milk yields. The pooled ranks show a cluster of wealthy pastoralists at Rambangondo, but there is an even distribution of pastoralists from all sites throughout the table. There can be considerable variation within an individual household's individual scores for different indices.

Reliance upon pastoral products also correlated reasonably well with men's food expenditure at market. Where men were responsible for buying food they tended to buy in bulk, using the proceeds raised from the sale of stock. This type of expenditure is infrequent, and involves disposing of relatively large sums. Weekly recall will sample this activity poorly, as the high variability of mean expenditure shows (Table 5.10 and Table 5.11). Nevertheless there appears to be a significant trend of men with more disposable income from their herds spending more at market on food for their families.

Summary

In Lushoto and Same District households can be grouped according to dependence on livestock and livestock products. The range of results recorded in all indices is large. This section has found a high degree of concordance between different indices of measurement of reliance on pastoral products.

In both Districts, and particularly Lushoto District, there are families who enjoy a high degree of dependence on pastoral products. There are also families who are unable to support themselves on their herds alone. Households here fit within the range of poor and wealthy pastoralists recorded elsewhere in other studies.

Table 5.10: Comparing men's market expenditure with dependence upon livestock in Lushoto

Expenditure at market					Reliance on livestock	
Household	mean	std	n	rank	Household	rank
H19	20,300	10,208	4	1	H19	1
H3	18,400	8,989	4	2	H11	2
H12	16,486	10,944	4	3	H3	3
H7	12,775	11,784	4	4	H12	4
H15	11,429	3,936	4	5	H15	5
H2	9,195	2,899	4	6	H1	6
H11	7,508	5,329	4	7	H2	7
H1	5,700	4,562	4	8	H9	8
H17	4,525	4,625	4	9	H17	9
H20	2,508	1,101	4	10	H14	10
H16	688	1,191	4	11	H10	11
H5	250	433	4	12	H6	12
H6	200	346	4	13	H18	13
H4	90	156	4	14	H4	14
H14	43	74	4	15	H20	15
H18	-	-	4	16	H16	16
H10	-	-	4	16	H13	17
H9	-	-	4	16	H5	18
H8	-	-	4	16	H8	19
H13	-	-	3	16	H7	20

Spearman's Rank Correlation: $R_s = 0.618$, $n=20$, $p=0.01$

Table 5.11 : Comparing men's market expenditure with dependence upon livestock in Same

Expenditure at market					Reliance on livestock	
Household	Mean	St Dev	n	rank	Household	rank
S11	76,260	64,310	5	1	S30	1
S16	15,284	27,402	5	2	S25	2
S30	11,590	10,114	5	3	S24	3
S34	8,656	7,617	5	4	S29	4
S26	7,400	12,893	5	5	S1	5
S3	6,000	6,000	2	6	S11	6
S25	4,627	3,418	5	7	S13	7
S8	4,200	3,154	3	8	S31	8
S29	4,040	1,386	5	9	S16	9
S12	3,388	3,873	4	10	S34	10
S10	3,156	3,848	5	11	S26	11
S1	2,930	4,150	5	12	S4	12
S32	2,580	3,670	5	13	S3	13
S18	2,400	4,800	5	14	S10	14
S19	2,200	4,400	5	15	S22	15
S22	1,867	2,640	3	16	S18	16
S33	1,796	1,663	5	17	S35	17
S7	1,660	1,574	5	18	S8	18
S13	1,608	1,608	4	19	S36	19
S6	1,163	826	3	20	S21	20
S9	900	967	4	21	S33	21
S2	784	851	5	22	S12	22
S35	748	706	5	23	S9	23
S36	727	1,028	3	24	S20	24
S24	440	880	5	25	S7	25
S37	60	120	5	26	S19	26
S31	46	92	5	27	S32	27
S20	-	-	5	31	S5	28
S21	-	-	3	31	S6	29
S28	-	-	5	31	S15	30
S4	-	-	3	31	S28	31
S5	-	-	5	31	S37	32

Spearman's Rank Correlation: $R_s = 0.395$, $n=32$, $p=0.05$

Farming

We have seen in chapter one that agriculture has long been a strategy employed by impoverished pastoralists in order to survive and to allow herds to recover. Maasai areas have been well known for the agricultural enclaves within them such as Sonjo, Taveta, Arusha chini and Arusha juu²⁴. These places were retreats for pastoral families who were unable to live off their herds. Following their defeat by the Kisongo in the *Iloikop* wars, the descendants of the Parakuyo took refuge with agricultural communities on the southern and eastern borders of Maasailand and turned to farming²⁵.

Anderson has provided a detailed case study of the fluctuating extent of irrigation agriculture practised by the Il Chamus in Baringo. He shows that the Il Chamus took in destitute Maa speaking pastoralists impoverished after the *Iloikop* wars in the mid 1800s, or by cattle disease later in the century²⁶. Agriculture was not an end point. Towards the turn of the last century, Il Chamus men traded ivory for cattle and raided their pastoral neighbours and accumulated such large numbers of stock that many were able greatly to reduce their dependence on agriculture²⁷.

Currently smallholder agriculture is widespread throughout East African rangelands as large numbers of pastoral groups turn to agriculture due to constraints on resources from a number of sources²⁸. We have seen that agriculture has become increasingly important for pastoralists at Ngorongoro, amongst the Borana of Isiolo District, Kenya, and among Maasai pastoralists in Tanzania²⁹. All are taking up agriculture in response to land loss and resource constraints³⁰.

²⁴ Spear, 1993a: 131-2; Anderson, 1988: 253; Berntsen, 1979b: 115-120.

²⁵ Beidelman, 1960: 250 and chapter six, page 172-5.

²⁶ Anderson, 1988: 248-9.

²⁷ Anderson, 1988: 251-6.

²⁸ Ndagala, 1996: 131-3.

²⁹ Chapter one, pages 32-47

³⁰ Igoe and Brockington, forthcoming.

Kjaerby has shown that Barabaig pastoralists have become progressively more involved in agriculture as the lands available to them have declined and as their herds decreased in number and value³¹. He notes that for wealthy pastoralists agriculture is a strategy that conserves the herd and allows it to grow; for poorer pastoralists it is a 'necessary liability' in order to survive³².

Little also studied changes at Baringo. In concordance with Kjaerby he observed that wealthy farmers invest in agriculture as a means of diversifying their economies and protecting their herds and that poorer families were taking up farming because they were unable to live off their herds and had to farm to survive³³.

This section uses two indicators to gain some measure of the importance of farming to peoples' livelihoods. The main measure is the yield gained from farming. The area farmed is used where yield data are not available or are unreliable. These data are vulnerable to manipulation from pastoralists trying to portray themselves as impoverished by the eviction operation. Some families may have exaggerated the extent of their losses to their herds and over emphasized their reliance upon farming. Others sought to portray themselves as poor and may have under-reported the sustenance they received from both herds and farming. Generally, I had the impression that many Maasai or Parakuyo families tended to downplay the size of their harvests. Both rich and poor people in Kisiwani were wont to dismiss their yields as minimal and of no importance.

Lushoto District

A number of families have taken up farming of two types. Some families bought plots in the nearby rice cooperative at Mng'aro. This is a large scheme set up with the help of the African Development Bank and the United Nations Capital Development Fund. The list of Maasai and Parakuyo pastoralists who had bought plots there were among the wealthiest I knew in the area. Another set of pastoralists, generally those poorer in terms of stock, moved to Kisima, a wet area just outside of

³¹ Kjaerby, 1979: 45-8.

³² Kjaerby, 1979: 48.

³³ Little, 1983: 260.

Table 5.12: Yields of maize and planting of cassava amongst pastoralists in Lushoto District

Location	H'hold	Rank	Maize yields / <i>debe</i>			Number of long rainy seasons when Cassava was planted
			Long rains 1995	Short rains 1995-6	Long rains 1996	
Mahambalawe	L19	1	60	0	9	0
Mahambalawe	L11	2	0	0	0	0
Mahambalawe	L3	3	0	0	0	0
Mahambalawe	L1	4	12	12	absent	0
Mahambalawe	L12	5	6	0	0	0
Mahambalawe	L15	5	3	0	0	0
Mazinde	L2	7	36	0	3	2
Mahambalawe	L17	8	6	absent	0	0
Mazinde	L14	9	12	0	0	1
Mahambalawe	L9	10	6	0	0	0
Kisima	L10	11	18	18	24	1
Kisima	L6	12	2	0	0	1
Kisima	L18	12	18	9	3	2
Kisima	L4	14	0	6	absent	0
Mahambalawe	L20	15	0	0	0	0
Mahambalawe	L16	16	0	absent	4	0
Kisima	L5	17	0	6	6	1
Mazinde	L8	18	24	0	0	2
Kisima	L7	19	30	3	2	2
Kisima	L13	20	12	0	0 ¹	1

¹L13 harvested 2 *debe* of rice.

²L3's son harvested 10 sacks of rice and 24 *debe* of maize after the long rainy season of 1996.

the rice farming village of Lunguza. Here they were able to acquire plots of land and also could benefit from the expertise of their agricultural neighbours.

Those living at Kisima were better able to guard and care for their farms personally if need be, whilst those living elsewhere were content to rely upon hired labour and long distance supervision. Kisima residents appear to do better from farming in the short rainy season.

There were other benefits associated from staying at Kisima. I saw Lobulu's (L13) family drying rice that they had gleaned from other farmers' fields after the first cut. Rice, when harvested, sprouts again and the second crop is often left. This rice was cut and dried with permission from the field's owner. Elsewhere a teenage boy in Edward's (L5) home had cooperated with a Sambaa neighbour to grow rice in the Sambaa's field. Proximity to the rice paddies and fields facilitated these pastoralists' participation in agriculture.

Table 5.12 compares farm sizes and yields for different households at different seasons. It shows no clear relationship between investments in agriculture and the importance of pastoralism. In all cases yields from season to season are highly variable. Investment of time or money into farming appears to be sporadic, and depends on the availability of labour, funds or good weather. However there are indications from these data that the poorer pastoralists at Kisima are more closely involved in agriculture. They lived near their farms and obtained harvests after the short rains, while the wealthier pastoralists did not. Pastoralists at Kisima planted cassava around their houses; this could then be left in the ground for a long period of time and harvested as needs arose. Wealthier pastoralists at Mahambalawe did not live in an area wet enough for cassava.

The visual impression at Kisima, of small homesteads surrounded by fields of cassava and maize, was that these families had moved to where they could farm more successfully than would be the case if they cultivated fields at a distance from their homes. Although the scale of operations and yields were sometimes small, there

was more likely to be a continual trickle of food from cassava, and two seasons of maize harvesting, than was the case in other locations. The yield data suggest that none of the families at Kisima would be able to support themselves from the produce they claim to have raised. As these families are also unable to support themselves on pastoral products, they must be finding some other way to earn a livelihood.

The wealthy pastoralists at Mahambalawe occasionally obtained high yields of maize after the long rains. These came from plots of land that they hired labourers to clear, plant, weed and guard. This capital-intensive farming is similar to the strategies described above that wealthy pastoralists pursue in order to conserve their herds. Some families at Mahambalawe bought petrol-powered pumps in order to irrigate their farms with water from the adjacent Uмба River.

Same District

In Kisiwani there is a shortage of good farmland³⁴. Access to water for irrigation is restricted and there is less opportunity to take up irrigated land than in Lushoto District, where there is more space and a large irrigation project has just started. Pastoralists' ability to take up land, or get access to water, in order to farm seems to be constrained in Same District.

There is no wetland, equivalent to Kisima in Lushoto District, that is easily available for use by pastoralists. There is a variation in the quality of the soil, as reported to us by informants, and some places may have been sought out because of their better soil. We were told that Kamadufa had rich soil, and that people had moved there in order to farm. In Rambangondo the soil was poorer but the vegetation was considered good for smallstock.

'Kamorei juu' (Upper Kamorei) is the home of Pare dairy farmers. Here there is much bare ground, devoid of plant cover. The farmers attributed this to the large number of cattle that used to pass through on their way to water at the Kisiwani river. Within this bare ground, however, were fertile and well tended farms, several acres

³⁴ Kiwasila, forthcoming.

Table 5.13: Yields in Same District

Location	H'hold	Rank	Long rains '95 Maize/debe	Short rains '95-6 Maize/debe	Long rains '96 Maize/debe
Kamadufa	S16	9	0	0	0
Kamadufa	S8	18	7	0	0
Kamadufa	S28 ¹	31	18	6	8
Kamadufa	S19	26	6	0	0
Kamadufa	S29	4	1	0	0
Kamorei chini	S11	6	7	0	0
Kamorei chini	S12	22	0	0	absent
Rambangondo	S34	10	no data	2	0
Rambangondo	S1	5	0	0.5	0
Rambangondo	S10	14	0	0	0
Rambangondo	S30	1	0	0	0
Rambangondo	S18	16	0	0	0
Rambangondo	S24	3	1	0	0
Rambangondo	S13	7	2	0	0
Rambangondo	S26	11	1	0	0
Rambangondo	S35	17	no data	0	0
Rambangondo	S9	23	0	0	absent
Rambangondo	S20	24	0	absent	0
Rambangondo	S7	25	3	0	0
Kapimbi	S25	2	0	0	0
Kapimbi	S6	29	6	0	absent
Kapimbi	S5	28	12	0	0
Kamorei Juu	S3	13	18	12	absent
Kamorei Juu	S33	21	18	6	24 ²
Kamorei Juu	S2	na	12	6	24
Kamorei Juu	S31	8	30	30	30
Kamorei Juu	S37	32	24	18	died

¹S28 also planted cassava.

²S33 also harvested 5 sacks of rice.

Households not included: S4 (died); S14 (son of S5); S15 (left the area); S17 (son of S5); S21 (incomplete data); S22 (son of S18); S23 (son of S5); S27 (son of S5); S32 (incomplete data); S36 (incomplete data).

across, into which the farmers channel rainwater in narrow ditches. They harvest the run-off from the denuded land onto their farms, giving islands of green in an otherwise bare area (see pictures below). Former farms were used as private calf pastures by these agro-pastoralists.

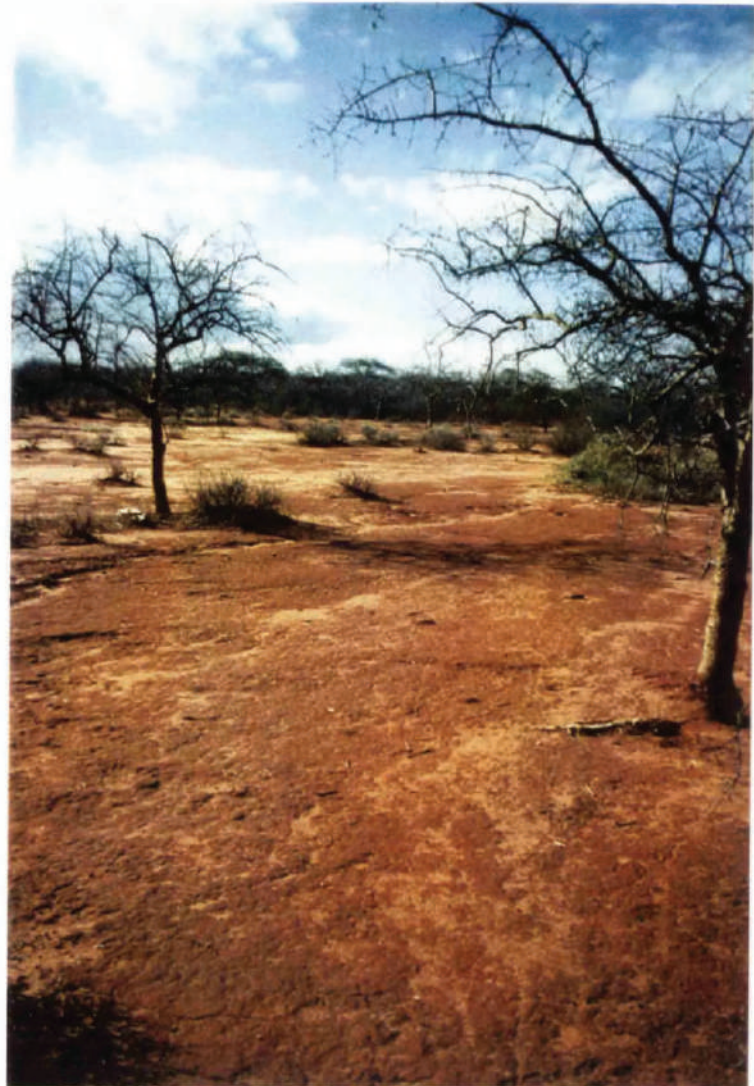
Table 5.13 shows yields of maize and farming of cassava in the households studied. This table contains only pastoralists for whom there are at least two records. Only one pastoralist, S28, was recorded as growing cassava. He was one of the poorest in the sample, and was also heavily reliant upon wage labour from the nearby construction of a Catholic school.

These data show that there are virtually no families who report reliance upon farming apart from the Pare dairy farmers (S3; S33; S2; S31; S37) who harvest twice a year. There may well have been significant under-reporting of yields by some families who were trying to portray themselves as generally in need. Table 5.14 shows the acres that each family reported farming, either themselves or with paid labour, for the two long rainy periods. It shows that there has been some investment of time and labour by most pastoralists, but that the area planted varies from year to year. This indicates that, as in Lushoto District, this is a variable activity dependent on inconstant weather, capital and labour supplies. The poor yields they report may be an indication of their inability to get good land as well as possible manipulation of the data.

Table 5.14: Area of farm planted in Same District

Location	Household	Long rains 1995 Area (acres)	Long rains 1996 Area (acres)
Kamadufa	S16	no data	2
Kamadufa	S8	6	2
Kamadufa	S28	3	1
Kamadufa	S19	4	no data
Kamadufa	S29	1	1
Kamorei chini	S11	10.5	6.5
Kamorei chini	S12	no data	absent
Rambangondo	S34	2	no data
Rambangondo	S1	2	1.5
Rambangondo	S10	2	1.5
Rambangondo	S30	2	4
Rambangondo	S18	4	no data
Rambangondo	S24	2.5	2
Rambangondo	S13	2	no data
Rambangondo	S26	2	no data
Rambangondo	S35	no data	no data
Rambangondo	S9	2.5	absent
Rambangondo	S20	no data	no data
Rambangondo	S7	3	3.5
Kapimbi	S25	2	3.5
Kapimbi	S6	6	absent
Kapimbi	S5	4	no data
Kamorei Juu	S3	5	absent
Kamorei Juu	S33	2	2.5
Kamorei Juu	S2	7	3
Kamorei Juu	S31	4	3.5
Kamorei Juu	S37	3	died

Bare ground and rain water harvesting at Kamorei Juu



Bare ground at Kamorei Jju



Bare ground at Kamorei Jju



Bare ground and rainwater collection ditch



Rainwater collection ditches leading to fenced farms



A fenced farm with a fenced calf pasture in the middle ground



Summary

There is evidence in Lushoto District that some stock-poor pastoralists are practising some farming which contributes frequent but small amounts of food to the household. Other pastoralists practise a more capital intensive type of agriculture, using the proceeds of sale of stock to invest in land, labour and equipment for farming.

Patterns are not so clear in Same District. It is probable that there was some under-reporting of crop yields; at the same time it is possible that, given pressure on the land, the plots of land available are not of sufficient quality to meet peoples' needs. Pare pastoralists who farm successfully have invested considerable effort and energy into creating well watered gardens. It is probably unlikely that Maasai and Parakuyo pastoralists living here have had access to land in sufficient quality to invest as much in farming as much as their associates in Lushoto District or their Pare neighbours. Pastoralists in Same may have got more from their farms than they reported, but, again, this is unlikely to have been sufficient to sustain their needs.

In both sites investment in farming, whether measured in yields or area, can vary considerably. Agriculture appears to be an opportunistic strategy pursued when the conditions are appropriate. It is also apparent from these data that farming does not provide the livestock poor families with enough to live off. These families are unable to subsist on their herds or farms. They were dependent on other sources of income, in particular the earnings of women.

The importance of women's income to the household economy

It is apparent from the yields reported for farming and livestock that some families are unable to support themselves from these occupations. It was also apparent that these families did not support themselves from the remittances of urban workers. I explore this issue in more detail in the following chapter; suffice to say here that only two people in the sample were known to have outside employment, and one of these found a job as a watchman in Dar es Salaam only at the end of the study. In the

absence of sufficient support from these sources, families required another means of sustenance.

Women's income is a vital part of the household economy in African pastoral and agro-pastoral societies. In pastoral societies women have numerous tasks essential to the maintenance and reproduction of the herd³⁵. We have previously noted that women had sole control over the production and allocation of milk, and are responsible for providing food for their sub-households³⁶. There is good evidence that historically women's trade has long been important for day-to-day food needs³⁷. There is also a widely held perception that women may have borne the brunt of recent changes and impoverishment³⁸.

We have noted that household economies may have quite divided domains of male and female control. In this context women's trade will be important for their own personal needs and private incomes³⁹. It also means that women's income needs to be seen in terms of the degree of independence and control they have over it compared to men⁴⁰.

It is possible to identify different patterns of income-earning by women in this sample. Once again there are problems with the accuracy of the individual data points, however, as with measures of income from livestock, patterns are visible across the sample. The frequency and importance of this activity for day-to-day food needs varies according to the income provided from farming and pastoralism.

Lushoto District

In the Lushoto sample, women's income is derived from selling chickens, milk, traditional medicine or hides locally. Some may barter milk for salt or bananas, the former brought to their *bomas* by itinerant traders, the latter sought for themselves.

³⁵ Dahl, 1987b: 253.

³⁶ Talle, 1990: 79, 82-3; Rigby, 1985: 148-9; Mitzlaff, 1988: 29-32.

³⁷ See chapter one, page 25.

³⁸ Talle, 1988: 268, 270.

³⁹ Buhl and Homewood, forthcoming.

⁴⁰ Huss-Ashmore, 1996: 210-1.

Table 5.15: Average number of weeks with selling events for women in Lushoto District

Village	No. of weeks women sold goods					Total
	Nil	One	Two	Three	Four	
Kisima	0	4	6	2	1	13
Mahambalawe	30	7	2	3	0	42
Mazinde	0	1	1	1	1	4
Total	32	12	9	6	2	61

Maximum possible total is four.

Table 5.16: Average weekly income for women in Lushoto District

Village	Average earnings			
	0	0-500	500-999	1,000+
Kisima	0	5	5	3
Mahambalawe	30	8	2	2
Mazinde	0	2	1	1

Table 5.17: Comparing women's incomes and market expenditure in Lushoto District

Location		Sep-95		Nov-95		Feb-96		May-96	
		Income	Market	Income	Market	Income	Market	Income	Market
Mazinde	Mean	245	7,920	1,070	1,715	350	4,623	855	10,020
	Std dev	182	-	1,196	2,223	460	6,188	951	-
	No. of <i>enkaji</i> with data available	3	1	3	3	2	2	2	1
Kisima	Mean	240	1,774	233	753	1,259	492	1,341	707
	Std dev	336	1,017	414	671	984	468	446	562
	No. of <i>enkaji</i> with data available	7	6	10	10	10	10	9	9
Mahambalawe*	Mean	179	0	107	1,500	233	540	73	1,975
	Std dev	455	na	421	-	903	-	259	-
	No. of <i>enkaji</i> with data available	38	38	37	1	36	1	35	1

*In addition to the sales recorded here, a minority of women at Mahambalawe occasionally bartered milk for salt, and on a few other occasions some exchanged milk for bananas.

In general there are two main types of selling activity. Some women sell goods occasionally and irregularly, depending on the availability of buyers or goods for sale. This activity occurs perhaps once every few weeks. Other women sell goods regularly and frequently, several times during the week if not every day.

Table 5.15 and Table 5.16 show the frequency and value of income generation in Lushoto District. Once again the distinction between the household economies of Kisima and Mahambalawe is clear. There are a large number of women from Mahambalawe who are not recorded as selling anything. Women at Kisima generally earn more than those elsewhere and do so more regularly.

To gain some idea of the significance of this activity Table 5.17 compares the income women earn through the weekly sale of milk or medicine with the money they spend at markets each week. The first market data collected, in May 1995, are omitted here, as no data on the income generated by women were available then.

The table shows that just as women at Mahambalawe earned little, so they rarely bought food. In most cases when we asked women in Mahambalawe what they had bought at the markets in the previous week, they referred us to their husbands, because they did not normally visit, spend money or buy goods at markets. Buying food for the household was generally the preserve of men, who would buy maize in bulk and then distribute it amongst the sub-households. For most of the year women at Mahambalawe lived too far away to be able often to buy or sell goods at the market.

Women are not always prevented from going to market because they live far away. Sikana *et al* report a number of studies which show women co-operating to share transport costs, or investing in donkeys to bear their produce⁴¹. Ensminger reports that nomadic Galole Orma women have less access to the market, but are able to sell

⁴¹ Sikana *et al*, 1993: 24-5.

ghee (butter) by giving it to their husbands who transport it there⁴². They also provide lengthy shopping lists to ensure that the man spends the money appropriately.

In contrast to Mahambalawe, women at Kisima went daily to Lunguza, the nearest village, to sell milk and buy food, both relish and maize. When we asked what food they had bought the previous week, men occasionally reported that they had made a bulk buy of maize, but generally referred us to the women. Here the general rule was for women to buy food, not once a week at the market, but every day from permanent stalls. As a rule they consumed daily what they bought with the money they earned that day.

Every morning in Lunguza Maasai and Parakuyo girls and women could be seen carrying the milk around the village. We had to time our survey work to catch people before they left or after they came back. The older women would sometimes carry their medicines with them, and sell to the Sambaa people at Lunguza. The most important day for selling medicines were the market days, when a large stand of Maasai women would congregate to sell their traditional cures.

Anecdotal evidence of the importance of women's income is afforded by Yeiyolai (LW44), the second wife of Masaine (L7), an elder living at Kisima. Yeiyolai's goats died, and she was left without any animals to milk, and so had no source of income. At the same time Masaine was quite sick and several cows died from East Coast Fever. In the face of this misfortune Yeiyolai was lent four female goats by her wealthy uncles, who were living at Mahambalawe. These were hers to milk and then return. They enabled her to earn the weekly income listed.

It has been observed elsewhere that where sufficient milk is not available from the herd, then pastoralists sell milk to get food⁴³. This allows them to exploit the favourable calorific terms of trade between milk and cereals. Holden *et al* have

⁴² Ensminger, 1987: 42.

⁴³ Sikana *et al*, 1993: 13-16.

Graph 5.1: Frequency of food use for women in Lushoto District in 239 meal days

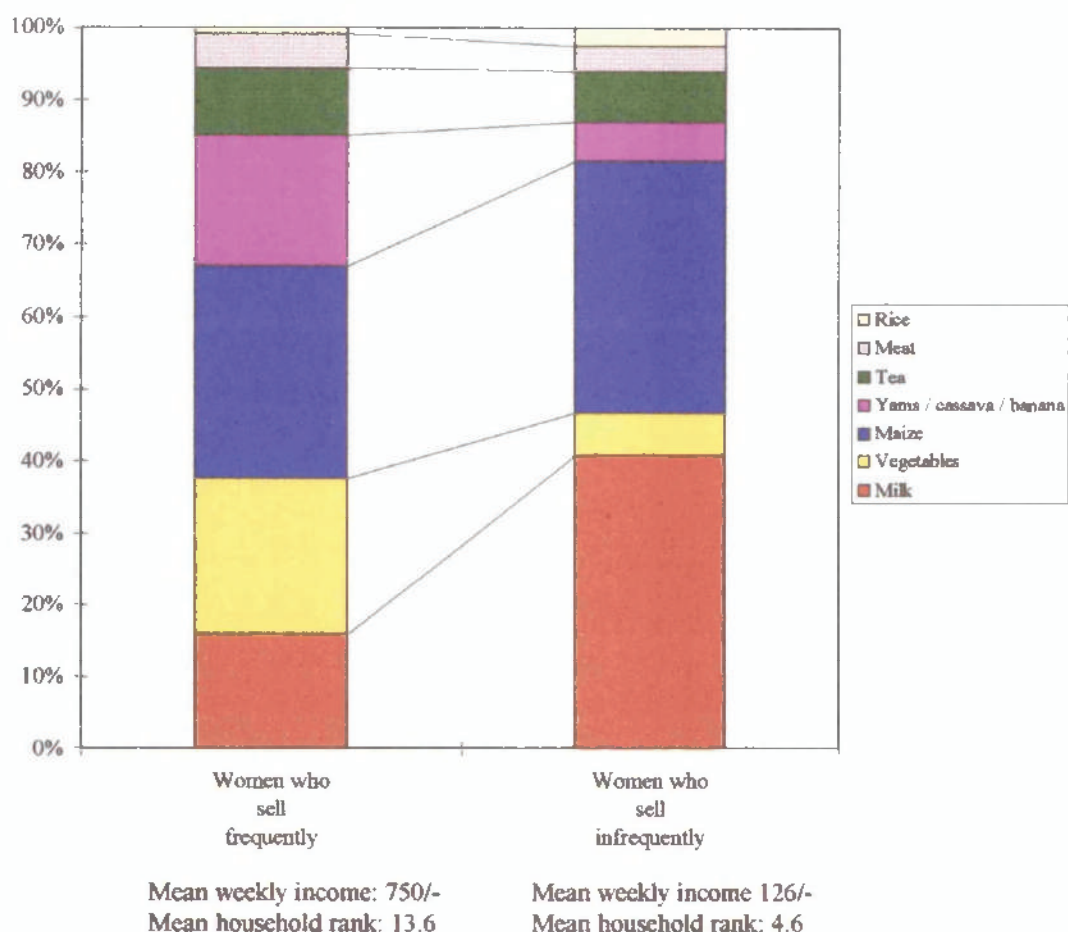


Table 5.18: Frequency of use of different foods in Lushoto District

Food	Frequent market activity	Infrequent market activity	Total	Frequent market activity	Infrequent market activity	Total
Milk	34	163	197	16%	41%	32%
Vegetables	47	24	71	22%	6%	12%
Maize	63	139	202	29%	35%	33%
Yams / cassava / banana	39	22	61	18%	6%	10%
Tea	20	28	48	9%	7%	8%
Meat	10	14	24	5%	4%	4%
Rice	2	10	12	1%	3%	2%
Total foods recorded	215	400	615	100%	100%	100%

Total meal days: 239.

'Frequent market activity' represents all adult women in Kisima, Mazinde, and one at Mahambalawe for whom records of sale and buying are presented in Table 5.17. 'Infrequent market activity' represents all the other women at Mahambalawe.

described milk marketing by Borana pastoralists in Ethiopia. They report that sales of milk by poor pastoralists were high as they needed to exchange milk for grain to get sufficient food. They noted that poorer pastoralists had moved nearer towns in order to sell milk more easily. They also found that grain consumption decreased with increasing distance to the market, and with increasing wealth⁴⁴. Oba found that poor Obba Borana families on the Kenya-Ethiopia border also sell milk in order to buy maize. Some families set up contracts guaranteeing a regular supply of milk for their clients⁴⁵. Herren has reported that poorer Somali camel herders are more involved in milk marketing than wealthier families. The latter withdraw to remote pastures in the wet season, the former remain near towns selling milk in order not to have to sell animals to meet subsistence needs⁴⁶. Likewise Turton and Turton have shown that impoverished Mursi agro-pastoralists moved closer to neighbouring agriculturalists to better trade with their neighbours, and farm themselves⁴⁷.

Women who sell frequently convert their earnings into food for their families. This has a visible effect on their families' diet. Table 5.18 and Graph 5.1 show the proportion of times that different foods were recorded during dietary recall. This table is a summary of all foods used in 239 sub-household-meal-days in Lushoto⁴⁸.

In Lushoto District there is a clear difference between households where women are involved in frequent market activity and those where they are not. Women who sell milk frequently give less milk to their families to consume than do those who sell little. They also cook more vegetables, yams, bananas and cassava than those who sell little and are dependent upon bulk buys of maize for starch and milk for relish. Women who do not sell goods frequently come from the larger and wealthier households which are highly dependent on their herds and consume a good deal of milk.

⁴⁴ Holden *et al* 1991: 50-53.

⁴⁵ Oba, 1990: 43.

⁴⁶ Herren, 1990: 8.

⁴⁷ Turton and Turton, 1984: 179.

⁴⁸ A sub-household-meal-day is all the meals prepared by an adult woman for her family in one 24 hour period.

The Mahambalawe diet is similar to the Maasai pastoralists that Nestel recorded in Kajiado District in Kenya⁴⁹. She noted a strong preference for milk, particularly during the wet season, with purchased maize used as an alternative staple. She notes that other cereals, pulses, vegetables and fruits were rarely eaten⁵⁰. Similarly Galvin *et al* state that pastoralists generally 'rely on milk as the dietary staple whenever possible'⁵¹.

Fratkin and Smith examined pastoral diets and women's sales among settled and nomadic Rendille. They found that residence in towns provided women with opportunities to sell milk, if they had animals, or vegetables from their gardens. They also noted that they tended to convert their incomes directly into food purchases, with the result that settled families' diet involved more starch and greens than nomadic families who were heavily reliant upon milk⁵². Similar trends in diet and occupation are reported for peri-urban Borana pastoralists⁵³.

Fratkin and Smith noted that the town dwellers have a more varied diet as a result and that women's close involvement in the market brings 'greater food security in terms of food bought'⁵⁴. However they also observed that income-generation is not always possible and that some of the poorer women are just scraping by on famine relief programmes. In a later study Nathan *et al* showed that although the settled diet was more varied, and despite the provision of food aid in urban areas, settled children experienced more malnutrition and wasting in dry years compared to nomadic children whose diet was dominated by milk⁵⁵. They suggest that the large number of camels owned by the nomads, and the practice of food sharing ensured better food security for pastoralists⁵⁶.

⁴⁹ Nestel, 1989: 19.

⁵⁰ Nestel, 1989: 19.

⁵¹ Galvin *et al*: 1994: 122.

⁵² Fratkin and Smith, 1995: 445-6.

⁵³ Galvin *et al*, 1994: 122.

⁵⁴ Fratkin and Smith, 1995: 447.

⁵⁵ Nathan *et al*, 1996: 512.

⁵⁶ Nathan *et al*, 1996: 512-3.

Table 5.19: Average number of weeks with selling events for women in Same District

Village	No. of weeks women sold goods						Total
	0	1	2	3	4	5	
Kamadufa	5	3	3	0	0	0	11
Kamorei juu	3	5	5	6	0	5	13
Rambangondo	9	7	8	3	4	1	24
Kapimbi	10	8	0	4	0	0	18
Total	27	23	16	13	4	6	66

Maximum possible total is five

Table 5.20: Average weekly income for women in Same District

Village	Average earnings			
	0	0-500	500-999	1,000+
Kamadufa	5	6	0	0
Kamorei	3	16	2	3
Rambangondo	9	19	3	1
Kapimbi	10	6	1	5
Total	24	47	6	9

The Kisima families are comparable in that they too have a more varied diet as a result of daily food purchases by women. The setting, however, is more rural than the towns that Fratkin and Smith describe. Women at Kisima sell milk in small agricultural villages rather than towns. Furthermore, although the diet of these pastoralists may be more varied than their colleagues' in Mahambalawe, the livelihood is more precarious. Families at Kisima are dependent on the day-to-day sales from a small herd, and have to turn to relatives in times of need. The wealthier pastoralists rely on a larger herd which is less likely to fail them.

Same District

Table 5.19 and Table 5.20 shows that once again women's sales can be frequent and important, but also that some women appear to sell very little. In Same District, differences between settlements are not so stark as in Lushoto because all are close to Kisiwani and all women have access to Kisiwani village should they desire to sell anything. Women here sold milk, medicine and chickens, but in addition some sold firewood, which was not recorded in Lushoto District.

In Same District patterns are further complicated by the presence of additional sources of income that are not available to pastoralists in Lushoto. Both the Catholic and Pentecostal Church give out food aid there and pastoralists have been successful in getting access to it. There are also more sources of employment. The Catholic Church was building a secondary school and employed '*vibarua*', (casual labourers), to shift the stone needed for the foundations and buildings. Water Aid employed one *murr*an to conduct a brief survey of water problems in the area. The NGO *Ilaramatek Lolkonerei* also built offices and employed large numbers of youths, exclusively Maasai, to build them and gather the stone and materials. The meetings of the organisation itself was also an important source of income - via *per diems* - for Maasai elders involved in the organisation.

Although all women had the opportunity to sell goods, not all chose to. Once again it is possible to use differences in women's income and marketing activity to highlight differences in livelihood strategy. There are three groups of women who sell goods frequently and upon whom their families rely for meeting day-to-day needs, but

Table 5.21: Women's weekly income and market expenditure for households in Same District where women sell frequently

Livelihood		Jun-95		Oct-95		Dec-95		Mar-96		Jun-96	
		Market	Income	Market	Income	Market	Income	Market	Income	Market	Income
Women who sell locally Total <i>enkaji</i> : 5 Households: 3 Mean h'hold rank: 23	Mean:	470	40	1,168	170	1,230	400	254	948	680	400
	Std dev:	394	80	1,990	129	1,023	800	391	1,124	410	200
	<i>Enkaji</i> with data:	5	5	5	5	5	5	5	5	5	5
	absent:	0	0	0	0	0	0	0	0	0	0
Pare Dairy women Total <i>enkaji</i> : 5 Households: 5 Mean h'hold rank: 18	Mean:	953	758	1,618	187	1,679	1,512	2,744	1,872	2,650	1,633
	Std dev:	1,039	648	1,015	128	1,631	1,142	2,136	1,229	1,582	873
	<i>Enkaji</i> with data:	6	6	5	6	4	5	5	5	3	3
	absent:	0	0	1	0	2	1	1	1	3	3
Itinerant saleswomen Total <i>enkaji</i> : 16 Households: 1 Household rank: 28	Mean:	448	82	1,625	2,000	689	1,389	585	1,259	2,581	1,711
	Std dev:	629	185	1,833	6,000	637	3,107	960	3307	2,480	3,789
	<i>Enkaji</i> with data:	12	11	10	10	9	9	9	8	9	9
	absent:	4	5	6	6	7	7	8	8	7	7

Table 5.22: Weekly income and market expenditure of itinerant saleswomen in Same District

Household	Woman	Jun-95		Oct-95		Dec-95		Mar-96		Jun-96	
		Market	Income	Market	Income	Market	Income	Market	Income	Market	Income
S5	SW75	0	0	abs	abs	abs	abs	abs	abs	abs	abs
S5	SW9	750	0	2,100	0	1,780	10,000	385	-	2,400	0
S5	SW2	2,050	abs	abs	abs	550	0	3,075	-	9,240	3,400
S5	SW5	1,100	0	275	0	abs	abs	0	-	2,460	0
S5	SW74	abs	abs	abs	abs	abs	abs	225	abs	625	12,000
S5	SW37	0	0	200	0	200	0	300	-	abs	abs
S5	SW26	1,050	300	abs	abs	800	2,000	1,280	10,000	abs	abs
S5	SW68	250	0	550	20,000	820	0	abs	abs	abs	abs
S5	SW15	abs	abs	abs	abs	abs	abs	abs	abs	abs	abs
S5	SW35	abs	abs	abs	abs	abs	abs	abs	abs	abs	abs
S5	SW30	0	0	1,000	0	0	0	0	-	1,650	0
S5	SW65	80	600	495	0	abs	abs	abs	abs	400	0
S5	SW33	0	0	5,925	0	1,730	500	abs	abs	2,950	0
S5	SW87	100	0	4,100	0	0	0	0	-	1,750	0
S5	SW88	abs	abs	1,400	0	320	0	0	-	1,750	0
S5	SW63	0	0	200	0	abs	abs	abs	abs	abs	abs
	Mean	448	82	1,625	2,000	689	1,389	585	1,259	2,581	1,711
	Std Dev	629	185	1,833	6,000	637	3,107	960	3307	2,480	3,789
	No. of <i>enkaji</i> with data	12	11	10	10	9	9	9	8	9	9

pursue slightly different strategies to do so. Details of their income and expenditure and how they correspond are shown in Table 5.21.

In two sets of families women were often involved in sales of milk, firewood or medicine to provide day-to-day needs. The weekly sales reported here are totals of several sales made throughout the week. Some of these were poor Maa-speaking families (labelled 'women who sell locally' in the table) who resemble the poorer families at Kisima. One of these families was also involved in daily exchanges of milk for maize-meal in addition to the sales reported in the table.

The 'Pare dairy women' are the Pare agro-pastoralists who live at Kamorei juu. They were part of a dairy network and regularly sold milk to middlemen, who would ferry it in buckets on bicycles into Kisiwani. This, in addition to farm yields, made an important contribution to daily household needs. This is similar to the organised dairying described by Waters-Bayer for the Fulani of Nigeria, and Kerven's description of dairying in South Darfur, where milk sales, controlled by women was roughly estimated to contribute 40% of annual family income⁵⁷.

The 'itinerant saleswomen' all come from Moses' (S5) household in Kapimbi. This household is poor in terms of livestock and also did not farm. Instead their main source of income was the revenue earned by women from selling traditional medicine. This selling was different from local saleswomen in that these women did not sell goods at Kisiwani. Instead they traveled long distances to sell medicines in urban areas where prices were higher and there was more demand. They went extraordinary distances, reaching Dodoma, Arusha and Moshi, even crossing into Kenya as far as Mombasa, returning to Tanga and thence back home.

The nature of this activity for different women within the household is brought out in Table 5.22. This shows that many women are often absent and were not available to answer questions. This was because they were on the road selling medicines. On the few occasions when a woman was back home they reported high earnings of up to

⁵⁷ Waters-Bayer 1985; Kerven, 1987: 25.

Table 5.23: Women's weekly income and market expenditure for households with less women's market activity

Livelihood		Jun-95		Oct-95		Dec-95		Mar-96		Jun-96	
		Market	Income	Market	Income	Market	Income	Market	Income	Market	Income
Sales with pastoralism Total <i>enkaji</i> : 37 Households: 10 Mean H'hold Rank: 9	Mean:	294	134	328	185	674	156	578	572	797	184
	Std dev:	581	342	506	306	1,319	279	1,372	582	1,080	398
	<i>Enkaji</i> with data:	36	35	31	31	29	29	32	32	30	30
	absent:	1	1	6	6	8	8	5	5	7	7
Little activity Total <i>enkaji</i> : 9 Households: 5 Mean H'hold Rank: 12	Mean:	811	0	739	0	701	0	606	50	858	83
	Std dev:	1,467	0	1,465	0	1,208	0	865	122	909	186
	<i>Enkaji</i> with data:	9	9	8	8	8	7	7	7	6	6
	absent:	0	0	1	1	1	1	2	2	3	3

20,000 shillings. Other women are rarely absent, they are the daughters-in-law of the itinerant saleswomen who care for the remaining children at home, spending the money their mothers-in-law earn.

Whereas the local saleswomen have parallels in the literature, as described above for Kisima, I am not aware of similar cases to the itinerant saleswomen. Its closest parallel is migrant labour to urban areas, which involves keeping the family in the rural area as a base, while earning income in the towns. It differs from other patterns of migrant labour in that the women tended to move quickly between towns, rarely staying more than a few days in each town. Contact with one particular town, though repeated, was ephemeral. For accommodation they would depend on churches, or the advice or hospitality of Maasai people living in the towns⁵⁸.

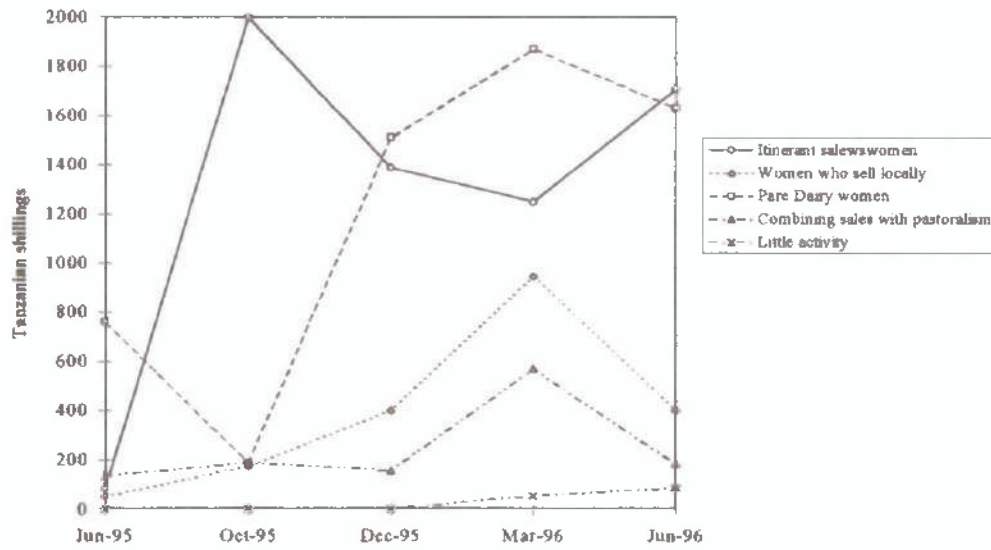
Some households ranked highly in dependence on livestock but, women's income from firewood or milk sales was still important, and women did some of the buying of provisions at the local market. These households are akin to the wealthy herders described earlier who maximise herd productivity by keeping animals away from the village and letting calves, rather than people, use the milk (Table 5.23).

Data from the present study reveal an additional insight into the importance of women's income in making this strategy work. The ability of women to earn money may be deliberately used by male household heads, who want to minimise milk offtake and reduce the offtake of live animals. It seemed that expenditure by the household was reduced by living near to a large village, which presented more market opportunities.

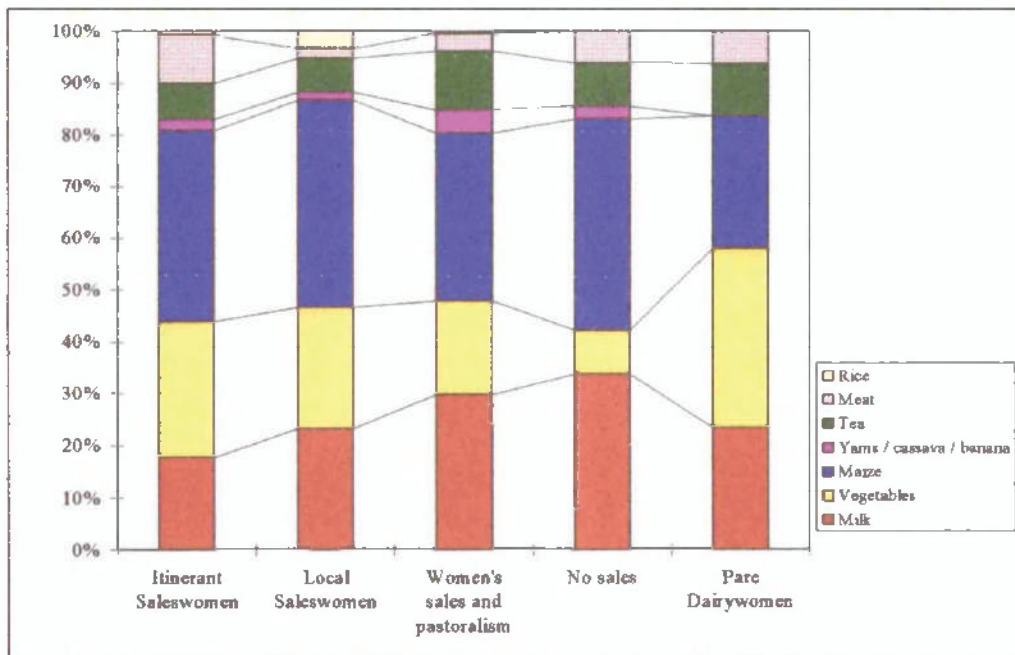
The activity was a matter of considerable negotiation within some households. In one case (Faustin's, S11) the women disliked the extra work, and the head of the household disliked seeing his wives and dependents selling firewood, because it was a sign of poverty. On the other hand, the men resented the expenses of his large household and needed his dependents to earn money. Eventually his wives prevailed

⁵⁸ Interview EFW 9/7/96.

Graph 5.2: Mean income earned by women in different households



Graph 5.3: Frequency of food use for women in Same District from 325 meal days



Mean Women's Income :	1,286/-	394/-	246/-	27/-	1,192/-
Mean hh rank:	28	23	9	12	18

on him to bring more cattle back from the cattle camp, so that they could milk them for food and income.

In some of these wealthier households sales were slight in the dry season. When rains were good, women were better able to sell milk every day to local Pare people in Kisiwani. They managed the sales themselves without middlemen. The sales that these women made in the wet season was of cows milk, not goats milk as at Kisima, and it was a daily, or frequent, occurrence during the week. It is hard to see a trend in the data as these are interspersed with sales of firewood and medicine.

Sikana *et al* have modelled to circumstances in which pastoral families will sell milk products and when they will refrain from sales and consume the products. They suggest that wealthy families will withdraw from sales in the wet season because it is less profitable to sell then when milk is plentiful⁵⁹. At Mkomazi however the women who sold milk appeared to sell when they had a surplus rather than in response to price changes. This has also been observed by Buhl and Homewood in Burkina Faso⁶⁰.

Finally there are some households in the present study where women appear to have sold little if anything during the five sample weeks of the survey (Table 5.23). They are relatively few and tend to be wealthy in terms of their dependence on livestock. A few households have not been included in these tables. These are mostly families who left the study area during the course of the survey and for whom only a few months' data are available.

The overall patterns of mean income earning are summarised in Graph 5.2. The distinctions again correspond to differences in diet. Table 5.24 and Graph 5.3 show the actual number of times that different foods were recorded during dietary recall. These data is based on 325 meal-days recorded in Same District.

⁵⁹ Sikana *et al* 1993: 12, 15-16.

⁶⁰ Buhl and Homewood: forthcoming.

Table 5.24: Frequency of use of different foods for different groups of *enkaji* in Same District

Food	Itinerant Saleswomen n = 16	Local Saleswomen n = 5	Pare Dairywomen n = 5	Women's sales and pastoralism n = 37	No sales n = 9	Total
Milk	23	14	23	126	28	214
Vegetables	34	14	34	83	7	172
maize	48	24	25	143	34	274
yams / cassava / banana	3	1	0	21	2	27
tea	9	4	10	53	7	83
Meat	12	1	6	13	5	37
rice	1	2	0	2	0	5
total foods recorded	130	60	98	441	83	812

Food	Itinerant Sales-women	Local Saleswomen	Pare Dairywomen	Women's sales and pastoralism	No sales	Total
Milk	18%	23%	23%	29%	34%	26%
Vegetables	26%	23%	35%	19%	8%	21%
maize	37%	40%	26%	32%	41%	34%
yams / cassava / banana	2%	2%	0%	5%	2%	3%
tea	7%	7%	10%	12%	8%	10%
Meat	9%	2%	6%	3%	6%	5%
rice	1%	3%	0%	0%	0%	1%
total foods recorded	100%	100%	100%	100%	100%	100%

Data collected from 322 meal days. 'n' refers to the number of *enkaji* in each category.

Distinctions in Same District are less pronounced than in Lushoto but a pattern is still identifiable. Graph 5.3 shows that in those families where women sell no milk, or only sell milk seasonally, milk is consumed more often, and fewer vegetables are eaten as relish. Those who sell milk or other goods on a regular basis, or as part of a combined strategy with pastoralism consume less milk and eat more vegetables.

Summary

In Same District, as in Lushoto, there are a number of families for whom the daily and weekly income of mothers and wives provides an important source of revenue and provisions. The frequency and regularity of these women's sales is high. Some families in Same District have taken things a step further by traveling far to undertake sales. This is also done by families in Lushoto District, for I met women in Tanga who came from that area although none of them however were recorded in the sample I surveyed.

In Same District the importance of women's income is heightened by the proximity of Kisiwani, which provides a good market for their produce. This gives women more power and freedom to earn revenue, should they want to. They are not constrained by distance and poor access. Equally it is possible that male household heads may exploit the fact that their wives are able to earn more, by relinquishing certain responsibilities to provide food and provisions for their families. Men may seek to save money and avoid livestock sales by giving women less, and leaving them to make up the shortfall.

Overall, the household economies described above can be summarised into three types. Some of the households are as wealthy as in other surveys of pastoral societies. In Same these combine live animal sales and village residence and are supplemented by women's income. In Lushoto they live in more isolated *bomas* and consume milk and maize bought with the proceeds of the sale of animals. At the other end of the spectrum poorer families depend on residence near villages to allow cultivation and the sale of milk, firewood and medicine by women. Sale of animals and investment in them are minimal. These families are living a more day-to-day

existence, with food consumed the day that it is bought; they are much less secure than their wealthy colleagues.

Current patterns of wealth and poverty around the Reserve give little idea of the extent to which these livelihoods reflect the impact of evictions from the Reserve. The next chapter discusses the extent to which it is possible to know whether livelihoods around Mkomazi have changed as a result of eviction.

Chapter Six

The consequences of eviction

In this chapter I consider how eviction has affected the pastoralists who used to live inside the Reserve. I examine several aspects of their livelihoods and residence patterns and attempt to assess whether they have changed since the pastoralists were evicted from the Reserve. I address five areas of interest:

1. changes in herd performance;
2. farming;
3. changes to the women's income;
4. movement to urban areas, and
5. protest and resistance to eviction.

Introduction

Wealth and livestock ownership are closely linked among pastoralists. People try to maximise their herds and those with many cattle are considered wealthy. When I talk about impoverishment here I am referring to loss of livestock. Yet that notion of wealth on its own is a simplification. Prosperity is also linked to the number of dependents attached to the household. Those who control large amounts of labour are also, in some respects, wealthy. There is much social capital to be gained from being a generous benefactor. We will return to the dual nature of wealth at the conclusion of this thesis; the important point here is that assessments of impoverishment ideally need to monitor both

indicators of wealth, as expressed, for example, in measures of *per capita* livestock holdings¹.

Other studies of pastoral societies and resource loss have relied on data gathered in previous research to provide a baseline of these measures against which to monitor change². However where these are not available, and the changes are stark, qualitative measures can be used³. Despite the rich historical records about Mkomazi, it is difficult to establish a baseline against which to compare data on current livelihoods. Much of the assessment of impact must rely on qualitative indices of change, although some quantitative evaluation and comparison with other areas is possible. Here, therefore, I have focused on consequences of eviction for livelihood types and strategies, rather than quantifying the degree of impoverishment.

There are two problems associated with this. First, the nature and extent of impoverishment at Mkomazi are contested domains, disputed by conservationists and pastoralists. Although there are numerous records of protest against eviction made by pastoralists which provide useful insights into its consequences, they must be treated with caution. This is particularly so with Maasai and Parakuyo pastoralists who are seeking compensation in court for losses they allege they have experienced as a consequence of eviction. The grievances that pastoralists have voiced need to be treated with caution and considered in the light of other evidence of change. On the other hand conservation organisations have down-played the extent of impoverishment following land loss. They are wont to dismiss out of hand protests over losses following eviction. In the absence of a baseline it is important to treat qualitative statements about change with extreme caution. Here I weigh up historical data and experiences from other research to try to evaluate the consequences of eviction to pastoralists at Mkomazi.

¹ I am grateful to Kate Hampshire for some illuminating insights to the interrelation of wealth and control of labour among the Fulani of Burkina Faso.

² McCabe, 1987; Fratkin and Roth, 1990; Potkanski 1997; Hodgson, 1995; Homewood and Lewis, 1987.

³ Dahl, 1979; Hogg, 1980.

Second, the changes described can be quite general and may refer to household level of 'community' level differences which pass over the implications for different groups within households or communities. Change to residence and livelihood alters the power relations within households and can have positive or negative effects on different members according to their age, sex and status⁴. In examining livelihoods it is important to be sensitive to the way in which developments are affecting different members of the household. Again with reference to historical material and other research I have tried to look beyond household level changes and consider the impact of changed livelihoods on relations within households.

Measures of cattle numbers and herd performance

This section uses the baseline data that are available, and some historical records, to examine how pastoralism at Mkomazi may have changed. It also builds on Homewood's comparisons of Maasai pastoralism in Kenya and Tanzania, and other work on herd structure to make comparisons between herd performance in Mkomazi and other areas⁵.

There is circumstantial evidence to suggest that Mkomazi was a good place to rear cattle. The immigration pressures into the east and west of the Reserve in the 1960s and 1970s respectively indicate that pastoralists wanted to be there. Oral histories proclaimed the Reserve to be excellent pasture, with a mixture of 'sweet' and 'salty' grasses that enhance livestock productivity, and that was relatively free of trypanosomiasis and East Coast Fever⁶. It is not possible to say to what extent such accounts, even if grounded in truth, are coloured by rose-tinted views of the past, and by political lobbying emphasizing the extent of suffering following eviction.

It is generally alleged that shortly after eviction there were severe losses of livestock. Two relatively impartial and independent accounts corroborate this. Lutheran Missionaries in

⁴ Guyer, 1986: 92.

⁵ Homewood, 1992.

⁶ Interviews - KM 18/2/96; LK 20/2/96; Lky 9/5/96; MM 10/5/96; ML 5/9/96; Group Discussion, Antakaye 10/5/96.

Table 6.1: Household herd sizes in Same and Lushoto District before and after eviction

Year	District	Village	Sub-Village	Cattle keepers	TLU	TLU per household
1984	Same	Kisiwani	Kavateta	12	11,300	942
1984	Same	Kisiwani	Kisima	16	2,402	150
1984	Lushoto	Kivingo	-	92	32,761	356
1995-6	Same	Kisiwani	-	26	633	24
1995-6	Lushoto	Mn'garo	Mahambalawe	10	1,341	134
1995-6	Lushoto	Lunguza, Mng'aro	Kisima, Mazinde	10	101	10

Kivingo in 1989 found that their Easter service was nearly disrupted by the stench of dead cattle⁷. The Divisional Livestock Officer of Uмба noted that the high concentration of cattle outside the borders of the Reserve resulted in the rapid spread of infectious diseases⁸. In addition to these in September 1989 the Maasai and Parakuyo pastoralists of Uмба Division met to record the losses that they had experienced; forty nine pastoralists recorded losses of 7,700 cattle and 2,200 small stock⁹.

It is possible to compare household herd sizes before and after evictions. These can be derived from the livestock census data of 1984 and can be compared to data from the stock counts. Herd size data are difficult to interpret without accurate data on the number of people per household. We have no idea how households were defined, nor how many people were within them when the 1984 livestock census was conducted. At best they give a general picture of the number of cattle present in one particular area (Table 6.1).

Table 6.1 shows that the size of the household herd present in each *boma* has decreased. In Same District, this is not surprising given the constraints on space at Kisiwani, and it is impossible to tell how much of the decrease reflects the large number of absent animals. In Lushoto District, household herd sizes have decreased to between 3% and 38% of their former size and average overall 75 TLU per household.

In general the differences are quite stark, but they are difficult to interpret. They suggest that either the number of households in the area has increased dramatically, or that the definition of a household was different in 1984 from that used in my survey, or that large numbers of stock are now held elsewhere in both areas, or finally, that stock ownership has declined considerably since eviction.

⁷ Interview - CK December 1995.

⁸ Interview - MK July 1994.

⁹ Fosbrooke's papers - 20/9/89.

Table 6.2: Stock ownership of pastoralists at Kisiwani by ethnic group

	Cattle	Goats	Sheep	H'holds	Mean TLU per h'hold	Range	Mean h'hold size	Range per capita
Pare	3,400	445	200	6	585	106-1548	8.33	5-20
Maasai/P'kuyo	14,149	6,380	2,790	35	448	28-1217	11.43	3-21

Source: KWLF, 11/10/1983.

On their own, these data cannot be taken to indicate change. However there is an additional livestock count available for Kisiwani in 1983 which corroborates the idea that household herd size has decreased (Table 6.2). It was compiled for a meeting with the Same District Commissioner, and is probably a list of the more wealthy pastoralists in the area. It indicates that household herd sizes were indeed large, and households relatively small. The data are not entirely believable, since most of the cattle numbers are estimates rounded to the nearest one hundred, and some of the family sizes are so small that it is difficult to see how they managed to herd so many stock without extensive co-operative arrangements. Nevertheless, as a rough guide it does indicate considerable wealth, with generally as many as, or more than, the 4-12 cattle *per capita* needed as an estimated minimum for pastoral subsistence¹⁰.

These data suggest that it is possible to interpret the changes shown in Table 6.1 to mean that there has been a considerable reduction in the average household herd. Given that, it is possible to use the current wealth distribution to learn more about how eviction affected different families. Table 6.1 shows that the wealthier households at Mahambalawe however are still almost as wealthy as pastoralists at Kisima (Same District) were before the evictions. Those at Kisima (Lushoto District) are considerably poorer than their neighbours. We have seen earlier (Table 5.3, page 132) that the distribution of wealth is highly skewed, and over half do not have the minimum needed for subsistence requirements.

Fratkin and Roth, describing the impacts of drought amongst the Ariaal in Northern Kenya, and Roth amongst a larger sample of Rendille people, note that richer families tend to lose more livestock both absolutely, and in terms of the proportions of their herds¹¹. However they do not suffer the same consequences as the poor. The size of their pre-drought herds keeps them within minimum subsistence requirements even after the

¹⁰ See chapter five, footnote 13.

¹¹ Fratkin and Roth, 1990: 397; Roth, 1996: 221.

effects of drought¹². They are not reduced to the same sort of famine avoidance methods that poorer families had to resort to. Families, which start 'poor' or middle income families which finish as 'poor', are reduced to circumstances from which they are less able to rise so quickly.

Ensminger shows a similar pattern amongst the Galole Orma. In the 1974-5 and 1983-5 droughts, the poor and middle category families lost a greater proportion of their livestock holdings than did rich families. Similarly, the recovery rate of herds after the drought was much higher for the rich families than for herds of their poorer colleagues¹³.

The principles of these cases are applicable to Mkomazi. If there was a reduction in the average household herd, then the current distribution of wealth in Lushoto District gives some idea as to how it might have affected different groups. The consequences of impoverishment following eviction would have been most severely felt by the poorer families and middle income families. A number of households may have been able to remain rich following the evictions, as those at Mahambalawe appear to have done. Yet eviction has also resulted in concentrations of impoverished pastoralists, such as those found at Kisima and who are dispersed around Kisiwani, who are not heavily reliant upon their herds. This is not to argue that wealth was equally distributed before eviction. The average household herd size of 1984 undoubtedly conceals considerable variation in individual families' wealth. The point is that the consequences of eviction have probably accentuated the inequalities by making the poorer families even poorer.

The final data about changing cattle populations come from the reduced bride prices recorded at Mkomazi. Bride price is an indication of wealth in cattle. Fleisler reports long term variations in the bride price of Kuria women in north west Tanzania that fluctuate from 2 to 35 according to the abundance of cattle¹⁴. Potkanski indicates that Simanjiro

¹² Fratkin and Roth, 1990: 398; Roth, 1996: 221-2.

¹³ Ensminger, 1992; 82-3.

¹⁴ Fleisler, 1997: 121-2.

Table 6.3: Herd structure at Mkomazi and elsewhere (figures in percentages)

Location	Year	Situation	Bullocks; bulls & steers	Male calves	Cows	Heifers	Female calves	All males	All females	Stock counted	H'holds
Toloha ^a	1946	na	17	13	56	15	no data	29	71	14,331	no data
Mnazi ^b	1953	na	14	12	65	9	no data	26	74	5,268	10
Mnazi ^b	1953	na	13	15	58	13	no data	29	71	450	2
Mnazi ^c	1953	na	33	<i>11</i>	35	10	<i>11</i>	44	56	918	2
Same ^d	1953a	na	14	<i>12.5</i>	45	16	<i>12.5</i>	26	74	94,461	na
Same ^d	1953b	na	15	10	44	16	15	26	74	94,152	na
W. Simanjiro ^e	1957	na	18	<i>11</i>	60	no data	<i>11</i>	29	71	1,350	27
Ilkiloriti Group Ranch, Samburu District ^f	1973	na	9	23	45	no data	23	32	68	5,144	na
W. Bagamoyo ^e	1977	na	15.1	13.4	55.1	no data	16.3	28.6	71.4	2,160	23
Ilkiloriti Group Ranch, Samburu District ^f	1978	na	22	<i>11</i>	56	no data	<i>11</i>	33	67	3,699	96
Samburu District ^f	1973	na	18	<i>11.5</i>	44	15	<i>11.5</i>	29.5	70.5	221,214	na
Same District ^g	1978	Mkomazi	no data	no data	no data	no data	no data	34.1	65.9	39,539	na
Narok ^h	1979	na	17	<i>11</i>	46	15	<i>11</i>	28	72	66,700	no data
Kajiado ^h	1980	na	16	<i>12</i>	42	18	<i>12</i>	28	72	221,200	no data
Kajiado ^h	1980	na	17	<i>11</i>	45	16	22	28	72	2,500	no data
Ngorongoro ⁱ	1980	Nasera	16.7	12.3	42.9	15.5	12.6	29	71	168	<5
Ngorongoro ⁱ	1980	Ilmesigio	19.9	15.14	38.1	12.5	14.4	35	65	176	<5
Ngorongoro ⁱ	1980	Sendui	17.6	13.27	29.4	26.8	12.9	30.9	69.1	157	<5
Kajiado ^j	1981	Poor	21.9	8.4	40.6	18.4	10.7	30.3	69.7	no data	41
Kajiado ^j	1981	Medium	20.5	10.4	34.8	23.5	10.8	30.9	69.1	no data	41
Kajiado ^j	1981	Rich	28	7	35.7	34.9	9.3	35	65	no data	41
Kajiado ^j	1981	Olkarkar	22.2	9.7	36.6	19.3	12.2	31.9	68.1	no data	41
Kajiado ^j	1981	Merueshi	23.3	10.8	34.7	20.5	10.7	34.1	65.9	no data	41
Kajiado ^j	1981	Mbirikani	27.8	6.5	36.2	20.9	8.6	34.3	65.7	no data	41
Kajiado ^j	1981	Mean	25.9	7.7	36.1	20.5	9.8	33.6	66.4	> 5,100	41
Baringo ^k	1980	Na	21	8.5	33	29	8.5	29.5	70.5	72 herds	no data
Monduli ^l	1984	Monduli Juu	20.1	15.4	42	13.1	9.4	35.5	64.5	7,589	no data
Monduli ^l	1984	Meirugoi	15.1	18.9	49.1	7.5	9.3	34	66	20,959	no data
Lushoto District, Umba Division ^g	1984	Na	19	10	44	15	12	29	71	49,113	629
Same District ^g	1984	Mkomazi	18.5	7.1	48.2	16.8	9.4	25.6	74.4	39,977	351
Mkomazi ^m	1995	Lushoto	no data	no data	no data	no data	no data	27.6	72.4	338	20
Mkomazi ^m	1995	Same	no data	no data	no data	no data	no data	26.3	73.7	623	32

Italic figures are estimates. These are made for calf populations when the proportion of male and female calves is not known. In these cases the split is estimated to be even.

^a TNA 11/5 ii

^b TNA File 11/5 iii

^c TNA File 69/1 vol II

^d Census data, RH Afr. Micr. 472. Same District Books.

^e Rigby 1985: 134

^f Perlov, 1987: 101

^g Census data, District Livestock Office

^h Meadows and White 1981

ⁱ Homewood et al 1987

^j King et al, 1984: 37

^k Little, 1983: 140-1

^l Ndagala 1992b

^m These data are taken from the livestock registers.

District has a high bridewealth, making it a wealthier area than Ngorongoro¹⁵. Maddox notes that general impoverishment amongst the Gogo in central Tanzania resulted in a decline in bridewealth¹⁶.

In late 1990 a group of Maasai and Parakuyo elders from Kapimbi in Kisiwani, including the Moses (S5), met to agree a new bride price. They decided that because of the general impoverishment in the area, the bride price should be reduced from 15 cattle to 10-12. They communicated their decision, by letter, to the three leading Parakuyo elders in Lushoto District¹⁷. This record is valuable because it indicates how pastoralists were discussing the impacts of eviction amongst themselves. It is less coloured by the lobbying and exaggeration that can affect more public discourses.

More rigorous measures of herd performance and productivity before and after eviction are hampered by the lack of baseline data. The only measure for which there is a good run of data before and after eviction is cattle herd structure. Here it is possible to make comparisons over a long period of time, and with results reported for Maasai and Parakuyo herds. These data are presented in Table 6.3.

Variation in the age-classes of male and female cattle must be treated with caution, because different studies have used different criteria for distinguishing between 'calves' and 'adults' or 'calves', 'heifers' and 'adult females'. Those data are not entirely equivalent. Fortunately that uncertainty does not apply for the categories 'male' and 'female' and it is possible to look for change in the sex structure of the herd over a 50 year period. These data record no appreciable change and were not recorded frequently enough to show fluctuations in herd structure.

¹⁵ Potkanski, 1997: 73.

¹⁶ Maddox, 1991: 40.

¹⁷ Letter from EF to MM 3/11/90.

Box 6.1: Cattle population dynamics calculations

Fertility:

Cow months at risk for a given year are shown in the attached tables. They comprise:

1. Fertile cows present at the beginning of the year and which do not die. Count 12 months at risk of giving birth each.
2. Animals that were born before the operation that are estimated to become fertile this year. Count 6 months at risk of giving birth each in the year when they become fertile and a full 12 months thereafter each year unless they die.
3. Named cattle for whom births are recorded, and whose own year of birth is known, become fertile when they are four. Count 6 months at risk of giving birth each in the year when they reach four years old and a full 12 months thereafter each year unless they die.
4. Female offspring of named cattle on the register which reach four years old become fertile. Count 6 months at risk of giving birth each in the year when they reach four years old and a full 12 months thereafter each year unless they die.
5. Cattle who give birth before they reach four years. Count 6 months at risk each in the year when they first give birth and a full 12 months thereafter each year unless they die.
6. Fertile animals which died this year. Count 6 months at risk of giving birth each in the year when they die.

To get general fertility rates the number of cow months at risk is converted into cow years at risk by dividing the number of months by 12. The general fertility rate of a given calendar year is the number of births per number of cow years.

Mortality:

Cow months at risk of dying are calculated thus:

1. All animals starting and finishing a year are at risk of dying for 12 months.
2. Animals dying, sold or given away as presents in a year were at risk of dying for 6 months of that year.
3. Animals which were born bought or received as gifts in a year were at risk of dying for 6 months of that year.

Indices of mortality per cow year can be calculated by dividing the number of deaths in a calendar year by the number of cow years at risk lived that calendar year.

Calf mortality has also been calculated. This was not expressed in terms of calf years at risk of dying but simply lists the number of calves of a given cohort which die before they reach two years old. In practice because I only know the year and not the month of a calf's birth these rates are all underestimates. This is because a calf born in, for example, November of 1988 is recorded as being alive in 1988 and two years old by the end of 1989, when it is only 13 months old. As discussed in chapter two, page 62-4, this underestimate will act to obscure rather than create poor cattle performance.

All that these data appear to show is that the herd structure which pastoralists use is a robust ecological adaptation that persists through many kinds of change. The large proportion of females in the herd is maintained as it is the best way to achieve large and reliable milk yields, despite long dry seasons, and offers the prospect of rapid herd recovery following drought, or other periods of livestock loss¹⁸. Amanor, in an extensive study of 54 herd structures throughout West Africa, also found that structure principally varied according to ecological conditions, with some variation near to towns¹⁹.

Fertility and mortality data have been derived from livestock registers were used to reconstruct herd performance in the years after eviction (see chapter two, page 62-4 and appendix one; summary of the calculations made is provided in Box 6.1 opposite). These can be compared to other cattle populations (Table 6.4). De Leeuw and Wilson have observed that Maasai calf mortality is low compared to West African pastoralists. They suggest this is due to better calf management and provision of reserved calf pastures²⁰. Here I have compared the data from Mkomazi with other Maa-speaking pastoralists.

Table 6.4 shows that, while calving rates at Mkomazi can approach and even exceed levels elsewhere, in general rates do not compare favourably to other populations. Calving rates were particularly low during the dry spell of 1991, and considerably lower than the rates recorded at Baringo during the first year of a drought²¹.

Calf mortality figures in Table 6.5 show that rates in Lushoto District are on a par with those elsewhere; in Same District, however, they are similar to those of the Ngorongoro Conservation Area where high levels of tick borne disease were recorded at the middle altitude study site. The dry year of 1991 appears to have had relatively little impact compared to that recorded in Baringo.

¹⁸ Meadows and White, 1979; Dahl and Hjort 1976.

¹⁹ Amanor 1995.

²⁰ De Leeuw and Wilson, 1987: 380.

²¹ Note that the 1982-3 figure in Baringo is unusually high as it conceals a delayed recovery to a previous drought (Homewood and Lewis, 1987: 628).

Table 6.4: Cattle fertility at Mkomazi and elsewhere

Year	Place	fertility	n	Place	fertility	n
1981-3	Kajidao ^a	0.6	120	NCA ^c	0.61	153
1982-3	Baringo pre-drought ^b	0.83	68	-	-	-
1983-4	Baringo drought	0.69	76	-	-	-
1988	Same ^d	0.47	8.5	Lushoto ^d	0.52	34.5
1989	Same	0.7	11.5	Lushoto	0.46	44
1990	Same	0.33	15	Lushoto	0.52	51.5
1991	Same	0.29	25	Lushoto	0.31	61
1992	Same	0.46	35	Lushoto	0.4	80.5
1993	Same	0.59	44	Lushoto	0.47	105
1994	Same	0.67	58	Lushoto	0.51	125
1995	Same	0.7	68	Lushoto	0.57	135
1996	Same	0.71	35	Lushoto	0.37	65.5

Note: n = number of cattle monitored for Kajidao, NCA and Baringo (82-3) and number of 'cow years at risk' for the data of this thesis.

^a Bekure *et al*, 1991; Homewood, 1992.

^b Homewood and Lewis, 1987.

^c Homewood *et al*, 1987.

^d This survey

Table 6.5: Calf mortality at Mkomazi and elsewhere

Year	Place	n	mortality		n	mortality	
			within 2 years	Place		within 2 years	Place
1981-3	Kajidao	678	0.09*	NCA	no data	0.26	
1983-4	Baringo - drought	no data	0.89	-	-	-	
1988	Same	6	0.17	Lushoto	29	0.17	
1989	Same	13	0.15	Lushoto	32	0.06	
1990	Same	12	-	Lushoto	34	0.12	
1991	Same	12	0.25	Lushoto	27	0.04	
1992	Same	20	0.20	Lushoto	33	0.09	
1993	Same	28	0.36	Lushoto	50	0.18	
1994	Same	39	0.28	Lushoto	65	0.06	
1995	Same	47	0.19*	Lushoto	77	0.18*	

*within 18 months only.

Source, as for Table 6.4.

These data to some extent concur with interview data which suggest that eviction concentrated cattle into areas close to the mountains, where tick borne diseases are prevalent. We observed the herd of one pastoralist, kept at Kamorei, decline from 20 cows to zero during the course of this study. This was mainly due to disease; although other adverse circumstances played a part since the household head fell ill on a number of occasions and had to pay high medical costs. Elsewhere around the Reserve, individuals' household herds declined due to wasteful selling by drunkards or profligate youths²².

In summary there were probably some stock losses immediately after eviction in concentrations that were visible to observers, and which warranted a change in bridewealth. There are indications that household herd size has declined considerably. Since eviction, Lushoto District calf mortality has generally been little different from elsewhere; in Same District, calf mortality is higher, and cattle fertility lower, than other sites. Mkomazi's cattle herds have not 'bounced' back after the evictions as herds were observed to do at Baringo, and elsewhere, following drought²³. Seasonal immigration of herds does occur, especially when shortages are experienced elsewhere. No change is visible in herd structure. In order to gain a better picture of how livelihoods have changed as a result of eviction, it is necessary to examine other aspects of the household economy at Mkomazi.

Farming

We have seen that all pastoralists at Mkomazi rely upon various sorts of farming. Yet Parakuyo and Maasai pastoralists at Mkomazi commonly complain that they have had to take up farming since being evicted from the Reserve. These statements must be treated with even more caution than normal, for both groups hold cultivation in low esteem, and their rhetoric about it can reflect normative values rather than actual practices²⁴. It is

²² cf Potkanski, 1997: 102-3; Talle, 1988: 265; Spencer, 1988: 10-11, 237-8.

²³ Homewood and Lewis, 1987: 628; Hogg, 1980: 304; Meadows and White, 1979.

²⁴ Galaty 1982.

possible that pastoralists may say that 'the Maasai and Parakuyo' did not farm when they were herding inside the Reserve because, by definition, Maasai and Parakuyo do not farm, and so pastoralists who were farming were not Maasai or Parakuyo. For this reason I wish to examine carefully the records of farming and agricultural activity by these pastoralists before they were evicted from the Reserve.

We have previously seen that farming is, and has been, an oft-used strategy taken up by people who might otherwise aspire to be pastoralists. It can be a means to survive during times of poverty, or it can be a way of prospering, allowing herds to breed without disposing of them. It is part of the 'normal' continuum of livelihood strategies that pastoralists use.

The Parakuyo, who dominate the sample of pastoralists in this study, are historically a more agricultural branch of Maa-speakers. This group are part of 'the Kwavi' who lost stock and access to pasture as a result of the internecine *Iloikop* wars of the last century. They were dispersed among agricultural peoples along the eastern and southern borders of the Maasai territories²⁵. Some took up agriculture to help them survive the loss of their herds²⁶.

In the Mkomazi area the distinction between agricultural Kwavi and pastoral Maasai was observed by European travellers passing through the area *en route* to, or from Kilimanjaro. Johnston visited the area in 1884. He recorded involvement, and traded with, both 'nomadic Maasai' and the 'Kwavi' whom he described as 'agricultural Maasai'. He noted close links between the two groups, but also enmity following recent conflict. He said:

²⁵ Waller, 1985b: 119.

²⁶ Beidelman 1960: 247-250.

‘Though the nomadic Maasai and the agricultural Maasai (WaKwavi) differ so much in their habits they do not differ at all in their language.’²⁷

Baumann described relations of client-patron relations between the Kwavi and the Zigua and observed that the former had abandoned pastoralism and were accustomed to a more agricultural diet:

‘Die Wakuafi dieser Gegend haben seit Jahren das Nomadisiren aufgegeben und sich als Viehzüchter unter der vorherrschend ackerbauenden Wasegua niedergelassen. Doch verschmähen sie die Feldfrüchte keineswegs und man kann Weiber mit dem schweren Eisenschmuck Getreide stampfen sehen, dass die Halsringe klirren.’²⁸

Le Roy, who travelled through the area at approximately the same time, also noted the same distinction between the Maasai and the Kwavi. He wrote:

‘Le peuple peut être partagé en deux grandes familles: les Massais proprement dit et les Kwavis. Ceux-ci après une longue suite de guerres avec leurs frères aînés on finit par voir leur puissance disloquée ... Plusieurs mêmes se livrent maintenant à l’agriculture .’²⁹

Fosbrooke recorded that the Maasai and Parakuyo agreed a truce that ended the conflict along the Ruvu river in 1881³⁰. The relative peace and stability which followed allowed

²⁷ 1886: 313, parentheses in original. Also cited in Waller, 1985b: 115-6 and Galaty, 1993a: 181.

²⁸ The Kwavi of this region abandoned their nomadic life years ago and have settled down as herdsmen under the employment of the agricultural Zigua, they by no scorn means scorn agricultural produce and one can see women with heavy iron jewellery pounding grain which makes their neck rings jingle. Baumann, 1891: 277. Translated for me by Prof. Ian Brockington.

²⁹ The people can be divided into two main families. The Maasai proper and the Kwavi. The latter, after a long series of wars with kin ended up impoverished. Several of them even maintain themselves through agriculture. Le Roy, No Date: 332

³⁰ Fosbrooke 1948: 11.

the Parakuyo to build up their herds and become more reliant on pastoralism. When Beidelman wrote up his observations on the Parakuyo he recorded:

‘At present no Baraguyu I encountered will touch a hoe though they are dependent upon considerable agricultural produce.’³¹

He described them as ‘purely a pastoral people’ who practise (to his knowledge) ‘no agriculture whatsoever’. He did record that they supplement their diet with grain and vegetables³².

Galaty described the Parakuyo as ‘specialised pastoralists in a complementary relationship with neighbouring cultivators’³³. They lived in close symbiotic relations with their agricultural neighbours, exchanging livestock products for produce and hiring the labour of their agricultural neighbours to tend their fields. He has also reported *per capita* cattle holdings for the Parakuyo of between 21-24, as opposed to a Maasai mean of 10³⁴. The Parakuyo figure is extremely high and it is not certain how much variation there is around that figure. In 1957 the Kilosa District livestock census reported an average of three cattle *per capita*³⁵.

The high cattle ownership Galaty recorded, or Beidelman’s blanket statement about the absence of agriculture are unlikely to be universally true. Beidelman himself stated that the study was not based on an exhaustive and intensive survey³⁶. It is possible that poorer Parakuyo pastoralists farmed at the time of his research. Rigby, on the basis of work done in the late 1970s and early 1980s in West Bagamoyo District, noted that the Parakuyo were amongst the former ‘purely pastoral formations’ who were being brought into closer

³¹ Beidelman 1960: 250.

³² Beidelman 1960: 254.

³³ Galaty, 1991: 178-9; Cf Mitzlaff, 1988: 32-7.

³⁴ Galaty, 1988: 171.

³⁵ Beidelman, 1960: 254, second footnote.

³⁶ This is apparent in inaccuracies in the map of the distribution of Parakuyo pastoralists Beidelman provides. In the late 1950s he marked the Baraguyo pastoralists as present in Kisiwani, but absent from Mnazi. This distribution is not supported by archival records or oral histories discussed in chapter three.

relations with agriculturalists following the alienation of pastures and water resources to government schemes³⁷. He also stated that the Parakuyo mainly relied on their agricultural neighbours for labour in whatever farming they invested in³⁸.

It is not clear to what extent Rigby's observations were applicable to Mkomazi. Pastoralists here were relatively distanced from land losses that were taking place elsewhere. Perhaps the most significant had been the clearance of the Tarangire National Park in 1970, on the west side of Simanjiro. Aside from that, Mkomazi's pastoralists were relatively distanced from land alienation. At Mkomazi there is little evidence that agriculture was ever an important Parakuyo strategy in the recent past, despite the possibility of cultivators among the broader spectrum of Parakuyo people. Such evidence that there is suggests that agriculture was rarely practised amongst Parakuyo or Maasai pastoralists here. Farming, if it occurred at all, was unusual, and a recent activity.

The archival records on pastoralists' farming at Mkomazi are sparse. At Toloha, in 1938, Kenyan officials moving Maasai and Parakuyo pastoralists from the Lake Jipe noted that they had farms and it would be worthwhile delaying the move until crops had been harvested so that no compensation need be paid³⁹. It is not certain who was providing the labour on those farms.

There are indications that these pastoralists were not prosperous at that time: the livestock census of 1936 also recorded that the Maasai of Pare District had a high small stock:cattle ratio of one to one. This compares poorly with Pare neighbours in the same area (Table 3.2, page 88). It is possible that the Maasai may have been investing in small stock to build up their cattle herds. Equally it could be an indication of relative poverty which would encourage cultivation.

³⁷ Rigby, 1985: 169.

³⁸ Rigby, 1985: 170.

³⁹ TNA File 723/I - 27/4/38, DO Taveta to DO Same.

By 1953 the small stock:cattle ratio amongst the Toloha Maasai had decreased considerably. They were reported to have between three and five times as many cattle as small stock (appendix three). In 1944 Kenyan officials reported that Maasai pastoralists bought a great deal of food from their agricultural neighbours in the late 1940s. For this reason they tried to limit the range of Maasai immigrants⁴⁰. This is another hint that these pastoralists were not, by that time, growing their own cereals.

In Lushoto District in 1938 Popplewell, the District Commissioner of Lushoto, made this note in his diary whilst on safari at Mnazi.

‘(The) Wakwavi guide whom I took to Kitivu today told me that they consume milk and cattle; a cattle being killed and eaten communally and then another from a second’s herd. 10 cattel (*sic*) are not considered anything by an Mkwavi. He said he had 20 and that was nothing.’⁴¹

This does not suggest much dependence on agriculture, but equally the endorsement of the purely pastoral diet is probably normative, or maybe just typical of young men. It is not possible to infer much from this statement.

A detailed breakdown of pastoral livelihoods at Mnazi is available in 1954 when a list of Maasai, Kwavi and ‘pseudo-Kwavi’ pastoralists was made in order to clarify who was to be allowed to stay in Lushoto District and who would have to leave⁴². Only one man out of 27 is recorded as having a farm. Six of the ‘pseudo-Kwavi’ were allowed to stay on the condition that they cultivated or never had more than 10 cattle. The list was made shortly after the drought year of 1953, when hundreds of cattle are recorded as having died⁴³. In these circumstances it is unusual to have so little cultivation reported.

⁴⁰ TNA File 11/5 - 9/5/44, DO Taveta to DO Same.

⁴¹ Popplewell, 27/2/38. RH Mss.Afr.s.1980. Kitivu refers to the swamps at Lunguza, near Mng’aro.

⁴² TNA File 723/III, 8/11/54: DC Lushoto to the Game Ranger Same.

⁴³ TNA File 962/15, 4/1/55: Lushoto DVO annual report to the Tanga PVO.

Table 6.6: Parakuyo herd structures; percentage of males and females

Location	Year	Bullocks; bulls & steers	Male calves	Cows	Heifers	Female calves	All males	All females	Stock counted	H'holds
Mnazi ^a	1953	13	15	58	13	no data	29	71	450	2
Mnazi ^b	1953	33	11	35	10	11	44	56	918	2

Italicised numbers are estimates.

^a TNA File 11/5 iii

^b TNA File 69/1 vol II

Herd structures specific to the Parakuyo that were collected in 1953 provide conflicting and circumstantial evidence (Table 6.6). One shows the female dominated herds that characterise plains-based pastoralism orientated towards milk production and high fertility⁴⁴. One shows a higher proportion of male stock. This could be characteristic of agro-pastoral families who retain oxen for tilling the ground and agricultural work. However these herd structures were recorded just before the animals were sent down to Bagamoyo District. It is possible that the proportion of males had been augmented with stock that were being sent down the coast for sale. Since both herds were the property of just two individuals, one cannot say whether either are representative of the general population.

A more recent source of information about past farming practices at Mkomazi by pastoralists are the oral histories collected during this fieldwork. These show widespread agreement between pastoralists, agriculturalists and government officials to whom I spoke that farming was not something that Maasai and Parakuyo pastoralists did before the eviction operations. The risk of ideological and political colouring are high here. However the evidence of informants from different interest groups, Pare Sambaa, Maasai and Parakuyo, and government officials concur. All informants state that the Maasai and Parakuyo in and around Mkomazi did not farm before eviction⁴⁵. By contrast wealthy Pare pastoralists stated that they themselves did farm as part of their normal livelihood⁴⁶.

Place histories concur with the oral histories. There are settlements in Lushoto District and Same District (Kisima and Kamadufa respectively) where Maasai and Parakuyo pastoralists have settled since eviction in order to farm. In Kisima the distinction is clearest as here a swampy piece of land that was a dry season grazing refuge has been settled by people taking advantage of its wetter location in order to cultivate⁴⁷.

⁴⁴ Dahl and Hjort, 1976: 28-33.

⁴⁵ Interview - LK, YsK, MtK 5/3/96; MN 1/4/96; KK 7/5/96; KL 8/9/96; SD 26/3/96; MS 30/4/96; TM 7/5/96; Group Discussion - Antakaye, 20/5/96; Kwemkazu, 22/5/96.

⁴⁶ Interview - SA 21/3/96; IRM 4/7/96.

⁴⁷ Interview - VC 26/11/95; KK 3/3/96; KL 26/2/96; MsK 29/4/96.

A further problem with the statement that these pastoralists did not cultivate before eviction is that they must have been able to survive entirely by selling or consuming products from their herds. To do this that they would have had to have owned numerous livestock. The 1984 census data, in conjunction with the Kisiwani data, suggest that this was the case (Table 6.1 and Table 6.2).

In all, these data and the history suggest that Maasai and Parakuyo pastoralists did not farm before eviction and that they had little need to. Nonetheless it is still possible that the claim that Maasai and Parakuyo pastoralists 'did not farm' is an exaggeration. Despite the concordance of recollections about the past, I still feel that there must have been some farming activity, although it was probably minor. It may be truer to say that there was hardly any farming practised, or that it was a rarely employed strategy. One Maasai woman said that there was some farming before the evictions⁴⁸. Another man said that they had once ploughed land inside the Reserve for one year only in the early 1980s. He specified that this was in response to a government-led call to increase agricultural productivity. They began farming because that was what they thought the government wanted them to do. This was later countermanded by Department of Wildlife staff who said that they were not allowed to farm inside the Reserve⁴⁹.

The data presented in the previous chapter record that almost every pastoralist in the sample currently keeps a farm. Richer pastoralists tend to practise more capital-intensive farming, paying for labourers to tend their farms. The poorer pastoralists invest more of their own labour and have moved to places where they can be near their farms and oversee them themselves. In Kisima, they have moved to take advantage of wetland conditions favourable to farming, although seasonally unsuitable for animals.

⁴⁸ Interview - AA 30/5/96.

⁴⁹ Interview - MK 29/4/96.

In taking up agriculture Mkomazi's pastoralists are following strategies taken up following impoverishment in the past, and adopted for a number of reasons in the present. Currently, smallholder agriculture is widespread throughout East African rangelands as large numbers of pastoral groups turn to agriculture due to constraints on resources from a number of sources. All are taking up agriculture in response to land loss and resource constraints. What seems to emerge from this case study is that at Mkomazi the main constraint initiating agricultural change has been the policy of evicting and excluding people from the Reserve. Loss of livestock consequent upon eviction has forced a qualitative change in livelihoods.

Women's income

Women's income at Mkomazi has varying significance for day-to-day household needs according to these families' reliance upon pastoralism. Although there are no baseline data on women's income generation in Mkomazi, the income-generating activities recorded in chapter six will not be new. There is a rich literature on the current and historical importance of women's income generation for their private needs, and for their families, from numerous case studies. What may have changed as a result of eviction is the significance of these incomes to household livelihoods, which may in turn have knock-on effects on women's autonomy. I argue here that the extent of some families' dependence on women's income has been necessitated by problems they experienced following, and as a result of, their eviction from the Game Reserve. It is not certain how this will alter women's status, but I argue that the livelihoods followed are more vulnerable to misfortune, and generally more precarious than before.

There are long records of the importance of women's trading to families and household economies. These go back to pre-colonial times when women were reported trading with their neighbours and with caravans⁵⁰. More recent evidence of the importance of trade is

⁵⁰ See chapter one, page 25.

available from the early 1950s when Fosbrooke observed a thriving trade in milk products in this part of Tanzania:

‘Considerable markets have grown up to which the Maasai bring their milk, sometimes by donkey from far distant *bomas*, returning home with cash or bananas, cereals and other vegetable products ... the milk is usually sour and may be up to a week or 10 days old ... From the railway bookings and other sources I estimated that in 1951 about 24,000 gallons of milk come from Pare District alone into Chaggaland. From subsequent observations around Moshi and Arusha I would not be surprised if this trade were found to total about 100,000 gallons per month, the selling price being the same as for fresh European produced milk.’⁵¹

Unfortunately Fosbrooke does not say whether those selling the milk were men or women. Elsewhere he notes that women have complete control of milk distribution and that they should be consulted for any proposed milk development programmes⁵².

In practice, Waller notes that men, not their wives, tend to receive payments from dairies⁵³. Ndagala similarly records that more men say they have control over commercial milk sales than over subsistence milk supplies⁵⁴. This however was the result of a survey of men; it is not clear what the women thought. Talle observed local small-scale dairy operations were dependent on women delivering milk supplies at their own discretion; Bekure *et al* state that income from milk sales accrues to women⁵⁵. In the context of the informal sales that Fosbrooke describes, it is still possible that the women commanded some of the proceeds from its sale. Igoe reports that sales of milk between women and

⁵¹ PRO CO/892/10/2. Fosbrooke’s submission to the Royal Commission, 15/5/1953.

⁵² Fosbrooke, 1948: 48.

⁵³ Waller, 1986, no page numbers.

⁵⁴ Ndagala, 1982: 37.

⁵⁵ Talle, 1988: 288; Bekure *et al*, 1991: 109.

fishing communities in Moipo on the west bank of the Ruvu was important for women's livelihoods at about the same time⁵⁶.

In the absence of baseline data it is not clear what more recent patterns of income generation were like prior to the evictions from Mkomazi. It is difficult to tell how much of the current activity is a product of eviction. It is possible to gain some insights by considering its importance relative to other sources of income. For some impoverished families women's income is now an important source of income for day-to-day needs whereas before these household needs could have been met through pastoralism. The argument can be over-stated; other factors, such as stage and age of the household are important. However the material collected here and comparative experiences elsewhere suggest that this was the case.

Women I interviewed were adamant that the loss of stock was damaging, because it forced them to go and earn money to provide for their families:

'SE: (N)g'ombe zimeisha na shida kuingia -

AE: Watoto wanapata njaa; hakuna chakula kutumia; hakuna kununua nguo. Ni shida tu inatokea mpaka naona nzuri natafuta hii dawa.'⁵⁷

It may well be that many women would have sold goods anyway because they needed their own income to achieve some form of financial independence. What the women were complaining about was the fact that the income they would have disposed of is now required for needs that pastoral activities would formerly have provided. Their freedom to enjoy the fruits of their sales for their own purposes is denied, and the whole family is relying on a less secure means of livelihood.

⁵⁶ Igoe and Brockington, forthcoming.

⁵⁷ SE: The cows were finished and the troubles began - AE: The children were hungry, we had no food to prepare; we could not buy clothes. It was just hardship until I decided I'd better try this medicine (business). Group Discussion EFW 9/7/98. Grammar of the Swahili as in the original.

The itinerant saleswomen of Moses' (S5) household make a good case study of some of the more extreme change that has happened following (though not entirely due to) eviction. The women said they had been itinerant medicine sellers since 1994 when the last of their cattle were finished. This family was affected by eviction and the costs of marrying five sons, all of a similar age⁵⁸. When we started work with them, there were no cattle at the *boma* and the small stock were hit by disease, which severely depleted the herd from 100 animals to around 50 during the year of this survey.

The family were highly dependent upon the income of the adult women. This is apparent from the large sums that they reported earning and from the high incidence of absence, caused by women being away selling medicines when we visited the home (Table 5.22, page 158). The expenditure reported when women were away was money spent by their dependents (generally the newly married wives of their sons), who depend on the proceeds of the sales of medicines.

In part the income earned by the elder women of Moses' *boma* reflects their age and stage in their lifecycle⁵⁹. With married sons and daughters-in-law to care for younger children, Moses' wives were able to leave the household and earn money. Income generation depends on how many dependents a woman has and who can perform her jobs for her when she is away. Earning money will be a mixture of freedom and necessity.

The extent of the setback that the family suffered may be alleviated shortly. Just before we finished our work it became apparent that the family had cattle again that were held towards the eastern end of the Reserve and had been obtained following the marriage of one of Moses' daughters. Furthermore he had other daughters who were approaching marriageable age.

⁵⁸ Moses was prominent amongst the list of elders who lobbied to have the bride price reduced from fifteen cattle to twelve as a consequence of the costs of eviction. See page 168.

⁵⁹ Little, 1987: 82; Ensiminger, 1987: 29; Dahl, 1987a: 6; Robertson, 1995: 114.

Although the family has been able to live off the women's income, the strategy has risks that pastoralism does not. Towards the end of this research one of the women was killed in a car accident near Moshi in which two other women from the same *boma* were also injured. The accident occurred, and so many women were involved, because they were on the road selling medicine to keep their families. It is not certain when the injured women will be able to travel to sell medicine again. These strategies are vulnerable because many people become reliant on the income generated by a few.

Again I would not argue that pastoralists at Mkomazi are qualitatively different from those elsewhere. Such events could have happened anywhere and are not wholly the product of the Mkomazi evictions. The issue here is rather that, as a result of eviction, pastoralists' livelihoods have changed qualitatively and women's income now supports a greater extent and proportion of household economies than would otherwise have been the case.

The impact of this development on women's status will depend upon how it affects intra-household dynamics. To a certain extent changes to society hinge on the extent to which they involve change in the degrees of autonomy and interdependence of men and women's domains⁶⁰. Understanding the impact of change depends to a certain extent on knowing about the changing interaction of these domains.

In pastoral societies some aspects of male and female economies coincide where there are overlapping rights and claims over livestock that require cooperation and negotiation between men and women⁶¹. In most pastoral societies women generally have usufruct rights to livestock that are mediated through men. They have the power and authority to dispose of certain of the products of an animal and of its slaughter. The animals they have access to are theirs by virtue of their relationship to the men who control them - their

⁶⁰ Odgaard, 1986: 211.

⁶¹ Broch-Due, 1990: 149-50, 155.

fathers, husbands and sons⁶². The controls are usually weak and indirectly expressed; they are mediated by women's councils or through meetings of elders or male kin⁶³.

Some researchers contend that women were more powerful before colonial intervention, and that colonial officials, presuming men to be in charge, effectively marginalised women by not dealing or consulting with them⁶⁴. This argument resonates with other studies which show that external interventions focus on men and marginalise women by ignoring their roles, rights and needs⁶⁵. Gender divisions of power are flexible and fluctuate to empower either men or women⁶⁶.

Talle has commented upon the impact of commercialisation on pastoral economies. She argues that this will have a negative effect on women. She notes that it was customary for women to have small stock slaughtered for them after childbirth. She says that now there is a trend for men to sell the animals to a butcher and give only a portion to their wives. Women also lose control of the social value of exchanges if cattle are sold⁶⁷. Other authors make a similar point. As men frequently have greater control over the means of production of pastoralism (i.e. the animals), then where use of livestock becomes commercialised, they will benefit most⁶⁸. In these situations women can become poorly paid labourers working for male-controlled industries which primarily benefit men⁶⁹.

Ensminger breaks down her analysis of the effects of change on women among the Galole Orma pastoralists according to wealth. This enables her to explain the erosion of some

⁶² Talle, 1987: 54; Dahl, 1987b: 261. In some pastoral societies womens' rights are more powerful and they can control more completely stock given to them by their brothers or which they have come to control themselves, see Little, 1987: 86-7.

⁶³ Potkanski, 1997: 103; Dahl, 1987b: 262-3.

⁶⁴ Hodgson, 1995: 10, 75-8; forthcoming.

⁶⁵ For example Davison (1988: 165) argues that the Swynnerton plan marginalised women by giving preference to individual ownership vested in male household heads. See also Ensminger, 1987: 39-40, 42;

⁶⁶ Guyer, 1986: 47. For example Getachev (1996: 122) claims that amongst the Garri of Ethiopia, women who fled the country as refugees are returning with greater autonomy and independence compared to those who remained. Some are the head of their own households, others have set up their own commercial activities.

⁶⁷ Talle, 1987: 76-7.

⁶⁸ Huss-Ashmore, 1996: 210-211; Roberts, 1996: 228; Mullins *et al*, 1996: 249.

⁶⁹ Mullins *et al*, 1996: 249; See also Broch-Due, 1990: 154; Odgaard, 1986: 222.

women's powers juxtaposed with the retention or even extension of others. She finds richer women are more able to lobby effectively to protect their livestock from being sold by husbands because their husbands have more choice about which animals to sell⁷⁰. Settlement pattern is also important. Women far from settlements and markets have less control over the marketing of animals and are less able to influence the sale of stock⁷¹.

Ensminger also notes that settled women of a previously nomadic population are better able to take advantage of money-earning opportunities and control these earnings because their husbands have little control over their businesses. She documents the case of a woman who sold bread made from the flour her husband left her and pocketed the proceeds to assist her son to run away from home and seek employment elsewhere⁷². Those who live far from the towns have to rely on their husbands to sell their goods and buy provisions and materials for them, they have less direct control over the income generated⁷³.

As physical control over their income gives women more power over the proceeds, so economic diversification may give women more freedom because it offers access to more sources of income which they can control⁷⁴. In this respect diversification of livelihoods at Mkomazi could enhance women's status as it provides income-generating opportunities that women control. Similarly residence near settlements offers more possibilities for earning income than residence in remote areas⁷⁵.

Women's income needs to be considered with respect to the level and nature of support that women receive from men. Researchers comparing East and West Africa draw two contrasts here. First, they note that trade by Kikuyu and Kamba women appears to be born out of necessity: they do not want their children to follow them, but to return to the

⁷⁰ Ensminger, 1987: 33-6.

⁷¹ Ensminger, 1987: 39.

⁷² Ensminger, 1987: 39-40.

⁷³ Ensminger, 1987: 42.

⁷⁴ Little, 1987: 99-100.

⁷⁵ Ensminger, 1992: 87-8.

land and rural lifestyles. Ghanaian women traders, however, seek to plough their profits back into their businesses in the hope and expectation that their daughters will become successful traders⁷⁶. Following this, they offer the generalisation that men in West Africa support their wives', and female relations', trading activities, but that men in East Africa may withdraw support from their wife if they are able to⁷⁷.

Robertson concludes that they may well have more independence from the men as a result of earning their own money, but that they were no richer, well off or more food secure, because men often simply withdraw their support. They have only won 'the freedom to be poor'⁷⁸. This again is similar to cases at Mkomazi where women selling medicine or firewood are in charge of their own income, and are less reliant upon the male controlled livestock economy. In other ways the withdrawal of livestock from the *boma* to more distant camps, and subsequent reliance upon women's income to meet household needs co-opts women's trading into supporting the male controlled part of the household economy.

Nevertheless the settled lifestyle at Mkomazi offers women a number of advantages and several preferred to live close to the other settlements. Towards the end of my fieldwork a number of households at Mahambalawe bought plots at Mazinde with a view to setting up homes there. They planned to keep their cattle at Mahambalawe but for most of the women and children to live at Mazinde. Some of the women who were to move told me that they would prefer to live near the village because it had a school, church and clinic and because it was easier to buy food there⁷⁹.

Buhl and Homewood argue that patterns of milk sale by Fulani women in Burkina Faso can be explained with reference to women's needs alone more than recent erosion of livelihoods. They found that milk sales are common amongst Fulani women in Burkina

⁷⁶ Robertson, 1995: 115.

⁷⁷ House-Midamba, 1995: 92.

⁷⁸ Robertson, 1995: 117.

⁷⁹ Interview, MKW 15/5/96.

Faso. Those who did not sell milk were either the secluded wives of very wealthy men or were young wives whose first child was still a few months old. Sales were not lower among moderately wealthy women in the wet season as Sikana *et al* have predicted (page 160). Instead, moderately wealthy women were selling more milk in the wet season.

This took place in the context of divided responsibility for food provision, where men are expected to provide the daily millet, and women the relish to eat with it. Women controlled the milk produced and would use some for the family food but could convert excess milk into their own wealth. Sales here were rather driven by women's needs for their own personal wealth and possessions and for goods for their children. This is possibly enhanced by the insecurity of marriage and high divorce rates among the Fulani. If divorced, a woman may only retain from a marriage what she has bought herself.

The authors argue that explanations must take into account the gender relations of production that dominate milk sales. They note that other writers have portrayed milk sales as driven by slowly increasing poverty and have not taken into account women's autonomous need for money independent of male-controlled domains. Fulani women use milk sales as a way of generating their own private income which they can spend on goods which they own independently of men.

Sales at Mkomazi therefore may not be simply driven by family impoverishment but be important for women's own needs⁸⁰. However, in the context of relatively sudden impoverishment due to eviction (as opposed to the insidious forces of gradual modernisation that Buhl and Homewood are referring to) it could also be the case that eviction has caused problems for women because it has caused some to spend their private income on needs previously met by men.

⁸⁰ Waters-Bayer reports the same for Fulani dairy-women in Nigeria. She notes one informant who told her that 'milk was the most important product of the herd as far as the women as individuals were concerned but that livestock sales were more important for the family as a whole' (1985: 19).

Pastoralists and urban livelihoods

I have argued previously that pastoralism is precarious. It is characterised by a 'sloughing off' of those who have lost the means to continue as pastoralists⁸¹. Equally those who rebuild their herds are able to return to pastoral livelihoods⁸².

People forced out of pastoralism have turned to urban livelihoods since towns first began⁸³. Now urban incomes are even more important to pastoralists facing change. Dahl and Hjort note that labour migration to find work after drought is a common feature⁸⁴. Both Dahl and Hogg both noted that migrant labour had increased greatly among Borana pastoralists after the Shifta wars⁸⁵. Fratkin observed considerable sedentarization and urban growth in Marsabit District following the same disturbances, and as a result of the income earning opportunities towns afforded⁸⁶. Perlov records numerous wage earning jobs that were sought by Samburu men⁸⁷. Urban livelihoods are also potentially important for pastoral women. Dahl reports a variety of strategies from selling *miraa*, to courtesanship, to gathering forest products, or taking in and looking after school children⁸⁸. Fratkin and Smith note a variety of urban occupations for Rendille women in northern Kenya⁸⁹.

Drastic change can bring about widespread dependence on wage labour and remittances from migrant labour. Bonté has examined the development of migrant labour supplying the mines of Mauritania⁹⁰. He argues that the pastoral societies who now supply the labour were destabilised by conquest before the 1940s, and after that experienced a series of wars and droughts which made it necessary to seek alternative forms of income. In

⁸¹ Waller, 1976: 535.

⁸² Anderson, 1988: 251-5.

⁸³ Waller, 1976: 537-8.

⁸⁴ Dahl and Hjort, 1979: 29

⁸⁵ Dahl, 1979: 212; Hogg, 1980: 307-8.

⁸⁶ Fratkin, 1992: 121-2, 124.

⁸⁷ Perlov, 1987: 120.

⁸⁸ Dahl, 1979: 250-5.

⁸⁹ Fratkin and Smith, 1995: 448-9.

⁹⁰ Bonté, 1975.

Tanzania Maddox has traced the rise of migrant labour among the Gogo⁹¹. He shows that labour migration was initiated in colonial times following drives to conscript labourers and soldiers for the war effort. He argues that the people left to seek work because of their poverty, but that the absence of a work force then enhanced the want of those who remained⁹².

In the West African Sahel seasonal migration to towns or prosperous rural areas in the south is well incorporated into rural families life cycles and survival strategies⁹³. Migration from the hinterland to towns on the more prosperous coast is long-established. Migration is both long term, taking people away for several years as part of their careers and life-cycle, and seasonal, built into the annual pattern of migration and livelihood change⁹⁴. In contrast to East Africa, the long dry season of the Sahelian climate, and the difficulty of practising dry-land agriculture, underpins high rates of labour migration in West African pastoralists.

It is difficult to say how permanent a change recourse to urban livelihoods represents in an East African context. Waller records that a number of Maasai women moved permanently to towns following the disasters of the turn of the last century. He also reports a visit of these urbanised women to *Laibon Olanana* and suggests that the visit was in order to maintain links with the rural pastoral community⁹⁵. Dahl and Hjort suggest that first generation migrants seeking work see it as a temporary, 'stop-gap' strategy⁹⁶. Dahl suggests that poorest Borana, particularly the Sakuye Borana, may be drifting off permanently to towns or to form a rural proletariat should work be available⁹⁷. Hjort notes that small towns provide loci for pastoralists to pursue a number of economic strategies

⁹¹ Maddox, 1991.

⁹² Maddox, 1991: 37-9.

⁹³ refs to be selected from a number Kat gave me

⁹⁴ refs to be selected from a number Kat gave me

⁹⁵ Waller, 1988: 101.

⁹⁶ Dahl and Hjort, 1979: 29.

⁹⁷ Dahl, 1979: 213

Table 6.7: Occupations of respondents' siblings

		Same		Lushoto	
	Occupation	Brothers	Sisters	Brothers	Sisters
Evicted	Rural	82	244	62	182
	Non-rural	0	0	1	0
	Not sure	0	1	1	2
Not evicted	Rural	42	180	54	137
	Non-rural	0	1	0	0
	Not sure	0	11	1	8

and they are the focus of diversification of livelihoods that back-up existing production systems⁹⁸.

Generally, relations between urban and rural areas in East Africa have been characterised by much continuity. Those moving to towns maintain strong links with the rural areas, so much so that Hyden argues that towns have become increasingly 'ruralized' as they have grown in size⁹⁹. He states:

'because town is to most Africans still only a place to live and not 'home', the social orientation of the bulk of Africa's urban population has remained rural. City-dwelling Africans have not developed the specific orientation that is typical of townspeople in other parts of the world.'¹⁰⁰

In Tanzania the opportunities of earning income from urban areas are growing. In Dar es Salaam there has been a considerable growth in the number of young male Maasai and Parakuyo pastoralists who are finding work as watchmen and guards in the city. This is a recent phenomenon that was observed by colleagues and residents of the city, although I know of no published research on the change.

Despite these trends, and the importance of non-rural livelihoods elsewhere, reports of siblings seeking urban occupations are remarkable for their absence at Mkomazi. Hardly any of the siblings reported in the sibling survey were reported to live in towns, or as having urban occupations (Table 6.7). The two 'non-rural' livelihoods that were reported were one soldier and one medicine seller.

When I interviewed young men about work in the towns they maintained that very few of them went there¹⁰¹. I only heard of three doing so; they were working as watchmen.

⁹⁸ Hjort, 1990: 158.

⁹⁹ Hyden, 1986: 21.

¹⁰⁰ Hyden, 1986: 20.

¹⁰¹ Group discussions 11/5/96; 14/5/96; 8/7/96.

Table 6.8: Comparing the frequency of occurrence of actual and predicted proportions of brothers for all full sibling groups

Number of groups in each category	Proportion of brothers						
	1	0.74 0.99	0.51 0.739	0.5	0.261 0.49	0.01 0.26	0
Predicted	7 <i>5.6</i>	7 <i>5.1</i>	22 <i>23.7</i>	18 <i>19.9</i>	31 <i>30.9</i>	15 <i>15.3</i>	23 <i>22.8</i>
Actual	4 <i>5.6</i>	3 <i>5.1</i>	25 <i>23.7</i>	22 <i>19.9</i>	31 <i>30.9</i>	16 <i>15.3</i>	22 <i>22.8</i>

(Expected figures in italics)

<u>Chi-Square</u>	<u>Value</u>	<u>DF</u>	<u>Significance</u>
Pearson	3.26495	6	p = 0.77493

The table shows that there were generally more sibling groups that were dominated by sisters, ie on the right hand side of the table. This is because more women were interviewed than men (98 women, 25 men) and because women were much more likely to report sisters than men (Table 2.9). However, Table 6.8 is based on calculations which done separately for male and female respondents, and which therefore takes account of the make-up of the sample (appendix two). As there is little difference between the predicted and actual distribution of sibling groups one can assume that either people were not 'dropping out' in appreciable numbers, or that they were doing so irrespective of their gender.

Otherwise the only urban livelihoods were the itinerant medicine sellers, and they operated from a rural base and were transient visitors to towns.

This poses a dilemma. If there is a general increase in urban work amongst Maa-speaking pastoralists, why are the pastoralists at Mkomazi not mentioning it? It may be possible that people were just not telling me about urban livelihoods; they may have thought that it was not important to tell me about it. Alternatively there may be a stigma attached to urban life and people may have been keeping silent, or else had forgotten, about the people who were now in the towns.

The last possibility is slight. It implies that former pastoralists living in towns have somehow dropped out of pastoral social networks. This is not predicted by the general pattern of African urbanisation, nor by the historical tenacity of pastoral society. Hogg noted that the Borana migrants usually returned after a few years and that only a few 'get lost'¹⁰². Nonetheless, given the absence of urban livelihoods reported for these siblings, it is necessary to cross-check to see if this has occurred.

I used the sibling data to compare the proportions of brothers and sisters reported, with those predicted from a sample of this type (see chapter two, page 66, and appendix two). This detects 'dropout' if women were leaving in appreciably greater numbers than men, or vice versa. It would be manifest if there were greater proportions of men or women present than expected. No evidence of missing siblings was found; the make-up of brothers and sisters is as expected (Table 6.8). This shows either that no appreciable numbers of one group were dropping out or that men or women are dropping out in equal proportions.

It is still possible that pastoralists who were forced to leave the environs of Mkomazi, and who were not sampled in this survey are increasingly turning to non-rural livelihoods.

¹⁰² Hogg, 1980: 308.

One problem with these data is that they are based on siblings who are highly clustered around the Reserve (Map 4.6 page 119). Other work on migration shows that occupations, and migration strategies, are also highly clustered¹⁰³. People venture into town to do what their neighbours do. Where none have yet tried others may not venture. Consequently at Mkomazi it is possible that other families in other clusters which were not sampled which may have stronger urban links than those reported here. Alternatively it may just be generally true that it is simply too early for these urban connections, and opportunities, to develop.

Resistance and protest

There are many cases of resistance to conservation regimes and conflict with the authorities imposing them¹⁰⁴. Among pastoralists, perhaps the most well known is the case of Amboseli, where there have been a series of conflicts and compromises over the use of key dry season resources within the Park, and wildlife's use of land outside it¹⁰⁵. Maasai pastoralists also resisted the establishment of the Serengeti National Park and submitted a memorandum to the Governor of Tanganyika in which they laid out the importance of the Park's resources to their livelihoods¹⁰⁶. In Kenya Somali pastoralists, allowed to live in the Nairobi National Park, petitioned the King of England to protest at the stock reductions that they were forced to undertake¹⁰⁷. Their petition was an impressive document, compiled by lawyers, bound, and submitted to Buckingham Palace. The Palace turned down their request for more stock at the recommendation of the Governor of Kenya Colony. Somalis resorted to violence following the establishment of the Kora National Park. Neumann has documented a number of relatively tacit but continual protests to constraints on resource use around Arusha National Park, and across the continent, local dissatisfaction with resource use constraints of Protected Areas is

¹⁰³ Homewood, 1997: iv, 57.

¹⁰⁴ Adams and Hulme, 1997: 10; Colchester, 1997: 103-112; Peluso 1993; Ghimire and Pimbert, 1997: 14-16.

¹⁰⁵ Western and Wright, 1994; Berger, 1993; Lindsay, 1987.

¹⁰⁶ RH Mss.Afr.s.1237. See also Neumann, 1991: 161-3.

¹⁰⁷ PRO CO/533/551/2.

Table 6.9: Contravention of Reserve regulations

Systematic records of Reserve-related offences are confidential and documented in patrol reports and Reserve receipt books. The following list is not complete and is no measure of the extent of contravention of Reserve rules. It does give an idea of the type of opposition the Reserve faces and the type of punishment exacted. These records are extracted from Reserve files.

July 1991:	Two herders fined Tzsh 121,000 and 21,000 respectively (£313 and £52)
September 1992:	Fines recorded for illegal grazing by Fosbrooke (1992): Tzsh 26,600; Tzsh 27,200; Tzsh 42,200; Tzsh 40,000; Tzsh 65,500; Tzsh 91,500; Tzsh 91,500; Tzsh 40,000. (Equivalent to £50 - £175).
November 1993:	Lorries smuggling beer are caught in the Reserve (they pass through it to avoid paying tax at village customs duty posts). The value of the beer transported was Tzsh 36,000,000 (£59,000). The smugglers were fined 10% of the value.
April 1994:	A shotgun was confiscated after it was used for poaching.
July 1994:	9 elephant tusks weighing 48 kg and worth Tzsh 960,000 (£3,200) were seized in Mkomazi Game Reserve.
November 1994:	Two herders caught and fined Tzsh 65,000 and Tzsh 70,000 (£78 and £84).
July 1995:	1 herder arrested and fined Tzsh 40,000 (£50).
August 1995:	1 herder arrested and fined Tzsh 50,000 (£62).
September 1995:	2 herders arrested and fined Tzsh 10,000 and Tzsh 20,000 (£12.5 and £25).
October 1995:	2 herders caught and fined Tzsh 40,000 each (£50).
November 1995:	2 herders caught and fined Tzsh 60,000 and Tzsh 47,000 each (£75 and £59).
December 1995:	3 herders caught, fined Tzsh 50,000 (twice) and Tzsh 3,000 (£62.5 and £4).
January 1996:	4 herders caught and paid fines of Tzsh 50-70,000 each (£62.5 - £87.5); 2 herders caught and paid fines of Tzsh 85,000 each (£106).
February 1996:	2 herders paid fines of Tzsh 60-70,000 each (£75 - £87.5).
March 1996:	2 herders paid fines of Tzsh 60,000 and Tzsh 100,000 each (£75 and £125).
April 1996:	1 culprit paid 100,000 shillings (£125) for an unspecified offense.
May 1996:	1 poacher caught with 33.5 kg ivory.

Source: Homewood *et al*, 1997: page 52.

manifest in poaching and illegal incursions to collect firewood, wild resources or to graze cattle¹⁰⁸.

In common with other protected areas there is continual passive resistance to the Reserve's legislation and flouting of its laws. Although Mkomazi is less attractive to pastoralists than it once was, there are still resources within Mkomazi important for pastoralists living some distance away but still within reach of the Reserve. Pastoralists living beyond the Reserve repeatedly return to graze there illegally. This is especially common for pastoralists in the Ruvu valley who like to move east of the Pare mountains in the short rainy season, and who still set up wet season camps inside the Reserve. Records of this are sporadic, an indication is given by Homewood *et al* (Table 6.9).

On occasions large numbers of herders and their livestock would concentrate around the edge of the Reserve. This usually followed extended dry seasons when pastoralists would try to use the streams that still drained the eastern slope of the mountains and whatever grazing remained near the hills and within the Reserve. For example, during an extended dry period in 1991 there was a return movement of pastoralists into the Reserve. The aerial census of livestock taken at the time observed that the animals were concentrated around the edge of the Reserve, whereas in the previous census of early 1988, shortly before the final operation, they had been observed dispersed throughout the Reserve¹⁰⁹.

The incursion of livestock into and just around the borders of the Reserve resulted in a renewed drive to evict the pastoralists. This period is also associated with stress sales in local livestock markets as pastoralists found themselves dealing with the effects of drought and exclusion from the Reserve (see chapter seven, page 216-7). The practice of exclusion is violent. There are a number of records of altercations between pastoralists and field staff of the GAWPT who tried to repel the intruders (Box 6.2).

¹⁰⁸ Neumann, 1991: 198-223

¹⁰⁹ Huish *et al*: 1993: 6.

Box 6.2: Conflict between Reserve staff, conservation workers and herders

24th - 25th January 1992.

'6am. Talk with Mungure (Game Warden). Rangers had confiscated wire snares and encroaching livestock near Ngurunga and herded it to Kampi ya Chauka. The camp was attacked in the night by intruders. Kisinza (officer in charge) was beaten unconscious and several others injured. All taken to hospital in Same. Caught two prisoners.

Seems herdsmen came to break into the livestock compound. The rangers refused them entry. They offered them a bribe. An argument ensued and the herdsmen pulled out clubs, rungas (wood clubs) and pangas (machetes), thankfully there were no guns.'

15th February 1992.

'3:30 pm about to sit down for lunch when Mungure calls them to say he and Mr Tarimo ran into over 3,000 head of livestock at Kavateta Dam on their recce and they are trying to contain them. 7 guys ran off but they got 3. Needs help from some of our guys till the rangers can get them.

Head off with Semu, Efatha and Zakaria and we are about 7 miles out when Mungure calls again and Fitz too - who's at Kisiwani on his way in. Mungure decides there is far too much stock and its getting too late as the sun is going to set soon, he must give up, I head back to camp. Tony offers to find the rangers in Kisiwani and chase up the game lorry to go and relieve Mungure. Fitz finds Hassan and they round up the guys and lorry. Then he and Hassan drive in to meet Mungure ... Fitz gets a half hour flight in before dark to check Kavateta situation. Gives livestock a warning buzz and home by dark.' ...

'In the early morning of the 30th I dropped the Kisima workers off in Kisiwani for the day so they could go to church and Tony went flying with Nick. They spotted hundreds of head of encroaching livestock heading towards Kaveteta Dam and several herdsmen with spears ... The ranger force was spread thin and none were in the vicinity of the livestock. If the herds had a chance at the water they'd finish it and there'd be nothing left for the wild animals, who would then wander outside the Reserve and face the consequences. Tony radioed headquarters straight away, but everyone was busy trying to fend off the fire which had already burned part of the new office. So he arranged to move a handful of rangers who were stationed at Kifukua - 25 km from us to Kavateta Dam.

They were set up at Kavateta by 2.30 pm. The handful of rangers at Ndea - which is on the Northern border towards Lake Jipe - were alerted and they agreed to move in by foot and patrol their surrounding areas. We were satisfied at a good job done. At 5.30 we flew to see how the rangers were and where the encroachers were. We spotted a lovely herd of 30 plus elephant heading to the dam for a drink. A couple of kilometres away the herdsmen were settling in for the night. We descended to take a better look and the herdsmen began throwing spears and rocks at the plane. We feared the elephant might not be able to approach the dam due to the proximity of the herdsmen for they are right in their path.

As we circled a last time to pull up and inform the rangers a blast came hurtling through the aircraft's windscreen and shattered it. The break occurred on my side and I automatically ducked and thank goodness Tony kept flying, he cut the power a bit and flew straight and level before pulling up for more altitude. Everyone was okay but the compass was lost and the windscreen had a huge hole (in) it, half the normal size. It looked like and sounded like a bullet hit us but we found pieces of rock inside - a lucky shot?'

Extracts from Newsletter 5. Kim Ellis, field worker of the GAWPT, September 1992.

Another dry period occurred shortly after the field work was finished. The extended dry season of early 1997 led to large herds of cattle west of the mountains looking for grazing and water. Dr Coe observed 10,000 Pare and Maasai stock concentrated around the only available water inside the Reserve¹¹⁰. My colleague Hilda Kiwasila who was still in Kisiwani, described a similar situation around the edge of the Reserve:

‘Huku Kisiwani hali ni mbaya kabisa sana tena sana. Mahindi yote yaliopandwa Njiro mvua ilikoanzia yaliwaka moto yakawa kama jani kavu la M(komazi) G(ame) R(eserve). Ngombe nyingi sana na zote kutoka Ruvu, Kiteto zimejaa ndani ya Kisiwani na zinakaa Kambi ya Simba na Mkomazi. Zote zinakuja kunywa maji mto Nakombo Kisiwani. Zinapanda juu hadi kwenye source point Mzimbo na Nakombo River. Fujo sana ... (X) anakula pesa sana kutoka Wamasai kunyweshea mifugo yao na wakae Kisiwani wasiende maeno ya umbali na mashamba. Watu wamepigwa na wamasai wanolishia mazao mashambani ili ngombe sizife. Wanaume wanafuata msele ... M(komazi)G(ame)R(eserve) kwa sababu wanawake wanaogopa wakali walio huko.’¹¹¹

Kiwasila also observed that it was possible to buy a cow for a few thousand, or even a few hundred shillings, and that there was a surfeit of meat available. A British journalist described the place as ‘a land littered with fly-infested, stinking animal carcasses’¹¹².

The tensions and problems described in these cases are probably, in the first instance, largely a function of the drought, not of the exclusion policy. They illustrate, however, the

¹¹⁰ Kiwasila pers. comm. 4/2/97; Coe to the Editor of the Observer, 15/4/1997.

¹¹¹ At Kisiwani things are completely and utterly awful. All the maize that was planted at Njoro (near Kapimbi) when the rains were beginning has been burnt up like the grass inside the Reserve. Many cows have come and all from Ruvu and Kiteto. They’ve taken over Kisiwani and stay at Kambi ya Simba and Mkomazi. They have all come to water at the Nakombo Kisiwani river. Some have climbed up to drink direct from the source. This causes turmoil and X has taken a lot of bribes from the Maasai who want to water their cattle and stay at Kisiwani and not go to areas far from the farms. People have been beaten by Maasai who are feeding their cattle on their farms in order that the cows don’t die. Men have to collect Msele (a wild food) from the Reserve because the women are afraid of all the fierce characters staying out in the bush. Kiwasila pers. comm. 4/2/1997. Grammar and spelling as in the original.

¹¹² Johnston, 1997.

fact that there are occasionally strong pressures that force many animals into and around the Reserve, augmenting the continual passive resistance and leading to considerable confrontation or open disregard for Reserve regulations.

There is also evidence of more organised and planned opposition to the eviction. There are detailed records of this, and they provide another indication of trouble and material loss following eviction. The records are valuable because they provide an insight into the build up and development of resistance to the evictions. However, they must be treated with caution because they are open to manipulation. The extent of the losses can be exaggerated or they may only refer to the troubles of a particular group. Nevertheless they do provide some indication of the turn of events.

The records of protest largely concern the Maasai and Parakuyo pastoralists and not the Pare, Sambaa and Kamba. As we have seen in chapter two (page 27-9) there are three reasons for this. First, it partly reflects the relative severity and extent of the losses which had been inflicted upon the different groups; second, the records reflect the concerns of the late Mr Fosbrooke who collected those data for the International Institute of the Environment and Development (IIED), and third the politics of current opposition to the evictions, and the internationalisation of the opposition has given a louder voice to Maa-speaking groups, and which has in turn shaped the most recent instances of protest and resistance.

Taking into consideration these limitations on the most recent records it is still possible to build up a picture of the sequence of events that affected Maasai and Parakuyo pastoralists after eviction. In general, these pastoralists allege that the eviction operation was hastily executed and that proper arrangements for their removal and transport elsewhere were not made¹¹³. They allege that this contributed to the sudden losses experienced shortly after eviction. Fosbrooke's records show that Maasai and Parakuyo

¹¹³ Juma and Mchome 1994; Interview data MY 18/9/96.

pastoralists have mounted a sustained campaign against the eviction, in which they have appealed to numerous leading members of Government.

In July 1988 those in Uмба Division, Lushoto District, wrote to the Prime Minister complaining that they had insufficient space for their herds¹¹⁴. In early 1989 the Maasai and Parakuyo from Same District went to the Prime Minister's office themselves¹¹⁵. As a result an assistant to the Prime Minister wrote to the Regional Commissioner of Kilimanjaro Region and asked him to consider the difficulties that the pastoralists faced since eviction¹¹⁶. In August of the same year representatives from Same Districts travelled to the Head Quarters of the *Chama cha Mapinduzi* (CCM)¹¹⁷ in Dodoma and obtained a letter from the Head Office to the Regional Secretary of the CCM in Kilimanjaro informing him of the pastoralists' plight¹¹⁸.

These early appeals against the impact of eviction were to no avail. During a dry time in 1991, the pastoralists protested again. They wrote to the Minister of Home Affairs complaining of the loss of their land and also writing bitterly about the fines that they had to pay in order to recover stock caught inside the Game Reserve¹¹⁹. Records collected by Fosbrooke show that these fines were up to Tzsh 120,000/-, the equivalent of a year's salary¹²⁰. In total Fosbrooke noted that the fines were so extensive that, with tourism minimal, they were effectively financing the Reserve.

Between March and May of 1992 pastoralists around the east and west of the Game Reserve united their opposition and efforts to gain access to Reserve resources. In a series of meetings attended by hundreds of pastoralists they resolved to take a census of evicted

¹¹⁴ Fosbrooke's papers - 10/7/88.

¹¹⁵ Interview MY 18/9/96.

¹¹⁶ Fosbrooke's papers: URT PMC/DSM/C.230/16/A.

¹¹⁷ The Revolutionary Party set up by Mwalimu Julius Nyerere, then the only party in Tanzania's one party state.

¹¹⁸ Fosbrooke's papers: URT CMM/U.25/56/vol.2/250.

¹¹⁹ Fosbrooke's papers - 16/8/91.

¹²⁰ Homewood *et al*, 1997: 52

pastoralists and to seek help from the Catholic Church¹²¹. With the Church, they agreed to go to the District Commissioner to explain the problem and also to consider the possibility of obtaining help from the IIED¹²².

Thereafter the records end. Charles Lane of the IIED was approached through one of the nascent Maasai NGOs in Arusha. Henry Fosbrooke visited the area as a consultant for the IIED with Martin Saningo, leader of the NGO *Ilaramatek Lolkonerei*, in September 1992¹²³. As a result of his research he contacted the Legal Aid Committee of the University of Dar es Salaam who agreed to take up the case in 1993¹²⁴. In the same year Maasai NGOs, who were fighting land loss elsewhere began to offer their help to Maasai and Parakuyo pastoralists at Mkomazi¹²⁵. In September 1994 the Legal Aid Committee had prepared its case against the evictions¹²⁶. In the High Court at Moshi cases were taken out in 1994 and 1995 against the Ministry of Tourism, Natural Resources and the Environment.¹²⁷

As the evictions took a higher profile, so attention has been ever more narrowly focused onto the Maasai and Parakuyo pastoralists. International attention to land loss at Mkomazi now focuses on these groups to the exclusion of others. This is typified by an article in the Observer newspaper which discussed only the plight of Maasai pastoralists. Other groups of people, who are numerically by far the majority in the area, were not mentioned¹²⁸.

¹²¹ Fosbrooke's papers - 23/3/92; 25/3/92; 8/4/92; 23/4/92; 27/4/92; 29/4/92; 2/5/92.

¹²² Fosbrooke's papers - 11/5/92, 27/7/92.

¹²³ Fosbrooke, 1992.

¹²⁴ Fosbrooke's papers - 15/2/93.

¹²⁵ See J. Igoe's forthcoming doctoral dissertation. One of the leaders of these NGOs had accompanied Fosbrooke around the Reserve in 1992.

¹²⁶ Juma and Mchome 1994.

¹²⁷ *Lekengere Faru Parutu Kamunyu and 16 others vs The Minister for Tourism and Natural Resources and Environment and three others*, case 33 of 1994; *Kopera Keiya Kamunyu and 44 others vs The Ministry for Tourism, Natural Resources and Environment and three others*, case 33 of 1995.

¹²⁸ 'Barred from the animals' kingdom' Observer, 6th April 1997; A rebuttal to this ethnic stance was printed the following week: 'Not just a Maasai garden of Eden' (letter from Hilda Kiwasila) 13th April 1997. The full version of her letter was published in the Business Times 19th September 1997.

As the problems at Mkomazi have gained national and international attention, different NGOs have sought out a constituency amongst pastoralists evicted from the Reserve. However it would be inaccurate to suggest that opposition to eviction has been 'drummed up' by outside organisations. It is rooted in experiences of impoverishment that have hit pastoral groups particularly hard. There was considerable local resistance, and agitation was expressed to numerous government officials using several channels of influence, before any outside organisations became involved.

Notwithstanding its roots and pedigree, the opposition is now strongly coloured by the politics of these organisations. The high profile, ethnically-based NGOs effectively exclude non-Maasai and non-Parakuyo pastoralists. This is partly because the organisations directing the opposition are ethnically exclusive, and partly because other groups are wary of associating themselves with the opposition. Pare and Sambaa herders have lobbied the Reserve authorities on a number of occasions before. A number of agropastoralists at Vumari, near the town of Same, have a long-running conflict with the Reserve authorities over a section of land both groups claim¹²⁹. They have started court action to recover land. Generally, however, they are less keen to confront the government in this manner and would prefer a more consensual approach. Others are wary of a return of large numbers of Maasai pastoralists, fearing the stock theft and ethnic conflict that can be associated with that. Opposition to eviction from Mkomazi is taking shape along ethnic lines¹³⁰.

The ethnic element to politics at Mkomazi is common. The petition of the Serengeti and Ngorongoro Maasai to the Governor of Tanganyika spent much time stating that this was not a home area to the Iraqw people¹³¹. Shelter has argued that the Maasai were much more successful in lobbying the British authorities than other peoples in the west of the Park. This meant that they were able to gain more significant concessions from the

¹²⁹ URT, 1993: 86-9.

¹³⁰ Kiwasila, 1997a

¹³¹ RH Mss.Afr.s.1237b

government than were others¹³². The debate also dominated the early stages of Mkomazi's history. When the Reserve was first formed, Parakuyo residence alone was considered by officials, but the emphasis was not maintained after independence¹³³. The present developments are a reawakening of earlier themes.

Summary

This chapter has considered evidence of changes in livelihoods amongst pastoral families as a consequence of eviction. Pastoralists who did not previously farm are now investing considerable time and resources into agriculture. Women's income has, since eviction, become the main source of revenue for some families.

It is difficult to say to what extent herd performance has changed as a result of eviction because no quantitative comparisons are possible. The indices discussed above suggest that the performance of pastoralists' herds at Mkomazi does not compare well with that of other populations, despite pre-eviction perceptions that Mkomazi was exceptionally good for livestock rearing.

Taken together with the records of political protest these data suggest that there has been significant impoverishment of many pastoral families around Mkomazi as a result of eviction. The effect was probably felt more by the poorer families. The burden of coping with the resulting shortages has often fallen on the women, whose income from selling traditional medicines, fuelwood and milk is now supporting families rather than supplementing income from pastoralism. In contrast to other studies there is little indication that appreciable numbers of pastoralists from this particular sample have turned to urban livelihoods.

¹³² Shelter forthcoming

¹³³ I am grateful to Ms Hilda Kwasila for emphasizing the importance of this distinction to me. Cf Kwasila, 1997a and 1997b.

The political record has focused mainly on the Maasai and Parakuyo, and they have also dominated this study's household survey. There is less indication about how Pare, Sambaa and Kamba pastoralists and agro-pastoralists have been affected. To understand how widespread the effects have been and to obtain a regional overview of the impact of eviction, different data are required. The next chapter considers change in the cattle markets of the area and considers to what extent it is possible to infer more general impacts of eviction from variations in the level and type of livestock sales.

Chapter Seven

The impact of eviction on livestock markets

In this chapter I examine livestock sales at cattle markets in the Mkomazi area before and after eviction. These records are valuable because they are the only data which allow direct comparisons with continuous data of patterns before and after eviction. I consider whether there are any indications of change in these markets following eviction of pastoralists from the Reserve. I discuss the implications for the wider informal livestock economy of the change observed in the official markets.

Introduction

Pastoralists are specialist producers of livestock products and need to exchange their products for agricultural goods. In terms of herd management, this entails offtake of surplus males from the herd¹. These are slaughtered, given away, exchanged or sold.

There is considerable debate about whether pastoralists are 'market-orientated', or whether their sales are determined by subsistence needs. To an extent the debate simplifies the dilemmas facing all rural smallholders in East Africa. Hyden argues that African smallholders are neither capitalist, nor feudal peasants, but are largely independent producers². Spear argues that classification misses the point; Tanzania's farmers may respond to both subsistence needs and commercial pressures according to the context. Responses to market opportunities will therefore vary³. Perlov, writing about Samburu cattle sales, adopts an approach similar to Spear's and focuses on the individual strategist responding to both social and economic pressures to sell or conserve cattle⁴. Here I deal with general District or market level data, not individual

¹ Kerven, 1992: 5.

² Hyden, 1986: 19

³ Spear, 1997: 9

⁴ Perlov, 1987: 10

decision-making, but these arguments show that even at the individual level there are many factors guiding decisions made by Mkomazi's pastoralists to sell their stock.

At the market level, livestock sales by subsistence pastoralists are generally not sensitive to market prices⁵. Subsistence pastoralists have been observed generally to sell in the dry season when, especially towards its end, the price of grain is higher and the condition and value of livestock lower. This is called the 'inverse response', or 'perverse supply response' to price opportunities⁶. Greater commercialisation can bring more responsiveness to market conditions. This involves withholding stock from sale until prices improve and varying the type of animals offered for sale according to market demand. However, the extent to which that is visible in market records depends upon the number of traders present at the market who have the wherewithal that gives them the flexibility to withhold sales until the price suits them⁷.

The extent of commercial orientation in a particular pastoral economy will depend upon:

- the demand for livestock products;
- ease of access to markets and centres of demand;
- pastoralists' need for agricultural products or consumer goods;
- government policy, and
- local historical circumstances.

As a general rule, Sandford observes that it is not advisable to assume market responsiveness or subsistence for any particular group but rather let the observed behaviour define the nature of the economy. He notes that this will be a difficult task given the dearth of accurate data⁸.

⁵ Kerven, 1992: 6

⁶ Sandford, 1983: 201.

⁷ Quarles Van Ufford, 1997: 14.

⁸ Sandford, 1983: 201-3

Various studies have found different market responses by pastoralists over different time scales⁹. Baker, in a longer term study of pastoral marketing in Uganda found the inverse response characteristic of subsistence pastoralists¹⁰. Near Mkomazi, Western found the same for cattle sales in Loitokitok District in 1970. Here pastoralists sold cattle in order to meet immediate needs and had to sell more in the dry season when the price of livestock was low and that of grain high¹¹. Cook, with a large number of records from six Nigerien markets, found that traders responded positively to market opportunities for male animals, but negatively for female animals¹². That means they were prepared to play the market with male stock, but only sold female stock when they had to.

The difficulty with Cook's finding is that it is not based on 'primary' markets, but on sales at major centres 'downstream' in the flow of cattle from the West African hinterland to the coast. Patterns observed here may reflect responses of traders rather than pastoralists. Quarles Van Ufford's work on markets in Benin shows that the numbers of stock sold at local markets is largely determined by the needs and behaviour of local livestock keepers¹³. He notes that these people are largely concerned with meeting immediate cash needs, but that there was a trend for pastoralists to respond to price fluctuations and to begin to play the market. Most buyers in these markets were commercial traders who bought for re-sale elsewhere such as in the downstream markets that Cook monitored. The influence of these traders on marketing activity is visible if data is analysed and pooled from a number of markets within one region. Equally, patterns of sale by local producers can be lost if market data are aggregated.

The extent to which livestock sales are visible in official market activity depends partly upon the quality of the records and partly on government policies of the time. High market taxes or fixed low prices may drive cattle sales 'underground', through unofficial channels, with the result that trends are less visible in the official records.

⁹ Cook, 1996: 77-83

¹⁰ Baker, 1967: 14, 24-5

¹¹ Western, 1973, quoted in Spencer, 1997: 224.

¹² Cook, 1996: 85

¹³ Quarles van Ufford, 1997: 24.

Kerven has provided detailed examples of how government policies have limited or stimulated official trade in both East and West Africa¹⁴.

It is possible to group the forces that drive livestock sales at official livestock markets into three categories. First, the 'internal' nature of the pastoral economy driving the need to sell; second, 'external' forces which control the demand to buy animals, and third, state policies which influence how much of the selling and buying takes place at official markets, and how much through other channels.

There is another set of influences consisting of infrequent events such as drought, disease and disasters which force pastoralists to sell large numbers of stock suddenly. Amanor cautions against considering drought as an external factor when adaptation to drought is an integral part of pastoral economies and societies¹⁵. He finds that the long term effects of drought on herd composition in arid areas may have been exaggerated. Infrequent events are grouped separately here because they explain certain features, such as drought-induced distress sales, which the other categories cannot explain on their own.

The regional and historical context of livestock markets at Mkomazi

Colonial rule brought increased demand for meat from urban areas coupled with official concern that there were too many animals, many of which must be sold in order to protect the fragile environment¹⁶. To meet urban meat needs, and to encourage destocking, the Tanganyikan colonial administration sought to establish a network of primary and secondary markets that would take livestock from the plains and bring them to urban areas.

The networks of official markets have never been extensive enough to be reached directly by all households. Instead, in this region, households are linked to the markets by traders who buy animals at the *boma* gate and trek them to market in groups¹⁷. The

¹⁴ Kerven, 1992.

¹⁵ Amanor, 1995: 376.

¹⁶ TNA File II/5 Vol II 12/2/46: PVO Tanga to PC Tanga.

¹⁷ Cf Evangelou, 1984:126-138; Kjaerby, 1979: 106.

official livestock markets are therefore only the formal tip of a huge informal industry in buying and selling livestock. They depend upon the informal activity which releases the stock for sale at the main markets.

The earliest important market close to Mkomazi that can give an indication of business at 'official' markets is at Korogwe. This was set up during German rule. It acted as a holding ground for stock coming from a large area *en route* to the coastal markets. Sales there were the final product of large networks of informal trading, as well as formal trading in feeder markets further up country. They give some indication of the scale of official trade since the early years of this century.

In the 1924 annual report for Lushoto District, the District Commissioner reported on the Korogwe Cattle market which at that time still fell within his domain. He records that 10,231 cattle passed through the market that year, and 9,052 the year before, *en route* to butchers in Tanga¹⁸. Most of the traders were Somalis. Fosbrooke noted that initially all the trade, from *boma* to holding grounds, was conducted by itinerant Somali traders. These people would travel from *boma* to *boma* buying stock from pastoralists who wanted to 'buy shillings'. They were banned by the British authorities in the late 1920s in favour of fixed government run markets¹⁹.

Later reports on the Korogwe market indicate that the trade had increased. In 1948 over 35,000 cattle were reported sold there, with buyers and sellers coming from as far away as Moshi, Singida and Nzega²⁰. In 1952-55 the number of animals sold ranged between 32,684 and 43,643²¹. More recent records indicate that it has since declined, with 17,345 cattle sold in 1989 and 8,908 in 1992²². Its place has been taken by markets at Pugu and Weruweru, serving Dar es Salaam and Moshi respectively. Here the number of animals sold now far exceeds that at Korogwe (Table 7.1).

¹⁸ TNA File 1733 (28) 1924 Lushoto District Annual Report.

¹⁹ Fosbrooke, 1981: 2.

²⁰ TNA File 62/6. Korogwe District Annual Report.

²¹ TNA File 962/15 - 19/1/54, Korogwe District Veterinary Officer to Tanga Provincial Veterinary Officer; 16/12/55 Tanga Provincial Veterinary Officer to Veterinary Services, Dar es Salaam.

²² Marketing Development Bureau, Dar es Salaam, 1989: 16; 1993: 16.

Table 7.1: Records of sales from Korogwe, Pugu and Weruweru

Year	Korogwe	Weruweru	Pugu
1923	10,231	-	-
1924	9,502	-	-
1948	>35,000	-	-
1952	32,684	-	-
1953	39,964	-	-
1954	43,643	-	-
1955	34,880	-	-
1989	17,345	50,555	110,458
1992	8,908	24,908	129,034

Source: see footnotes in text.

The decline of the Korogwe market does not indicate a decline in the livestock economy nearby. The changes are much more likely to be tied to the growth of the Dar es Salaam and Moshi markets. Mkomazi is also close to Moshi and stock sold there were frequently recorded as going inland rather than to the coast.

Until 1967, there was little effect of government policy on livestock prices. The only influence appears to have been the practice of District Councils to collect taxes at the markets, where it was easier to catch people with funds to pay²³. This practice is said to have been especially prevalent in Maasai District and led to higher sales in neighbouring Districts which did not follow this practice²⁴. This may have acted to increase sales at official markets in the Mkomazi area at this time.

After 1967, the meat canning company Tanganyika Packers Ltd (TPL) was nationalised and given responsibility for providing meat for markets in Dar es Salaam. It offered relatively low prices; price leadership, and command over the best animals, passed to foreign markets and private buyers²⁵. Mackenzie noted that most of TPL's activity, and the impact of meat price policies was concentrated in the north-west and centre of the country. Kilimanjaro and Tanga Region are not listed as a supply area for the company²⁶.

²³ Raikes, 1981: 207.

²⁴ Raikes, 1981: 207, footnote 8.

²⁵ Raikes, 1981: 209.

²⁶ Mackenzie, 1973a: 18.

In 1974, the Tanzanian Livestock Marketing Corporation (TLMC) was set up as a subsidiary of the Livestock Development Authority²⁷. This controlled all aspects of primary marketing and was charged with supplying meat to the towns and TPL²⁸. The prices they offered, however, were low and they were outbid for the better quality animals by the other buyers. By 1979 the TLMC's activities were restricted to operating the markets and maintaining their infrastructure. They charged a flat rate of Tzsh 20/- auction fee, which had the effect of discouraging the sale of poorer quality animals²⁹. In the mid-1980s this task was taken over by the Livestock Development Division of the Ministry of Agriculture and Livestock Development³⁰.

The data presented here date almost entirely from the period following the establishment of the TLMC. Sales will be affected in some way by the pricing strategy adopted. Before considering what patterns can be detected, it is necessary to consider the quality of the data.

The quality of the data

The data presented here come from the official livestock markets serving the Mkomazi area; they therefore represent only a small proportion of the actual trade going on in the area. Official markets, however, can be used as an indication of events in the wider livestock economy. The type of animals that herders are prepared to sell, and the prices they are prepared to accept, will be reflected in the performance of the official markets. Livestock markets are frequent events occurring every fortnight or month with records kept of each month's performance. The records provide quite detailed information about the condition of the livestock economy.

The data analysed here were collected from District and Regional Livestock Offices and archival files. There are six main problems to consider when examining this analysis.

²⁷ Raikes, 1981: 212.

²⁸ Kjaerby, 1979: 107.

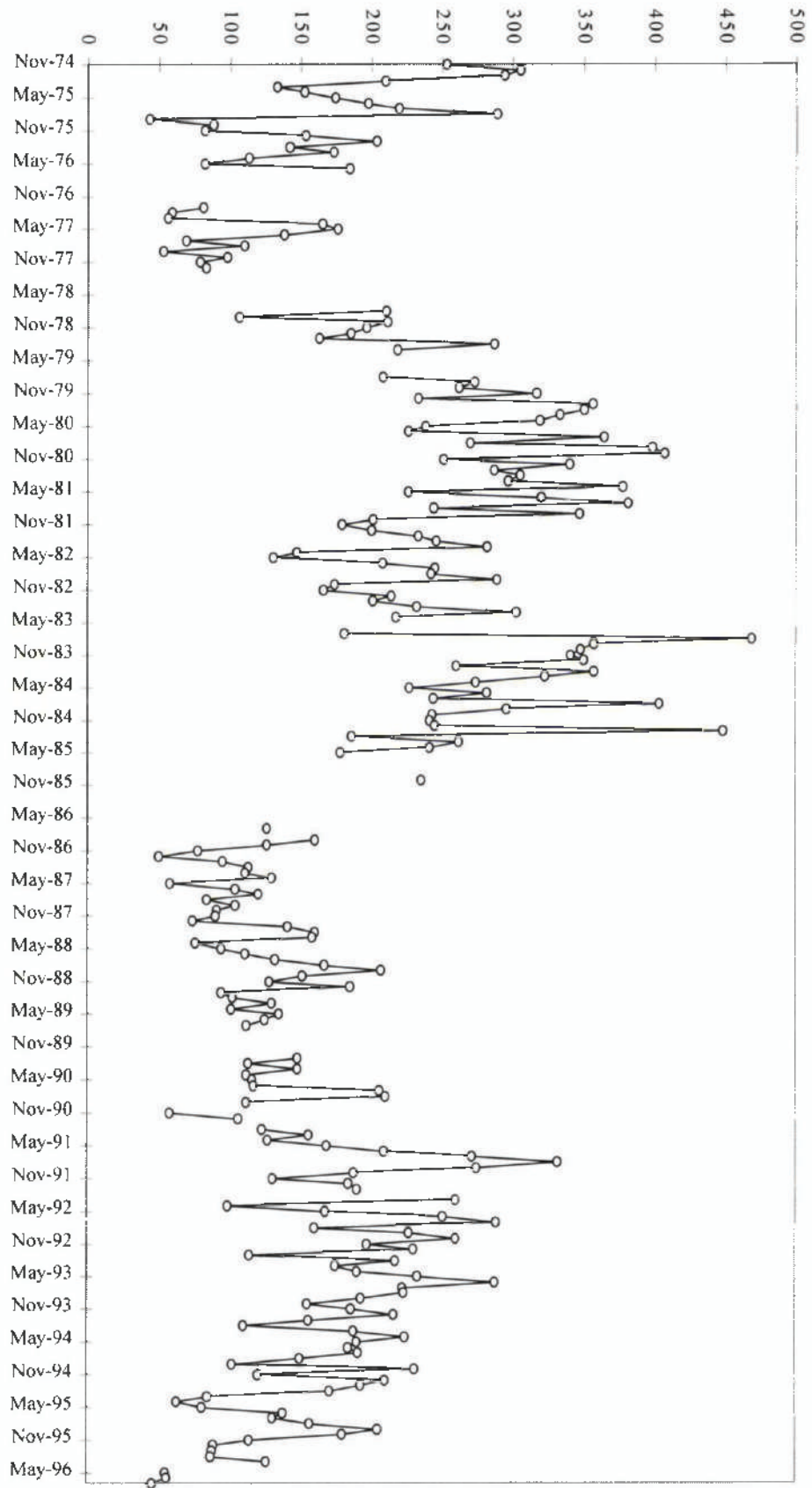
²⁹ Kjaerby, 1979: 108.

³⁰ Pratt *et al*, 1989: 21.

1. The prices reported may be under-estimates of the money actually exchanged. Sale is not by auction but by mutual agreement between buyer and seller, who then report the taxable price to the government officer present at the market.
2. There are inconsistencies in the records which suggest that the amount of money collected from markets was sometimes under-reported.
3. Records are not continuous. Sometimes this is because data are not available, which makes interpretation of long term trends difficult; sometimes it is because the market was temporarily not functioning.
4. Geographically, the records are patchy, with the best body of data coming from Same District. Records from Lushoto District are more sparse and sporadic; the northern plains of Lushoto District are not well served by formal livestock markets. Records from Mwanga District are largely incomplete.
5. Spatial aggregation of the records also varies. Sometimes only District level data are available, although most of the time data are available for individual markets. Changing District boundaries means that description of historical trends may have to take into account changes in the area concerned.
6. The type of data available is not consistent. Sometimes records provide highly specific data on the type of animals sold and the average, highest and lowest prices recorded. On other occasions only the number of animals sold and the average price is given.

Notwithstanding these problems, some patterns are detectable. The individual inaccuracies that arise due to misrepresentation of sales are unlikely to conceal long

Number of animals sold



Graph 7.1: Cattle sales in Same District markets 1974 - 1996

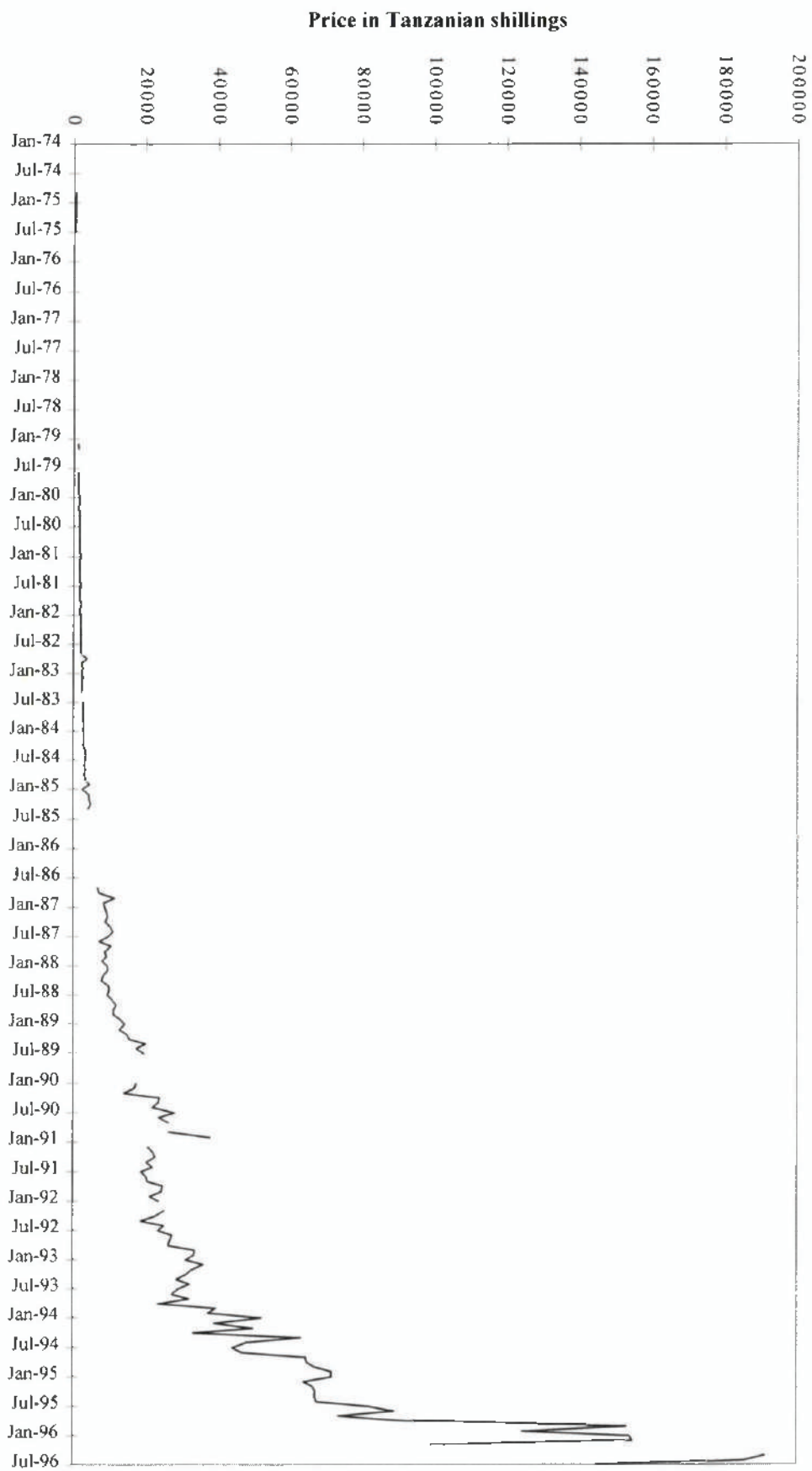
term trends. Variation in organisation and spatial aggregation does not appear to have obscured all developments. Overall, both prices and volume of sales can be taken as minimum estimates as there is a consistent incentive to under-report them both.

There have been 7 main markets near Mkomazi: Kisiwani, Hedaru, Same Town, Makanya, (all in Same District), Mgagao and Kwakoa (in Mwangi District), and Mnazi in (Lushoto District). Data from all can be patchy; those from Lushoto are so full of inadequacies as to make their analysis unprofitable. Between 1984 and 1991, only District level data were available and only those for Same District could be recovered. This analysis therefore concentrates on data from the four markets in Same District with reference to Mgagao and Kwakoa where possible.

Cattle sales in Same District

Graph 7.1 shows the changing volume of sales in the four Same District markets over the last 22 years. Sales were low in the mid 1970s, at their peak from the late 1970s to the early 1980s, low again in the mid 1980s and higher in the early 1990s.

Overall there is a significant difference in the levels of sales found before 1986, (when the Reserve was occupied), and from 1986 onwards, shortly before the series of operations to clear the Reserve began and further use was prohibited. Levels of sales are higher when cattle were inside the Reserve (Table 7.2). Moves to evict people coincide with a reduction in the number of cattle brought for sale at official livestock markets. Before we can deduce whether the drop in sales is a consequence of evictions, we need to examine changes to the price and value of cattle sold.



Graph 7.2: Changes in cattle price 1974-1996

Table 7.2: Comparing sales of cattle in Same District from November 1974 to October 1985 and from July 1986 to July 1996

Period	Months of data	Mean	std dev
all period	192	194.85	89.22
11/74-10/85	81	261.72	78.94
7/86-7/96	111	146.06	59.95

Periods compared	't' test for separate variance	Degrees of freedom	P
11/74-10/85: 7/86-7/96	11.06	143.07	<0.001

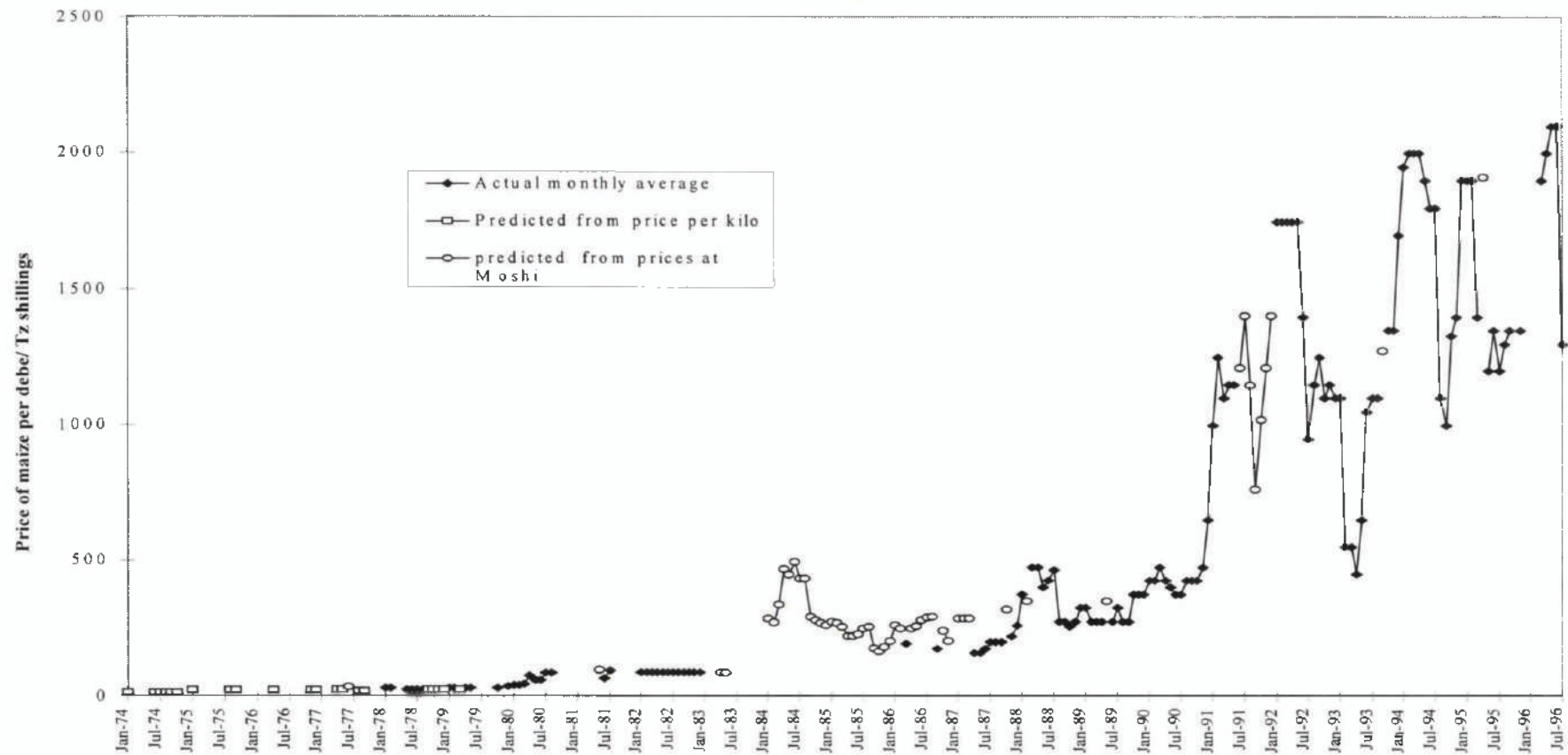
Note: 't' tests for separate variance are used where the variance of the samples are significantly different. In these cases there is a risk that differences between the variances may cause normal student 't' tests to register a significant difference when in fact there is none (Norusis and SPSS Inc, 1993: 255).

Price and value of cattle

The price of cattle has been rising more or less exponentially over this period, due to the effects of inflation (Graph 7.2). Those data however give little understanding of the change in the value of livestock which is best gleaned from comparing the price of livestock to the price of maize. Graph 7.3 shows the change in maize price over this time period. The price of maize climbs in three jumps with a rise at the beginning of 1980 followed by a plateau, the same at the beginning of 1984 and a further jump in 1990. The value of cattle in terms of maize fluctuates continuously with 5 troughs and 6 peaks over a 20 year period (Graph 7.4). The rise in prices in 1979 is outstripped by the increase in the value of maize which occurs at the same time.

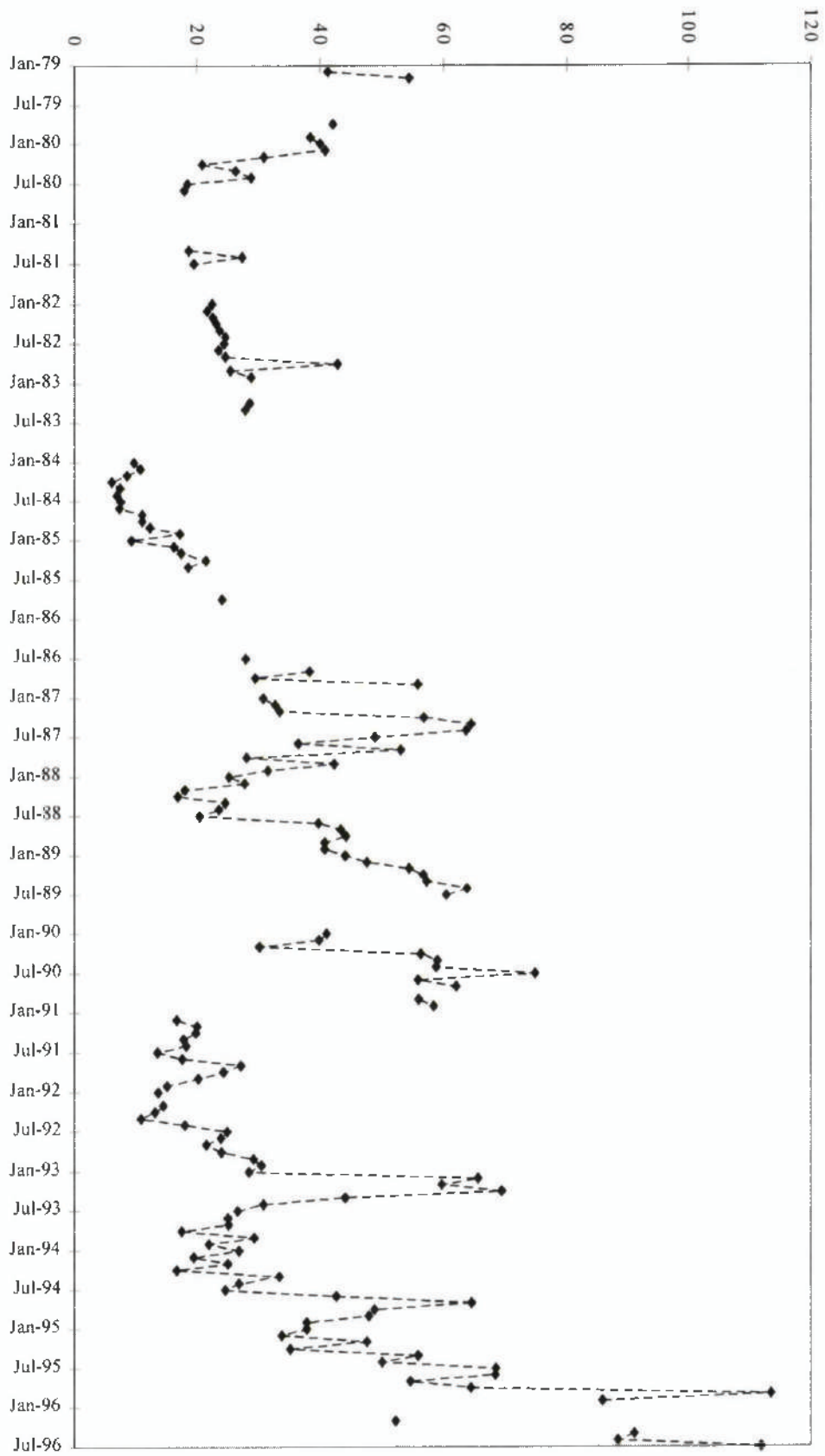
The relationship between the number of cattle sold and their value demonstrates the inverse response to market prices typical of subsistence pastoralism (Graph 7.5). When cattle are more valuable, pastoralists sell fewer animals, and vice versa. This relationship only explains a small proportion of the variance but is highly significant.

Graph 7.3: Actual and estimated maize prices in Same District given

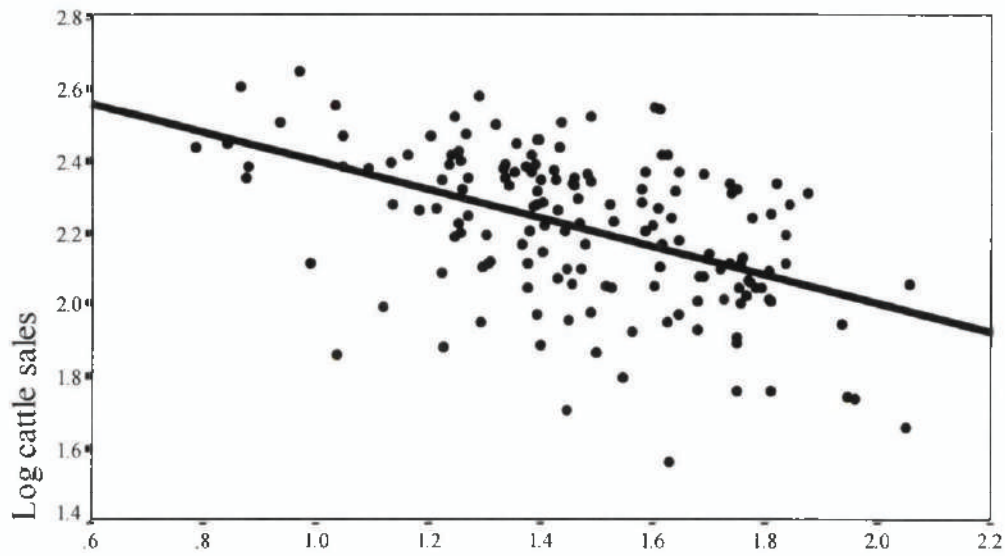


These data are mainly derived from the price of maize per *debe* (18 kg tin). Where this was unavailable, it is predicted from the price per kilo in Same District or the price per *debe* in nearby Rural Moshi District.

Debe of maize per cow



Graph 7.4: Change to the value of cattle in terms of maize

Graph 7.5: Log cattle sales and log average cattle value in terms of maize

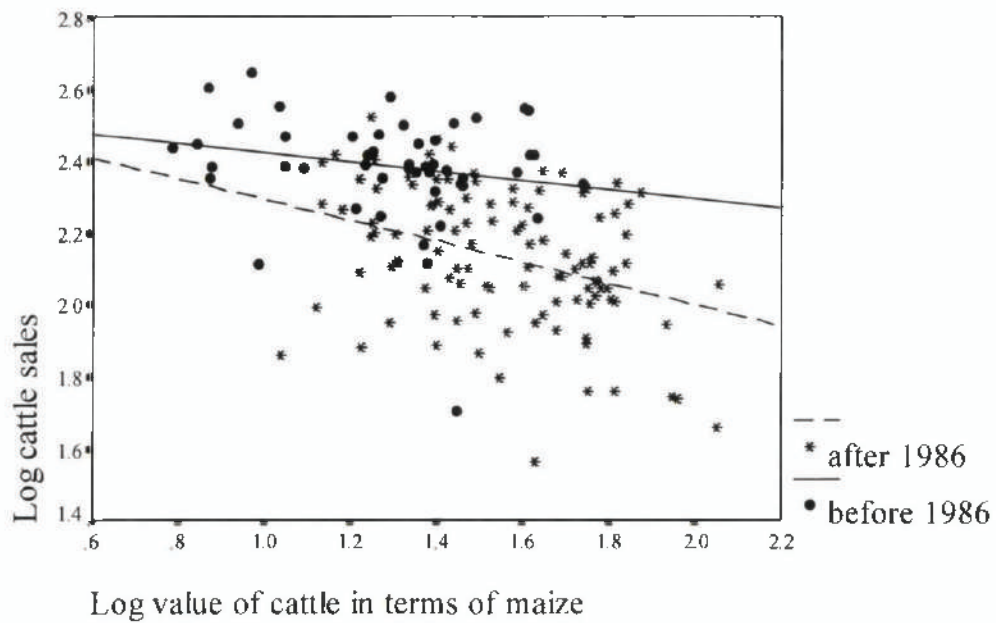
Log value of cattle in terms of maize

The variables have been logged to show a linear relationship.

Regression of log value of cattle against log sales

Months of data	F	R square	Significance
156	46.995	0.234	<0.0001
Variable.	B	T	Significance
Log value	-0.396	-6.855	<0.0001

Graph 7.6: Log cattle sales and log average cattle value before and after 1986



't' test on the difference between the mean ratio of log sales to log value before and after 1986

Period	Months of data	Mean	std dev
all period	156	1.57	0.42
11/74-10/85	48	1.93	0.46
7/86-7/96	108	1.41	0.28

Periods compared	't' test for separate variance	Degrees of freedom	P
11/74-10/85: 7/86-7/96	7.2	62.91	<0.001

The value of cattle in terms of maize shows no long term trend over nearly twenty years in pastoral terms of trade. This is counter to Kjaerby's argument that the Barabaig had experienced a deterioration in their terms of trade in the 1970s, although the data he presents shows more fluctuation than decline³¹. It also does not accord with Little's data³². In contrast, Zaal and Dietz have questioned the universality of declining pastoral terms of trade³³. Dietz shows that in Western Pokot terms appear to have fluctuated rather than declined³⁴. Similarly Kerven shows fluctuating terms of trade for Sudanese pastoralists, with no long term trend between 1969 and 1985³⁵.

At Mkomazi, the value of cattle in terms of maize is, on average, higher after 1986 than before (Table 7.3). This suggests pastoralists might have been selling fewer cattle after 1986 because their animals were worth more in real terms and they did not need to sell so many in order to meet their needs. The decline in sales after 1986 could be simply a reflection the improving value of cattle.

Table 7.3: 't' test of the value of cows in Same District before and after 1986 in terms of *debe* of maize per cow

Period	Months of data	Mean	std dev
all period	156	34.84	20.27
11/74-10/85	48	22.26	11.1
7/86-7/96	108	40.43	20.95

Periods compared	't' test for separate variance	Degrees of freedom	P
11/74-10/85: 7/86-7/96	-7.05	149.24	<0.001

To test this idea I compared the relationship between sales and cattle value before and after 1986 (Graph 7.6). I found that the same inverse relationship between cattle sales and value was found for both periods, and that the mean ratio of log sales to log value

³¹ Kjaerby, 1979: 64.

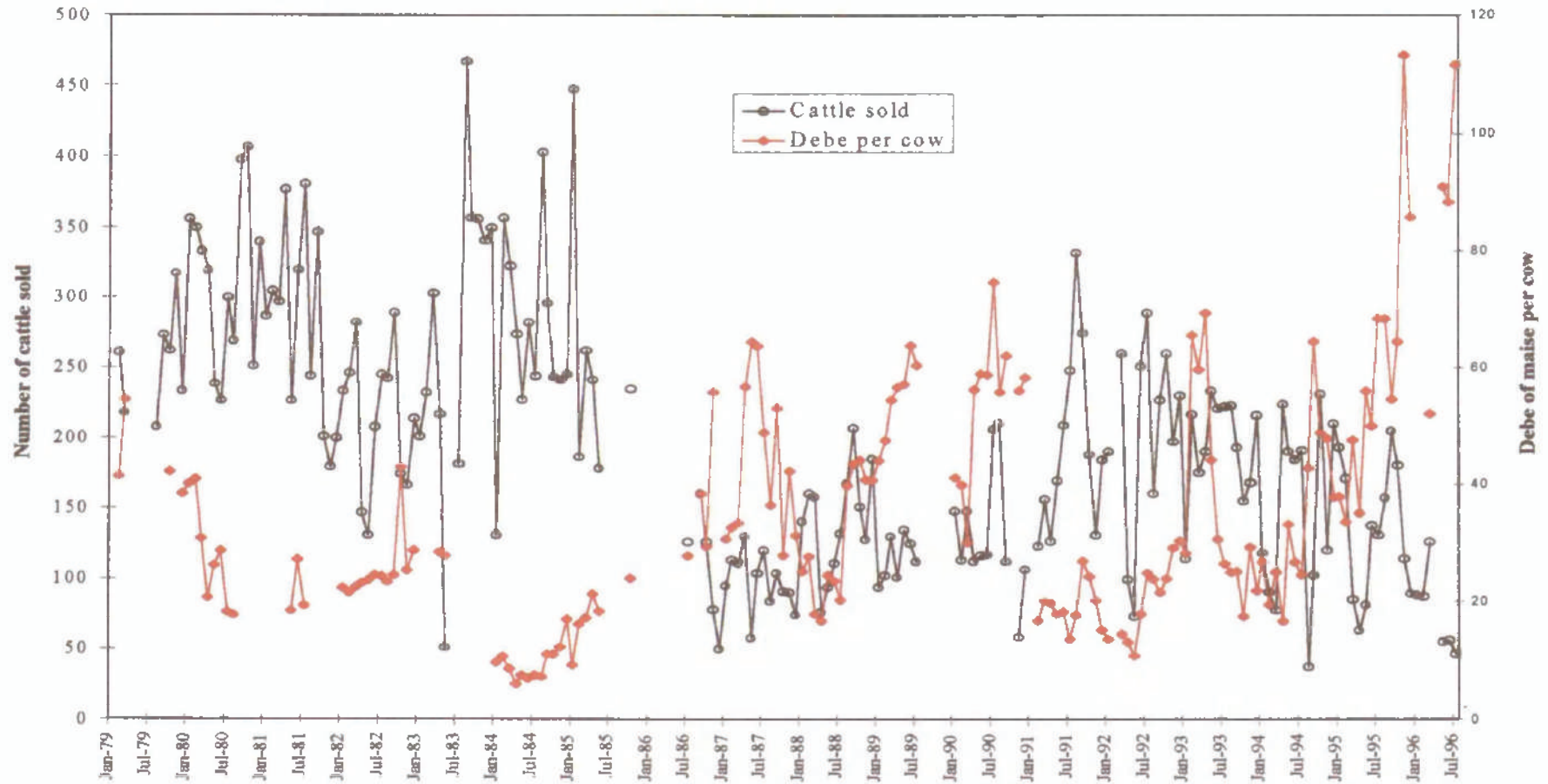
³² Little, 1983: 161.

³³ Zaal and Dietz, 1995.

³⁴ Dietz, 1993: 96.

³⁵ Kerven, 1987: 24.

Graph 7.7: Number of cattle sold in Same District and pastoral terms of trade



is significantly different for the two periods. For a given value of cattle in terms of maize, more animals are sold before 1986 than afterwards. Fewer animals are being sold for a given value of maize now than one would expect on the basis of pre-eviction market relationships.

Graph 7.7 shows how these patterns change over time. The general pattern is that when cattle are worth little, many are sold - in 1980, 1983-84, 1991-92. Similarly a high value of cattle is matched by lower sales - 1986-87, 1988-90 and 1994-95. Both for low and for high values of cattle, more animals were sold for any given value before 1986 than after that year.

Sales at Same District are less now than they were when pastoralists were resident inside the Reserve. There are a number of possible explanations for this:

- Pastoralists' decision-making has changed. They have been less ready to sell cattle after 1986.
- Same District markets are no longer so popular for traders. Cattle that once would have been sold in Same District are now taken elsewhere, such as Kenya.
- Fewer cattle are available for sale. Eviction has meant that there are fewer cattle resident in Same District; markets are doing less business as a result.

If changes in pastoralists' decision-making had occurred this would mean that they have become less commercially-oriented over time, and less willing to sell than before, despite better terms of trade. Alternatively it could mean that they are all richer and so have less need to sell animals; that they have less need to sell animals because livelihoods have diversified, and needs are being met from other sources of income. Greater wealth is unlikely as it runs counter to the impoverishment experienced by pastoralists living around Mkomazi that was discussed in the previous chapter. There is an indication that pastoralists are becoming less commercially orientated over time in that the inverse slope of the regression after 1986 is steeper than before (Graph 7.6). However this would result in more animals being sold when they are worth less

compared to pre-1986 sales for equivalent values, which is not observed in these data. Explanations based on greater wealth, or greater commercial orientation are weak.

Other explanations are more probable. A reduction in sales following an increase in incomes from other livelihoods is more consistent with the findings of the previous chapter. Also, structural adjustment programmes, initiated nationally in 1984, and with international support from 1986 onwards, may have changed the economic environment making it more attractive to sell animals in Kenya³⁶.

It is difficult to quantify the effect of cross-border sales. I know of no studies which have examined relations and connections between livestock sales on both sides of an international boundary³⁷. It is therefore difficult to say how significant Kenyan markets are for the Same livestock markets. However, if there has been a switch to sales of livestock in Kenya since 1986, it has taken place despite the improved value of cattle in terms of maize that pastoralists in Tanzania have enjoyed. Also, with the Reserve closed to pastoralists, cross-border movement to Kenyan cattle markets, already impeded by Tsavo is logistically now a harder operation. Potkanski notes that a fall in the value of the Kenyan shilling in late 1992 boosted Tanzanian sales in and around Ngorongoro³⁸. No such development is apparent at Mkomazi and it is possible that sales here may have been relatively dislocated from cross-border sales compared to other places along the Kenyan border.

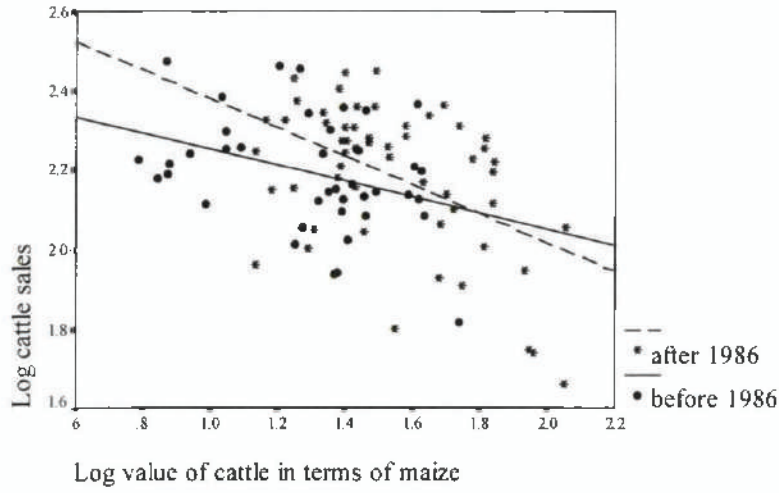
The final explanation is that there are simply fewer cattle left to sell in Same District. This explanation would see the decline in sales in Same District as a product of eviction operations which resulted in the physical movement of cattle away from Mkomazi. To test this idea we need to examine changes in individual markets.

³⁶ Havenik, 1993: 289

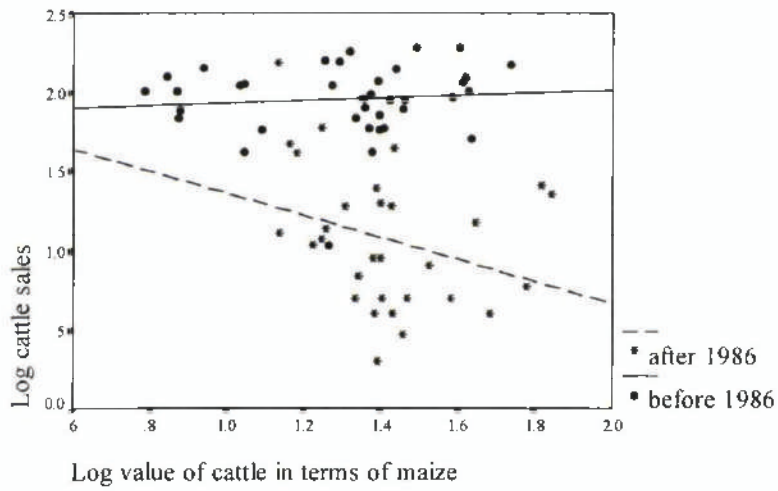
³⁷ Raikes, 1981, Kerven, 1992, and MacKenzie, 1973a, 1973b, and 1977 are all more concerned with areas further west and do not present continuous data on the relationship between prices in the two countries. Evangelou, 1984 is concerned with Kenya only.

³⁸ Potkanski, 1997: 85. Cf Zaal and Dietz, 1995: 6.

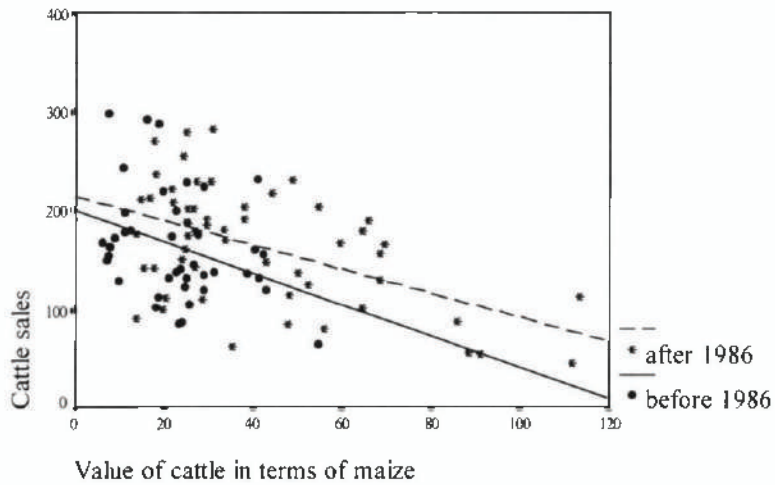
Graph 7.8: Log cattle sales and log value west of the mountains



Graph 7.9: Log cattle sales and log value at Kisiwani



Graph 7.10: Cattle sales and cattle value west of the mountains



Sales at individual markets

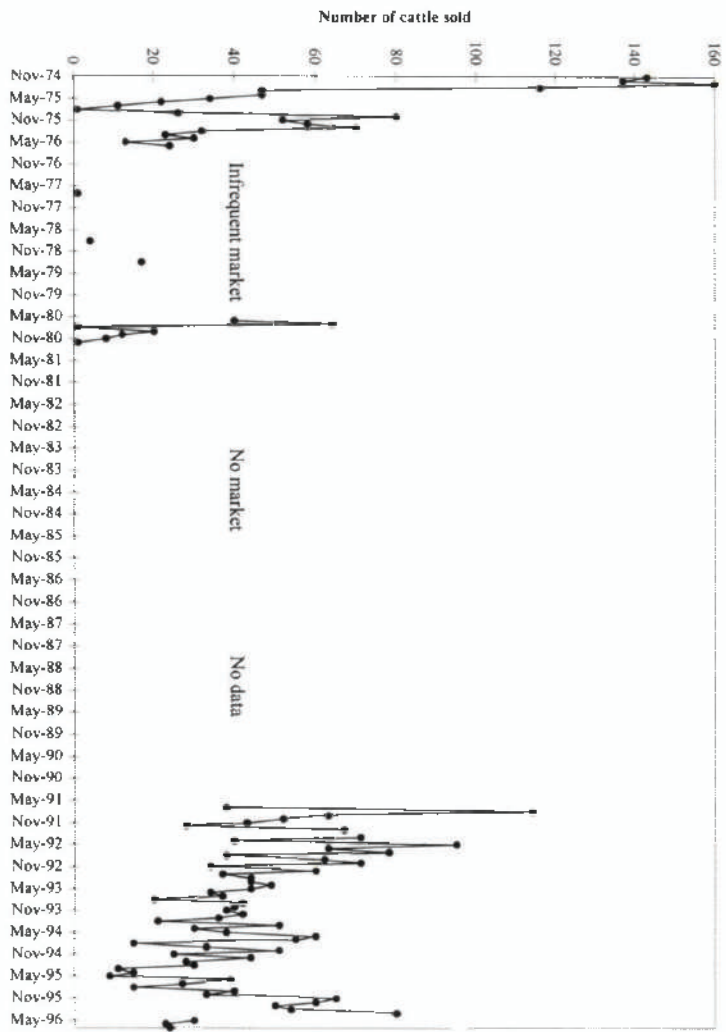
The Same District livestock markets can be broken down into those west of the Pare mountains (Makanya, Hedaru and Same Town) and Kisiwani market which is east of the mountains. Kisiwani market is particularly important for assessing the impact of eviction. This market was established in 1975 following the growth of cattle populations in the western half of the Game Reserve. We have seen that the market grew rapidly and became, on occasion, the most prominent market in the District (Table 4.4, page 116). During this survey, people at Kisiwani were constantly reiterating to us that their cattle market used to be a major event and attracted people from all over the Region.

If the relationship between cattle sales and value is broken down between Kisiwani and the markets west of the mountains, a clear pattern emerges (Graph 7.8 and Graph 7.9). The relationship for the markets west of the mountains shows no significant change. Indeed if actual sales are examined they appear, if anything, to have increased (Graph 7.10). At Kisiwani, however, there is a drastic slump in sales after the evictions. The decline in cattle sales in Same District could therefore be explained by the collapse of sales at Kisiwani. This is partly countered by an increase in sales west of the mountains reflecting higher cattle populations after cattle went there after eviction.

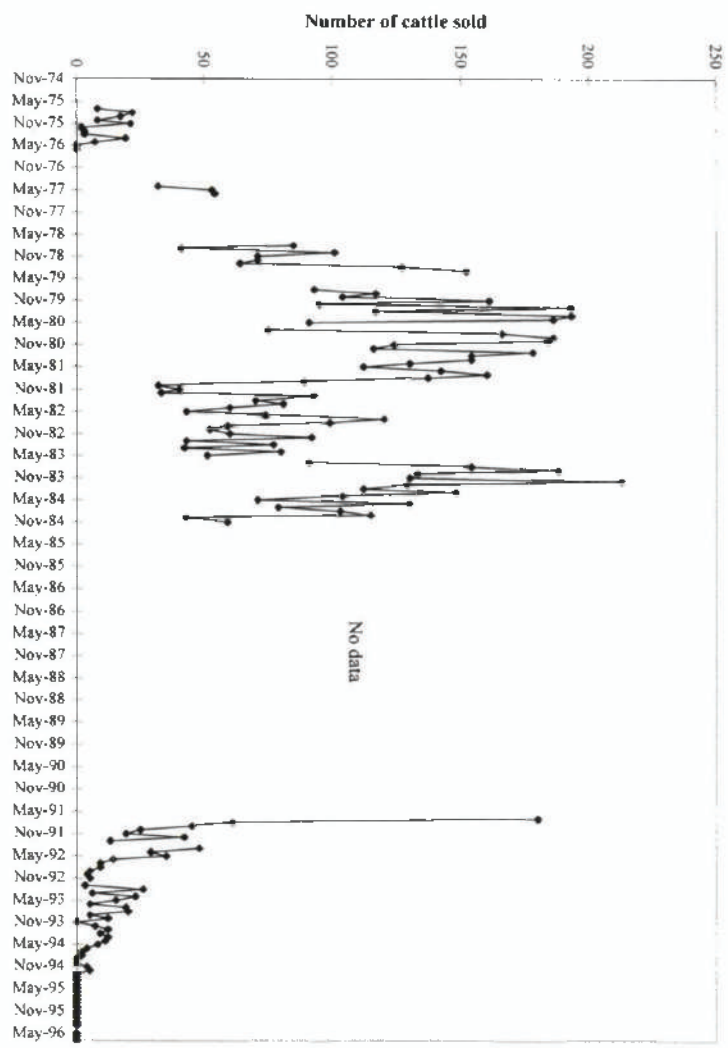
Graph 7.11 shows how this collapse occurred with time. Sales are high when cattle were in the Reserve and when the value of cattle in terms of maize is low³⁹. Individual market records are not available between 1984 and 1991 but on the first month when records become available again, Kisiwani records a peak of sales on a par with the collective sales for the entire district in previous months. This came after a prolonged dry period. It coincides with a aerial count which recorded a large number of cattle particularly on the margins of the Reserve⁴⁰. At that time there were renewed

³⁹ It is interesting here to recall the herd structure data from Table 6.3, page 169. This showed that in 1978, before the period of high sales began the proportion of males in the herd was recorded at 34% in the livestock census. Six years later, after considerable sales, the proportion of males was 28%.

⁴⁰ Huish *et al*, 1993: 6. Cf chapter four, page 119 and chapter six, page 193-5.



Graph 7.12: Cattle sales at Same Town 1974-1996



Graph 7.11: Cattle sales at Kisiwani 1974-1996

operations by the Department of Wildlife to prevent illegal incursions and evict herders who had gone back into the Reserve⁴¹.

This peak could be due to distress sales made by pastoralists evicted from the Reserve and unable to support their animals on the pasture available. The following month there is a similar peak in sales in nearby Same Town, suggesting that herders who were moved on from Kisiwani continued to sell stock at that market the following month (Graph 7.12). After these distress sales, Kisiwani market declined terminally. It closed temporarily following a rinderpest ban in 1995 and never reopened. There were no formal cattle sales there during the entire fieldwork period.

The decline of this market appears to result from the absence of cattle in the Reserve, just as its inception resulted from their arrival. It was a major complaint of local businesses in the area that the collapse of the cattle market has damaged the economy of the village⁴².

Patterns in the type of animals sold

Males and female cattle

Data on the sex of animals sold are available for Same District markets before 1991. Overall, these data show that more males are sold than females (Graph 7.13). This is expected for a subsistence pastoral population where males are sold routinely in order to raise cash for herd and household needs. Productive females, the source of milk and calves, are rarely sold or slaughtered⁴³.

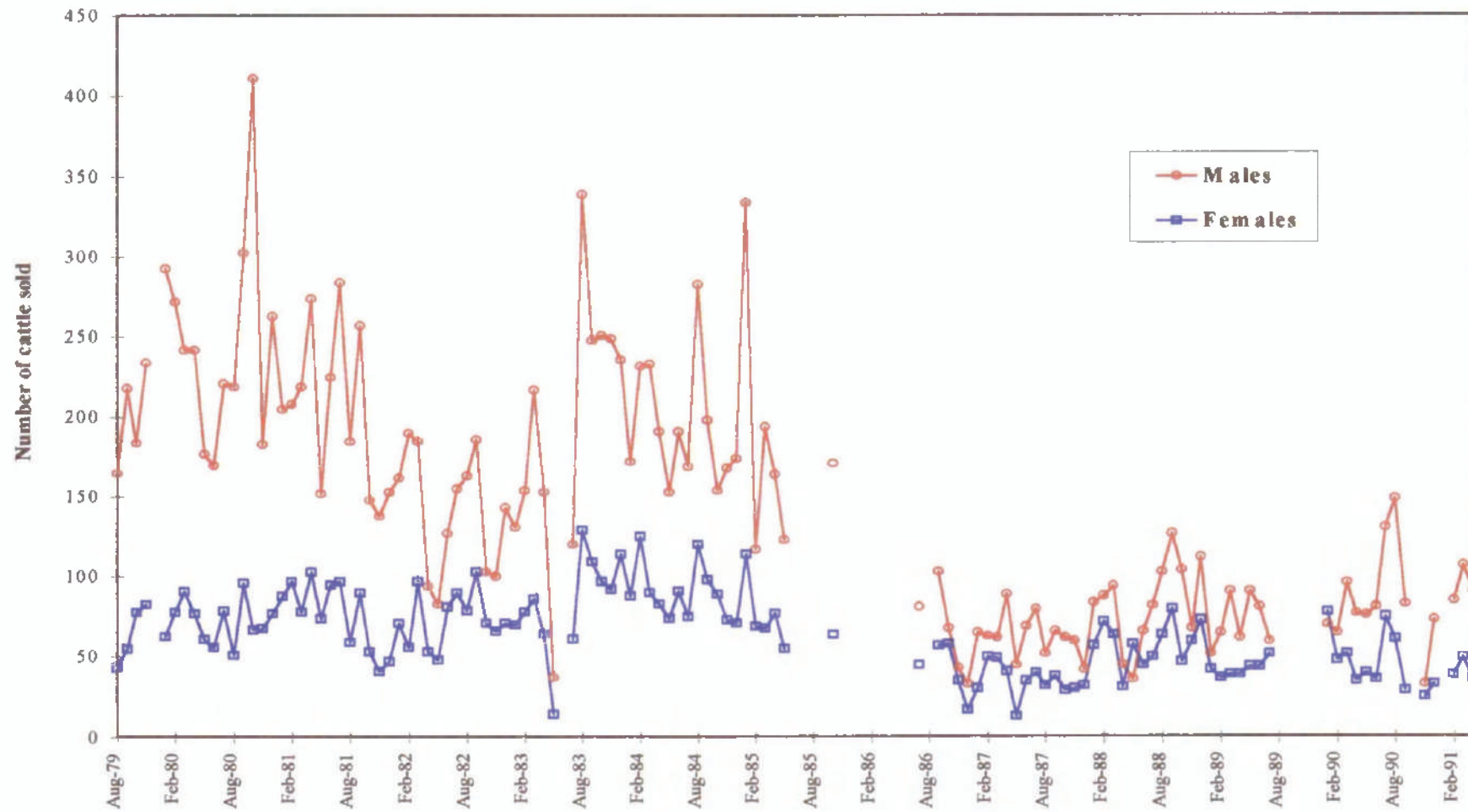
As a corollary, high sales of females are indicative of stress in the pastoralists economy. It indicates that pastoralists are selling off this productive nucleus. It is indicative of loss of flexibility and lack of choice of which animals to sell, and when to sell them. It shows that the pastoralists have no other surplus animals to sell and that they are having to dispose of their basic means of production to supply their

⁴¹ Same District Livestock Officer, pers comm, October 1995.

⁴² Homewood *et al* 1997: 49

⁴³ Dahl and Hjort, 1976: 161

Graph 7.13: Male and female cattle sold at Same District Livestock markets 1979-1991



household needs⁴⁴. It results from poor herd performance, that sees lower fertility rates and higher mortality rates reducing the choices pastoralists have as to which animals they can sell. This can happen during droughts, or when good quality pasture is unavailable such as after the evictions.

In Tanzania the proportion of cows and heifers sold at cattle markets is normally low. Mackenzie found that sales of female animals in all primary markets in Tanzania ranged from 19.5% and 22.5% between 1967 and 1971⁴⁵. In Kilimanjaro region 28.5% of sales at all markets were cows in 1966. A higher figure of 38.8% was recorded in 1970, which followed the dry period at the end of the 1960s⁴⁶.

Graph 7.13 shows that the proportion of female cattle sold increased considerably after 1986. This pattern is maintained throughout the eviction period and beyond. The difference in the ratio of male:female animals sold is statistically significant (Table 7.4).

Table 7.4: Comparing the male:female ratio of cattle sold before October 1985 and after July 1986

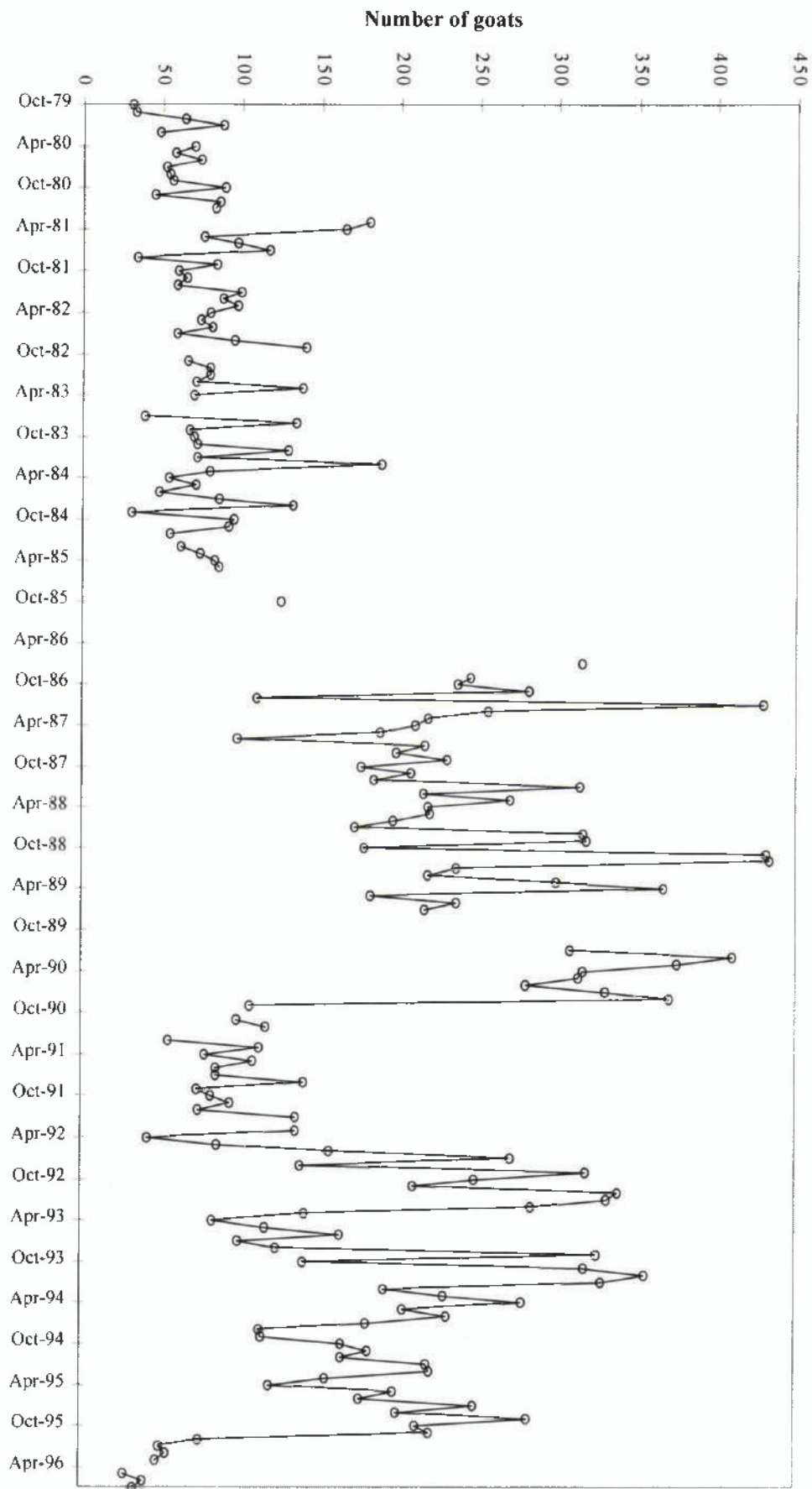
Period examined	Months of data	Mean ratio	Mean % females	std dev
all data	119	2.23	31%	0.79
11/74-10/85	69	2.57	28%	0.79
7/86-7/96	50	1.76	36%	0.52

Periods compared	Students 't' test	Degrees of freedom	P
11/74-10/85: 7/86-7/96	6.3	117	<0.001

⁴⁴ Cf McCabe *et al*, 1992: 359.

⁴⁵ Mackenzie, 1973b: 51.

⁴⁶ Mackenzie, 1973a: 18.



Graph 7.14: The number of goats sold in Same District 1979-1996

Small stock

Small stock sales are harder to interpret than cattle sales. Small stock ownership is more extensive than cattle ownership, and informal sales are considerable. The formal sales recorded at livestock markets represent a much smaller proportion of the total business conducted, and more caution is needed when interpreting these data. Sheep sales are not well recorded and only sales of goats are represented here. There is a clear pattern of goat sales increasing considerably in 1986 (Graph 7.14). This occurs at the same time as cattle sales appear to decrease. The differences between sales before and after 1986 are statistically significant (Table 7.5).

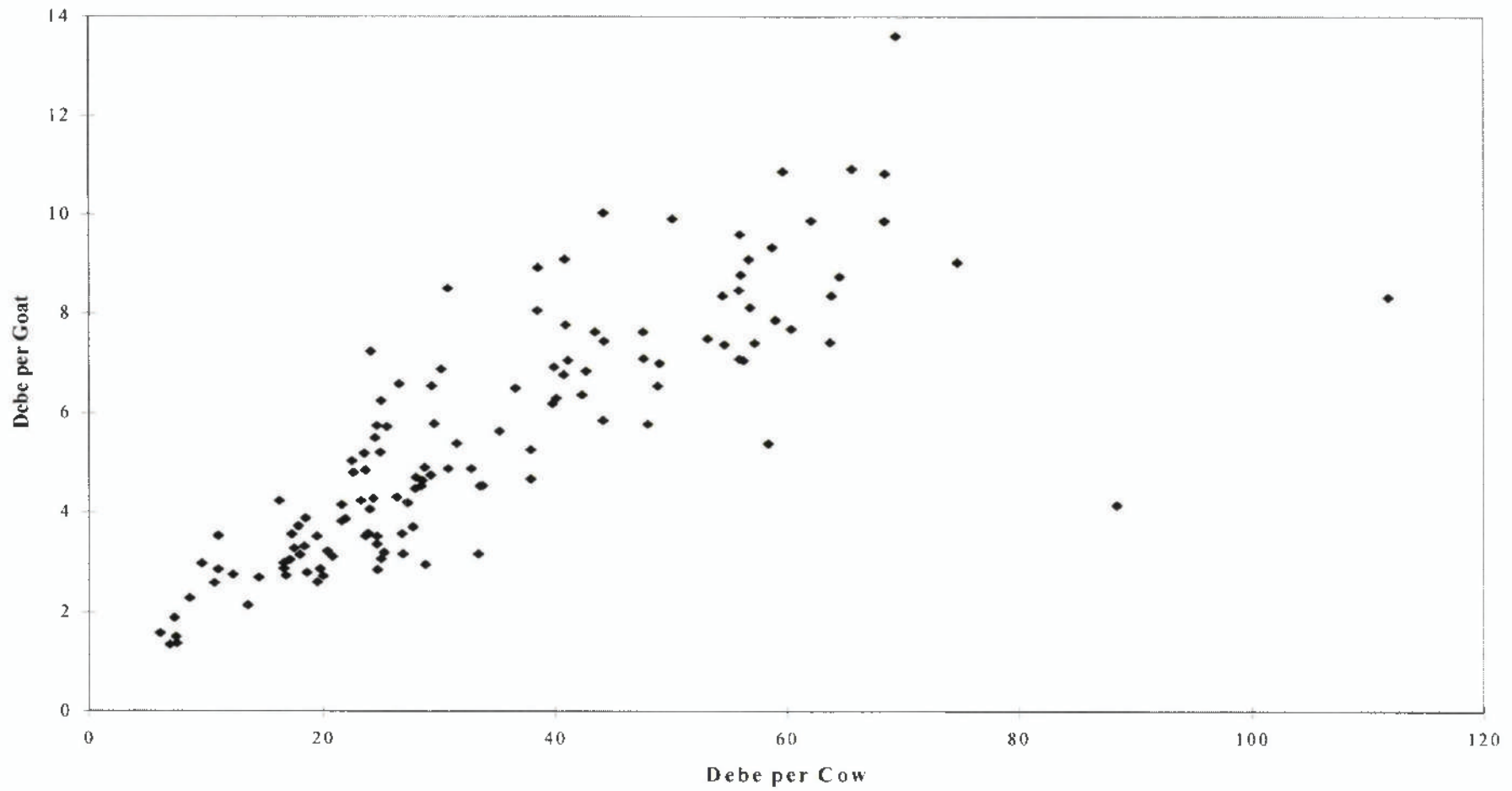
Table 7.5: Comparing sales of goats in Same District from October 1979 to October 1985 and from July 1986 to July 1996

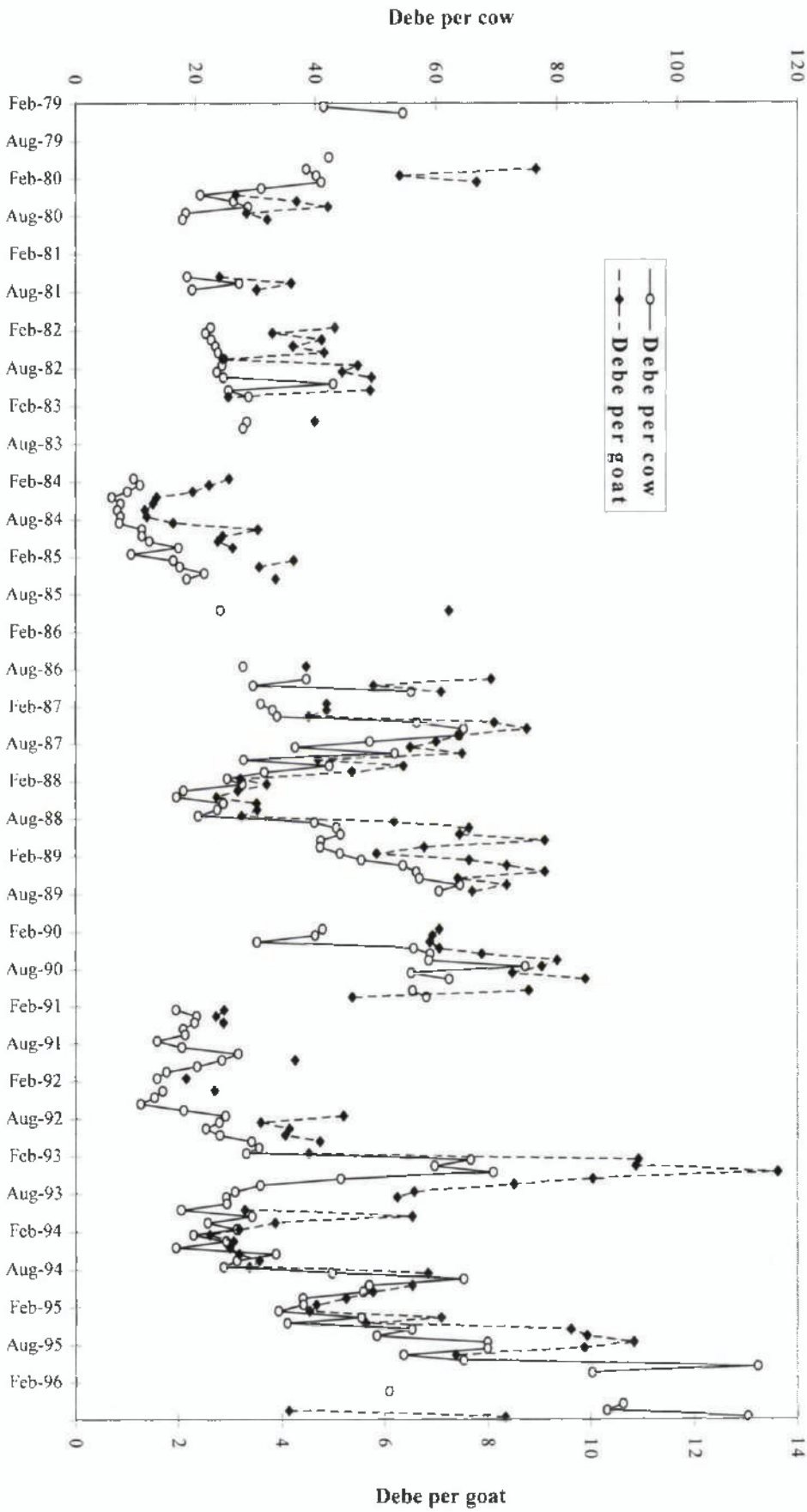
Period	Months of data	Mean	std dev
all period	174	157.89	99.61
10/79-10/85	63	81.44	33.62
7/86-7/96	111	201.28	98.59

Periods compared	't' test for separate variance	Degrees of freedom	P
10/79-10/85: 7/86-7/96	-11.67	148.63	<0.001

The value of goats in terms of maize corresponds closely with the value of cattle (Graph 7.15) and follows the same time series (Graph 7.16). The value of goats in terms of maize also significantly increased after 1986 (Table 7.6).

Graph 7.15: The value of cattle and goats in terms of maize





Graph 7.16: Variation in the value of cattle and goats 1979-1996

Graph 7.17: Goat sales and value

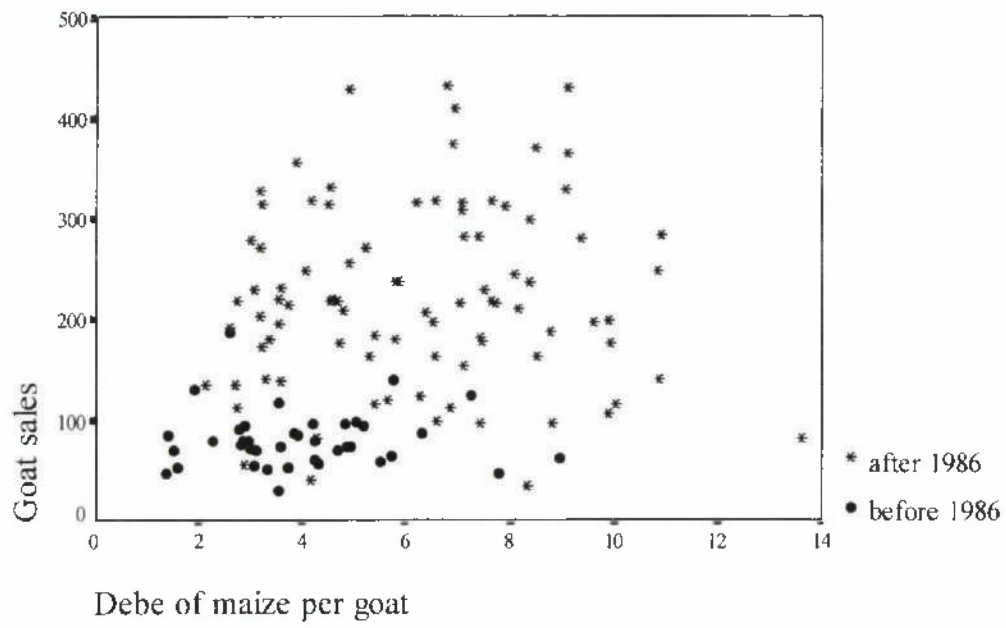


Table 7.6: The value of goats in *debe* of maize in Same District before and after 1986

Period	Months of data	Mean	std dev
all period	129	5.51	2.48
10/79-10/85	39	3.97	1.73
7/86-7/96	90	6.17	2.47

Periods compared	't' test for separate variance	Degrees of freedom	P
10/79-10/85: 7/86-7/96	-5.79	100.98	<0.001

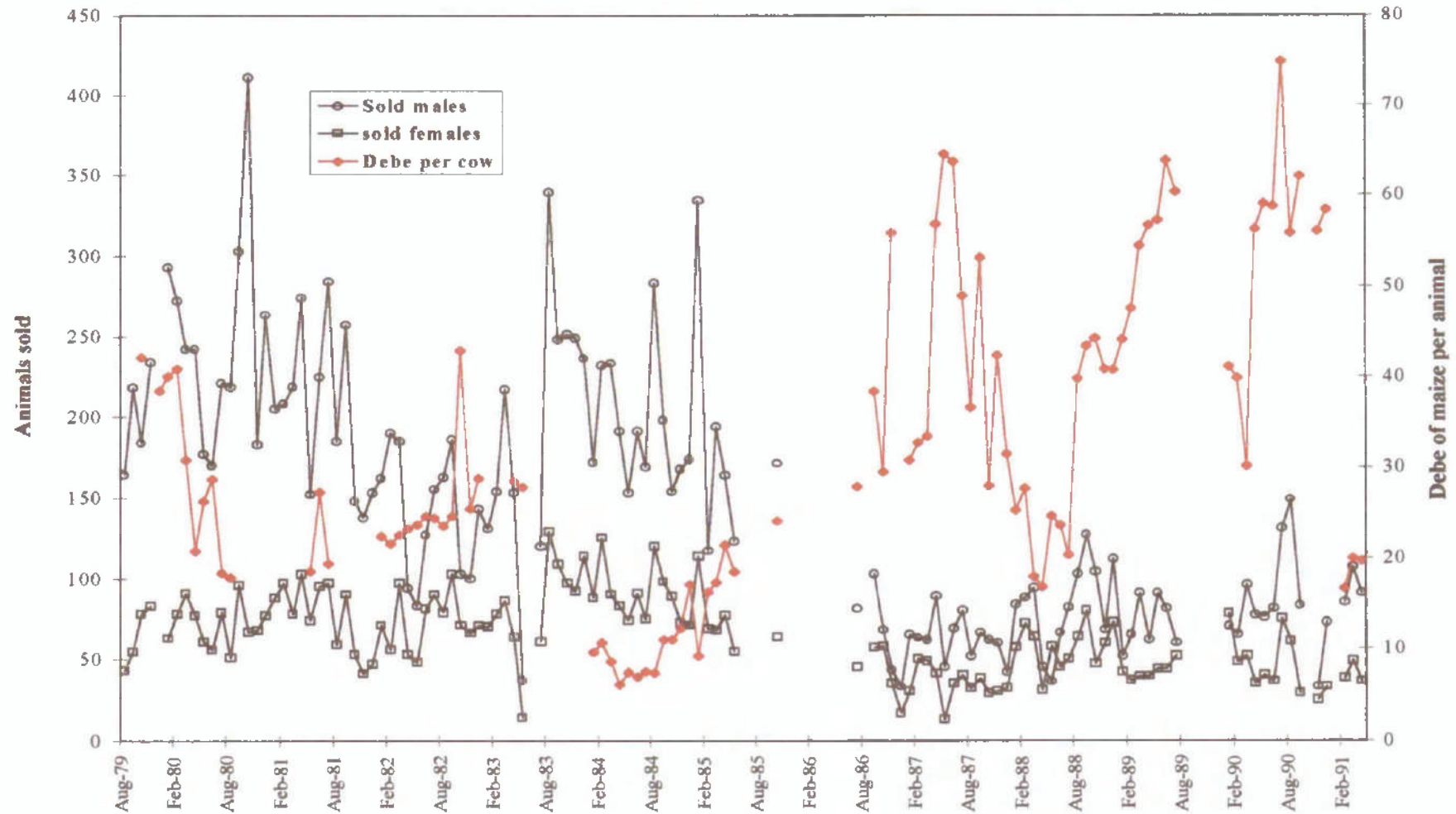
Although the trend appears to be for goat sales to increase with their value in terms of maize, this is not a significant relationship (Graph 7.17).

Reliance upon, and investment in, small stock are both indicators of stress in pastoral economies. Numerous authors, both empirical and theoretical have suggested that increased reliance on small stock is an indication of poverty and is a useful investment strategy for those who are trying to rebuild their herds⁴⁷. Increased sales could be a consequence of pastoralists selling more small stock in order to avoid selling their cattle.

It would be difficult, however, to draw that conclusion from these data without corroborative evidence. The livestock markets here serve a large number of agro-pastoralists who own small stock and are heavily reliant upon agriculture as well. Their sales of small stock will reflect decision-making linked to agricultural livelihoods. So many sales take place informally that it is hard to interpret trends in the wider economy on the basis of these data. The lack of relationship between goat sales and their value presents more obstacles. It would be questionable to infer changes in pastoral decision-making due to herd loss from this pattern alone.

⁴⁷ Spencer, 1988: 9; Mace and Houston, 1989; Hogg, 1980: 304-5; Dahl and Hjort, 1976: 230-237.

Graph 7.18: Value of cattle and the number of male and female animals sold



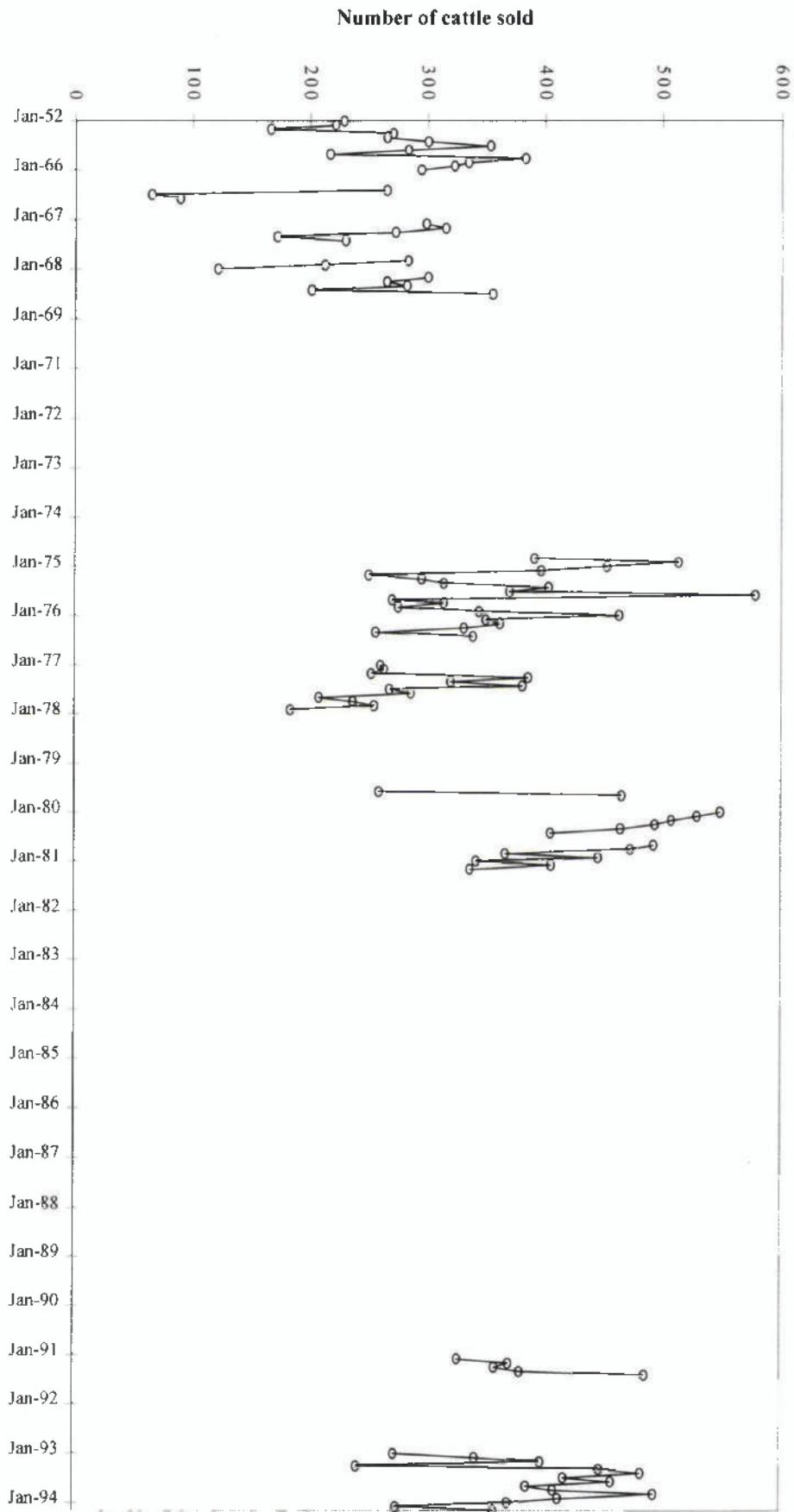
The increased sales of female cattle are a surer sign of stress. It is more remarkable given that the terms of trade for cattle are improving at that time (Graph 7.18). Even though pastoralists found that their cattle were worth more in terms of maize, they were forced to sell proportionally more female animals.

Taken together, these two indicators suggest that there has been a decline in the viability of pastoralists' household economies that has resulted in them selling more female cattle, and relying more on goats to meet their cash needs. These changes and indications of stress coincide with the eviction of pastoralists from the Reserve. Given the indicators of impoverishment recorded in the previous chapter, and the simple logistical problems that herders faced when excluded from such an extensive area, this is the simplest explanation.

It is misleading to attribute too much change to one cause. The patterns described here began when there were still some pastoralists inside the Reserve. They also coincide with national economic changes and structural adjustment programs that were widely criticised for the burdens they imposed on rural dwellers. Education costs, for example, rose as government expenditure on services was reduced⁴⁸. Perlov notes that education expenses accounted for 30% of stock sales among Samburu herders in Kenya⁴⁹. Food needs accounted for only 18% of sales. The changes recorded here also reflect these forces.

⁴⁸ Havenik, 1993: 299.

⁴⁹ Perlov, 1987: 256



Graph 7.19: Cattle sales in Pare District

The changes analysed so far are local trends, specific to Mkomazi. If we examine more markets from a larger area, and over a longer time scale, similar changes are not visible. Before 1979, Same and Mwanga District were part of Pare District. A sporadic record of sales in this larger area does not reflect local changes (Graph 7.19). Cattle sales were still at a high level in the 1970s and remained high in the early 1990s, although a breakdown of markets shows that 89% of sales in the 1990s were on the western side of the mountains. Unfortunately, no breakdown is available for earlier years. This recalls Quarles von Ufford's finding that the influence of local producers' needs is less visible when data are aggregated across larger areas.

Conclusion

Data from cattle markets in Tanzania are unreliable and difficult to interpret. Official records represent only a fraction of total sales. Yet despite confounding factors, a number of patterns are visible that suggest considerable change in the cattle economy before and after eviction. They coincide in a way which suggests that the evictions have had an important and measurable impact. The decline of sales generally, and the collapse of the Kisiwani market appear to reflect a lack of cattle in the area. The increase in the proportion of female cattle sold, and the growth in the sale of goats are both indicators of stress in the pastoral economy.

Other factors, such as the impact of structural adjustment policies and the effect of Kenya cattle prices will also be important. The data on Pare District suggest that the impact on sales may be restricted to a relatively small area. Overall however, the coincidence of patterns occurring during and beyond the eviction period indicate that the eviction of pastoralists from Mkomazi and their subsequent exclusion from using the Reserve's resources have affected livestock sales. There are a number of indications of economic stress amongst livestock keepers at local livestock markets and a general decline in local sales with consequent knock-on effects to the rest of the local economy.

On the basis of these data, it has been suggested that the lost business due to eviction of pastoralists from the Reserve could amount to 30 million shillings per quarter,

worth approximately £37,500⁵⁰. At Ngorongoro, informal trading was estimated to account for only 30% of cattle trading⁵¹. If that estimate is retained and losses in the informal sector are equivalent to losses in the formal sector, then the total level of lost trade could be £500,000 per annum⁵². This does not take into account the knock on effects in services linked to the livestock trade. I conclude that the impoverishment recorded in the previous chapter is not restricted to a small number of pastoral groups.

⁵⁰ Homewood *et al* 1997: 48.

⁵¹ Homewood *et al* 1997: 48.

⁵² Homewood *et al* 1997: 49.

Chapter Eight

A desert strange

In this conclusion I draw together three ideas. First, that there has been real loss at Mkomazi as a result of the exclusion of pastoralists from the Reserve. Second, that pastoralists have not been the passive victims of that loss but have strategies for ameliorating the losses and for contesting it politically. Third, that it is important to take into account the extent of the loss people experience, and their adaptation and resistance to that loss, when examining conservation-induced displacement.

Introduction

A number of authors writing about change in pastoral society have emphasized the resilience and endurance of people's coping strategies. Waller criticises ideas about marginalisation of pastoralists under capitalism for the way they subsume pastoralism within a broader subset of rural societies without considering its peculiarities or the thoughts or agency of the pastoralists themselves. He argues that this leads to a one-dimensional view of pastoralists as 'victims'. What is needed instead is to approach things with the pastoral viewpoint foremost in mind.

Turton has shown that the Mursi experienced devastating losses in the droughts of the early 1970s but argues that the Mursi's response to drought and impoverishment then and subsequently shows 'resilience, technical sophistication, inventiveness and sheer human determination to survive'¹. He argues that notions of 'rehabilitating' refugees such as the Mursi risks overlooking these qualities. He criticises some ideas about displacement as

¹ Turton and Turton, 1984: 178.

being 'sedentarist' and argues that we need to see displacement as part of a longer history of movement, migration and adaptation that is normal for these areas.

Fratkin argues that 'things do not necessarily fall apart' for the Ariaal, despite the effects of drought and development programmes². Ensminger finds loss of stock and increasing inequality among the Galole Orma, but yet signs of economic well being among the poorer families³. Hogg writes about a 'crisis in pastoralism' resulting from the changes to the world around them and loss of land, but sets that in the context of pastoral resilience in the face of change, and of great variety of responses by different pastoral groups⁴.

Common to these authors, and others, is the idea that change is real and problematic and can have serious consequences. Their position is that resilience is manifest because of the hardship. They are therefore critical of imposed and unwelcome change, and in particular, they have noted the harmful effects that can follow the loss of land for conservation purposes. Turton, for example, predicts that resettlement of the Mursi from the National Parks on their land:

'almost certainly lead to unemployment, landlessness, marginalisation, food insecurity, loss of access to common property, erosion of health status, social disarticulation and cultural stress'⁵

The impoverishment experienced at Mkomazi caused problems that people have, generally coped with, but which need to be carefully dealt with when assessing the impacts of conservation-induced displacement..

² Fratkin, 1991: 125.

³ Ensminger, 1992: 88-101.

⁴ Hogg, 19: 133, 135.

⁵ Turton, 1996: 108-9. (The list of problems is quoted from McDowell, 1995: 179).

Responses to impoverishment at Mkomazi

Rural groups have experienced dispossession of their lands at the hands of the state in many countries and for many centuries. In every continent there have been, or still occur, periods of extensive land alienation for other farmers, political elites, or development projects.

The material consequences of these evictions are far reaching. This thesis has shown how eviction has been accompanied by a reduction in herds, a reduction in reliance upon pastoralism, and consequent change in livelihoods. We have seen that the poorer pastoralists present in the region of the Reserve are likely to have experienced more impoverishment, and that women's income is now sometimes the main source of sustenance. There is evidence in the livestock markets of quite widespread stress to pastoralists as a result of the evictions.

The consequences are not merely economic. In other situations, the testimonies to the disorder caused by forced removal suggest effects far more disturbing than neutral terms like 'displacement' can convey. Displacement entails loss of homes, livelihoods and places of spiritual and cultural importance⁶. The takeover of territory, and the usurpation of power and authority to manage and inhabit the landscape renders once familiar places 'a desert strange and chill'⁷.

John Clare's words were written in protest at the enclosure movement. His work gives some sense of the indignation and anger involved. However in general the tone of this, and others like it, invokes a finality and sense of disaster that does not well describe the response of pastoralists at Mkomazi.

I begin with this perspective partly because eviction is a traumatic experience. I have not dealt with that aspect here but do not want it to go unmentioned. The perspective is also

⁶ Oliver-Smith, 1996: 78; Gray, 1996: 101.

⁷ Thornton, 1997: 68. The extract is from Clare's poem: 'Remembrances' of the mid 1840s.

important because the weakness of rural groups in the face of more powerful forces provides the appropriate context for understanding people's response to displacement.

The fact that eviction occurred at all is illustrative of evictees' political weakness. Yet it is despite the imbalance of power that protest is mounted and pursued. It is in the face of resource loss that livelihoods are adapted and new coping strategies formulated. I argue that pastoralists at Mkomazi are at once impoverished but resourceful, weak but strong.

We saw in chapter one that Bonfiglioli has emphasized the crisis facing pastoral societies⁸. He is specifically pessimistic about the Maasai of Tanzania:

‘The Maasai pastoralists in Tanzania, incorporated into national economic structures, have grown more and more vulnerable to forces beyond their control; their capacity to manage their own lives is decreasing and their very survival as an ethnic group is threatened.’

It is not clear what research that statement is based upon. Predictions of the demise of Maasai society have been made for some time, and do not reflect the tenacity or flexibility of livelihoods and society in this region. Péron adopts a similar tone when writing about the changes to Kenya Maasai. He concludes his findings about the impacts of recent political changes and Group Ranches on Kenyan Maasai with these remarks:

‘Il est plus vraisemblable que ceux-ci vont un jour ou l'autre être destitués du peu de terre qui leur reste, et finir (s'ils ont de la chance) par entreprendre un travail manuel sous-payé, pris au piège de la pauvreté. Une bien triste perspective pour un peuple si fier.’⁹

⁸ Bonfiglioli, 1992: 3; chapter one, page 47-8.

⁹ Péron, 1995, vol II: 231. This is in turn quoted from Graham, 1989: 185. The text reads: It is more likely that they will become landless and end up (if they are lucky) in low paid manual jobs, caught in a poverty trap. A sad prospect for a proud people.

I suggest these remarks err in two ways. First, they offer broad generalisations about diverse fortunes and responses; second they are overwhelmingly negative and portray little of the resilience that can accompany people's responses to land loss.

At Mkomazi I was working with a great variety of families pursuing varied livelihoods with different strategies to enhance prosperity while minimising the risk of loss. There were Maasai and Parakuyo herders splitting their herds into several different locations in Kenya and Tanzania and there were Pare herders sending animals down towards the coast. Women were selling firewood every day in Kisiwani, or traveling far to sell medicine, or selling the milk from animals which they had lobbied to have brought back to the *boma*. There were old men dependent on stock loans from relatives after profligate sons had wasted their inheritance; there were young wives reliant on selling milk from borrowed goats; widows who sold medicine and beadwork on the one hand and managed their herds on the other. Pare farmers bought weak animals from Maasai herders during the dry season, and toiled continuously to ensure that their rain-fed farms did not succumb to weeds. Alcoholics sold their animals recklessly and their children ran away from home. There were vulnerable individuals with few relatives to rely on; stock-poor families who depended on wage labour; aging families who had to pay the cattle bridewealth of their sons' weddings, and others who experienced new-found prosperity when their daughters were married. There were stockless dependents living in other people's *bomas*, rich women whose adult sons controlled many cows and their poor co-wives who only had smallstock. There were wealthy elders renting irrigated rice fields, and poorer youths jointly investing in, or gleaning from neighbour's lands. There were men engaged in stock trading, or buying improved stall-fed cattle, while others invested wages in goats, or sought careers with Maasai NGOs.

Amidst the diversity three features stand out. First, that the pastoralism once practised at Mkomazi has been changed by eviction. Second, that in response, people now are using similar strategies tried in the past. Third, that the experience of impoverishment is mediated by other aspects of pastoral life. It has been intensified by the expenses and

opportunities that people face at different stages in their, and their families', lives. It has been shaped by and played out along tensions between male and female-controlled economies.

In all, the picture that emerges is not of terminal crisis, but rather of a people facing rapid change that leaves some of its members in hardship. The losses at Mkomazi are within the realm of past experience, and as such people have coped with them. This in part reflects the fact that wealth is measured in labour, and not just livestock. Impoverishment as measured in terms of livestock loss, still leaves the possibility of recovery. Households which were accustomed to feeding themselves from their herds will have been thrown into difficulty but if there is labour available they may find a means of living.

Ensminger's research shows that there has been a general reduction of livestock holdings among the Galole Orma between 1974 and 1987 and a concentration of the remaining livestock into the hands of the wealthiest families¹⁰. She also notes that there have been some positive changes to the social and economic indicators of the poorer and middle income households since 1980 and argues that this is because of the new economic opportunities available to them in the current economy. 'Proletarianisation' and commercialisation have enhanced, in some respects, their well-being¹¹.

It does not follow, however, that the new livelihoods followed at Mkomazi are more secure. In the context of variable environments and generally increasing pressure on rural livelihoods and resources, the new occupations will not necessarily lighten peoples predicament. At Mkomazi, people are poorer, some of the livelihoods they follow are more precarious, and they are now more vulnerable to further misfortune¹².

¹⁰ Ensminger, 1992: 82-3.

¹¹ Ensminger, 1992: 108.

¹² Waller, 1988: 112.

In other situations people express more pessimism. Spencer draws attention to the recent developments in Turkana where families forced out of pastoralism take up residence in towns or refugee camps without the networks they need to return to the pastoral sector¹³. In effect, these people have been ‘sloughed off’ from pastoralism, with little hope of returning. The strategies they have followed have ruled out some future options¹⁴.

The case highlights areas of further research that could be conducted. This study is based on the experience of people who were still able to live close to the Reserve, and their relatives. It can say little about the livelihoods of other networks of people who are not so closely connected to the pastoralists studied here. Those who have remained around the Reserve may have been the more fortunate group. The issue can only be resolved by following up those who have left. Similarly it would be interesting to know more about the nascent experience of towns that the medicine sellers of Kisiwani, and a few young men of Same and Lushoto have gained. It is possible that evictees from Mkomazi fall more broadly on the continuum from no-urban-experience to no-return-to-pastoralism than these data have been able to show.

Resistance and protest

We have seen that alienation of resources from various groups has been the norm at Mkomazi for some time now. Eviction and removals have been frequent for several decades, with only short interludes of relative calm. Protest, both directly to representatives of the state, and in practise through evading regulations, has been equally common. Indeed the notion of crisis in pastoral societies is also weak because it is not always readily compatible with the vigour of sustained opposition that can be mounted in response to resource loss.

Maa-speaking pastoralists were effectively excluded from the Lake Jipe area by the Kenyan government, and the National Parks Board in the early 1950s. They were then

¹³ Spencer, 1997: 226, 236-7.

¹⁴ Adams and Anderson, 1988: 534.

excluded from the Mkomazi Game Reserve by an alliance of Parakuyo pastoralists and Tanganyikan officials. In response they changed their identity and forged new alliances with both the Parakuyo and government staff so that, by 1968, the numbers of pastoralists allowed in the Reserve had increased considerably.

Pare, Sambaa and Kamba herders were excluded from any use of Mkomazi's resources when the Reserve was established. Boundaries were redrawn to ensure that no huts were found inside the Reserve and that therefore people would have no right to live there. They responded with vigorous opposition to the establishment of the Reserve on their grazing lands. Herders at Gonja, overlooked by Bates when he proposed the Reserve, successfully lobbied to have that land excised from the Reserve. Others hired lawyers to plead on their behalf. Pare pastoralists were also successful in gaining more access to the Reserve in the late 1960s and early 1970s when a series of dry years made its resources all the more important.

All groups have protested when immigrant herders deprived them of their grazing resources and have sought to re-establish communal controls managing dry season grazing. They appealed both to the District government and the Reserve authorities to try to limit the incursions. They re-organised their own efforts to set aside dry season pastures.

Some of the older pastoralists at Mkomazi have spent their entire lives avoiding regulations designed to control their residence. They have variously circumvented the Kenyan boundary and National Park regulations, Tanganyikan and Tanzanian Game Laws, veterinary regulations concerning the movement of stock, colonial dictates concerning which tribes were to live in which areas, and, on occasion, local regulations governing use of dry season pastures. Some have been imprisoned or fined many times. In short, Mkomazi's pastures have long been contested, and control of them is an intensely political process. The latest round of protests and court action about Mkomazi is

both a continuation of past contests and similar to numerous protests that have followed large scale resource losses elsewhere.

Neumann has applied Scott's arguments on the forms of passive resistance by politically weak groups to local resistance of Protected Areas. He observed that when faced with the imposition of land alienation for conservation, rural groups resort to 'everyday forms of resistance' that effectively nullify the regulations¹⁵. In the same article he notes that the rise of indigenous NGOs is giving rise to new forms of protest at the troubles caused by conservation areas, and to opposition to removals from Mkomazi¹⁶. Neumann goes on to note that as a result:

'...pastoralists are moving away from "everyday forms of resistance" and protest toward more organised and formalized forms of political action.'¹⁷

However the history of Mkomazi shows more continuity than this suggests. The organised and formalised forms of political action are old; government officials have been continually engaged in negotiation and concession to persistent pastoral demands. Rather, as Rogers *et al* have argued, what has changed is that the internationalisation of the issues has opened up new arenas of conflict and hardened the boundaries between those negotiating over the best use of the Reserve's resources¹⁸.

The heightened levels of conflict after eviction have brought more than just a hardening of boundaries. As Oliver-Smith has observed, the decision to resist resettlement will entail significant changes among the people fighting the moves, whether or not they are successful. He writes:

¹⁵ Neumann, 1995b: 365. The work is J.C.Scott (1985) *Weapons of the weak. Everyday forms of peasant resistance*.

¹⁶ Neumann, 1995b: 372-4.

¹⁷ Neumann, 1995b: 378.

¹⁸ Rogers *et al* forthcoming.

‘ ... society is constantly in the process of reconstituting itself through actions of alignment and disengagement along axes of individual-group, ethnicity, age, gender, class, etc., activating a process of continual contestation and interpretation of culture, that is therefore, also constantly “in production”.’¹⁹

Amongst the Maasai and Parakuyo, the decision to resist the evictions at Mkomazi has brought these pastoralists in closer political union with other Maasai pastoralists who are fighting land loss in Simanjiro and Kiteto District. It has added a new dimension to ties of migration and intermarriage forged since the beginning of the century²⁰. It has also, however, brought in a new constituency to which these groups are now answerable. Since the international NGOs provide the Maasai NGOs with most of their funds, these NGOs can become more orientated towards their donors than to the people whom they represent. In some cases, the groups can become little more than vehicles for the ambitions of their leaders²¹.

In addition, these groups are ‘indigenous peoples’ NGOs’. They are part of the growing indigenous peoples movement that articulate their needs through their ethnicity, uniqueness and powerful historical and spiritual claims to land²². In an East African, and in particular, a Tanzanian setting there are problems in taking an ethnic stance that excludes co-resident ethnic groups²³. We have seen that there are many ethnic groups with resource needs around Mkomazi²⁴. Yet these are now, as they were in the early 1950s, being passed over and ignored by some of the more high profile debates around Mkomazi.

¹⁹ Oliver-Smith, 1996: 82.

²⁰ Igoe and Brockington, forthcoming.

²¹ I am grateful to Peter Rogers and James Igoe for pointing out this aspect of NGOs to me. For more details about how this is manifest at Mkomazi see their forthcoming dissertations.

²² Gray, 1996: 100-1.

²³ CF Galaty, 1993c.

²⁴ Homewood *et al*, 1997: 29-33.

Neumann notes that part of the process of contesting the evictions means promoting a history of the Reserve that endorses and celebrates pastoral use of it, rather than, as the conservationist history does, celebrating their exclusion from it²⁵. While that is the case, it is not the whole story. Pastoralists are indeed offering an alternative history of the Reserve, but theirs is not necessarily as multi-ethnic an account as other records suggest.

In summary, an oft-quoted review of African rural protest lists numerous forms of protest and debates surrounding it²⁶. It does not discuss protest arising specifically because of contests over Protected Areas. It is perhaps time to treat this as a separate category of rural protest. The commonalities between this and other forms of unrest are numerous; the continuity between agents of the state, and conservation organizations is strong, and there are many similarities in goals and purpose of state and conservation organisations²⁷. Nevertheless the internationalisation of conservation concern and agendas, and the far-reaching powers conservation has on rural people's lives, and perhaps, most of all, the fact that conservation-induced displacement can still be seen but some social scientists as 'seemingly innocuous', and by others as in people's best interests, means that it may be useful to draw attention to such cases separately.

Conservation and Development

I have argued elsewhere that the conflict between conservation and development is rooted in different values²⁸. Reconciling the competing goals necessarily involves pragmatic solutions; suggestions for such compromises at Mkomazi have been made²⁹. Generally, there is a lively debate about how to reach such compromises for Protected Areas; how to evaluate the competing claims to resources targeted for national development and how to decide when the state has a right to control resources which are needed locally. Within the debate, it is widely agreed that what is needed is to know more about the way that people

²⁵ Neumann, 1995b: 375. Cf Mduma, 1988a and b.

²⁶ Issacman, 1990.

²⁷ Rogers *et al*, forthcoming.

²⁸ Brockington and Homewood, 1996.

²⁹ Homewood *et al*, 1997; Rogers *et al*, forthcoming.

are affected by losses, for only with that knowledge can informed decisions about proposed displacements be made. In McDowell's words:

'Forced displacement, therefore, whether it is due to development, warfare, political upheaval or natural disaster has physical consequences which have to be better understood before the true costs of displacement and the benefits of development can be known.'³⁰

Conservation-induced displacement is beginning to be recognised as one of the causes of forced movement³¹. It is little different, in practice, from development-induced displacement. Both are projects undertaken for some higher good, valued by the state, or the international conservation movement, who declare 'eminent domain' over the resource in question. In addition, Protected Areas are increasingly being valued for their economic potential, and not just their worth as conservation areas³².

Cernea lists three types of loss that 'oustees' can experience following development-induced displacement³³. They can lose their homes, lands or both. Pastoralists at Mkomazi belong to the latter two categories. All have lost access to seasonal grazing grounds, others permanent homes as well.

Cernea goes on to list numerous types of poverty that can afflict 'oustees' who are moved in this way, ranging from loss of livelihoods, to greater food insecurity, decline in nutritional status and in social integration³⁴. Cernea emphasizes that the latter feature is often not sufficiently recognised, and that the informal social networks that are so important in poor rural areas, and the social capital which they create and depend upon,

³⁰ McDowell, 1996: 6.

³¹ Cernea, 1996: 298, 310.

³² Neumann, 1995b: 368-70; Pearce, 1996; Commission for Tourism, 1994; CHL, 1995; Nicholas O'Dwyer Vamos International Joint Venture Partnership, 1995. I am also grateful to Joel Freehling for an illuminating discussion on the many ways in which conservation areas in fact constitute development poles.

³³ Cernea, 1996: 297.

³⁴ Cernea, 1996, 304.

can be lost following displacement. Yet at Mkomazi there is evidence still of strong social integration. The networks of siblings and of gift-giving, the various forms of organised resistance and the lobbying of local and national government all testify to strong social networks among evicted people. The oustees from Mkomazi rather resemble the relatively well-adjusted 'self-settled' people Cernea describes than they do disintegrated societies³⁵. These findings, however, are restricted to the people who remain around the Reserve. This study cannot trace or comment on people who may have been less integrated into the societies at Mkomazi, experienced greater dislocation, and left.

As to solutions to the problems of development-induced displacement, Cernea tries to take the middle ground and argue that these conflicts are between two causes which are both right: the need for people to have authority over their own environment, and the need of the state for 'eminent domain' over its lands in the interests of national development. In such cases Cernea argues that solutions are possible to the extent that:

'... the state is prepared to recognise the losses and pains inflicted on those called to make the immediate sacrifice and accept the uprooting.'³⁶

As Neumann has argued more knowledge on its own is insufficient. He observes that around the Selous in Tanzania, community conservation measures have not addressed the unequal power relations that leave local villagers with little control over their environment or the implementation of policy³⁷. However at Mkomazi, even the knowledge base, which the organisations responsible for evicting and excluding pastoralists rely on, is poor.

The state was responsible for the removal of people, and pastoralists are suing their government for compensation. Since eviction the policy of exclusion of pastoralists from

³⁵ Cernea, 1996, 314.

³⁶ Cernea, 1996: 304.

³⁷ Neumann, 1997: 576.

the Reserve has received the active and practical support of a number of conservation organisations, of which the most prominent are the GAWPT and its sister Trust, the TW/GAAWPT. In their rhetoric there appears to be little recognition of the ‘losses and pains inflicted’ or of the understanding of the ‘true costs of displacement’.

The chairman of the GAWPT has suggested that people around the Mkomazi Game Reserve are not facing any particular problems at all but that:

‘The lot of the local villagers is no better and no worse than that of most of the rural population in Tanzania’³⁸.

What makes this conclusion rather extraordinary are the data on which it is based. When asked to support his assertion, The Chairman cited regional health statistics dated from 1982 and 1972 and relevant only for Kilimanjaro Region³⁹. It is not valid to deduce the impacts of eviction from data gathered prior to the event. The view is also not concordant with other ideas that the Chairman has published elsewhere which stress the importance of wildlife paying for itself, and the unreasonableness of expecting people near Protected Areas to pay the expenses wildlife can bring⁴⁰.

More troubling is a persistent and well thought-out campaign to portray Mkomazi as a ‘restored wilderness’, a ‘recovered pearl’, a corner of Africa saved from destruction, brought back from the brink of destruction and given a new lease of life. It casts itself almost as an African case of ‘creative conservation’, where the tide against nature has been turned back. There are a number of elements in this which are disturbing⁴¹.

First, it is by no means certain that the environment was ‘destroyed’ as a result of human occupation. This is the subject of a separate thesis. Briefly, there are still no published

³⁸ Eltringham 1997: 30.

³⁹ Eltringham to Lane 4/11/97.

⁴⁰ Eltringham, 1994: 168.

⁴¹ Cf Turton, 1996: 107.

data which support that contention, and data on plant, insect and bird biodiversity give no indication as to the effect of resident domestic grazers on recorded levels of abundance⁴². On the other hand, there are no wildebeest populations to exclude cattle from grazing grounds as at Ngorongoro, and at Mkomazi, pastoral residence may have made it harder to control the influx of poachers⁴³. However these are only possibilities and the idea that pastoralism adversely affected the ecosystem remains to be supported or refuted⁴⁴.

Second, the notion of wilderness is problematic⁴⁵. Portraying Mkomazi as a wilderness unspoiled by people denies its history, and the many ways it was used by a variety of people long resident in or near it. It is much more a reflection of Western notions of what that environment should be like, than of what Mkomazi actually has been for the people whose environment it is. Through the claims made in fund-raising documents the Trusts are re-casting Mkomazi in the minds of their funders to the mould of a world view formed in Europe and America.

Third, this campaign involves making claims which are not true. Fund-raising material of the Trusts states that evicted people were 'not indigenous to the area'⁴⁶. This is an attempt to cleanse its past from claims by various ethnic groups to have a stake in the area, and sell the concept to a large number of wealthy benefactors in the West.

These ideas are not just being circulated among wealthy western donors, but also among conservation circles elsewhere in Africa. Trusts recently set up a Black Rhinoceros sanctuary in the Reserve and have stocked it with five animals from South Africa. Before

⁴² Brockington and Homewood, 1996; Homewood and Brockington, forthcoming.

⁴³ Homewood and Rodgers, 182-5.

⁴⁴ Brockington and Homewood, 1996.

⁴⁵ Western, 1994: 18; Turton, 1987: 180; Anderson and Grove, 1987: 4-6; Adams and McShane 1992; Brockington and Homewood, 1996: 93.

⁴⁶ George Adamson African Wildlife Preservation Trust, fundraising material no date; Tony Fitzjohn / George Adamson African Wildlife Preservation Trust, fund-raising material. The full text in both documents reads: 'In 1989, when the restoration of Mkomazi was declared a National Priority Project, the Tanzanian Government was faced with a tough decision. Over the years, people and livestock had moved into the reserve, causing serious overgrazing. However the residin tribes and their livestock were not indigenous to the area, and in order to save the remaining wildlife and reverse the years of deterioration, they were relocated outside the reserve'.

the moves, two South Africans made a brief evaluation of the proposed sanctuary. They focused on the ecological aspects but addressed some remarks to the interests of local people. They wrote:

‘There appears to be limited resentment towards the Mkomazi Game Reserve by the Msaai (*sic*), as they were well aware that their permission to graze within the reserve was only a temporary one ... The more numerous Wapare and Wasambar (*sic*) tribe members within the Kisiwane (*sic*) and Usambaras areas were never historically associated with the reserve and thus have no negative feelings towards it ... it would appear that the introduction of black rhinoceros into the M(komazi)G(ame)R(eserve) would be ... little affected by the limited to dwindling negative feelings towards the reserve by the surrounding communities.’⁴⁷

When alternative views were voiced, the matter was investigated again. The South African wildlife officials were told by the Tanzanian Government that the court case dispute was being pursued by Maasai who originally came from Kenya, and that it did not have the support of the local population of Mkomazi⁴⁸. A recent draft management plan also stated that:

‘When the Mkomazi/Umba Game Reserves were established, six pastoral families were living inside and they were compensated in order to move to areas outside the reserve.’⁴⁹

None of these ideas are backed up by the archival records. It is an almost Orwellian rewriting of the area’s history, just as the representations of Mkomazi as a ‘restored

⁴⁷ Knight and Morkel, 1994: 6-7.

⁴⁸ Koch, 1997: 109.

⁴⁹ Wildlife Division, 1997: ii.

wilderness', and a sanctuary saved from the ravages of people, ignore the sentiments that those people may have had towards the Reserve. The image of Mkomazi sold by conservationists to Western funders and tourists in the west is indeed 'a desert strange' to those whose home it was.

Conclusion

The inventions that now surround Mkomazi are not atypical. Indeed the Reserve was founded on such ideas, and many other Protected Areas around the world began with, and have thrived upon, such views. However many dissenting opinions are voiced, the appeal of the wild is powerful to those with the resources to ensure that land is set aside to be, or become, wilderness. If it is a myth, it is an exceptionally sticky one, and will remain, and probably dominate, for many decades⁵⁰.

Nevertheless it is a view which is being increasingly challenged. Its validity and the consequences of its application are being questioned. At the beginning of this thesis I set out to provide the kind of in depth study needed to assess the impact of conservation-induced displacement on people. The contribution of this thesis is to show that there can be, and needs to be, careful study of the consequences of land loss on livelihoods. This thesis has brought out some of the hidden, but considerable, costs that some people have to pay as a consequence of conservation policy and which will need to be dealt with as 'community conservation' is increasingly applied. Talk of reconciling conflicting aims, benefit sharing and participation, will need to be followed up by careful assessment of what the costs and benefits of particular options are for different groups of people. Only then is it possible to move on from simplistic narratives of compatibility or 'community-gain' that can characterise debate about 'community conservation'⁵¹.

I also set out to learn more about the consequences of eviction for pastoralists. I have been able to build up a picture of qualitative change of livelihoods following land

⁵⁰ Leach and Mearns, 1996: 28; Adams and Hulme, 1994: 4-8.

⁵¹ Adams and Hulme, 1996: 8, 12.

alienation. I have shown that there has been vigorous resistance to restrictions on land use both now and over the last 40 years. There is much continuity in the nature of the pastoralists' response to conditions at Mkomazi, both with past occasions, and with other pastoral societies.

The contribution of this thesis to the debate about pastoral change is to fill in a gap in our knowledge about responses to eviction and displacement in East Africa. Following other authors, I have shown that unwelcome change is normal in these peoples' lives, and that, amongst this sample, eviction and displacement has not had wholly catastrophic effects. Impoverishment followed, and hardship with it, but in the case of Mkomazi, those ills have been partly balanced by the tenacity with which people deal with their circumstances.

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Appendix One

Calculation of Cattle Population Dynamics

Fertility and mortality rates were calculated from these data in terms of the amount of time in which a cow is at risk of dying or giving birth. The unit of time is a 'cow year at risk' of an event happening. The purpose of this is easiest to understand when considering fertility. A herd of 20 cows may include 10 animals which are too young to give birth. Relevant fertility rates must only include the mature animals. Furthermore it is important to know for how long each of these 10 mature cows is at risk for during the year. Two cows may be sold in June and thus will only have been at risk of giving birth for 6 months, another may only have matured in May and so will only be at risk of giving birth for 7 months.

These data recorded the timing of events by calendar year. It was not possible to determine when in the year an animal died. Assumptions had to be made when calculating cow years at risk.

If a fertile animal is present at the beginning of the year and at the end of the year there are 12 months at which it is at risk of giving birth or dying. If it dies, it is assumed to die in the middle of the year; it is therefore assumed to be present for just 6 months, and so is only at risk of giving birth for 6 months.

When an animal is born it is assumed to be born in the middle of the year and so present for just 6 months. In the first year of its birth it is only at risk of dying for 6 months. An animal is considered to be fertile 4 years after it is born. In the first year when it becomes fertile it will only be at risk of giving birth for 6 months as it was born halfway through the year.

For most animals I know when they were born, when they started giving birth and when they left the household herd through death, slaughter, sale or being given away. However for some animals information is less complete. First, I do not know when some animals were born. For all of these however, I know when they first gave birth. I assume that they were fertile, and at risk of giving birth, one year before they are recorded doing so. If these animals gave birth before the

operation, I assume that they remain fertile for half the average fertile life of an East African Zebu cow. I estimate that an East African Zebu could expect to live to be giving birth for about 8 years, and that therefore cows of unknown age who first gave birth before eviction remained fertile for 4 years.

For the purposes of this analysis an animal which left the household herd through any means is not included in the calculations of cow months at risk of giving birth. These results then, are a record of the fertility of the managed herd, not of a cattle population. These calculations are summarised in box 6.1.

Mortality rates are similarly calculated on the basis of cow-years-at-risk of dying. Animals present throughout a year are at risk of dying for twelve months. Those that leave the herd or die were at risk of dying for six months as are those that were born or entered the herd that year. Indices of mortality of deaths per cow year were calculated by dividing the number of deaths in a calendar year by the number of cow years at risk lived that calendar year. Additional rates of sale, livestock gift giving, slaughter and general offtake can also be worked out with similar calculations.

Appendix Two

Looking for missing siblings

To detect for missing siblings I 'used a binomial expansion of the probabilities of different proportions of brothers and sisters in each sibling group size' (page 66). This appendix sets out in detail the steps involved.

It involves three steps:

1. Divide the siblings reported into maternal sibling groups.
2. Set out how many possible combinations of brothers and sisters there are for each group size.
3. Predict how many sibling groups will fall into each category of brother/sister combination.

Maternally sibling groups

The survey of siblings provides a list of the adult, living, siblings of each respondent, their gender, and the name of each sibling's mother (Table A2.1).

Table A2.1 Sample of the data

Respondent	District	Mother	Sibling	gender
N. K.	Lushoto	L.	N. K.	f
N. K.	Lushoto	L.	Y.	m
N. K.	Lushoto	L.	P.	m
N. K.	Lushoto	A.	D.	m
N. K.	Lushoto	A.	P.	m

This shows that N.K. from Lushoto District has two male full-siblings and two male half-siblings who are each others' full siblings.

From this information the siblings can be grouped into maternal sibling groups. The full-siblings of the respondent, including the respondent(s), are grouped, and the half-siblings of the respondent are grouped according to their mothers. Only full siblings are used in this exercise as they are the best remembered siblings. Reporting of half siblings was unreliable.

Possible combinations of proportions of brothers and sisters

The nub of the analysis examines whether there has been under-reporting of male or female siblings. This can be measured by calculating what proportion of sisters one would expect to find in this distribution of full sibling groups and comparing it to that actually found. It makes no difference whether one chooses to measure sisters of brothers, here I will talk about sisters.

There are several steps to this calculating the predicted proportion of sisters. First, I assume that there is an equal chance of men and women surviving to, and persisting in, adulthood. This assumes equal chances of boys and girls being born, equal chances of them surviving childhood, equal chances of them surviving being warriors or childbirth and equal chances of them living through old age. None of this is true but a 50-50 split is a good approximation.

Second, I estimate the likelihood of having a certain proportion of sisters in any given sibling group size. For example, if there is one adult living person in the sibling group then there is a 50% chance they will be a man and a 50% chance they will be a woman. If there are two people in a sibling group then they could be both female (ff), both male (mm), or one of each. There are two possibilities for the last combination, either the daughter is born first (fm), or the son (mf). For a doubleton sibling group there are four combinations in total, there is a 25% chance of the group being all female or all male, and a 50% chance of there being a brother and a sister.

This procedure is repeated for all the other sibling group sizes in the sample. The combinations for three member sibling groups and four member sibling groups are given below (Table A2.2). The decimal fraction at the bottom of each cell is the probability of that particular proportion of men and women occurring in any given sibling group.

Table A2.2: Predicting the gender make up of sibling groups

Family size	Combinations possible.								
3		mmm 1/8 0.125		mmf mfm fmm 3/8 0.375		mff fmf ffm 3/8 0.375		fff 1/8 0.125	
4	mmmm 1/16 0.0625		mmmf mmfm mfmm fmmm 4/16 0.25		ffmm fmfm fmmf mfmf mmff mffm 6/16 0.375		mfff fmff ffmf ffim 4/16 0.25		ffff 1/16 0.0625

Third, it is necessary to modify the expected probabilities of any given mixes of the sexes according to the gender of the respondent. In this analysis I am only dealing with the full sibling groups reported by men or women. The respondent's gender will influence the chances of the any given mixes of men and women occurring. For example, in a 3 member sibling group reported by a male respondent there is already one male child (Table A2.3). There are therefore variously one way of having two women in the group (ff), two ways of having one woman in the group (mf or fm) and one way of having only men (mm). It is impossible to have all women (fff).

Table A2.3: Constructing the respondent dependent sibling groups

Male already in the group	m	m	m
Possible Combinations	mm	mf fm	ff
	1/4 0.25	2/4 0.5	1/4 0.25

Predicting combinations for this sample

The expected proportions of sisters in a given sibling group size reported by men or women is calculated by multiplying the number of cases of that sibling group by its appropriate probabilities. For example in these data, five male respondents reported three member sibling groups. According to Table ?? above, one would expect just 1.25 of the groups to be all male, 2.5 to be have two men and 1.25 to be have two women. This calculation is repeated for all the sibling groups reported by men and women separately. By treating male

and female respondents' groups separately in this way it is possible to cope with the skewed sample.

The total proportion of brothers and sisters expected for sibling groups of different sizes is then calculated. The data are represented in the form of a table which shows the number of all male groups expected, the number of groups which are 75-99% male, the number which are 51-74% male, the number which are 50% male and so on. Those data were shown in table 6.8 above, chapter 6.

Appendix Three

Cattle Census Data

Pare District, May 1953.

May-53		Bulls	Bullocks	Cows	Heifers	Calves	Cattle	Male Cattle	Female cattle	Goats	Sheep	Small stock	Small stock:Cattle
Same	Same	122	91	919	299	372	1,803	22%	78%	691	474	1,165	0.6461
	Ruvu	281	496	4,156	1,422	1,991	8,346	21%	79%	2,056	1,409	3,465	0.4152
	Chatto	-	-	313	-	54	367	7%	93%	978	154	1,132	3.0845
	Kivereni	33	20	338	96	78	565	16%	84%	738	139	877	1.5522
	Minyala	17	11	73	61	22	184	21%	79%	428	144	572	3.1087
	Lembeni	52	44	172	68	88	424	33%	67%	1,525	327	1,852	4.3679
	Kilometa	164	133	1,064	423	570	2,354	25%	75%	338	69	407	0.1729
	Makungwini	7	12	31	14	16	80	34%	66%	166	38	204	2.5500
	Kiverenge	51	40	170	82	91	434	31%	69%	1,440	184	1,624	3.7419
	Buguru	29	19	144	32	64	288	28%	72%	362	77	439	1.5243
	Mugunga	23	17	99	28	63	230	31%	69%	282	118	400	1.7391
	Total	779	883	7,479	2,525	3,409	15,075	22%	78%	9,004	3,133	12,137	0.8051
Mbaga	Masandare	114	77	999	373	256	1,819	18%	82%	946	612	1,558	0.8565
	Upune	126	396	3,463	725	1,886	6,596	22%	78%	2,446	1,925	4,371	0.6627
	Mbaga	69	44	151	101	331	696	40%	60%	505	223	728	1.0460
	Mwembe	73	22	336	117	147	695	24%	76%	1,866	471	2,337	3.3626
	Vudee (plain)	80	19	365	156	209	829	25%	75%	983	573	1,556	1.8770
	Vudee (hilly)	28	5	104	38	59	234	27%	73%	533	112	645	2.7564
	Kisiwani	30	12	11	41	101	195	47%	53%	1,241	935	2,176	11.1590
	Total	520	575	5,429	1,551	2,989	11,064	23%	77%	8,520	4,851	13,371	1.2085
Mamba	Karamba	118	19	579	145	328	1,189	25%	75%	586	335	921	0.7746
	Kalemawe	14	60	233	84	174	565	28%	72%	218	228	446	0.7894
	Kihurio	50	8	230	86	316	690	31%	69%	43	68	111	0.1609

May-53		Bulls	Bullocks	Cows	Heifers	Calves	Cattle	Male Cattle	Female cattle	Goats	Sheep	Small stock	Small stock:Cattle
Usangi	Kilomeni	25	2	82	23	57	189	29%	71%	355	62	417	2.2063
	Lembeni plains	165	86	485	161	256	1,153	33%	67%	3,203	667	3,870	3.3565
	Kisangara plains	134	65	685	255	304	1,443	24%	76%	3,420	355	3,775	2.6161
	Lembeni hills (Sofe)	14	-	79	14	42	149	23%	77%	129	59	188	1.2617
	Kisangara hills (Ngujini)	16	-	60	9	32	117	27%	73%	75	50	125	1.0684
	Bumbuli	32	-	120	13	87	252	30%	70%	280	76	356	1.4127
	Ruru plains	18	6	41	9	30	104	38%	63%	66	38	104	1.0000
	Toloha Pare	312	78	710	185	414	1,699	35%	65%	955	503	1,458	0.8582
	Toloha Masai	730	322	2,261	571	1,193	5,077	32%	68%	788	259	1,047	0.2062
	Ngulu plain	86	30	485	67	229	897	26%	74%	1,626	655	2,281	2.5429
	Kwako plain	142	57	882	130	436	1,647	25%	75%	1,960	1,159	3,119	1.8937
	Kiriche	14	-	167	65	97	343	18%	82%	44	110	154	0.4490
	Mabweni/Kwamsambea	54	-	339	145	216	754	21%	79%	291	290	581	0.7706
	Mshewa	335	-	571	302	366	1,574	33%	67%	529	588	1,117	0.7097
	Kilongwe	56	-	460	58	224	798	21%	79%	200	237	437	0.5476
	Total	2,133	646	7,427	2,007	3,983	16,196	29%	71%	13,921	5,108	19,029	1.1749
Hedaru	Kihurio Hedaru	84	15	300	72	225	696	30%	70%	168	143	311	0.4468
	Bendera	75	43	755	189	466	1,528	23%	77%	177	230	407	0.2664
	Mkimai	14	7	54	5	36	116	34%	66%	62	40	102	0.8793
	Hedaru plain	85	74	1,281	230	464	2,134	18%	82%	860	225	1,085	0.5084
	Total	258	139	2,390	496	1,191	4,474	22%	78%	1,267	638	1,905	0.4258
Hedaru	Hedaru hills	54	4	187	78	88	411	25%	75%	195	220	415	1.0097
	Kirangare	87	32	395	109	129	752	24%	76%	331	56	387	0.5146
	Total	141	36	582	187	217	1,163	25%	75%	526	276	802	0.6896
Ugweno Hills	Msangeni	47	2	300	141	224	714	23%	77%	347	231	578	0.8095
	Shighatini	46	-	375	116	249	786	22%	78%	269	163	432	0.5496
	Mwaniko	8	4	526	146	315	999	17%	83%	324	355	679	0.6797
	Masumbeni	5	-	176	29	99	309	18%	82%	119	69	188	0.6084
	Mruma	4	-	169	14	87	274	17%	83%	181	59	240	0.8759
	Vuchama	17	-	222	96	142	477	18%	82%	438	330	768	1.6101
	Lambo	35	4	287	31	163	520	23%	77%	387	214	601	1.1558
	Total	162	10	2,055	573	1,279	4,079	20%	80%	2,065	1,421	3,486	0.8546
Ugweno plain	Kileo	240	197	1,422	947	1,379	4,185	27%	73%	2,594	1,577	4,171	0.9967

May-53		Bulls	Bullocks	Cows	Heifers	Calves	Cattle	Male Cattle	Female cattle	Goats	Sheep	Small stock	Small stock:Cattle
	Kitoghoto and Jipe	201	68	726	286	619	1,900	30%	70%	2,751	1,567	4,318	2.2726
	Mwanga	379	147	1,297	538	811	3,172	29%	71%	3,875	1,025	4,900	1.5448
	Kifaru and Kituri	206	115	713	327	379	1,740	29%	71%	1,246	870	2,116	1.2161
	Total	1,026	527	4,158	2,098	3,188	10,997	29%	71%	10,466	5,039	15,505	1.4099
Summary	Same	779	883	7,479	2,525	3,409	15,075	22%	78%	9,004	3,133	12,137	0.8051
early1953	Mbaga	520	575	5,429	1,551	2,989	11,064	23%	77%	8,520	4,851	13,371	1.2085
	Mamba	626	158	2,361	835	1,837	5,817	29%	71%	2,046	1,918	3,964	0.6815
	Suji	95	90	633	195	383	1,396	27%	73%	1,440	551	1,991	1.4262
	Chome	718	1,439	6,417	2,507	3,071	14,152	26%	74%	5,598	3,544	9,142	0.6460
	Gonja plains	999	584	3,194	1,441	2,391	8,609	32%	68%	2,483	2,822	5,305	0.6162
	Gonja hills	285	-	538	359	257	1,439	29%	71%	1,428	646	2,074	1.4413
	Usangi	2,133	646	7,427	2,007	3,983	16,196	29%	71%	13,921	5,108	19,029	1.1749
	Hedaru	399	175	2,972	683	1,408	5,637	23%	77%	1,793	914	2,707	0.4802
	Ugwenno	1,188	537	6,213	2,671	4,467	15,076	26%	74%	12,531	6,460	18,991	1.2597
PareDistrict	Total	7,742	5,087	42,663	14,774	24,195	94,461	26%	74%	58,764	29,947	88,711	0.9391

Pare District; second half of 1953.

Secondhalf53		Bulls	Bullocks	Cows	Heifers	M calves	F Calves	Cattle	M Cattle	F cattle	M goats	F goats	Goats	M Sheep	F Sheep	Sheep	S'stock	S'stock:Cattle
Same	Same	229	225	2,404	913	439	323	4,533	20%	80%	669	1,653	2,322	293	396	689	3,011	0.6642
	Ruvu-Kirya	44	760	63	304	127	136	1,434	65%	35%	114	365	479	43	83	126	605	0.4219
	Ruvu-Marwa	56	117	1,593	612	110	269	2,757	10%	90%	762	259	1,021	169	286	455	1,476	0.5354
	Ruvu-Ngarashi	113	322	2,709	793	204	563	4,704	14%	86%	340	1,407	1,747	226	299	525	2,272	0.4830
	Minyala	10	3	265	74	30	19	401	11%	89%	68	177	245	94	287	381	626	1.5611
	Chatto	16	5	175	59	18	11	284	14%	86%	354	468	822	73	145	218	1,040	3.6620
	Kivereni	13	2	146	37	12	33	243	11%	89%	107	316	423	22	47	69	492	2.0247
	Kilometa	460	235	1,345	674	516	835	4,065	30%	70%	795	1,915	2,710	176	390	566	3,276	0.8059
	Makungwini	16	21	45	24	11	15	132	36%	64%	117	209	326	26	30	56	382	2.8939
	Kiverenge	65	41	209	120	39	75	549	26%	74%	409	1,210	1,619	90	114	204	1,823	3.3206
	Bunguru	31	22	162	40	31	47	333	25%	75%	121	256	377	32	45	77	454	1.3634
	Mgunga	24	19	110	31	24	40	248	27%	73%	132	216	348	20	105	125	473	1.9073
	Total	1,077	1,772	9,226	3,681	1,561	2,366	19,683	22%	78%	3,988	8,451	12,439	1,264	2,227	3,491	15,930	0.8093
Mbaga	Masandare	87	45	580	241	131	153	1,237	21%	79%	236	293	529	173	301	474	1,003	0.8108
	Upunc	186	551	602	693	448	467	2,947	40%	60%	962	1,879	2,841	733	1,469	2,202	5,043	1.7112
	Vudee (plain)	48	30	270	136	97	87	668	26%	74%	338	2,373	2,711	115	396	511	3,222	4.8234
	Kisiwani (plain)	57	20	152	45	35	32	341	33%	67%	337	1,211	1,548	268	633	901	2,449	7.1818
	Mwembe (plain)	108	29	393	193	103	112	938	26%	74%	371	3,072	3,443	118	355	473	3,916	4.1748
	Mbaga (hilly)	214	-	619	268	97	117	1,315	24%	76%	218	978	1,196	88	261	349	1,545	1.1749
	Vudee (hilly)	68	6	258	97	50	37	516	24%	76%	162	529	691	106	163	269	960	1.8605
	Total	768	681	2,874	1,673	961	1,005	7,962	30%	70%	2,624	10,335	12,959	1,601	3,578	5,179	18,138	2.2781
Mamba	Kalemawe +Karamba	132	26	200	177	91	92	718	35%	65%	110	495	605	97	486	583	1,188	1.6546
	Kihurio	66	12	236	146	72	57	589	25%	75%	44	197	241	89	153	242	483	0.8200
	Ndungu	125	50	814	260	157	182	1,588	21%	79%	137	541	678	159	672	831	1,509	0.9503
	Jitengeni	95	10	353	99	58	62	677	24%	76%	221	345	566	21	90	111	677	1.0000
	Ivongo Ihindi	61	8	112	52	12	18	263	31%	69%	35	342	377	29	232	261	638	2.4259
	Mamba	269	-	722	372	78	312	1,753	20%	80%	509	840	1,349	136	390	526	1,875	1.0696
	Total	748	106	2,437	1,106	468	723	5,588	24%	76%	1,056	2,760	3,816	531	2,023	2,554	6,370	1.1399
Suji	Kitivo	47	24	351	82	89	97	690	23%	77%	134	602	736	66	213	279	1,015	1.4710
	Mango loma	38	-	130	20	41	36	265	30%	70%	65	285	350	52	250	302	652	2.4604
	Suji (hills)	79	-	275	197	98	154	803	22%	78%	286	590	876	76	272	348	1,224	1.5243
	Total	164	24	756	299	228	287	1,758	24%	76%	485	1,477	1,962	194	735	929	2,891	1.6445

Secondhalf53		Bulls	Bullocks	Cows	Heifers	M calves	F Calves	Cattle	M Cattle	F cattle	M goats	F goats	Goats	M Sheep	F Sheep	Sheep	S'stock	S'stock:Cattle
Chome	Mvungwe	1,233	1,003	5,484	1,264	898	1,032	10,914	29%	71%	1,016	3,588	4,604	1,400	3,006	4,406	9,010	0.8255
	Makanya station	77	48	481	258	196	136	1,196	27%	73%	141	305	446	163	333	496	942	0.7876
	Ngwashi Chome	62	18	341	34	52	40	547	24%	76%	60	285	345	43	182	225	570	1.0420
	Chome (hills) Tae	33	-	334	65	34	28	494	14%	86%	47	140	187	32	61	93	280	0.5668
	Total	1,405	1,069	6,640	1,621	1,180	1,236	13,151	28%	72%	1,264	4,318	5,582	1,638	3,582	5,220	10,802	0.8214
Gonjaplains	Makokani	300	200	1,000	406	200	350	2,456	29%	71%	250	310	560	110	238	348	908	0.3697
	Makongo ya Nzige	330	210	920	300	140	520	2,420	28%	72%	203	400	603	94	210	304	907	0.3748
	Kizerui	150	95	438	200	150	267	1,300	30%	70%	102	299	401	100	499	599	1,000	0.7692
	Kadando	170	70	500	265	168	289	1,462	28%	72%	319	410	729	168	465	633	1,362	0.9316
	Mkoro	140	25	520	230	190	282	1,387	26%	74%	223	420	643	210	525	735	1,378	0.9935
	Kambaga	30	10	80	30	40	45	235	34%	66%	39	59	98	33	49	82	180	0.7660
	Bumba	20	28	120	30	30	80	308	25%	75%	25	40	65	9	20	29	94	0.3052
	Mabili	10	20	55	35	10	39	169	24%	76%	9	20	29	3	9	12	41	0.2426
	Total	1,150	658	3,633	1,496	928	1,872	9,737	28%	72%	1,170	1,958	3,128	727	2,015	2,742	5,870	0.6029
Gonjahilly	Fanga	95	-	190	100	40	78	503	27%	73%	98	330	428	50	119	169	597	1.1869
	Vuje	45	-	91	53	20	33	242	27%	73%	78	159	237	45	118	163	400	1.6529
	Bombo	38	-	90	43	40	10	221	35%	65%	57	54	111	244	100	344	455	2.0588
	Mtii	57	-	105	84	20	35	301	26%	74%	77	307	384	28	90	118	502	1.6678
	Lugulu	52	-	61	45	19	30	207	34%	66%	25	95	120	22	45	67	187	0.9034
	Total	287	-	537	325	139	186	1,474	29%	71%	335	945	1,280	389	472	861	2,141	1.4525
Usangiplains	Kilomeni	27	5	113	27	22	39	233	23%	77%	115	240	355	20	51	71	426	1.8283
	Sofe	13	3	90	12	13	32	163	18%	82%	37	90	127	21	39	60	187	1.1472
	Lembeni plains	65	49	199	67	43	54	477	33%	67%	526	1,025	1,551	126	205	331	1,882	3.9455
	Kisangara plains	142	63	750	260	105	211	1,531	20%	80%	1,100	2,325	3,425	55	303	358	3,783	2.4709
	Kiruru	29	30	301	39	110	221	730	23%	77%	200	317	517	97	142	239	756	1.0356
	Ngulu plain	76	163	302	46	161	193	941	43%	57%	63	1,152	1,215	67	252	319	1,534	1.6302
	Kwakoa	53	123	385	119	94	106	880	31%	69%	83	358	441	101	107	208	649	0.7375
	Nyata	45	39	371	74	66	431	1,026	15%	85%	54	312	366	25	108	133	499	0.4864
	Ruru plains	77	127	419	174	101	159	1,057	29%	71%	109	520	629	40	188	228	857	0.8108
	Toloha Masai	409	227	1,415	483	241	344	3,119	28%	72%	151	420	571	129	237	366	937	0.3004
	Toloha Parc	190	148	925	304	165	258	1,990	25%	75%	227	626	853	65	279	344	1,197	0.6015
	Total	1,126	977	5,270	1,605	1,121	2,048	12,147	27%	73%	2,665	7,385	10,050	746	1,911	2,657	12,707	1.0461
Usangihills	Kilomeni	16	-	151	44	41	55	307	19%	81%	56	88	144	24	39	63	207	0.6743
	Kisangara hills	15	1	62	10	11	20	119	23%	77%	30	47	77	20	32	52	129	1.0840
	Kiriche	97	2	455	228	175	211	1,168	23%	77%	78	307	385	131	372	503	888	0.7603
	Kilaweni	61	-	276	120	93	110	660	23%	77%	24	210	234	32	129	161	395	0.5985

Secondhalf53		Bulls	Bullocks	Cows	Heifers	M calves	F Calves	Cattle	M Cattle	F cattle	M goats	F goats	Goats	M Sheep	F Sheep	Sheep	S'stock	S'stock:Cattle
	Mabweni	51	-	441	132	131	155	910	20%	80%	38	203	241	87	296	383	624	0.6857
	Mshewa	59	-	373	141	161	212	946	23%	77%	43	311	354	73	304	377	731	0.7727
	Total	299	3	1,758	675	612	763	4,110	22%	78%	269	1,166	1,435	367	1,172	1,539	2,974	0.7236
	Hedaru	222	230	1,812	496	314	448	3,522	22%	78%	431	1,582	2,013	337	708	1,045	3,058	0.8683
	Bendera	185	27	559	135	127	119	1,152	29%	71%	137	237	374	41	185	226	600	0.5208
	Total	407	257	2,371	631	441	567	4,674	24%	76%	568	1,819	2,387	378	893	1,271	6,045	1.2933
	Ugwenohills	49	6	313	151	113	122	754	22%	78%	174	201	375	117	131	248	623	0.8263
	Shighatini	51	7	391	110	148	130	837	25%	75%	142	158	300	102	140	242	542	0.6476
	Mwaniko	15	11	552	162	124	153	1,017	15%	85%	158	192	350	202	187	389	739	0.7266
	Masumbeni	10	2	192	32	57	51	344	20%	80%	104	72	176	47	61	108	284	0.8256
	Vuchama	28	8	363	143	116	122	780	19%	81%	373	660	1,033	187	286	473	1,506	1.9308
	Mruma	9	2	174	22	35	50	292	16%	84%	76	105	181	37	64	101	282	0.9658
	Lambo	42	7	301	55	89	93	587	24%	76%	201	217	418	174	190	364	782	1.3322
	Totals	204	43	2,286	675	682	721	4,611	20%	80%	1,228	1,605	2,833	866	1,059	1,925	4,758	1.0319
	Ugwenoplain	210	282	1,464	455	581	651	3,643	29%	71%	974	2,220	3,194	715	1,624	2,339	5,533	1.5188
	Kitiri	24	12	180	66	60	81	423	23%	77%	92	244	336	32	115	147	483	1.1418
	Kifaru	95	80	470	197	167	174	1,183	29%	71%	450	938	1,388	275	561	836	2,224	1.8800
	Mwanga	235	106	915	425	292	323	2,296	28%	72%	907	2,358	3,265	265	699	964	4,229	1.8419
	Kitoghoto	34	12	201	87	88	88	510	26%	74%	469	770	1,239	294	494	788	2,027	3.9745
	Kambi ya Simba	81	28	496	188	184	225	1,202	24%	76%	569	949	1,518	299	677	976	2,494	2.0749
	Total	679	520	3,726	1,418	1,372	1,542	9,257	28%	72%	3,461	7,479	10,940	1,880	4,170	6,050	16,990	1.8354
	Summary	1,077	1,772	9,226	3,681	1,561	2,366	19,683	22%	78%	3,988	8,451	12,439	1,264	2,227	3,491	15,930	0.8093
	late1952	768	681	2,874	1,673	961	1,005	7,962	30%	70%	2,624	10,335	12,959	1,601	3,578	5,179	18,138	2.2781
	Mamba	748	106	2,437	1,106	468	723	5,588	24%	76%	1,056	2,760	3,816	531	2,023	2,554	6,370	1.1399
	Suji	164	24	756	299	228	287	1,758	24%	76%	485	1,477	1,962	194	735	929	2,891	1.6445
	Chome	1,405	1,069	6,640	1,621	1,180	1,236	13,151	28%	72%	1,264	4,318	5,582	1,638	3,582	5,220	10,802	0.8214
	Gonja plains	1,150	658	3,633	1,496	928	1,872	9,737	28%	72%	1,170	1,958	3,128	727	2,015	2,742	5,870	0.6029
	Gonja hills	287	-	537	325	139	186	1,474	29%	71%	335	945	1,280	389	472	861	2,141	1.4525
	Usangi plains	1,126	977	5,270	1,605	1,121	2,048	12,147	27%	73%	2,665	7,385	10,050	746	1,911	2,657	12,707	1.0461
	Usangi hills	299	3	1,758	675	612	763	4,110	22%	78%	269	1,166	1,435	367	1,172	1,539	2,974	0.7236
	Hedaru	407	257	2,371	631	441	567	4,674	24%	76%	568	1,819	2,387	378	893	1,271	6,045	1.2933
	Ugwenohills	883	563	6,012	2,093	2,054	2,263	13,868	25%	75%	4,689	9,084	13,773	2,746	5,229	7,975	21,748	2.8672
PareDistrict	Total	8,314	6,110	41,514	15,205	9,693	13,316	94,152	26%	74%	19,113	49,698	68,811	10,581	23,837	34,418	105,616	1.1218

Pare District, 1978.

Village	Sublocation	MCattle	FCattle	AllCattle	MShp	FShp	AllShp	MGts	FGts	AllGts
Usangi	Kwakoa	1344	3182	4526	466	1980	2446	1340	3595	4935
Usangi	Toloha	1186	2731	3917	315	455	770	920	1110	2030
Usangi	Total	2530	5913	8443	781	2435	3216	2260	4705	6965
Same-Njoro	Njoro	1814	5051	6865	1647	3212	4859	2007	4950	6957
Same-Njoro	Vumari/Kizungu	1632	2705	4337	1333	2839	4172	2012	6256	8268
Same-Njoro	Total	3446	7756	11202	2980	6051	9031	4019	11206	15225
Ruvu	Mferejini	3375	9544	12919	4569	8415	12984	4896	12426	17322
Ruvu	Total	3375	9544	12919	4569	8415	12984	4896	12426	17322
Same	BomaniPolisi	18	28	46	110	135	245	276	441	717
Same	Masandare	875	2171	3046	886	1141	2027	1089	2926	4015
Same	Kavambugu	814	1912	2726	346	657	1003	942	2020	2962
Same	Kisima-ujenzi	351	727	1078	390	586	976	1099	2334	3433
Same	Total	2058	4838	6896	1732	2519	4251	3406	7721	11127
Kiswani	Barazani	7476	10246	17722	1358	2235	3593	2514	4623	7137
Kiswani	Igoma	68	137	205	90	125	215	88	299	387
Kiswani	Ijinyu	1203	3658	4861	354	841	1195	532	1685	2217
Kiswani	Total	8747	14041	22788	1802	3201	5003	3134	6607	9741
Maore	Kadondo	360	1465	1825	120	640	760	76	243	319
Maore	Maore	86	260	346	141	363	504	180	602	782
Maore	Mheza	359	989	1348	122	376	498	237	779	1016
Maore	Mhesa/Nadururu	121	358	479	81	127	208	146	290	436
Maore	Mpirani	57	223	280	134	321	455	151	520	671
Maore	Makokane	1191	3681	4872	201	707	908	328	1099	1427
Maore	Kifuka	2595	5006	7601	1160	1398	2558	1692	2126	3818
Maore	Total	4769	11982	16751	1959	3932	5891	2810	5659	8469
Ngungu	Kalemawe	659	881	1540	126	377	503	221	552	773
Ndungu	Misufuni	176	402	578	162	373	535	124	426	550
Ndungu	Ndungu	358	534	892	188	479	667	179	521	700
Ndungu	Bagamoyo	351	532	883	476	622	1098	175	518	693
Ndungu	Total	1544	2349	3893	952	1851	2803	699	2017	2716
Kihurio	Bendera	392	684	1076	366	983	1349	582	1432	2014
Kihurio	Mgandu	330	405	735	411	1021	1432	229	585	814
Kihurio	Kandokoro	312	398	710	268	722	990	195	500	695
Kihurio	Maore-Kongei	320	385	705	356	929	1285	284	772	1056
Kihurio	Usambara	817	1269	2086	484	1305	1789	501	1324	1825
Kihurio	Karamba	497	884	1381	128	376	504	217	552	769
Kihurio	Total	2668	4025	6693	2013	5336	7349	2008	5165	7173
Total		29137	60448	89585	16788	33740	50528	23232	55506	78738

Same and Mwanga District, 1984.

		Cattle			Immature	Male	All			Female	All	All	Male	Female	Immature	All	Male	Female	Immature	All
Village	Sublocation	Keepers	Bulls	Steers	Males	Calves	Male	Cows	Heifers	Calves	Females	Cattle	Sheep	Sheep	Sheep	Sheep	Goats	Goats	Goats	Goats
Usangi*	Toloha											3527				1669				2083
Usangi*	Kwakoa											4963				2093				5292
	Total											8490				3762				7375
Lembeni*	Mgagao											6048				1033				4663
Same-Njoro	Njoro	74	148	44	165	212	569	1129	188	336	1653	2222	279	993	301	1573	541	1936	541	3018
Same-Njoro	Vumari/ Kizungo	182	395	156	431	334	1316	1845	564	377	2786	4102	451	1582	530	2563	900	3042	1073	5015
Same-Njoro	Total	256	543	200	596	546	1885	2974	752	713	4439	6324	730	2575	831	4136	1441	4978	1614	8033
Ruvu	Jiungeni	32	212	269	213	260	954	1443	405	257	2105	3059	229	737	308	1274	314	843	324	1481
Ruvu	Mfere/ Mkangeni	12	92	66	132	143	433	467	140	60	667	1100	96	328	86	510	215	1011	314	1540
Ruvu	Mferejini	52	319	333	515	687	1854	3029	844	690	4563	6417	532	1614	359	2505	748	2522	824	4094
Ruvu	Total	96	623	668	860	1090	3241	4939	1389	1007	7335	10576	857	2679	753	4289	1277	4376	1462	7115
Same	Kwakoko	163	353	514	402	489	1758	2938	861	638	4437	6195	516	1389	289	2194	1005	4195	858	6058
Same	Mjini	51	43	1	57	57	158	260	79	69	408	566	88	263	62	413	338	1154	227	1719
Same	Total	214	396	515	459	546	1916	3198	940	707	4845	6761	604	1652	351	2607	1343	5349	1085	7777
Kiswani	Barazani	17	8	0	0	9	17	38	3	10	51	68	77	305	109	491	121	625	173	919
Kiswani	Kavateta	12	1144	622	721	644	3131	5243	1735	739	7717	10848	141	470	124	735	328	1339	312	1979
Kiswani	Igoma	24	24	12	31	42	109	106	13	32	151	260	43	157	54	254	57	223	71	351
Kiswani	Kisima	16	99	54	195	257	605	1148	192	330	1670	2275	28	102	26	156	107	416	82	605
Kiswani	Ijinyu	52	50	20	39	34	143	161	34	67	262	405	77	323	48	448	137	470	116	723
Kiswani	Total	121	1325	708	986	986	4005	6696	1977	1178	9851	13856	366	1357	361	2084	750	3073	754	4577
Maore	Kadondo	62	23	27	70	154	274	508	108	153	769	1043	59	557	178	794	64	514	147	725
Maore	Maore	24	2	0	3	10	15	27	1	8	36	51	82	303	104	489	70	295	98	463

Village	Sublocation	Cattle			Immature	Male	All	Cows	Heifers	Female	All	All	Male	Female	Immature	All	Male	Female	Immature	All
		Keepers	Bulls	Steers	Males	Calves	Male			Calves	Females	Cattle	Sheep	Sheep	Sheep	Sheep	Goats	Goats	Goats	Goats
Maore	Mheza	59	1170	1286	1440	1373	5269	10852	4331	2012	17195	22464	47	278	93	418	57	448	149	654
Maore	Mhesa Nadururu	43	45	117	95	276	533	1051	276	354	1681	2214	234	1234	168	1636	533	2504	410	3447
Maore	Mpirani	42	54	0	19	42	115	152	38	44	234	349	21	115	49	185	59	338	164	561
Maore	Total	230	1294	1430	1627	1855	6206	12590	4754	2571	19915	26121	443	2487	592	3522	783	4099	968	5850
Ngungu	Kalemawe	62	61	20	90	139	310	798	233	165	1196	1506	57	395	132	584	70	654	201	925
Ndungu	Misufuni	82	367	176	415	357	1315	1835	311	412	2558	3873	118	751	315	1184	271	1423	670	2364
Ndungu	Ndungu	129	108	33	106	228	475	744	242	235	1221	1696	142	768	300	1210	146	846	341	1333
Ndungu	Total	273	724	229	611	724	2100	3377	786	812	4975	7075	317	1914	747	2978	487	2923	1212	4622
Kihurio	Bendera	75	144	81	126	180	531	475	138	247	860	1391	394	916	544	1854	487	1457	883	2827
Kihurio	Mgandu	75	96	18	39	79	232	474	81	132	687	919	224	993	241	1458	166	920	236	1322
Kihurio	Kandokoro	81	55	3	9	14	81	165	6	46	217	298	81	232	87	400	58	199	49	306
Kihurio	Maore- Kongei	100	31	0	12	46	89	319	46	69	434	523	134	786	271	1191	106	715	185	1006
Kihurio	Usambara	46	8	0	7	23	38	62	14	33	109	147	24	189	113	326	37	209	97	343
Kihurio	Total	377	334	102	193	342	971	1495	285	527	2307	3278	857	3116	1256	5229	854	3500	1450	5804
SubTotal	Same District	1567	5051	3852	5332	6089	20324	35269	10883	7515	53667	73991	4174	15780	4891	24845	6935	28298	8545	43778

* Taken from Mwangi District records. Less complete than Same District.

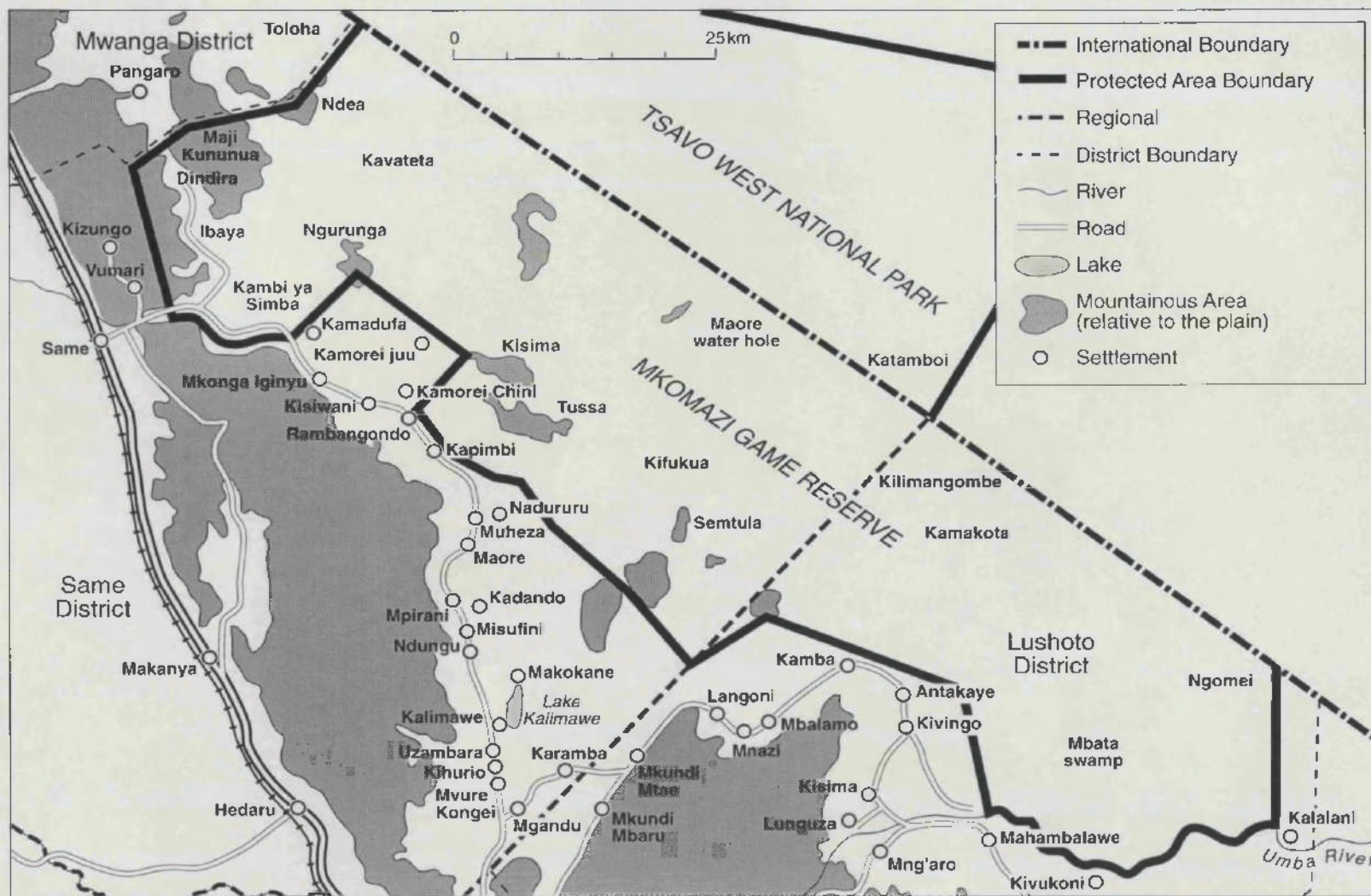
Lushoto District livestock census data.

	1960			1967			1978			1984		
Division	Cattle	Goats	Sheep	Cattle	Goats	Sheep	Cattle	Goats	Sheep	Cattle	Goats	Sheep
Lushoto	7,689	7,683	4,087	7,060	4,345	2,976	9,941	8,869	4,912	8,631	6,654	3,399
Soni	5,508	4,980	2,692	4,081	4,462	1,821	8,571	10,937	4,618	8,279	10,600	5,082
Mlalo	8,728	6,564	4,664	7,336	6,928	5,689	17,782	9,616	13,470	17,251	7,369	11,153
Mlola	10,200	7,988	3,075	15,148	11,041	14,501	13,525	12,880	6,931	13,690	9,835	8,024
Bumbuli	6,759	6,727	3,373	8,935	7,457	3,469	10,156	9,604	4,022	7,810	8,819	5,027
Mgwosha	2,708	6,573	1,150	3,394	5,364	1,647	8,951	12,886	3,774	5,439	8,232	1,725
Mtae	3,421	7,874	3,248	4,853	5,861	2,769	5,785	4,034	6,239	8,896	3,454	6,623
Umba	22,433	3,804	1,767	46,168	8,221	4,561	28,795	15,350	9,115	49,113	14,080	8,160
JUMLA	67,446	52,193	24,056	96,975	53,679	37,433	103,506	84,176	53,081	119,109	69,043	49,193

Lushoto District, 1984.

Ward	Village	Cattle			Imm	Male	All			Female	All	All	Male	Female	Imm	All	Male	Female	Imm	All
		Keepers	Bulls	Steers	Males	Calves	Male	Cows	Heifers	Calves	Females	Cattle	Sheep	Sheep	Sheep	Sheep	Goats	Goats	Goats	Goats
Mnazi	Mkundi	64	731	625	755	705	2,816	3,280	782	761	4,823	7,639	90	444	272	806	288	1359	1054	2,701
	Langoni	51	103	38	92	98	331	855	73	141	1,069	1,400	88	670	270	1,028	179	914	370	1,463
	Kwemkwazu	71	230	171	329	404	1,134	1,697	317	528	2,542	3,676	178	707	351	1,236	230	975	440	1,645
Mbaramo	Mbaramo	99	26	2	8	21	57	126	9	28	163	220	66	238	43	347	45	167	32	244
	Wungwi	72	12	1	17	16	46	66	66	14	146	192	16	153	65	234	69	473	228	770
	Zimbiri	84	20	1	16	33	70	108	84	37	229	299	nodata	nodata	nodata	nodata	nodata	nodata	nodata	nodata
	Nkombo	56	1	-	1	15	17	47	24	13	84	101	33	109	55	197	24	63	26	113
Lunguza	Lunguza	-	-	-	-	-	-	-	-	-	-	-	104	770	356	1,230	77	648	292	1,017
	Tewe	28	3	-	3	4	10	44	9	5	58	68	19	97	29	145	19	146	36	201
	Kivingo	92	957	1,500	2,925	3,641	9,023	13,178	5,182	4,260	22,620	31,643	232	1155	739	2,126	403	2670	1510	4,583
Mngaro	Mngaro	12	194	223	203	189	809	2,095	606	365	3,066	3,875	104	531	176	811	130	890	323	1,343
Grand	Total	629	2,277	2,561	4,349	5,126	14,313	21,496	7,152	6,152	34,800	49,113	930	4,874	2,356	8,160	1,464	8,305	4,311	14,080

Mkomazi Game Reserve



The location of Mkomazi Game Reserve

