People cascades, land and livelihoods: Farmer and herder land-use relations in the Idodi rangelands, Tanzania

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Thesis submitted in fulfilment of the requirements for the Degree of Doctor of Philosophy, University College London, 2005.

Abstract

Land policies in Africa have often been predicated on marginalising or extinguishing customary land tenure systems in favour of introducing more 'efficient' formal systems of individual titling and registration of land. This approach has been marked by its frequent failure and high cost. In Tanzania, recently introduced land laws instead now recognise customary systems and set out a basis for incorporating them in a village-based land tenure system. Yet there is growing apprehension that placing an emphasis on recognising customary practices will compound the growing trend of social differentiation, elite capture and the increasing numbers of landless poor. These issues can be better understood through investigating who benefits and loses from instances of 'negotiability' in access to land at a local level, particularly in the light of broader political economic and social changes.

Based on field work carried out in central Tanzania, the study traces the socio-environmental outcomes of herders and farmers living in the Idodi rangelands. Over the last 50 years, a substantial portion of these rangelands have been taken over by the state for the creation of wildlife conservation areas. The remaining parts of the rangelands have been settled by successive waves of farmers and herders, mainly associated with evictions from the creation of protected areas, other state-perpetrated land alienations in northern Tanzania, and state-enforced villagisation. Over time, the continued immigration of people into the Idodi villages has added to an already growing population, such that today, key resources - fertile arable land, grazing and water - are in increasingly short supply. The story of the Idodi rangelands reflects developments occurring in many other parts of Tanzania. In particular, wetland areas in the dryland rangelands have become a focus of in-migration and heightened competition for land and water, as farmers and herders alike converge on these centres of relatively high fertility and productivity. Often, as in the Idodi rangelands, competition for land and water has grown sufficiently great for conflict to break out in these polyethnic dryland-wetlands.

The social negotiability of land has remained central for herders' access to key land and landed resources. In the Idodi rangelands, herders have used their growing social relations with farmer-based centres of power to avoid conflict and maintain access to farmland. Contrastingly conflict over land has occurred when other herders have not sufficiently invested in social relations with farmers over access to land. Herders continue to remain squatters - albeit socially legitimate ones - on village land, without firm rights to rangeland resources. In recent years strong social relations have not been sufficient to guarantee herders' security in the landscape. It is clear that the land entitlements of marginalised herder groups may often need safeguarding by the government, but it less clear what the best approach may be. In Idodi, a more overt expression of pastoralists' rights to land would likely lead to polarisation between farmer and herder, and an increase in conflict and competition over land. Too little consideration has been given by the government to enabling the pluralistic yet equitable development of locally diverse customary understandings of land tenure. The continued increase in competition and conflict over access to land - as has occurred in Idodi - strongly suggests that priority should to be given in land reform processes to the development of locally legitimate dispute resolution fora that focus on negotiated outcomes wherever imposed adjudicatory decisions can be avoided.

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I wish to thank the Central Research Fund of London University, the Graduate School and the Department of Anthropology at University College London, and particularly the Leverhulme Trust for supporting this research. In addition, I would like to thank the Institute of Resource Assessment at the University of Dar es Salaam for supporting my research clearance in Tanzania, and the Commission for Science and Technology for granting me permission to carry out my research. I would like to acknowledge the Tanzania National Archives and Rhodes House Oxford for kindly allowing me access to their archives. I'd like to thank the support staff in the Department of Anthropology – in particular Cassie Hill, Alena Kocourek, Helen Cooper and Chris Hagisavva for all their help.

I am indebted to the staff of MBOMIPA project, Miss Dorothy Bikurakule, Mr K.A.S. Ngomello, Mr James Mudalbilwa, Mrs Kezia Oola, Mr Mashaka Omari, Mr Aston Mwela and Mrs Dorothy Mwandimbile, who were always welcoming whenever I showed up at the MBOMIPA office to pick-up my mail and to use the office as a base while in Iringa Town. They also kindly welcomed me into their homes. I would also like to thank members of the District Natural Resource Office, for their advice and support, including allowing me access to their files. In particular, I'd like to thank Mr A. Mallango the District Natural Resource Officer and Mr I. Kimaro, the District Game Officer as well as Mr J. Hante the District Land Officer.

In the Idodi villages, I'd like to acknowledge and thank the village executive officers, village chairpersons and ward executive officers who allowed me access to their files, entertained my questions and helped me on my way. In particular I'd like to thank Mr T. Makendi, Mr A. Nganylika, Mr R. Mkwele, Mr T. Mwampashe, and Mr J. Zayumba. In addition, I would like to warmly acknowledge the late Daudi Mbarazi, previously District Councillor for Idodi, who kept a paternal eye on me, and who introduced me to many folks. I would also like to especially acknowledge and thank Mr V. Mwaikambo, and Mr J. Hango.

I owe a debt of gratitude to my field assistants Mr Luca Chengula Mr Ng'awa Mgemaa, Mr Aucelio Mbata, Mr Onesimo Kiwele and Mr Deli Deda. Were it not for them, this thesis would not have been completed. In addition, I would like to sincerely thank Mr George Mtati and Mr Saleh Petwa who were a pleasure to talk to and an amazing font of local knowledge and folklore. In addition I would like to thank the following people: Mr Mikaelo Mdindile, Mr Juma Katei, Mr Clemek Temisika, Mrs Rosina Dalu, Mr Kipilpili Lebere, Mr Mahagano Chambulila, Mr Salum Mtemisika, Mrs Lolyian Katei, Mr Falimbopelo Mdindile, Mr Juma Katei, Mr Wilson Mpwepwa, Mr Selindoo Mtemisika, Mrs Mwigavilo Mkuvasa, Mr Assedeck Gissemoda, Mrs Kilwa Sekiwele, and Mr Yussuf Kimojaa.

I would like to thank Dr David Brown at the Overseas Development Institute, London for providing part-time employment while I was writing up in London, and I'd like to thank Dr Alan Rodgers in East Africa for the opportunity to work on various projects, partly in support of my extended writing up.

There are some people who I will never be able to thank enough – and I only hope that I am able to pass on their kindness and support to others in the future. In particular, Martin and Asha Walsh very generously welcomed me into their home (and study!) in Iringa, providing me with a base and a room to stay in whenever I was in town, and were simply great. In Tungamalenga, I would like to sincerely thank Jonas Padri, Mr and Mrs Mlewa, Godfrey, Humphrey and Ditrik with whom I lived and who were so hospitable and generous.

This thesis has been a bit of an unexpectedly epic undertaking – and the subject of numerous humorous jibes from a number of friends as to the time it's taken to complete. I thank Mhairi, Clare, Nadine, Steve, Beth, Fiona and Eshetu at UCL for their collegial support. And I thank Jan, Sharon, Caspar, Niek, Liam, Alessandra, Sally, Howard, Dave, Grant, Hanneke, Bakari and Mafunda, Thabit, Fred, Liz, Tim, Jo, Tom, Katie, Chris, Shaffin, Bijou, the Lofters crew, Zoe, Annabelle and not least, Weh! and Maria, for their amused support and humour. Finally, I would like to especially thank my kind mother on whom I descended during my final stages of writing up and who wonderfully allowed me to look after myself and tactfully remonstrated with the worst of my infringements on the English language.

I would like to very much thank Phil Burnham for his gentle and wise mentoring, and for so effectively hiding what must have been his considerable frustration with my academic deficiencies and hair-brained moves between the UK and East Africa. And finally, my sincere thanks go to my main supervisor, Kathy Homewood, whose patience and faith in my dawdling efforts have been remarkable, and her support unerring. I am truly grateful for the time Kathy has invested in me – and I hope that, *kwa hali na mali,* it's been – and will be – worthwhile! *Ashe oleng*!

This thesis is dedicated to my father who did not live to see it completed.

1 Introduction

1.1 A study overview

This thesis explores the livelihoods and land-use relations of a diverse group of herders and farmers living in the Idodi rangelands of northern Iringa District, central Tanzania. The thesis is based on field work carried out in the Idodi villages over a two year period between 2000 and 2001.

I began to realise after the first few months of having lived in Tungamalenga village, which was my home for two years, that something was not quite right. I had not expected that my fieldwork talking to people about their lives and livelihoods would be easy. I did expect a certain amount of wariness from people until I became a better known character in and around the Idodi villages. After all, why would a European come to live in Idodi? What was he doing? People were very suspicious and did not understand. This despite my attempts to explain in different ways that I was a student trying to understand how people in Idodi lived and how they farmed and used the land. Using the word 'land' was my mistake. I should not have mentioned it. Before long, rumours had begun to spread that I was here in Idodi to steal the land. At the time, when I discovered that these (and other) rumours were floating around, I was somewhat incredulous. Why ever would people think that I wanted to steal their land from them? It was only over the next year or so that I truly began to understand the significance of people's suspicions. People had traumatic memories of being evicted from their homes by the *wazungu* (Swahili: Europeans; *Mzungu* sing.) a long time ago. What the *wazungu* had started, the *serikali* (Swahili: government) had completed with forcible finality during Tanzania's years of *Ujamaa*. People were simply apprehensive about losing their land again.

Over the last 50 years, a substantial portion of the Idodi rangelands have been taken over by the state for the creation of wildlife conservation areas. The remaining parts of the Idodi rangelands have been settled by successive waves of farmers and herders, mainly associated with evictions from the creation of conservation areas, other state-perpetrated land alienations in northern Tanzania, and state-enforced villagisation during *Ujamaa*. Over time, the continued immigration of people into the Idodi villages has added to an already growing population, such that today, key resources - fertile arable land, grazing and water - are in increasingly short supply.

The thesis investigates what impacts these major state land-use interventions have had on people's livelihoods and on land-use relations in Idodi. The thesis shows that there are a minority of people who have managed to benefit from the villagisation of the Idodi rangelands, others who have fared not quite as well, and a great many who have, at least in recent years, experienced significant declines in their livelihoods and well-being. The thesis finds that, among other factors, the different livelihood trajectories of herders and farmers living in the Idodi villages are increasingly related to their ability to access and benefit from irrigated soil fertility. Thus a relative minority of people in Idodi have grown relatively wealthy from building up their access to fertile and irrigated farmland, drawing on the labour of a larger number of poor farmers now confined to marginally productive

land. Herders, as a collective minority, are struggling to maintain, let alone improve, their insecure access to range resources for their livestock. Today, the declining availability and quality of key natural resources in the Idodi villages has led to an escalation of dispute, most notably between farmer and herder.

The story of the Idodi rangelands holds wider significance as it reflects developments occurring in many other parts of Tanzania. Odgaard (2002, 77) describes an ongoing process of increasing population, heavy internal immigration, alienation of large areas for wildlife conservation and/or plantations, an increased focus by the state on cultivation (and implicitly the marginalisation of pastoralism), and an expansion of the area cultivated nationally, that has led to substantial pressure on arable land and pastures. In particular, wetland areas in the dryland rangelands have become a focus of in-migration and heightened competition for land and water, as farmers and herders alike converge on these centres of relatively high fertility and productivity. Often, as in the Idodi rangelands, competition for land and water has grown sufficiently great for conflict to break out in these polyethnic dryland-wetlands, particularly between herders and farmers.

The picture emerging from Tanzania may also be seen as part of a wider trend in sub-Saharan Africa. Over the last decade, there has been a significant increase in published research and other sources that describe mounting competition over land and landed resources across the continent (Peters 2004, 270; Berry 2002, 639). Although as Peters states, there is much to support a view of Africa as a continent with a majority of its population living on the land, without clearly defined classes of landed and landless, she argues that this is only part of the story (Peters 2004, 270). A growing body of evidence suggests that the other part is a less optimistic tale, filled with instances of intensifying competition and conflict over land, deepening rifts between and within kin-based, ethnic and regional groups, and of expropriation of land by local and non-local elites (Peters 2000, 270; Berry 2002, 639). People's access to land and landed resources across Africa may be most usefully understood today as being customarily comprised of bundles of rights that are often negotiable and flexibly mediated through social relations (Shipton 1994, 349 & 351). Yet as competition over land continues to intensify, some groups of people continue to accumulate more land and landed resources, while others continue to lose access, fall into higher levels of poverty and may become landless.

A number of countries in Africa have embarked on land reform processes through developing new land laws and new approaches to administrating land. For many years land policies in Africa have been predicated on marginalising or extinguishing customary land tenure systems in favour of introducing more 'efficient' formal systems of individual titling and registration of land, an approach that has been marked by its frequent failure and high cost. In Tanzania, recently introduced land laws recognise customary systems and set out a basis for incorporating them in a village-based land tenure system.

However, given the growing evidence of increasing competition and inequality over access to land, there is growing apprehension, particularly given weak governance at local level, that placing an emphasis on recognising customary practices will compound the growing trend of social differentiation

and the increasing numbers of landless poor observed across Africa (e.g. Peters 2004, 285). It may be the case that the strengths of customary land practices (i.e. the social negotiability of land) have been emphasised at the expense of a more candid analysis highlighting exactly who is included and excluded and why. These uncertainties need to be better answered if current land reforms promoting the principle of subsidiarity with increased emphasis on customary or local forms of land tenure are not to be similarly blighted by the serious problems of elite capture and growing inequality and insecurity over access to land, which have characterised previous land reform programmes (see Chapter Two). These issues can be better understood through investigating who benefits and loses from instances of 'negotiability' in access to land, an analysis that, in turn, needs to be situated in broader political economic and social changes taking place, particularly during the last 30 years (Peters 2004, 271).

The contemporary polyethnic nature of the Idodi villages has meant that land-use relations are a complex product of people's multiple interpretations of customary practice, pursuit of different socio-economic interests and diverse cultural understandings of how the landscape should be managed. Having established a detailed understanding of farmer and herder livelihood trajectories, I employ extended case study to examine some of the processes of contingency, flexibility and negotiability employed by pastoralists to modulate their land-use relations with farmers. I investigate - through my examination of livelihood practices and people's land relations in the Idodi rangelands - whether there are situations and processes that can limit or end negotiation and flexibility in access to landed resources for certain social groups and categories (see Peters 2004, 271). Focusing on farmer, herder and local government relations, I set out to identify what some of these key emerging processes and situations are that have enabled or constrained access by herders to key resources in the Idodi rangelands. Finally while maintaining a focus on Idodi, I continually and critically relate the story of Idodi to past and contemporary developments in Tanzanian natural resource management, macro-economic and development policy.

1.2 The thesis structure

Having provided a short overview of what this study is about, the thesis begins with a review of some of the key theoretical debates and contemporary developments in the study of society-environment relations most relevant to better understanding the livelihoods of people living in the semi-arid rangelands of Tanzania. At the end of this review, and drawing from the preceding discussion, I set out the context for the thesis, the key questions, and the analytical framework and methodology adopted. Chapter Three introduces the Tanzanian rangelands, and provides a review of the political economy of some key pre- and post-independence state policies that have heavily impacted on people's customary occupancy and management of rangelands in Tanzania. The Idodi rangelands, as the chosen site for field study, are introduced in Chapter Four. The Chapter reviews the human and physical geography of the field site, and then provides an overview of key aspects of social and administrative organisation and current land tenure practices that are relevant for the study's investigation of land-use relations in Chapter Seven. Two parallel studies are then followed in Chapters Four and Five. The former is dedicated to the farming peoples of the field site, and a more detailed context to their current landscape occupancy is constructed before a quantitative analysis of

their contemporary livelihoods is presented. The latter chapter is devoted to the herding peoples of the study area, again following a similar pattern of providing a context to their presence in the landscape before proceeding to present a quantitative analysis of their current livelihoods. The data presented on the land-use practices and livelihoods of both herders and farmers in the preceding two chapters, provides the context for Chapter Seven which focuses on land-use relations between herders and farmers. I examine, through a series of extended case studies, how different groups of herders have pursued different strategies towards maintaining their access to key resources, why some strategies have been more successful than others, and why this has been the case. In Chapter Eight I conclude by discussing the findings of my data chapters in relation to the main research questions.

2 'Safeguarding' environment and productivity

The existence, nature and causes of environmental degradation in East African rangelands have become the focus of increasing debate in recent years. Long held perceptions that rural African farming and herding systems, especially in the context of increasing human population, frequently lead to environmental 'degradation' have been increasingly questioned. As reviewed by Beinart (2000), recent scholarship has, over the last two decades or more, achieved much in painting over a perhaps somewhat tired canvas of the certainties of environmental degradation and the established narratives of the 'dysfunctional' relationship between rural African people and the environments in which they live. In its place a rejuvenated and more dynamic canvas can now be found, portraying a diversity of intertwining and cross-cutting themes that begin to reveal the complexities and context-rich nature of people-environment relationships in Africa. Alternative understandings of the ecology of the semi-arid rangelands of East Africa, new examinations of history and past policy as well as more sophisticated economic and socio-cultural understandings of rural peoples' ways of life have led to different perspectives and interpretations of the status of East African rangelands, their peoples and their drivers of change.

In this opening chapter, I set out a number of key theoretical themes that underpin past and contemporary understandings of society - environment relationships which I consider most relevant to the semi-arid rangelands of East Africa. I begin first with a short overview of recent and contemporary developments in research on society - environment relations in the African semi-arid rangelands. I then move on to review the two main methodological approaches that most relevant for this study. Having chosen and justified my choice of method, I review two key themes that have perhaps dominated the debate over society and environment in the African rangelands. I then briefly consider the relationship between research and the development of policy which has heavily influenced society - environment relations. These themes then lead into a discussion of the research questions, analytical framework and fieldwork methodology that I adopt in this study.

2.1 Received knowledge, past policy and new understandings

2.1.1 Received knowledge and past policy

Since the early colonial period, received wisdoms[1] of environmental degradation wrought by African farmers and herders have heavily influenced the policies and practices of many contemporary African governments and international development institutions. These narratives, often based on de-contextualised understandings of ecology, political economy and society, and often emanating from western science, have been dominated by a number of inter-related themes identifying rural farmers and herders as frequently practising primitive, environmentally degrading and economically inefficient land, plant and animal husbandry. Natural resource management policy has therefore been developed by pre- and post-independence governments with pragmatic intent to correct and improve economically inefficient and environmentally degrading land-use and land husbandry practices. With the long-term expansion and intensification of a global neo-liberal economy, governments have been anxious to increase and to capture rural agricultural productivity, by attempting to integrate local farming and herding systems into national economies and the wider international economy.

A persistent theme has been that of the dissonance between wild nature (in particular forests and wildlife) and rural peoples, with the need to protect the former from the latter. The division of landscapes into those inhabited by people and those exclusively reserved for wildlife and forest has often been effected to address the perceived dissonance, and to facilitate state-capture of the economic value of wildlife and forest resources. Contemporary orthodox biological science has been used to reinforce this process through its contention that biodiversity - or the variety of life - is greatest in pristine ecosystems untouched by human impact (Guyer and Richards 1996, 1-2).

Narratives of the society-environment relationship with an African context can also be seen as having often taken the form of a twin problematic of 'diversity' and 'dearth' (Schroeder 1999, 360). Fears have been expressed that Africa's natural wealth - i.e. its diversity - is in crisis and might be lost (Anderson and Grove 1987, Adams and McShane 1992, Biodiversity Support Programme 1993, Bonner 1993, Njiforti and Tchamba 1993, IIED 1994, Jarosz 1996, Neuman 1995b & 1996 cited in Schroeder 1999, 361). Thus stringent (bio)diversity protection and preservation measures have been justified and achieved through a broadening of scope for interventions by the state and international agencies (Schroeder 1999, 361). In contrast, 'dearth' has been manifested in the 'twin spectres' of

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[1] After Leach and Mearns (1996, 8) who define a 'received wisdom' as, 'an idea or set of ideas sustained through labelling, commonly represented in the form of a narrative, and grounded in a specific cultural policy paradigm'. Thus 'received wisdom' can be viewed as a discourse (after Foucault 1971; 1980) that is often embedded in particular institutional structures that are active on the ground. This may frequently result in the persistence or tenacity of (a) received wisdom with real practical consequences for (local) people. Leach and Mearns (1996, 25) do not necessarily view received wisdom as being of a conspired nature, but more as a form of social construction in which individual actors may unwittingly participate and further reinforce the paradigm through their interactions with others.

drought and famine, and the seemingly intractable problems of inefficient food production and appalling rates of environmental degradation on urban and rural landscapes (Franke and Chasin 1980, Watts 1983, Peters 1987, Hjort af Ornäs and Salih 1989, Drinkwater 1992, Ghai 1992, Massaro 1993, Turner 1993 Beinart 1984 &1996, Hoben 1996, Scoones 1996 cited in Schroeder 1999, 361).

2.1.2 *New understandings*

Contemporary understandings of society-environment relationships within an African context, particularly over the last 20 years, have grown and been transformed through the multi-disciplinary scholarship of Africanist (environmental) historians, anthropologists, geographers, ecologists and political economists. The substantial and diverse gains in our understanding of society-environment relationships within an African context have recently been usefully reviewed by several scholars.

In the introductory chapter to a volume focusing on African savanna environments, Basset and Crummey (2003) review a number of cross cutting themes focusing on the historical processes and discourses that have shaped outsider perceptions of - and interactions with - African landscapes and their peoples. These have been carefully pieced together by African historians (for example, Anderson 1984; Grove 1987; and McCann 1999) as well as by anthropologists (for example, Tiffen et al. 1994; Fairhead and Leach 1996; Basset and Zuéli 2000; Brockington 2002). Within this context, Basset and Crummey highlight the impacts of different ecological understandings on the management of savanna ecosystems and landscapes, and the recent emergence of alternative ecological paradigms that have gained growing currency (for example, Homewood and Rodgers 1987; Scholes and Walker 1993; Scoones 1995). The combined work of these scholars has demonstrated how African modes of landscape function and management have been often misunderstood by a wide range of pre- and post colonial actors, and in turn how discourses of environmental degradation have emerged and continue to be promulgated based on these misunderstandings. Orthodox classification of landscapes into pristine and human-impacted has become less credible as environmental histories have indicated that long-term relationships between, for example, farm and forest-savanna in west Africa (e.g. Fairhead and Leach 1996) as well as montane forest in east Africa (e.g. Schmidt, 1989), have been more complex than initially thought.

Contemporary understandings of customary African land tenure that convincingly challenge received wisdoms (which continue to retain currency) have been reviewed by Peters (2004) and draw from the work of scholars such as Channock (1991), Moore (1986; 1996), Basset (1993), Okoth-Ogendo (1989; 2000), Pinckney and Kimuyu (1994) Goheen and Shipton (1992), Berry (1989; 2002) and Toulmin and Quan (2000). There is now an extensive literature on herding - for example, that reviewed by Fratkin *et al.* (1994) and Little (2003), and farming societies - for example, that of Netting (1968; 1993) Richards (1985) and Reij *et al.* (1996), which has provided detailed and context-rich insights and understandings of local production systems. Lastly, advances in remote-sensing technology and productive inter-disciplinary collaboration have allowed ecosystem- and region-wide studies of contemporary landscape use and trajectories of change - for example those of Lambin *et al.* (2001) and Homewood *et al.* (2001). These studies have begun to highlight the

importance of macro-economic factors and land policy as being particularly important drivers in landscape use and change trajectories.

While affirming these themes, Beinart and McGregor (2003,17) argue, however, that perhaps previous critiques of 'colonial science' have been rather too condemnatory and ideological, with too little attention paid to the contexts in which particular ideas were initially shaped and thereafter reproduced. Importantly, Beinart and McGregor acknowledge that some aspects of colonial science were sensitive to local knowledge, and made substantial gains in scientific scholarship, despite the fact that such knowledge was not always sensitively and appropriately acted upon.

Many scholars and development practitioners now recognise that the perceptions and narratives of environmental degradation and economic inefficiency leading to corrective and prescriptive policies have frequently had an unfortunate impact on herders and farmers living in the East African rangelands. As a result of these and other past policies, for example in Tanzania, *Ujamaa*[2], herders and farmers have been alienated from their lands, required to grow specific acreages and types of crops, forced to enter into commodity transactions at times and in conditions not of their choosing, drawn to produce extractive surpluses in produce and labour, forced to sedentarise, compelled to de-stock their rangelands of their herds of livestock and have had unfamiliar systems of land tenure and husbandry imposed on them. In as much as many of the past interventions and policies have been partly conceived with an intention of improving, one way or another, the livelihoods of rural herders and farmers, many have had deleterious impacts. Ironically many such policies have contributed to deteriorating environmental indicators, declining agricultural production, the undermining of the capability of rural people to effectively manage their environment, increasing levels of inequality in wealth and the persistence of high levels of rural poverty.

Thus while understandings of society-environment relationships have grown and have been productively re-examined by a wide range of disciplines as well as through the interlocution of these different fields, the advances achieved may, as Beinart (2000, 284) argues, now be sufficiently robust and secure to withstand (further) examination and extension. Beinart reflects with regard to the study of the colonial (and subsequent[3]) legacy of environmental degradation narratives:

> Arguments rooted in an anti-colonial and sometimes populist or anti-modernist discourse can present us with an analytical closure, too neat an inversion, which is not always appropriate in a post-colonial world where the sources of power have changed. Clearly it is essential to keep issues of equity at the forefront of analysis, to combat racial assumptions in respect of resource use, and to understand past relationships between colonial authority and environmental regulation. *But it is equally*

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[2] Ujamaa, as described later in this thesis, was a massive state-sponsored social experiment in which about 5 million people were resettled into communal Ujamaa villages and made to work in communal agricultural production.

[3] While Beinart specifically reflects upon the colonial legacy at this point in his paper, his insight is arguably extendable to post-colonial environmental degradation narratives as well.

> *important that routes of research and analysis are not disguised by the strength of a new consensus.* (italics added)

Peters (2004, 270-1) in reflecting on the study of land and social conflict in Africa proposes that new theoretical moves have thus far been inhibited by:

> '[S]ticky' paradigms - analytical frameworks and theoretical premises that have been highly productive in the past but that, in fast-changing circumstances, are proving to be blinkers rather than powerful lenses.

In acknowledging the reservations of Beinart (2000) and Peters (2004), this chapter sets out the key theoretical components which provide a contextual framework for the thesis.

2.2 Recent theoretical advances in the society and environment debate

The emerging society and environment debate has been addressed by a number of different theoretical approaches, particularly over the last 40 or more years, with emphases on social anthropology, political economy, ecological anthropology, political ecology, and environmental and ecological economics. Within the context of contemporary African society-environment debates in particular, perhaps the most dominant theoretical approaches are those of political economy and political ecology. A principal concern of these debates is the development of appropriate policy[4] and interventions ultimately targeted towards rural farmers and herders, for developing local institutions which facilitate improvements to the equitability, socio-ecological sustainability and increased productivity of their production systems.

Institutions are the focus of attention since they are most thought to shape human behaviour in relation to resource use (Cleaver, 2000, 364). Key to understanding institutions is the realisation that they are embedded in complex social relations - relations that continue to evolve and be negotiated within the context of socially, historically and ecologically located people(s) who shape, and also are shaped by, a variety of institutions of varying degrees of formality and organisation (Cleaver, 2000: 362)[5].

The two theoretical schools of collective action theory and political ecology are discussed in the following sections.

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[4] *Policy is defined here after Homewood* (2004, 128) *and taken to mean the de facto guiding* principles which are implicit and evident in official planning, decision-making, and practice, even where these are not articulated and published as formal policy.

[5] Cleaver (2000: 362) draws on the work of: Giddens (1984; 1989) and Long (1992) about the interaction of agent and structure; Granovetter (1992) in regard to the concept of the embeddedness of economic transactions in social life, and; (Douglas, 1987) with regard to the role of institutions in shaping individual perception and action.

2.2.1 *Collective action: Common pool resource and moral entitlement theories*

Perhaps the most immediately prominent and widely received theory within the society and environment debate is that of collection action theory. Developed in the late 1980s and 1990s (see below), but with origins in the 1960s (e.g. Olson 1965) and the late 1970s (e.g. Popkin 1979), collective action scholarship has now crystallized into two related but very differently focused and articulated schools (Johnson 2004; Mosse 1997).

Common pool resource theory

Common pool resource (CPR) theory is heavily based on game and organizational theory as well as conceptual modelling (Bromley 1989; Ostrom 1990 & 1998; Cousins 1993; Keohane and Ostrom 1994). CPR theory is firmly rooted in an epistemology which seeks to construct general and predictive theories about common property regimes (Johnson 2004, 423). With affinities to the work of Thomas Hobbes and Adam Smith that premise people as rational self-interested individuals (*homo economicus*) (Mosse, 1997, 469), and based within political science, CPR theory counters the accepted wisdom that communal resource use inherently tends to lead to Hardin's (1968) 'Tragedy of the Commons'. The 'Tragedy of the Commons' postulates that individually and economically rational strategies lead to collectively irrational ecological outcomes and to the ultimate degradation of the communal resource. The proponents of CPR have, through many empirical examples ranging from recent water rights agreements in the western United States to local level irrigation arrangements in the Philippines, shown that CPR institutions have been, and can continue to be, effective in their operation.

Analysis of empirical examples has led to the construction of framework conceptual models (Keohane and Ostrom 1994; Ostrom 1990) that deconstruct the processes and interactions that tend to occur during negotiations leading towards collective action regimes. The analyses are concerned with how the 'assurance problem' can be effectively dealt with (Runge 1981; 1984; 1986 cited in Lane 1998). How can for example, (i) issues of heterogeneity amongst resource users (their preferences, expectations and capabilities) as well as differences in information flows be minimised; (ii) free-riding (cheating) be sanctioned against; (iii) institutions evolve in a gradual process towards maturity and resilience; and (iv) both individual and group costs incurred and benefits derived from entering into collective action arrangements be incorporated to enable Cost Benefit Analysis modelling.

Thus Common Pool Resource theory has been developed from drawing insights from a compilation of a large and diverse number of case studies, reflecting the complexity and variability of situation-specific contexts. However, the theory and methodological approach have been critiqued in a number of ways.

Agrawal (2001 & 2003) notes that the diversity and number of CPR case studies has led to the unsystematic generation of a relatively much larger number of variables which are impossible to analyse carefully. He argues for the adoption of a more systematic approach based on more careful study design leading to statistically valid cross comparative analyses. Agrawal latterly also acknowledges the lack of attention paid to power relations and micro-politics within communities in

CPR analyses as called for by Agrawal and Gibson (1999) and Moore (1998 & 1999), and he further recognises the diachronic nature of these phenomena with regard to the governance of common property.

The deductive and positivist nature of CPR theory has been tempered by contemporary experiences of complexities from the field. For example, Campbell *et al.* (2001) question the ease of realising Ostrom's (1994) postulation that, 'the case-study literature now demonstrates without a doubt that it is possible for CPR appropriators (i.e. users) to design, operate, monitor and enforce their own institutional arrangements'. Their experiences from Zimbabwe attest to the high transaction costs in developing formal CPR institutions especially where there are already well established informal and socially grounded customary norms and practices that, irrespective of their efficacy and their suspected decline, incur low transaction costs. Campbell *et al.* (2001, 596) reflect other scholars' reservations (e.g. Peters 1994; Mosse 1997; Leach *et al.* 1997; Goldman 1998; Cleaver 2000; and Toulmin and Quan 2000) that the nature of institutional economics which frames CPR theory lacks sufficient attention to spatial settings and temporal contexts of history, micro-politics and socio-economy. Thus, despite the general validity of its key findings, CPR theory is unable to adequately provide the grounded socio-economic and cultural nuance often required for sufficiently socially replete and historically contextualised analysis - necessary for understanding people and environment relations in diverse but often inter-related or nested contexts (e.g. Mosse 1997, 470).

The moral entitlement school

In contrast to Common Pool Resource theory, an alternative school within collective action scholarship emphasizes the force of tradition (i.e. history), social rights, value systems and moral codes in facilitating collective resource management (Mosse 1997, 469). Johnson (2004, 415) views the moral entitlement approach as differing from the CPR school in three ways:

> Firstly, socio-economic equality and poverty reduction, as opposed to the efficiency and health of the commons, constitute major normative concerns. Secondly, rules are important in so far as they enhance, not restrict, access to the commons. Thirdly, the entitlement literature tends to favour a structural-historical approach, in which property rights and relations are contingent upon contextually-specific forces of change.

Thus the entitlement literature is *centrally concerned* with the problem of inequality, and the ways in which formal and informal rules reinforce unequal access to common pool resources (Johnson 2004, 415). While the approach of the moral entitlement school arguably provides indispensable qualitative dimensions to our understanding of collective action, it is open to criticism for lacking a methodological framework conducive to deductive hypothesis construction and testing as well as systematic statistical analysis.

Although part of a longer term and much larger set of philosophical deliberations around relativism and rationalism (e.g. Gandy 1996, 30), there is currently a debate - as recently reviewed by Johnson (2004) - as to whether these two different approaches, the positivist hypothetical-deductive school (CPR theory) which leans towards an epistemology emulating the natural sciences, and the historical and contextual school (representing a moral entitlement paradigm), can be 'married'. Within the

context of environment - society discourse, some would argue that this marriage is possible and that it would offer the best of both worlds leading to synergies (e.g. King *et al.* 1994) such that, 'their assumptions, propositions and conclusions are tested both in terms of their logical coherence and consistency with empirically knowable facts' (Johnson 2004, 425). While the details of this debate lie out with the immediate focus of this thesis, the substance of the debate is relevant to the methodology and approach that is necessarily taken in cross-disciplinary research - such as the study of society and environment. Thus in acknowledging the substance of the debate, it is possible to turn to differently framed approaches to the study of society and environment which offer a useful epistemological alternative.

2.2.2 *Political ecology*

Political ecology brings together the natural and social sciences in the analysis of the complex relationships between people and the environment. Political ecology is characterised by a range of different discourses within a contested domain of thought and action (Brown n.d. cited in Escobar 1999, 25), which can most simply be seen as taking two primary forms (Brosius 1997 cited in Escobar 1999, 17) each tending towards opposite ends of a spectrum of interpretation (for example, see Demeritt's 2002 review and typology).

The first takes the form of a fusion between political economy and human ecology, in which a series of differently empowered actors can be seen as contesting each others' claims to particular resources - claims which stem from an 'unproblematic' ecological base. Thus in this form a dual set of epistemologies is adopted simultaneously as (ecological) science is used to understand the environmental impacts of human activities and then social science is used to understand the human organization of those activities, their dynamics and origins (e.g. Zimmerer 1996, 178).

The second form, informed by post-structuralist social theory, is characterised by a recognition of 'nature' (as well as the identities and interests of various agents) as being both contingent and problematic. Thus Escobar (1999, 3) defines this 'anti-essentialist' political ecology as, 'the study of the manifold articulations and the cultural mediations through which such articulations are necessarily established'. 'Anti-essentialist' here means that nature[6] is differently produced by different groups or in different historical periods (Escobar 1999, 5). In other words, this latter definition acknowledges that knowledge and perception of the bio-physical essence of 'nature' and people's interactions with it are manifold - i.e. that such sets of knowledge, perceptions and interactions with socially constructed 'nature' exist, each 'set' being contingent on a complex interplay between history and culture, and perhaps even overlapping in time and/or in space as 'hybrids'.

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[6] The term 'nature' is, as with some other widely used terms such as 'community', often amorphous in meaning and has been described by Raymond Williams (1983, 219 in Demeritt 2002, 777) as, '...perhaps the most complex in the [English] language'. Williams (1983) goes on to distinguish three specific, but closely intertwined, meanings of the word 'nature' - see Williams (1983, 219) or more recently Demeritt (2002, 777-778).

This latter definition particularly differentiates political ecology from 'collection action' approaches (as described above) to the study of society and environment, as political ecology seeks to relocate 'objective' (natural) science and its role in understanding society-environment relationships within an empirical and historically nuanced analysis of socio-cultural context. This analysis crucially recognises that the natural sciences and technology are neither ahistorial nor non-ideological (Escobar 1999, 3), and that there is a need to incorporate a greater awareness of what the different discourses on 'nature' may be ignoring and politically repressing (Soper 1996, 23). Thus it is the case that the often sophisticated ecological knowledge of farmers and herders has remained largely untapped and disregarded by 'science' because it lacks the imprimatur of scientific objectivity and expertise (Gilson *et al.* 2003; also Richards, 1985).

Discourse analysis has become a key tool in post-structuralist political ecology. Gilson *et al.* (2003, 777) define discourse as, '[A] power-laden set of statements about a referential subject in which there are no coherent, taken-for-granted or innate facts or structures of meaning'. In this regard, discourses are seen as sets of knowledge that emerge to serve a power structure and so re-create it. Following Foucault in using discourse analysis, it is therefore possible to look at the particular interactions between knowledge and power which accord validity to economic explanations, ecological models and certain ideas of 'community' to the exclusion of others (Mosse 1997, 471).

Thus an important outcome of the political ecology approach - with regard to East African rangelands - has been the highlighting of the biased use of perhaps increasingly dated rationalist views of objective 'factual' science in justifying and legitimising particular natural resource management policies, often in the interests of more powerful interest groups (Blaikie 1995, 7). This latter point, particularly in the context of understanding the social and political organisation of knowledge in colonial and post colonial Africa (Gilson *et al.* 2003, 383) and its impacts on society-environment relationships in Tanzanian rangelands[7], has been documented by a growing number of authors - for example, Brockington (1998), Brockington and Homewood (1996; 2001), Hodgson (2001), Homewood and Rodgers (1991), Lane (1991; 1996), Maddox *et al.* (1996), and Neumann (1992; 1998; 2001).

However, important as the developments and gains in political ecology have been in improving our approaches to studying and understanding 'society and environment', there is a growing need to take into consideration key issues of political economy (e.g. Peters 2004, 280) - such as the impacts of structural adjustment on Tanzanian herders' and farmers' livelihood strategies (e.g. Bryceson 2002, 728). Thus Homewood (2004, 139) states,

> To be able to frame the right questions and interpret findings in an appropriate way researchers need to combine an awareness of political economy and political ecology, of environmental discourse and narrative, not only with a natural sciences based understanding, but also with an understanding informed by local perspectives on environmental processes and causes of change.

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[7] Tanzania is given particular focus since it is the country in which field work for this thesis was carried out.

This may often entail drawing from disparate disciplinary and theoretical literatures and from debates in which there may be no single agreed interpretation; at the same time, it also entails not falling into the traps of over-selectivity, distortion or naiveté associated with disciplinary boundary crossing (Peters 2004, 280).

The analytical framework on which this thesis is based and which is discussed later in this chapter, draws from the interdisciplinary approach outlined above of combining political ecology with an awareness of political economy.

I now move onto consider three key themes that have dominated society and environment relations, particularly in the semi-arid rangelands of Africa. The first theme focuses on the debate about the relationship between population and environment, and whether the relationship is relatively straightforward or whether it is far more complex than previously acknowledged. The former (neo-Malthusian) position has also heavily influenced popular thinking about the relationship between environment and conflict – the second theme. In recent years, political ecologists have successfully challenged these popular and mainstream understandings of environment and conflict, leading to a much more nuanced and grounded analyses of the relationship between violence, environment and power. Finally neo-Malthusian understandings of environment and population have also often had an underlying and strong influence on approaches to African land economy - the third key theme. The widely and long held view that African customary systems of land tenure should be replaced by individualised and titled land tenure systems has been successfully challenged, although as scholars have recently pointed out, the renaissance in approach perhaps needs now to be tempered by a more critical analysis.

2.3 Contending with new paradigms of complexity in environment and society

A recurring and central controversy in the society and environment debate, that has in turn long underpinned the formulation of natural resource management approaches and policies - not least in the East African rangelands - is that between neo-Malthusian (after Malthus, 1798 & 1803 rpt 1960) and alternative understandings (see below) of the population - environment nexus. While neo-Malthusian paradigms have heavily informed policy and law, impacting on and often controlling local people's resource use patterns, as well as heavily influencing natural resource management interventions, alternative understandings, including those of 'post-normal science[8]', have only recently begun to filter through into the mainstream.

In substantial part, neo-Malthusian and science-based understandings of society and environment have been predicated on, or much associated with, a central assumption - 'the balance of nature',

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[8] After Funtowicz and Ravetz (1992), who characterise particular areas of science - not least those of ecology and climate - as increasingly encountering greater levels of complexity and uncertainty than was previously 'normal', as scientific methodology and understanding continues to develop (Shackley *et al.* 1996, 204).

that has been increasingly countered by an alternative paradigm, the 'flux of nature' (Gilson *et al.* 2003, 380). The 'balance of nature' paradigm, with a history reaching back to Linnaeus in the eighteenth century and before, emphasises that nature linearly tends towards single equilibrium points and stability (equilibrium theory), stable states which human action may often disturb or destroy. In contrast the 'flux of nature' paradigm comprises a much more complex construct (Gilson *et al.* 2003, 381). The 'flux of nature' paradigm, or disequilibrium theory, contends that nature - or an ecosystem - does not necessarily tend towards a single stable equilibrium point, although stability is not precluded. Instead ecosystems are viewed as potentially having multiple potential stable states modulated by processes that generate spatial and temporal heterogeneity, including interactions between organisms (biotic instability), environmental stochasticity and disturbance. Disturbance in disequilibrium theory, in contrast to equilibrium theory, is viewed as being the norm rather than the exception (Gilson *et al.* 2003, 381). Often ecosystem stability may be scale dependent - i.e. sub-components within an ecosystem may be in different degrees of flux, but the ecosystem may remain in a stable state until such time as the variability of one or more sub-components - or patch dynamics - act in such a way as to drive the larger scale ecosystem into a different state.

Thus, in large part predicated on the logic of the 'balance of nature' assumption, neo-Malthusian narratives emphasise a relatively straight-forward relationship between population growth and environmental degradation (e.g. Ness *et al.* 1993 and Pimenthal *et al.* 1994 cited in Agrawal and Yadama 1997, 439). Contrastingly, and as Agrawal and Yadama (1997, 440) note, a growing number of scholars contend that the relationship is anything but straight forward (e.g. Blaikie and Brookfield 1987; Netting 1993; Whitmore 1990). Thus the hegemony of neo-Malthusian paradigms of environmental degradation, not least perhaps the controversial desertification debate (e.g. UNEP 1992)[9], has been increasingly countered by a series of empirical studies (for example, Fairhead and Leach 1996; Linblade *et al.* 1996; Tiffen *et al.* 1994; Basset and Zuéli 2000) that have drawn divergent conclusions to prevailing received wisdoms about the relationship between people and environment in African rangelands. The contemporary challenge to neo-Malthusian paradigms has particularly benefited from the growing sophistication of disequilibrium theory as well as contemporary developments in our understanding of the varied environmental history and socio-economy of African rangelands and forests. Thus many rangeland ecosystems are now viewed as being the product of continual disturbance through patchy and unpredictable rainfall, fire, grazing, browsing and physical disturbance (e.g. Dublin 1995, Behnke and Scoones 1993, Ellis and Swift 1988, Homewood and Brockington 1999 cited in Homewood 2004, 129). In such systems habitat disturbance is not necessarily detrimental to species survival, as species diversity and survival is based more on their ability to disperse, colonise and persist in a patchy and unpredictably fluctuating environment (Davis *et al.* 1994, Stattersfield *et al.* 1998, Homewood and Brockington 1999, Laris 2002a&b, cited in Homewood 2004, 129). An implication that follows is that (pastoral) mobility and opportunistic management offer efficient strategies for coping with arid land ecology - as epitomised

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[9] Mortimore (1998) usefully reviews the historical development of the desertification and environmental degradation debate in some detail.

by the customary practice of indigenous pastoral systems (Sandford 1983, Behnke and Scoones 1993, Ellis and Swift 1988, Niamir-Fuller 1999, Turner 1998a,b, 1999a, Sullivan 1999b cited in Homewood 2004, 133).

These and other studies empirically demonstrate that the dynamics underlying environmental change can be more complex than a simple neo-Malthusian thesis, and that underlying socio-economic conditions and other factors such as induced migration and land tenure changes precipitated by government policies may be key to better understanding the environment-population nexus (e.g. Lambin *et al.* 2001). For example, deforestation may occur in localised areas, but on a wider scale, overall trends towards a more forested landscape can occur (Leach and Fairhead 1996). In agreement with Boserup's (1965) thesis, instead of inexorable soil erosion and decline in soil fertility associated with population expansion, rural farmers may, under the right policy conditions, invest more in soil and tree conservation practices with the aid of urban remittances as land availability declines and as agricultural intensification rises (Tiffen *et al.* 1994). These studies, amongst others, have been landmarks in developing better understandings of the socio-economic and ecological dynamics of agro-ecological systems.

Yet, it may also arguably be the case that, although the recent development of empirically-based scholarship questioning widely accepted neo-Malthusian perceptions about environment-people relationships has done much to advance a set of more nuanced understandings about their complexity, it is necessary that some of these studies be placed within a wider perspective. In particular, there has perhaps been a growing temptation to over-extrapolate some of these studies' conclusions outwith their context. This is especially the case when ground-breaking challenges to received wisdoms are themselves challenged, or considerably modified, by further field research. For example, while Tiffen *et al.* (1994) undoubtedly found a clear relationship between increasing population, maintained soil fertility and an afforested landscape, a subsequent study in the same area[10] revealed a more complex on going process (Murton 1999). This latter study found that while those farmers able to invest off-farm remittances in land and land-improvements were able to increase their yields, other poorer farmers were instead forced through circumstance to invest off-farm (labour) cash incomes in food security and were thus entrapped within a cycle of diminishing yields and decreasing investment in land improvement. A growing population was found to be exacerbating this latter cycle as less land was available and more people were in search of non-farm employment. Whereas an expected constraint in the relationship between people and environment had been successfully overcome (in terms of agricultural intensification and its associated soil status and yield improvements), continued population growth had effectively begun to reverse the relationship for the majority of poor farmers unable to benefit from the nexus between rural and urban economies (Murton 1999).

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[10] These studies were carried out in Machakos in central Kenya, East Africa.

This example demonstrates that, as Leach and Mearns (1996, 4) state, contradictory evidence from an individual case study cannot entirely refute an orthodoxy. While the questioning of particular received wisdoms has cast doubt over their wider applicability (Leach and Mearns, 1996, 4), a balance may need to be struck as further inquiry and critical examination reveals that, although the paradigms through which received wisdoms are constructed may often be extensively flawed, the concept of an ultimately finite, albeit far more complex, relationship between people and environment may be sound. The challenge therefore lies in developing more sophisticated understandings of the drivers and processes of change underlying people-environment relationships that, while recognising the limits of generalisation between individual, bounded contexts, afford comparative insights for wider theoretical advances.

I now move on to consider how popular understandings of environment and conflict have been heavily influenced by neo-Malthusian thinking and reproduced through the application of deterministic science. Since conflict is a re-occurring and central theme of this thesis, I provide an overview of the contemporary debate about conflict and environment, and its role in better understanding society and environment relations.

2.4 Understanding conflict: environment, power and violence

Conflict has long been a recurrent feature of socio-political relations over access to resources in the semi-arid rangelands of sub-Saharan Africa – most notably between herders and farmers. Current understandings of how and why conflict more generally occurs can be divided into three schools of thought:

1. 'Environmental security' – part of a wider set of theories which recognise conflict as being primarily driven by environmental scarcity leading to exacerbating political-economic and socio-economic factors;
2. 'Collective Action Theory' – setting out causality as being heavily associated with institutional failure manifested by poorly governed and ill-defined resources (see Sections 2.2.1 & 2.2.2);
3. 'Political Ecology' – setting out causality as being grounded in wider unequal socio-political relationships and being primarily driven by interests (often elites) defining and affecting control over (a) resource(s) (see Section 2.2.3).

The 'environmental security' paradigm is strongly underpinned by a neo-Malthusian understanding of the relationship between environment and population[11]. Emerging during the 1990s from two separate research programmes led respectively by Professor Homer-Dixon (1991, 1994, 1995, 1998, 1999) and Professor Gunther Baechler (1996, 1998) (Peluso and Watts 2001, 12), they generated what Peluso and Watts (2001, 15) view as 'fundamentally similar' models. Thus the

[11] Population growth underpins one of the three components of the Environmental Security model, despite Homer-Dixon's claims (1999, 28) that he is not a neo-Malthusian.

'environmental security' school lays out the rationale that rising population and increasing resource scarcity will lead to increasingly severe levels conflict around the world. A brief deconstruction and critique of the 'environment security' paradigm (focussing on the work of Homer-Dixon) is useful for understanding why alternative approaches – and particularly that of political ecology – may better locate the place of environment in relation to the occurrence of conflict.

2.4.1 *A summary critique of the 'environmental security' model*

The emergence of the 'environmental security' school of environment-conflict analysis coincided with the aftermath of the end of the cold-war and the belief among its proponents and supporters that growing resource degradation would contribute to a proliferation of 'small wars' (Peluso and Watts 2001, 7) or 'green wars' (Twose 1991, 1 cited in Fairhead 2001, 213). While there may not necessarily be any direct aetiological relationship between the 'environmental security' school and African rangeland policies, the underpinnings of each have a great deal in common. Both are driven by neo-Malthusian understandings of environment and population, which as I established in Section 2.3, are particularly inappropriate in an African semi-arid rangeland context.

In summary, as reviewed by Hartmann (2001, 40-42), the model asserts that:

1. In certain situations renewable resources can cause civil conflict and instability. Conflict and instability can cause social effects (such as poverty, migrations and weak institutions) that are misconstrued as being the immediate causes;
2. 'Increased demand' for environmental resources is driven principally by population growth;
3. 'Degradation' of environmental resources induces powerful groups to tighten their grip on them in a process termed 'resource capture';
4. 'Resource capture' leads to 'unequal resource distribution' and thereby intensifies resource scarcity for poorer and weaker groups;
5. The resulting 'environmental scarcity' can force migration of the poorest groups to ecologically vulnerable areas. The pressure of their numbers and their lack of knowledge and capital can cause severe environmental scarcity and chronic poverty, a process termed as 'ecological marginalisation' (Homer-Dixon and Blitt 1998, 225 cited in Hartmann 2001, 41).
6. Environmental conflict can be avoided through societies adapting to scarcities through more efficient resource use or acquiring resources instead through international markets. Adaptation depends on the sufficient supply of 'social and technological ingenuity' to produce solutions to scarcity. In poor countries, the prospects for ingenious adaptation are low, with potential for further impoverishment and migration.
7. Environmental scarcity also leads to the undermining and threatening of the state and society, as increased competition for resources leads to social segmentation and reduced social trust, as well as an escalation of challenges to the authority of the state.
8. Finally, by contributing to migrations, economic decline (in poor countries), social segmentation and weakened states, environmental scarcity helps lead to violent 'ethnic

conflicts, insurgencies and coups d'états' (Home-Dixon and Blitt, 1998, 227 cited in Hartmann 2001, 43).

Perhaps the biggest weakness of the 'environmental security' model, aside from its somewhat simplistic neo-Malthusian leanings, is that it fatally conflates distinct and very different processes into the overarching term of 'environmental scarcity'. Thus, 'increased demand for resources', 'degradation' and 'unequal resource distribution' can each or together cause 'environmental scarcity' (Hartmann 2001, 43). The conflating of three very distinct and different processes into one concept is a shortcoming that Fairhead (2001, 217) understandably laments as being 'tantamount to analytical obfuscation'. Fairhead then proceeds to show just how flawed the conflation of distinct processes into a single term 'scarcity' can be. He cites examples (e.g. Tiffen, Mortimore and Gichuki 1994, Murton 1997 and Lindblane, Carswell and Tumuhairwe 1997) where, instead of conflict, scarcity has led to improvement in the quality of the environment – particularly in densely settled agricultural areas where land is extremely scarce, land values continue to rise concomitant with the increasing productivity of land associated with investments in ecological improvements (Fairhead 2001, 217-219). Following on from these examples, Fairhead (2001, 219) appropriately asks, 'Why conflate into one concept the very relationships that are interesting to pull apart and explore'? For example, unequal resource distribution has very little to do with the environment *per se* and everything to do with issues of power, different understandings of environment and different forms of violence used to enforce inequality. Inequality in this context is often driven by resource wealth, rather than resource scarcity, and the interests of elites enforcing their control and access to those resources. Equally, Fairhead (2001, 220) argues that the case for the consistent presence of a relationship between resource degradation and increasing conflict has never been made convincingly. Moreover, the conflation of degradation with environmental scarcity is misleading – resources can be scarce but not degraded, and they can be widespread but degraded. In as much as the environment is often associated with the occurrence of conflict, contrary to Homer-Dixon's assertion, the former is frequently not an immediate or fundamental cause of the latter. Rather than enclosed and inwardly collapsing environmental systems – as intimated by the 'environmental security' model, often the dynamics of access to and conflict over resources are driven by powerful external forces and political economic processes or power relations.

This latter observation in particular underlines the need to look for alternative approaches to examining the relationship between environment and conflict. The application of common pool resource theory (see Section 2.2.1) in the analysis of environment and conflict has similar limitations to the 'environmental security' school (Turner 2004, 865). In particular, and as discussed in Section 2.2.1, CPR theory embraces an individualistic rational choice analysis of group behaviour (Ensminger 1992, Mccay & Acheson 1987, Oakerson 1992 and Ostrom 1990 cited in Turner 2004, 865). This postulates that the behaviour of individuals or groups if unconstrained will likely lead to competition-driven resource over-use – i.e. socially-produced resource scarcity. The neo-Malthusian underpinning of this analysis can easily lead to over-simplified interpretations of population-driven competition, conflict, environmental degradation and resource scarcity (Goldman 1998, Peters 1987, Turner

1999a cited in Turner 2004, 865). The adoption of a CPR approach is therefore likely to lead to shortcomings similar to those of the 'environmental security' school.

2.4.2 *Political ecology: power, environmental discourse and conflict*

Political ecology (see Section 2.2.3) may likely be the most flexible and powerful analytical approach to understanding the relationship between environment and conflict.

2.5 Land and institutions: social embeddedness, inequality and conflict

Changing perceptions and understandings of customary land tenure and land management have long been, and continue to be, a key element of the society-environment debate within an African rangeland context. These changing understandings have led to the development of a dualism between 'modern' and 'customary' forms of property relations and land tenure (Woodhouse *et al.* 2000, 18). The dualism can be traced through a historical kaleidoscope of four recent periods in modern African history: Colonial establishment and consolidation (1880s - 1930s); 'late colonialism' with its developmental thrust (1940s - 1950s); independence and the 'developmental state' (1960s - 1970s) and; the era of structural adjustment (1980s - present) (Woodhouse *et al.* 2000, 2). Given the frequently poor performance of previous land policies based on 'modernisation' (Toulmin and Quan 2000, 3), the debate is particularly significant and relevant as a number of African countries (e.g. Tanzania, Kenya, Uganda, Malawi, South Africa and Mozambique) are currently pursuing programmes of land reform - albeit at different stages of development.

2.5.1 *The evolutionary model of land tenure*

Thus for the early colonial period, colonial authorities are now viewed (e.g. Ranger 1983) as having played an important part in the re-creation of customary African land tenure through their interpretation, re-construction and integration of African land tenure systems of the day into their administrative systems (Colson 1971; Bassett 1993; McAuslan 2000; Okoth-Ogendo 2000; Wily 1988). This process was an important part of moulding and subsuming perceived and constructed customary law and power structures into the functioning of colonial administrations and economies.

In the latter part of the colonial period, and as underpinned by the influential report in 1955 of the East African Royal Commission (e.g. Shivji 1998, 5; Wily 1988, 31)[12], colonial administrations increasingly came to view customary - particularly communal - tenure as an obstruction to productivity and progress (Bassett 1993, 6). During this period, an evolutionary theory of land rights (ETLR) was to gain strong favour among policy makers. The approach advocated the gradual replacement of inclusive forms of customary tenure by individual title and registration, predicated on the assumption

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[12] Key findings of the East African Royal Commission were supported by the colonial Tanganyikan government in a policy paper 'Review of Land Policy' in 1958, which advocated a highly individualised form of freehold tenure and the transformation of customary land tenure to such a system (Wily 1988, 74).

that freehold tenure [13] (or its closest legal equivalent) offered the most propitious conditions for agricultural investments and productivity (Bassett 1993, 6; Peters 1994, 273; Platteau 2000, 52). Thus as land scarcity increased, people were expected to demand greater tenure security - articulated through the emergence of property rights which would evolve towards greater measures of individualisation and formalisation (Platteau 2000, 52). The approach also held that customary forms of land tenure were inefficient, did not provide sufficient security of ownership and in turn could not facilitate the use of land as collateral for credit and land investment. Moreover at the time it was thought that as human population grew, and with increasing agricultural commercialisation, there would, in any case, be an inherent tendency towards the individualisation of rights (e.g. Basset 1993, 13).

During the early independence period, newly formed African governments - both capitalist and socialist - adopted the evolutionary land tenure model for different ideological reasons and assumptions (Bassett 1993, 11). However an overriding 'broad-spectrum' approach was common to both - that a wide range of agrarian problems could be tackled through land tenure reform (Okoth-Ogendo 1993). Indeed today, this still remains a widespread and prevailing perception among governments, development organisations and institutions.

Individual titling and registration (ITR) schemes were promulgated as the best approach supporting the evolutionary model of land tenure. ITR was viewed as a strong complement to the agrarian reform programmes during the oil price crisis of the 1970s and into the structural adjustment era of the 1980s - particularly in post-independence African countries with capitalist economies - such as Kenya. During this period, African national economies began to increasingly suffer from declining terms of trade due to increased world oil prices and a general fall in primary agricultural commodity prices. Tanzania followed a very different path in that it embarked on the enforced communalisation of land predicated on socialist theory and a misunderstanding[14] of the nature of customary land tenure systems (Wily 1988, 82-83). Agrarian reform therefore became a centre-piece of governments' attempts to counter the declining status of national economies and an increasing debt crisis. Agrarian reform was promoted through encouraging increased production of primary agricultural commodities (in both socialist and capitalist economies) and the development of land-markets (in capitalist economies), in order to achieve greater levels of export-led economic growth. ITR, as a central component of agrarian reform, was viewed by many capitalist governments and key donor institutions, particularly the World Bank, as a key strategy to promote farmer-based investment in land improvement, access to credit and as an incentive for increasing agricultural

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[13] Although reservations were variably expressed within colonial administrations, particularly in eastern and southern Africa, that granting freehold status to local farmers would result in the destruction of land if farmers' agricultural practices went unchecked (Basset 1993, 9)

[14] This misunderstanding, on the part of Julius Nyerere (the first president of Tanzania), likely arose from a colonial fallacy that posited African systems of customary land tenure were intrinsically communal and that individual rights and ownership of land effectively did not exist (Wily 1988, 81; see also Nyerere 1968, 7).

productivity, particularly through the production of cash crops (see also Quan 2000, 34; Platteau 2000, 52-56).

Yet a growing body of evidence began to be gathered by scholars in the late 1980s and early 1990s (e.g. Bruce 1986; Green 1987; Barrow and Roth 1990; Okoth-Ogendo 1989 & 2000; Migot-Adholla *et al.* 1994) that the ITR schemes of the 1970s and 1980s had failed to realise their stated aims (Peters 2004, 274; Platteau 2000, 35; Quan 2000, 66). For example Barrows and Roth (1990, 290) conclude:

> On balance, there is little evidence to support the hypothesis that registration, through increased tenure security, has increased investment in agriculture, or that ...farmers are willing to risk their land for credit.

Scholars now compellingly argue that ITR programmes have frequently exacerbated conflicts and patterns of unequal access to land based on gender, age, ethnicity and class in farming systems (Okoth-Ogendo 1976; Coldham 1978; Pala 1980; Davidson 1988; Shipton 1988; Haugerud 1989; Attwood 1990; Shipton and Goheen, 1992, 316; Shipton 1994, 364-5; Besteman 1994; 1996; cited in Peters 2004, 274-5; see also Plateau 2000, 56-62 for an economistic critique). Amanor (2001, 5) provides an illuminating perspective of some of the assumptions implicit in the evolutionary model of land tenure upon which ITR is predicated:

> The problems of defining families, households, units of production, consumption and reproduction, one parent families and extended networks of kin are not considered. The farm unit is also not defined and it is presumed that the family farm consists of one contiguous unit which is passed down from parents to children (probably the assumption is the father) to children (probably thought of as sons). The concept of a farmer working on several plots that were acquired in different ways from different people does not feature in this conception of farm.

A similar literature details the adverse and sometimes disastrous impacts of ITR and range privatisation in herding systems and range management in Africa (Galaty *et al.* 1981; Horowitz, 1986; Baxter and Hogg 1990; Behnke *et al.* 1993; Peters 1994; cited in Peters 2004, 275). Range privatisation has generally lead to the break-down in range management systems that depend on larger scale seasonal movements of herds to efficiently utilise the temporal and spatial variability in productivity in semi-arid rangelands for grazing. But even more critically, privatisation of the range - for example, through group ranches - has tended to allow elites to convert the range to other uses (for example, commercial agriculture) often excluding previous and poorer range-users, who may then become landless and forced into poverty.

In response to the growing criticism of simplistic evolutionary tenure models and evidence of their adverse and poor performance, property rights analysts (not least at the World Bank) have readjusted their position such that ITR is now viewed as one of several options for land tenure reform, a process in which customary forms of tenure may also be retained (e.g. McAuslan, 1998). But strong suspicion remains that the underlying premises of land reform tenure remain unchanged: that individual land ownership and the emergence of a land market are seen as the ultimate objective

and as part of the continuing market liberalisation process (Amanor 2001, 8; Peters, 2004, 277; Shivji 1998, 111).

2.5.2 *Communitarian understandings of land tenure*

Much of the critique and pressure for re-examining the aptness and validity of the evolutionary land tenure model has been generated by what Amanor (2001, 9) terms the 'communitarian' approach to land tenure, that draws on anthropological, cultural studies and customary law approaches. Pioneered and initially developed by anthropologists in the 1940s and 1950s (e.g. Gulliver 1961; Biebyuck 1963; and Gluckman 1969), the communitarian school posits that customary land tenure systems are flexible and adaptive, and are embedded in a complex and continually changing matrix of social, cultural and political relations and meanings (e.g. Shipton and Goheen 1992; Berry 1993; Shipton 1994; Peters 2004). Thus Toulmin and Quan (2000, 12) state:

> Increasingly people have come to recognise that there are considerable merits in customary systems for land rights management systems since they provide a relatively secure means for those who are members of the community, at a lower cost than state run administrative structures. Many arrangements exist within customary systems which provide flexibility and movement of land between users, through sharecropping, tenancy, short and long term loans. Also customary tenure systems tend to consider the needs of poor members and prevent the alienation of land from the group as a whole.

While this school provides a far more nuanced approach to understanding land-tenure, it has perhaps failed, at least in the past, adequately to address the less egalitarian and equitable processes of social differentiation (c.f. Toulmin and Quan 2001, 12 as above) that may increasingly occur in contemporary customary tenure systems (Amanor 2001, 11-12). Recent work has shown that national and local elites often capture the benefits of decentralisation processes aimed at empowering local and 'traditional' leaders (e.g. Carney and Farrington 1998; Ribot 2000; Woodhouse *et al.* 2000 cited in Peters 2004, 277). Thus while the 'communitarian' school has achieved much in successfully providing alternative and increasingly powerful counter-understandings to the evolutionary land model, Peters presses for the need to go on beyond current formulations of the social embeddedness of land. She argues for the need to ask precise questions about the type of social and political relations in which land is situated, particularly with reference to relations of inequality - class, ethnicity, gender and age (Peters 2004, 278).

There are two immediate reasons why this need is apparent: the first lies in the point that it is rarely the case that all (local) people are able equitably to influence and engage in debates and processes of how and what constitutes the norms of contemporary customary access to land and resources (Amanor 1999; Peters 2004). Often these debates may be variably over-shadowed by larger political processes and underlying macro-economic trends such as commoditisation (Bernstein and Woodhouse 2000, 222). The second point lies in the issue of competition and conflict over access to land and resources that has long been a part of African society - environment relations. While some research remains ambivalent about trends in the incidence of land-use conflict (e.g. Hussein 1998), other research shows that competition and conflict over land is increasing over much of sub-Saharan Africa (reviewed by Berry 2002; and Peters 2004), and not least in Tanzania (Odgaard 2002), in

part driven by processes of land alienation and privatisation (e.g. Lane 1996; Shivji 1998; Brockington 2002). As competition for land and resources intensifies, Berry (2002, 640) presses for:

> ... the importance of situating land (and resource) struggles in specific historical contexts, taking account of the way multiple interests and categories of people come into play, and impinge on one another, as people seek to acquire, defend, and exercise claims on land.

Thus by deconstructing contemporary processes of socio-economic differentiation and inequality in customary land and resource tenure systems, and through increasing our understanding of the complexity of contemporary yet historically rooted land conflicts in Africa - which I set out to accomplish in this thesis - more grounded, sophisticated and representative understandings of these processes can be developed.

2.6 Mainstreaming new understandings of society and environment in policy

The extended debate over appropriate approaches to land tenure in Africa demonstrates how alternative understandings generated by extensive research findings may take a long period of time (in this case well over 20 years) effectively to challenge established policies and the knowledge upon which they are based. I briefly review why research generating new yet alternative and apparently unorthodox findings may often not lead to the improved policy outcomes intended for African farmers and herders and the environment. In this regard, Leach and Mearns (1996, 28) argue that fundamental changes in the relationship between research and development policy-making are required. This is particularly the case when research increasingly identifies multiple, and potentially equally valid, complex and/or uncertain outcomes as existing side by side - whether based on science or on alternative knowledge claims or on both. This leads to two immediate challenges. The first is that complex plural research outcomes are susceptible to criticism and the disadvantage that they may be too complicated for the derivation of clear, straight-forward and compelling policy advocacy (Leach and Mearns 1996, 32). The second is that plural research outcomes may often lie outside the mainstream and may be contrary to embedded and dominant bodies of knowledge.

Before discussing how these two challenges might be addressed, it is helpful to take a step back and briefly reflect on the complexity of policy-making processes and the false consensus that may often underpin established policy (e.g. Cleaver and Franks 2003a cited in Walsh 2004[15]). In this regard, it is worth quoting from the introduction of a paper by Brock *et al.* (2001) which explores the dynamics of the making and shaping of poverty policy. The paper takes as its starting point a critique of linear versions of policy-making, highlighting the complex interplay of power, knowledge and agency in poverty policy processes. Thus Brock *et al.* (2001, iii) view the policy process as involving a complex configuration of interests between a range of differently positioned actors, whose agency matters, but whose interactions are shaped by power relations (and structures). I argue here that, within the context of the following quotation, 'poverty' is interchangeable with 'society and environment'.

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[15] I acknowledge Dr Walsh for having drawn my attention to this and following papers.

> Policy... is not shaped simply on the basis of 'good' research or information, nor does it emerge simply from bargaining amongst actors on clearly defined options and choices. Rather, it is a more complex process through which particular versions of poverty come to frame what counts as knowledge and whose voices count in policy deliberations in particular political and institutional contexts. Making sense of participation in poverty policy processes, then, requires an analysis of the ways in which power and knowledge define spaces for engagement, privileging certain voices and versions and excluding others. It also requires an understanding of how particular ways of thinking about poverty have gained ascendancy, coming to determine the frame through which poverty is defined, measured and tackled. To do so calls for an historical perspective, one that situates contemporary poverty policy with regard to antecedent visions and versions (Brock *et al.* 2001, iii).

Thus Keeley and Scoones (1999, 32) argue that policy processes need to be understood in discursive and political context and that the power of political interests and embedded patterns of knowledge are significant constraints on any policy process.

Returning to look at how to approach the dual policy-advocacy challenge in research of plurality and unconventionality, Keeley and Scoones (1999, 31) identify two possible modes of engagement. The first approach is more confrontational and sets out to advocate marginalised interests and excluded forms of knowledge to counter established policy (Keeley and Scoones 1999, 29). Thus 'counter-narratives' (Roe 1991; 1995) are developed to encompass and integrate the excluded knowledge and problem definition claims of a wider range of (marginalised) interests in order to counter established policy paradigms - such as those of prediction and control (Leach and Mearns 1996, 32; Shackley *et al.* 1996, 221; Keeley and Scoones 2001, 30). The second approach is more participatory and consensual (Keeley and Scoones 2001, 31), although it is reliant on the policy development process recognising the contingency of different knowledge claims and placing more emphasis on institutions that promote argumentation and deliberation (Keeley and Scoones 2001, 31). The quality of this latter approach is also contingent on the nature of 'participation' and 'consensus' - for example who is included and who is excluded, and on how the 'policy spaces' in which debate occurs are constituted. Thus 'policy spaces' and participation may be 'created from above' by powerful institutions and actors, or they can be more autonomous, created 'from below' through independent forms of action (Brock *et al.* 2001, 1).

Nevertheless, increasing recognition of the existence and expression of a broad range of knowledge and problem definition claims provides a growing opportunity for the 'democratisation of expertise' (Funtowicz and Ravetz 1992 cited in Leach and Mearns 1996, 31) such that policy outcomes are negotiated among an extended range of 'non-traditional' actors (Leach and Mearns 1996, 31). The challenge remains that, whereas ideas move on, institutions and organisations often stand still (Chambers 1993 cited in Scoones 1996, 53), attached to universal epistemologies and simple ideas with powerful slogans, even when they are patently inaccurate or inappropriate (Swift 1996, 85; Shackley *et al.* 1996, 221).

2.7 The study approach, analytical framework and methodology

Thus far I have reviewed recent and contemporary developments in research on society - environment relations in the African semi-arid rangelands and discussed and chosen one of two major

methodological approaches that I consider important for better understanding these relations. As a basis for the presentation and discussion of my research questions (below), I have reviewed two key themes that I see as most important (with regard to this thesis) in the debate over society and environment in the African rangelands. And finally, I have provided a brief review of why a growing body of alternative knowledge about society and environment relations in the African rangelands is only now beginning to filter through into policy. I now turn to introducing my research questions, the analytical framework of the thesis and its methodology.

2.7.1 *The study context*

The approach to this study has been influenced by two main considerations: The first consideration, following on from the discussion in the preceding sections, is an attempt to contribute to Peter's (2004, 270) call, for further advancing our understanding of land-use relations and land-based conflict in Africa. Specifically, Peters urges that scholars strive to uncover who the 'winners' and 'losers' are in their studies of contemporary African land relations. She also argues for the need to identify and include additional important situations and processes, such as commodity production, livelihood diversification, and the political economy of the state, that might limit or end negotiation and flexibility for certain social groups and categories.

The second consideration is a need to better understand the underlying causes and processes leading to growing competition and continuing outbreaks of conflict over land and landed resources among farming and herding groups in Tanzania, briefly outlined in the introduction, and further described in Chapter Three. Thus the study sets out to investigate the current livelihood trajectories of farmers and herders in the Idodi rangelands and to consider some of the key processes underlying people's land-use relations and outcomes, which are likely to reflect similar processes of competition and conflict for land in other dryland-wetlands in Tanzania.

2.7.2 *The research questions and analytical framework*

Research questions

This thesis is centrally concerned with the political ecology of access to rangeland resources. There is currently strong support for a 'new' evolutionary approach to land tenure law and reform which posits that non-interference in local - or customary - land tenure systems will allow adaptable and equitable outcomes (Peters 2004, 277; see also Platteau 2000, 72). This approach is predicated on experience which has shown that direct state intervention in land matters is best minimised because in the past it has lead to increased insecurity for farmers and herders (Platteau 2000, 71; see Section 2.4). Instead, what is required is a pragmatic and gradualist approach that reinstitutionalises indigenous land tenure, promotes the adaptability of its existing arrangements, avoids a regimented tenure model and relies as much as possible on informal procedures at local level (Bruce 1986, 64-68; Atwood 1990, 667; Migot-Adholla *et al.* 1991, 170-173 cited in Plateau 2000, 72). As Platteau (2000, 72) reflects, there are strong merits to this approach.

However, as Peters (2000, 278) argues, it is also increasingly clear that despite its strengths, the new evolutionary approach to land tenure reform (as, for example, as partially adopted by the new

Tanzanian Village Land Act - see Chapter Three) is not a panacea. If anything, the approach could be seen as increasingly at odds with the proliferating evidence on competitive and conflictual relations over land (Peters 2000, 278).

In this thesis, I set out to contribute to a better understanding of Peters' central concern about increasingly competitive and conflictual relations over land that, albeit for a specific case study, hold wider and comparative significance for similar situations across eastern and southern Africa. Thus the central questions of the thesis - in terms of contributing to the wider debate about inequality and social conflict over land in Africa - are as follows:

1. What are the major wider factors that have influenced increasing socio-economic differentiation and unequal access to land and landed resources at local level?

2. When and how does local social flexibility and negotiation over land lead to inclusion or exclusion at a local level between different resource-users? How does this take place?

3. Scholarship has shown that past and continuing efforts to reinvent, subsume and/or extinguish customary law within national law throughout sub-Saharan have contributed to growing social differentiation and landlessness. In this context, to what extent does an alternative approach recognising the legitimacy of customary land tenure practices reinforce the growing trend of social differentiation and the increasing numbers of landless and resource poor observed across Africa? Under what circumstances might such an approach limit or reverse the trend?

This thesis sets out not to question the new evolutionary approach to land reform and tenure, but to examine how it might be better facilitated and supported at local level in relation to past land reform failures. In relation to my chosen case study of the Idodi rangelands, I document the growing social differentiation, competition and conflict over access to land through a livelihoods analysis. I investigate to what extent the increasing competition over access to land and landed resources is a product of local practices as compared to state interventions and policies. In identifying the key factors underlying the major outcomes and trends in people's land use and livelihoods, I investigate some aspects of current land use relations, focussing on interactions between herders and farmers. Are local or customary forms of negotiation sufficient for enabling herders to gain sufficient equitable and legitimate access to landed resources? When and how does local social flexibility and negotiation over land lead to exclusion or inclusion of particular groups of resource user?

Although I find much evidence in support of Peters' concern about increasingly competitive and conflictual relations over local access to land, I argue that this is trend is as much a product of previous state policy, which has compounded shortages and insecurity over land and landed resources. I demonstrate - albeit for one set of resource user relations (herder - farmer) - that social negotiation over landed resources continues to be key for herders maintaining their access to these resources. At the same time, I demonstrate that informal and socially negotiated land-use agreements are not sufficient. I argue that locally barely legitimate access to these resources by marginalised

resource users can be made more secure by approaches to land use management that seek to address marked inequalities in power and facilitate the building of further local legitimacy for different resource users through local fora.

The underlying rationale of the thesis' questions lies in the fact that in Tanzania customary tenure practices and people's relationships with the land have been long disrupted and marginalised by the pre- and post-independence state. Thus, people have experienced major disruptions to their customary resource tenure practices and systems which have been censured, marginalised and overridden by the state (see Chapter Three). Many rural people continue to contend with the after-effects of successive state-mediated appropriations and re-organisations of entire landscapes (which have not ceased) that culminated in the *Ujamaa* villagisation schemes of the 1970s. I argue that these and other factors - such as on-going changes in political economy - continue to comprise significant challenges and constraints for people's livelihoods and land use relations, particularly for marginalised categories of resource users.

The analytical framework

As a multi-disciplinary study, the thesis is conceptually divided into three main components - although linkages should be seen as running through all three. The three components of the thesis in order of appearance are firstly, the political economy of natural resources and land in Tanzania; secondly, the socio-ecological and socio-economic aspects of people's rangeland-use, and; thirdly, the socio-political processes of land-use relations in the Idodi villages.

Since the analysis of livelihoods and land relations is potentially complex, my approach progressively contextualises the study by firstly reviewing key past and contemporary developments in the political economy of rangeland management in Tanzania. There are several ways of approaching this analysis - I focus on two themes that have particularly impacted on people's land relations in the Idodi rangelands - state-imposed landscape reorganisation and state control of people's production relations and natural resource use. On the basis of these themes and a synopsis of current land reforms in Tanzania, I explain how cascades of people have moved through Tanzania in search of land and livelihood. I explain how these developments have had a direct impact on the livelihoods and land relations of people living in the Idodi rangelands. I then introduce the Idodi rangelands and provide a review of relevant background information, including a description of current village administration and land tenure practices.

Having contextualised and situated the field study, I proceed to analyse the socio-ecological and socio-economic aspects of people's livelihoods in the Idodi rangelands. Since the Idodi rangelands are home to a polyethnic community, I disaggregate and review the factors underpinning the different major in-migrations that have occurred in the rangelands. In order to more easily understand people's livelihoods, I define and separately investigate two categories of land-user - herders and farmers - on the basis of their different social organisation and means of production. In essence, and as will emerge from the thesis, this categorisation constitutes both an emic and etic labelling of actors which is further employed to frame the analysis of land-use relations in the third component of the thesis.

Having investigated and described key attributes and trends in people's livelihoods, the third component focuses on the socio-political nature of land-use relations between herders and farmers in the Idodi rangelands. I focus on the varying strategies employed by different herders to secure access to key landed resources. Much of the analysis lies in examining the negotiability of rules and processes, and focuses on the investment by herders in social and economic relations with farmers as an important strategy for maintaining access to key landed resources.

The dryland - wetland rangeland areas of Tanzania, for example those of the Idodi rangelands, are of particular interest as they provide microcosms and bounded arenas in which:

- the contrasting livelihood outcomes and socio-ecological practices of different livelihood groups can be studied and understood in some detail
- the socio-environmental past may be more easily deduced
- the range of competing interests that are produced and played out can be examined over a longer term period - for example, between herders, farmers, government sanctioned wildlife interests and other groups;
- the processes of social differentiation that often occur can be studied;
- the political economy impacts of past and current policy on different resource users may be relatively easily traced and analysed;
- people's exposure to increasingly differentiated rights of control and access to land and landed resources may be understood as part of the interaction of the above factors.

Moreover, these lines of inquiry may be pursuable across a range of different levels of agency and interest groups - individuals, households, resource user or artisanal groups, corporate groups - within different and changing institutions and structures.

2.7.3 The study methodology

The multi-disciplinary study methodology was developed in such a way that different lines of inquiry could be pursued simultaneously. The lines of inquiry were carried out through both formal and informal data gathering processes. The formal data gathering process consisted of carefully developed and piloted randomly sampled semi-structured multi-round household survey (for farmers), and multi-round household-based census (for one group of herders). My approach to investigating land holding and its impact on people's livelihoods - in this case farming livelihoods - was carried out at a household level. It is important to emphasise that this level of analysis may mask underlying inequalities within the household - but unfortunately it was not possible to sufficiently disaggregate my data collection and analysis to reveal inequalities in terms of gender, age and kin-status. Nevertheless, in terms of wider comparisons, the household remains a strongly appropriate and well recognised level at which analysis can be carried out. Less formal data and material collection techniques were used to pursue extended case study (e.g. van Velson 1967, 141-149), life history and other information needs, based on formal interviews, discussions and conversations, participation at public and other meetings, participant observation and excursions to different places of interest. In addition, archival work was carried out at village, divisional and district levels and at the Tanzania

National Archives. The rationale for the different interactions and how they were employed to collect specific data and material are briefly explained as follows:

Multi-round household farmer survey: a random semi-structured multi-round household survey[16] was designed and, after piloting, carried out to gather data from village-based farm households. The household was the most appropriate sampling level for the farming community in Idodi since it comprises the domestic group (Fortes 1971, 2) and it is an established level at which data on people's livelihoods can be systematically gathered and analysed (e.g. Ellis, 1998). The household survey was carried out twice during the two year field work period.

Household-based census: a semi-structured household-based census[17] for *Ilparakuyo* herders living in the Idodi villages was designed and implemented in close consultation with *Ilparakuyo* informants. The census was designed to gather detailed data on household composition, herd numbers and structure (on the basis of emic categories) and farm fields cultivated. Although there are two pastoralist groups in the Idodi villages, the *Ilparakuyo* and Barabaig, only the *Ilparakuyo* were included in household survey work. It was decided not to survey Barabaig households resident in Idodi as circumstances did not sufficiently allow for this.

Key informant interviews and conversations: Key informants (men and women) were important for discussing farming and herding practices, constructing extended case study material, and providing local oral histories. In addition everyday interactions with people, whether on the road, at a market place, in a village beer club or at the monthly market, often provided useful background information or asides about one or other event or issue under investigation.

Participation at public and other meetings: A point was made of attending public meetings. In addition, semi-quarterly divisional government meetings were attended as these often raised a useful vignette of some of the major issues ongoing throughout the Idodi villages. Some 'workshops' were attended that were convened by the district (at the behest of the Ministry of Livestock) to examine herder-farmer conflict, and to look at pastoralist issues.

Archival research: Local village and divisional records (such as they existed) were examined (with permission), which yielded a limited amount of information for the period between 1970 and 1990. The national archives in Dar es Salaam were consulted, yielding information from between the mid 1920s to the late 1950s. Further archival work was carried out at Rhodes House Oxford. The aim of

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[16] The survey was administered on the basis of household lists that were generated from asking sub-village chairpersons to list all the households in their sub-village and cross checking these with the village household register.

[17] A census was chosen as the most appropriate survey technique as, at the beginning of fieldwork, there were 52 *Ilparakuyo* homesteads in the field area, and in order to ensure statistical validity during later data analysis, it was considered appropriate to survey all the homesteads (which was achieved).

the archive work was to piece together a framework of the key events - from the state's perspective - in the Idodi landscape over the latter half of the twentieth century in Idodi.

3 Tanzanian semi-arid rangelands in perspective

3.1 Introduction

The Tanzanian semi-arid rangelands comprise between 65-85 per cent[18] of Tanzania's area. Over the last half century, they have become increasingly demarcated by the state into different land-use areas. A large extent of the rangelands has been exclusively set aside for protected areas, and other parts now comprise large ranches and plantations. The demarcation of the rangelands, together with other key developments, such as *Ujamaa* and the marginalisation of customary land tenure practices and systems, has led to increasing insecurity and shortage of land and landed resources for herders and farmers in Tanzania. As a result of these developments, many herders and farmers have been compelled to move in search of new land and landed resources that are still to be found - albeit decreasingly so - in the dryland-wetland areas of Tanzania's semi-arid rangelands (see below). These important rangeland areas can be viewed as rapidly filling 'frontiers', which having become home to polyethnic in-migrant communities of herders and farmers. The dryland-wetland 'frontiers' are now increasingly characterised by growing levels of competition and conflict over access to key resources.

In this Chapter, I therefore provide a summarised account of the developments which I view as having most impacted on rural livelihoods and land relations in the Idodi rangelands. I initially focus on Shroeder's (1999, 360; see Chapter Two) twin problematic of dearth and diversity as being a key factor in contemporary land-use outcomes. In Tanzania this problematic has developed through the creation of an extensive protected area network and the extensive resettlement of farming and herding populations as part of a strategy to capture their production by the State. I then move on to review other related developments in the political economy of Tanzania over the last 30 years which have further contributed to the displacement of farmers and herders and the disruption of their livelihood and land-use practices. Increasing state control emerges as a pervading theme. In recent years and in contrast to previous policy, the current emphasis on decentralisation and local government reform is now viewed as a key strategy for reversing some the inequities and deficiencies of the past, and for improving governance, service delivery and democracy. Yet I demonstrate that in Tanzania the decentralisation of control (across a wide range of governance and administration issues) has been resisted in two key areas - the first is the wildlife sector. The second is the administration of land - which the state has insisted retaining ultimate control of, despite paying greater deference to local or customary land tenure practices. I argue that both these issues impinge strongly on farmer and herder livelihoods. Finally, in the light of these developments, I describe how both herders and farmers have been compelled to move through the landscape in search of key resources in frontier rangelands, such as those of Idodi.

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[18] The estimates vary according to different ways of defining a rangeland (see Bourn and Blench 1999, 7).

This chapter therefore provides the context for introducing the Idodi rangelands, its peoples and their livelihoods and land relations in the following chapters. It also provides key evidence for my argument that previous state interventions and policies are heavily implicated in the increasing levels of competition and conflict over land that are occurring today in Tanzania's semi-arid rangelands.

3.1.1 *Defining the semi-arid rangelands*

Before proceeding, it is appropriate that I clarify what I mean by the semi-arid rangelands. Arid and semi-arid rangelands cover two thirds of sub-Saharan Africa (Solbrig 1993, Le Houérou 1989 cited in Homewood 2004, 125). The semi-arid rangelands can be generally defined by the length of growing period (LGP) for annual plants - areas in which the LGP ranges from 79 - 179 days (FAO 1984 cited in Mortimore 1998, 10). The LGP for arid rangelands is defined as falling between 1 - 79 days (FAO 1984 cited in Mortimore 1998, 12). Land cover in the rangelands includes grazing land interspersed with cropland mosaic and woodland (Homewood 2004, 125).

The semi-arid rangelands of Tanzania - equivalent to areas falling between the rainfall isohyets of 500-800mm - stretch from the northern plains of the Serengeti, through the central plains and down to the south-west towards the Usangu plains. To the eastern and western side of this belt lie higher rainfall areas which receive 800-1000mmyr^{-1} (see Figure 3.2). Higher rates of precipitation occur in the highlands and along the coastal strip. The central zone of the semi-arid rangelands is less prone to tsetse fly and trypanosomaisis (see Figure 4.1[19]) which is endemic to the western and eastern *Brachystegia* 'miombo' woodlands. There has been a historical long-term flux in the boundaries between endemic and non-endemic tsetse zones (e.g. Ford 1971). A substantial expansion in the distribution of the tsetse fly has occurred in the last 50 years, which has been largely attributed to changes in human land-use and agro-ecological practices. It is thought that at least 60 per cent of Tanzania is currently varyingly infested with tsetse (Galaty 1988 - but see the higher and more recent FAO-PAAT estimate as provided in Figure 3.1), adversely impacting livestock keeping and making human inhabitation difficult[20], particularly in the worst affected areas. Thus those parts of the semi-arid rangelands of Tanzania that remain relatively free of trypanosomaisis are very important for livestock herders.

A feature of the semi-arid rangelands is that they contain both extensive dryland areas and usually smaller discrete 'dryland wetlands' that may often be part of larger river systems. The 'dryland

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[19] The tsetse fly distribution depicted in Figure 4.1 is taken from the UN Food and Agricultural Organisation's (FAO) Programme Against African Trypanosomiasis (PAAT) http://www.fao.org/ag/againfo/programmes /en/paat/maps.html. The map shows the tsetse fly distribution for *Glossina morsitans* produced by modelling the 'known' presence and absence of the flies between 1999 and 2003 (using maps developed by Ford and Katondo [1977] modified with more recent information collected from national and international agencies and researchers).

[20] Although localised agricultural bush and woodland clearance may significantly reduce local tsetse fly densities around settlements.

Figure 3.1: The topography of Tanzania, location of major wetlands and general tsetse fly distribution

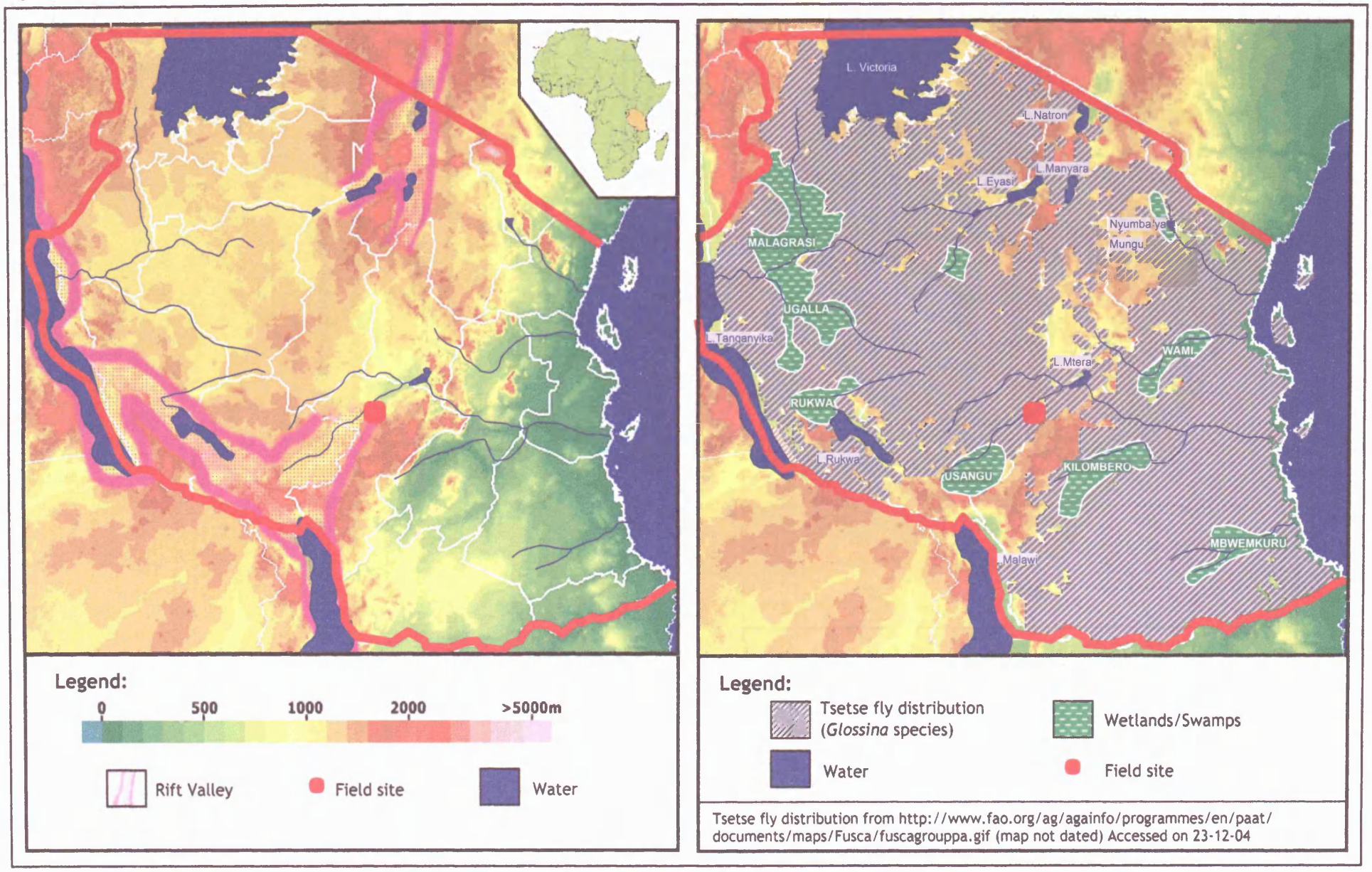
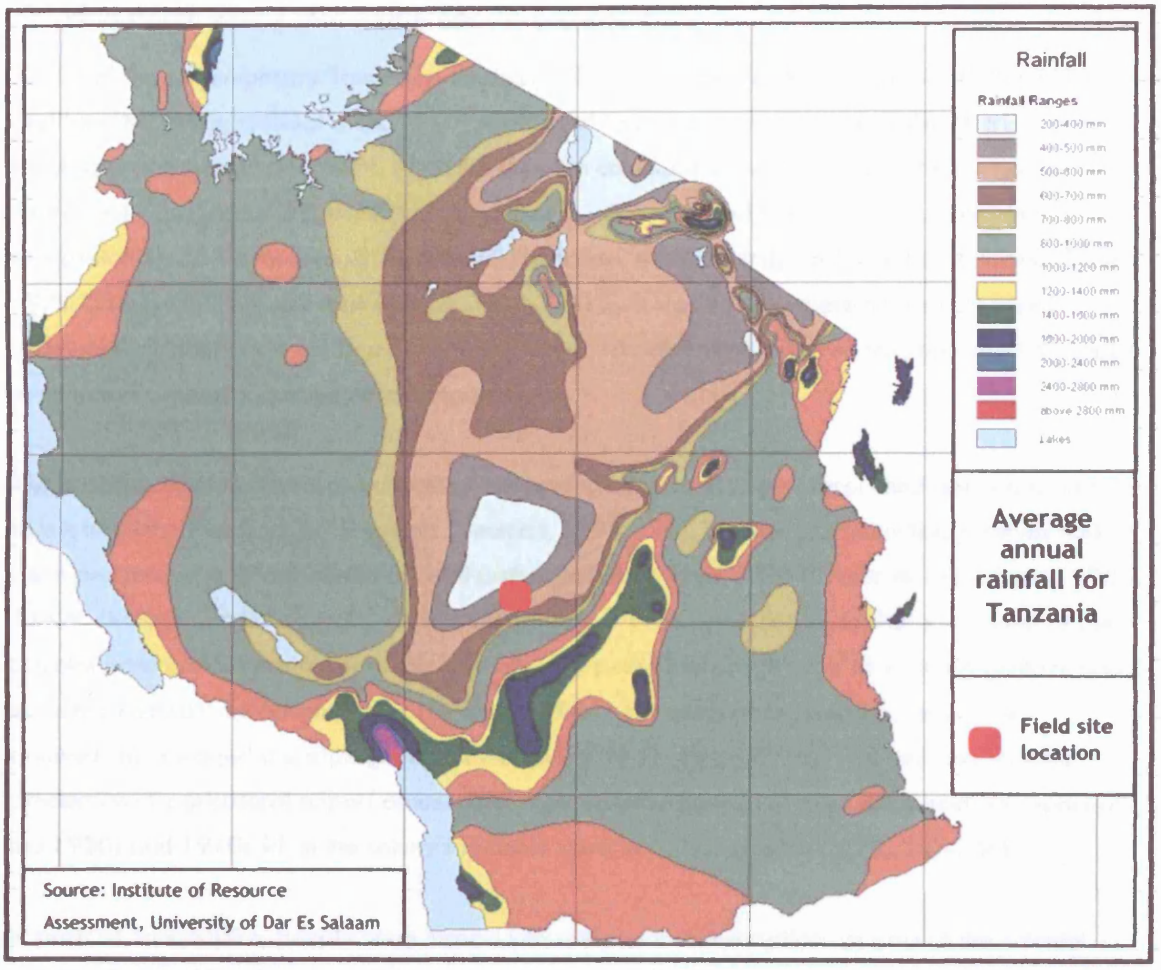


Figure 3.2: Average rainfall distribution for Tanzania



wetlands' are frequently very important for dry season grazing for both (agro)pastoralist livestock, and also in extensive parts of east and southern Africa, wildlife. In areas with higher rainfall, particularly for the semi-arid rangelands, 'dryland wetlands' are also often farmed by agriculturalists who productively exploit the rich fertility of these wetlands during the wet season. In turn, the dryland parts of the semi-arid rangelands are important wet season dispersal areas for livestock and wildlife. The semi-arid rangelands therefore support a diversity of land-users - agriculturalists, pastoralists, hunter-gatherers, commercial ranchers and farmers and the wildlife tourism industry. However, the semi-arid rangelands are becoming an arena for increasing levels of conflict as more people and an increasingly diverse range of interests depend on them for their livelihoods, competing for access to their resources.

3.2 Some key developments affecting rangeland management in Tanzania

3.2.1 *Colonial partitioning and landscape re-organisation*

The lie of the contemporary Tanzanian landscape has strong links to the colonial past[21]. The German and later the British colonial authorities[22] partitioned Tanganyika into administrative districts, and latterly, provinces and chiefdoms. After the German colonial period, the British set up a system of indirect rule instituted in 1926. Native authorities were established[23] on the basis of colonial interpretations and inventions of 'traditional' chiefdoms, ethnic identity and social organisation (Iliffe 1979, 318-342; Shivji and Maina Peter 2000, 13-15). It was through these native authorities (abolished at independence) that the British colonial administration collected tax, operated a judicial system and generally administered Tanganyikans.

The British administration retained most of the protected area estate of forest and game reserves that it had inherited from the Germans (Neuman, 1998, 100). The first game hunting reserves had been proclaimed by the German colonial authorities as early as 1896 (Wanitzek and Sippel 1998, 114)[24]. During the British colonial period, the protected area network was further expanded as the colonial administration re-ordered the landscape as part of its programme of exerting political and economic control over Tanganyikans (Neumann, 2001). For much of the colonial period, the administration waged a campaign to halt the spread of the tsetse fly and improve small-holder production of agricultural export commodities - particularly during the depression and war years of the 1930s and 1940s when the colony's finances were in crisis (e.g. Iliffe 1979, 347-356).

In parts of Tanganyika, people were moved into settlement concentrations as part of the colonial project of controlling sleeping sickness and wildlife, and capturing and increasing the agricultural production, labour and tax returns of rural Tanganyikans. A number of these interventions were later to lead to the creation of new protected areas (Kjekshsus 1995). For example, in south-western Tanzania, the Selous Game Reserve was much expanded into western Liwale District as part of a campaign during the 1930s to control elephant in the east of the district. A series of enforced resettlement and concentration schemes were carried out to depopulate the western district as people were moved to concentration areas in the east, and as the elephant were driven west by the Game Department. The impact of the scheme was substantial - 40,000 people left western Liwale District during the 1930s and early 1940s (Yeager and Miller 1986 cited in Neuman 1998, 147) and some of the most fertile areas of farmland in the district were lost to wildlife conservation (Neuman 2001, 658). The depopulation of west Liwale District was only brought to an end when it was realised

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[21] The history of colonial hunting and wildlife protection has been contrastingly documented by Ofcansky (2002), Bonner (1993), Mackenzie (1988), and (in an edited volume) Anderson and Grove (1987).

[22] Tanganyika was the protectorate of the German East Africa Company between 1895-1890, and then part of Imperial German East Africa from 1895-1919. At the end of World War I it was ceded to Britain in the Treaty of Versailles as a protectorate on behalf of the League of Nations.

[23] Under the Native Authorities Ordinance of 1926.

[24] Between 1906 and 1914,231 forest reserves and 18 game reserves were proclaimed (Neuman, 1998, 99).

during the mid1940s that the remaining human population comprised a useful labour reserve for what was to become the ill-conceived and infamous ground-nut scheme (Neuman 2001, 658-660; see also Iliffe 1979, 440-2). In northern Iringa District similar reasons were put forward by the colonial administration for expanding the Rungwa Game Reserve southwards into the Idodi and Pawaga rangelands. Specifically, a dispersed rural population living in a huge rangeland was perceived as presenting substantial administrative problems for the colonial administration, which was also faced with the challenge of attempting to control the continued spread of the tsetse fly (see Chapter 4).

During the late inter-world war and post-world war years in colonial Tanganyika, as rural human populations recovered and grew from their depressed levels at the end of the previous century (Kjekshus 1995), people and wildlife[25] came increasingly into conflict. This conflict was exacerbated in part due to new wildlife rules and regulations now being increasingly enforced by the Game Preservation Department. Rural populations were increasingly officially barred or regulated[26] from freely hunting and effectively controlling wildlife populations. From the early years of the British Colonial administration, an uneasy stand-off had existed between some administrators with a more tolerant attitude allowing local Tanganyikans to continue customarily using wildlife and forest resources, and others, particularly in the Game Preservation and Forestry Departments, who were against such practices. The latter argued for further restrictions on customary resource use rights and an expansion of the protected area estate (Neuman 1998, 102-106). Yet the heavily stretched Game Department fought a loosing war against crop-raiding elephants[27] which raided the fields of many small-holder farmers over disparate areas of Tanganyika[28] (Neumann, 2001).

During the 1940s and 1950s an international wildlife conservation lobby became ever more concerned that local Tanganyikans were a fundamental threat to nature and wilderness places. An increasingly powerful European coalition successfully lobbied the colonial office in London for the expansion and stricter enforcement of the protected area estate in Tanzania (Neumann, 1998, 122-

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[25] Human-wildlife conflict occurred particularly with elephant which had been unaffected by the rinderpest pandemic, and which had increasingly begun to recover from the ivory trade of the mid-19th century (Kjekshus 1977).

[26] Hunting without the use of precision firearms was initially allowed in Game Reserves but not in National Parks.

[27] Although elephants had been heavily hunted in the 19th century as a result of the ivory and slave trade, the elephant population had much recovered by the 1930s. By this period, elephants were becoming a great nuisance to farmers (together with other small vermin) and the subject of much complaint by farmers to the Game Preservation Department. For example, during the 1920s, game scouts were killing 800 elephant per year in crop depredation control efforts, which consumed 75 percent of the game department's energies (Neumann 1998, 648). Neumann also provides an estimate that one quarter to one third of the country's annual food crop production was lost to wildlife crop raiding during the 1920s to 1940s. In fact, by the 1940s the number of elephant shot per year had risen to over 3,000, and between 1931 and 1950, 33,462 elephant had been culled with no check to the population (Neumann 2001, 659).

[28] For example, elephant populations greatly expanded in the Dabaga area of Iringa District in central Tanzania and in Liwale District in the south east of the country (Neuman, 2001).

148). With the passage of the new Game Ordinance of 1940 and National Parks Ordinance of 1948[29], the wildlife estate began to be further expanded (Kjekshus 1995). For example, in eastern Tanganyika, the substantial extension of the Selous Game Reserve during the mid 1940s (Neumann 2001); in central Tanganyika, following the creation of the Rungwa Game Reserve in about 1937 (Jennings 1994) the extensive annexation of the new Ruaha section to the Rungwa Game Reserve to its south in 1954, and; in northern Tanganyika the withdrawal of the Maasai from the previously created Serengeti National Park in 1958[30]. Thus by the declaration of independence, the Tanganyikan landscape had become extensively partitioned and a substantial protected wildlife and forest estate had been created.

3.2.2 *Post independence state control: Ujamaa, deconcentration and decentralisation*

The process of resettling remote rural populations into settlement concentrations began during the British colonial administration, was to be carried on by the independent Tanganyikan[31] state. Although in some regards, during the initial years of independence, rural populations began to achieve a higher level of autonomy from the control of the state, this rapidly changed as the decade progressed (Hyden 1980).

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[29] Game ordinances had been passed in both the German colonial period (1896, 1898, 1900, 1903, 1905, 1908 and 1911) as well in the early British colonial period (1921) (Nelson *et al.* 2003, 8; Wanitzek and Sippel, 1998). Although the Game Preservation Ordinance of 1921 re-gazetted the game reserves created during the German colonial period, the Ordinance maintained that, '... the native should be regarded as having a moral right to kill a piece of game for food' (Neumann 1998, 100). This position was to increasingly change to one of growing restrictions from the 1940s onwards, for example with the passage of the Game Ordinance of 1940, the National Parks Ordinance of 1948, the Fauna Conservation Ordinance of 1951 (which introduced a game hunting licensing system for African Tanganyikans in coordination with native authorities) and the current National Parks Ordinance of 1959, the latter of which remains in force - see Wanitzek and Sippel (1998) for a detailed review.

[30] Throughout the 1940s and 1950s people were increasingly evicted by force from newly created or extended Game Reserves and National Parks or cajoled to leave - as in the case of the Ndorobo, Ikoma, Sukuma and Maasai peoples in the Serengeti (see also Nelson *et al.* 2003, 11-15; Neuman 1998, 129-139; Homewood and Rodgers 1991, 69-83). In this latter case, the Maasai agreed to withdraw on accepting a government undertaking that guaranteed them the right in perpetuity to live in the Ngorongoro highlands and crater to the east. This latter undertaking has for many years increasingly and, sometimes violently, been reneged upon, both through successive amendments to the law increasingly extinguishing customary rights and also through extra-legal actions taken by the managing Ngorongoro Crater Conservation Authority. Today the Maasai living in the Ngorongoro highlands are supplicant to this parastatal authority, which controls - in effect - nearly all natural resource-based activities within a declared Conservation Area. The parastatal has even gone so far as to attempt acquisition of land title for the Conservation Area, when title belongs to the Maasai as a right of customary occupancy (Shivji and Kapinga, 1998).

[31] Tanganyika gained independence in 1961. In 1964, after the Zanzibar revolution, Tanganyika and Zanzibar formed a union to become the United Republic of Tanzania.

The early independence years

In the years leading up to independence in 1961, the colonial administrative system of native authorities was initially supplemented with a system of elected District and Town Councils (Cole and Denison 1964 cited in Charnley 1994, 55)[32]. At independence, native authorities were abolished[33] being entirely replaced by the District and Town Councils in a strategy to eliminate 'non-egalitarian' customary systems of authority. The vesting of power in the District and Town Councils led to an increasingly politicised and TANU[34]-orientated administration being established, and the councils soon became implementing bodies for the central government's development plans (Havnevik 1993 cited in Shivji and Maina Peter 2000, 18).

The new District Councils lacked the power to prohibit, restrict or regulate pastoral migration and agricultural settlement (James and Fimbo, 1973; Charnley, 1994: 58). James and Fimbo (1973 cited in Charnley, 1994: 58) note that the whole structure of 'traditional' hierarchy in relation to land administration crumbled and a vacuum was left in its stead. Yet throughout the mid to late 1960s the government passed a series of laws that communalised land[35] and exerted greater state control over herders and farmers, leading up to the Arusha Declaration of 1967 and the subsequent pathway to *Ujamaa* and villagisation.:

For example, the Range Development Act of 1964 enabled the creation of Range Development Commissions and ranching associations[36]. The Commissions, entirely consisting of appointed administrators, were given the power to issue bylaws governing the use of land by herders. Ranching associations were to be set up that would adhere to the Commissions' bylaws that regulated the movement and numbers of livestock in an association's area. All customary rights held within each association's area were to be extinguished, including those of the members of the association. Failure to comply with the bylaws could lead to expulsion without further provision of land elsewhere (Sundet 1997, 18; Wily 1988, 88). A series of range development projects ensued which were externally conceived and implemented with no appreciable consultation with the targeted 'beneficiaries' (Sundet 1997, 19; Hodgson 2001, 208-220). They subsequently failed (e.g. Cliffe and Cunningham 1973; Jacobs 1980).

The Land Tenure (Village Settlement) Act of 1965 provided the facility for government-sanctioned Rural Development Commissions to extinguish customary land tenure rights in a settlement area, which

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[32] District and Town Councils established under the Local Government Ordinance of 1953.

[33] Under the African Chiefs Ordinance (Repeal) and Native Authority (Repeal) Acts of 1963.

[34] The Tanganyika African Nationalist Union - which was to become the only and ruling political party in Tanganyika, and latterly, Tanzania. For example, the Local Government Election Act of 1965 decreed that all District Councillors had to be TANU members (Mwinasa and Shauri 2001, 8).

[35] These were the Rural Settlement Commission Act, 1963; the Range Development and Management Act, 1964; the Land Tenure (Village Settlements) Act, 1965, and; the Land Acquisition Act, 1967.

[36] This development followed from recommendations provided by a United States Agency for International Development (USAID) mission to Tanzania in 1963 (Shivji and Maina Peter 2000, 19).

were then to be replaced by 'derivative' rights for the allocation of plots of land to 'entrepreneurial progressive' farmers (Sundet 1997, 19 & 26; Shivji and Maina Peter 2000, 18). Thus while customary rights to land were to be put under administrative arbitration, the Act was in fact little used, as the 'transformative[37]' approach to national development which had underpinned its creation was subsequently abandoned (Sundet 1997, 19). However the Land Acquisition Act of 1967 greatly expanded the Government's rights to extinguish customary rights for 'public purposes' (Sundet 1997, 19).

These combined legislative developments had major implications for rural Tanzanians (Presidential Commission of Inquiry into Land 1994, Vol. 1 cited in Shivji 1998, 6)[38]. Firstly, land tenure was to be removed from the domain of customary law. Secondly, there was an implied perception of the evolution of the land tenure system to some form of individual tenure under the firm supervision of the state (see previous discussion on ITR in Chapter Two). Thirdly, land tenure and land-use systems were to be administered and managed from above through a series of detailed regulations, rules and bylaws, with corresponding penalties (e.g. loss of land) and criminal prosecution for the breaking of these laws. Fourthly, farmers and herders were to have virtually no role in the planning, administration and management of the land on which they lived.

The Arusha Declaration and the onset of Ujamaa

The development of Tanzania took on a new impetus with the Arusha Declaration of 1967. TANU, under the leadership of Julius Nyerere, adopted a doctrine of African socialism and self-reliance, and embarked on a pathway of nationalisation of industry, agriculture and transport. Later in the same year, a policy document, *'Socialism and Rural Development'*, set out the official blue-print for the establishment of *Ujamaa* (Swahili: familyhood) villages (Pratt 1971, 237 cited in Sundet 1997, 24). All political power was to become consolidated in the party (Hyden 1980)[39].

The policy of *Ujamaa* entailed the restructuring of diffuse rural communities into self-reliant *Ujamaa* villages. The aim of creating *Ujamaa* villages was to transform rural agricultural productivity upon

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[37] In the early independence era, there were two main approaches to development adopted by the Tanzanian Government and World Bank (then the IBRD). The first was the 'transformative' approach in which large inputs of capital and technical support would transform national development through resettlement. The second was the 'improvement' approach in which resources were to made available to 'progressive farmers' who would provide the country with the fastest economic growth (IRBD 1961, 101-128 cited in Sundet 1997, 15; Shivji and Maina Peter 2000, 18). Despite continuing debate within TANU and technocrat cadres of government, the 'transformative approach' was dropped after the first five year plan in 1966 due to its high cost and failure (Sundet 1997, 15). Ironically, the *Ujamaa* and villagisation debacle of the 1970s was an adoption of the very 'transformative' approach dropped in the previous decade.

[38] Village-based land tenure is discussed further in Chapter Three.

[39] This was exemplified during the late 1960s by the party compulsorily taking over the only independent and voluntary Ujamaa villages that had formed themselves into the Ruvuma Development Association (RDA) (Coulson 1982, 263-271 cited in Sundet 1997, 36).

which the party - now synonymous with the state - had placed its hopes of national self-reliance and economic development. *Ujamaa* villages would provide the country with agricultural surpluses - achieved through economy of scales of communalised production (Hyden 1980). Moreover, the clustering of people together, especially from remote rural areas close to lines of communication would enable the easier provision and development of health, education and agricultural extension services.

Between 1968 and 1975, a programme of 'operations' was launched to create *Ujamaa* villages. Initially the formation and registration of these *Ujamaa* villages was voluntary, but the overall registration rate was relatively low, as rural people's priorities and livelihood objectives differed from those of the party (Hyden 1980). As might be expected, rural people were more concerned with securing their livelihoods and they often could not sufficiently relate to the party's top-down requirement of nation building and surplus production of targeted crops - despite political indoctrination processes (Hyden 1980). Moreover, in terms of local realities, even if rural Tanzanians had supported many aspects of *Ujamaa*, the nature of their seasonal labour priorities clashed with the labour demands of communal production. Communal production was therefore frequently less productive than private smallholder agriculture, despite higher levels of inputs and mechanisation. Further, as Hyden points out, whereas reciprocity within extended families and kin groups was common place, the compulsory extension of this practice to a much wider locus such as that applicable in an *Ujamaa* village - often made up of people from disparate origins and backgrounds - was largely a foreign concept and thus resisted (Hyden 1980).

Previously voluntary, *Ujamaa* was to become a matter of compulsion. Privately held land and property was nationalised in 1970-1971[40] (Sundet 1997, 36-39). However, the most significant development in the *Ujamaa* period for rural populations was the decree by Nyerere in 1973[41] that all people were to compulsorily move and live in designated *Ujamaa* villages by the end of 1976. State and party officials moved with alacrity to implement the villagisation decree. The planning of the *Ujamaa* villages was unfortunately frequently rushed and inadequately thought through (Shivji 1998, 12). New village sites were often poorly located in relation to the agro-ecological sustainability of the new settlements (or expansion of established ones) and the simple practicalities of life (such as the distance to drinking water and fields) were often overlooked. The operation was substantial with up to five million people being moved to new *Ujamaa* villages nationwide (Hyden 1980). There is now considerable evidence that force was used arbitrarily as militia and paramilitary

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[40] The legislation for the nationalisation of property and land (the Freehold Titles [Conversion] and Government Leases Act of 1963 and the Rights of Occupancy [Development Conditions] Act of 1963) had been enacted by Parliament in 1962, and went largely un-noticed at the time, as later Nyerere wryly observed in 1971 (Sundet 1997, 17).

[41] Supported the Rural Lands (Planning and Utilisation) Act of 1973. Shivji (1998, 13) describes this act as a thinly veiled attempt to confer open-ended powers on the President and appropriate Ministers to 'extinguish' customary 'rights' without due process or any legal redress.

units were deployed as part of the campaign (Shivji 1998, 12). The Idodi rangelands were no exception and hamlets were burnt out with little notice (*pers com* anon) - see Chapter Five.

The Presidential Commission of Inquiry into Land (1994) states of the villagisation campaign:

> 'One major feature of the 'operation' stands out above all. There was total disregard of the existing customary land tenure systems as well as the fact that virtually no thought [was] given to the future land tenure in the newly established villages' (Vol. 1, 43).

Villagisation opened up possibilities of alienation of village land on a scale greater than even that of colonial times (Tenga 1987 cited in Shivji 1998, 12). Shivji (1998, 12) observes:

> Villagisation had a major impact on land tenure generally and the rights of rural land-users in particular. In effect, it amounted to major land reform. Yet that was not how it was conceived, planned or implemented. The result was confusion in tenure and the total undermining of security for customary landholders.

The farming populations were not the sole target of the villagisation campaign. For example, Maasai pastoralists in northern Tanzania were forced, as part of operation *imparnati* (Maa: permanent habitations), to move into livestock development villages (Arhem 1985a; Ndagala 1985). In each of these development villages there was to be a central settlement, and wet and dry season grazing areas (Hoben 1976; Parkipuny, 1979). Although existing land-use and settlement patterns were used as the basis for the new livestock development villages, a new structure of executive leadership was imposed on Maasai society based on alien administrative village institutions together with restrictions upon their stock holdings and movements. Many Maasai were wary of the new villagisation programme and they considered it just another step taken by the government to subjugate and control their relationship with the land (Arhem 1985a). This suspicion has since been borne out as large tracts of land and important natural resources in Maasailand have been corruptly allocated without consultation by the state to other interests - commercial agriculture, wildlife hunting companies, and private individuals (e.g. Shivji 1998, 32-39).

The villagisation process was completed in 1976 with the passage of the Villages and *Ujamaa* Villages Act of 1975 which provided the enabling legislation for the registration of villages, the demarcation of their boundaries[42], the election of village councils and a village administrative system right down to 10 household (cell) leaders. Land was to be allocated by District Development Committees[43] that then would be re-allocated to villagers by each village council (Charnley, 1994: 59; Shivji 1998, 14). This latter period perhaps represented the apogee of autocratic state control and the expansion of state space through decentralisation of state power vested in powerful

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[42] In very many villages, this process remains unachieved, and long-term inter-village boundary disputes are not uncommon.

[43] The Villages and *Ujamaa* Villages Act of 1976 replaced District Councils with party-controlled District Development Councils.

Regional Commissioners and their administrations[44]. A significant impact of the Villages and *Ujamaa* Villages Act, in addition to the vague, inconsistent and often contradictory nature of laws pertaining to land (e.g. Sundet 1997, 47), was that customary land tenure was *de jure* and *de facto* heavily eroded to the point of extinction. For example, the minister responsible for villages (the Prime Minister) was delegated the authority by the President to issue directions for land-use as he saw fit through the District Development Councils. In turn the Village Councils were obliged to give effect to such directions on land-use allocation as issued by the District Development Councils (Sundet 1997, 49; Shivji and Maina Peter 2000, 23-24).

Deconcentration of state power

In addition to the villagisation process of the 1970s, a parallel programme of administrative 'decentralisation' was launched in 1972 and swiftly implemented (Shivji and Maina Peter 2000, 20). The representative local government authorities which had been inherited from the colonial period were abolished[45]. They were replaced by larger District Development Councils and Regional Development Councils (Mwinasa and Shauri 2001, 8; Shivji and Maina Peters 2000, 19-21). Central government administrative powers were deconcentrated to the regions[46] and in turn to the districts, but the central party and central government retained the real decision-making power (Rweyemamu 1974, 125-126 cited in Sundet 1997, 39). The effect of this decentralisation process was that, together with villagisation, the government was brought closer to the rural population and direct links of command were established between the centre and rural areas (Sundet 1997, 52). Thus the twin programmes of villagisation and 'decentralisation' led to extensive control of the people by the state, in which villages 'were to be developed' and regarded as 'project units' (URT 1978, 115 cited in Sundet 1997, 46). In this regard, the decentralisation process that was carried out during this period can be more accurately described as having been a 'deconcentration' process, in which the workload of central government was shifted outwards, but real power was retained by the central state.

The end of Ujamaa: decentralisation, liberalisation and local government reform

The *Ujamaa* years drew to a close in the early 1980s when the state and party conceded that macro-economic reform was necessary if the national economy was not to entirely collapse. In 1986, with the retirement of President Nyerere as Head of State, a more neo-liberal macro-economic and political outlook was adopted by the central government when an IMF structural adjustment reform package

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[44] Up until the mid 1990s, regional administrations were the most powerful locus of local government. However, with the launch of a new local government reform process in the mid 1990s, and with the passage of the Regional Administration Act in 1997, substantial administrative powers have since been moved to the district level and districts are now at the centre of local government.

[45] As a result of the recommendations of a management consultancy firm McKinsey and Co (Coulson 1982 and Mushi 1978 cited in Shivji 1998, 12).

[46] The decentralisation process (legislated through the Decentralisation of Government Act of 1972) facilitated the creation of Regional Integrated Development Plans (RIDEPs) which, coordinated by a newly created Prime Minister's Office and supported by donor assistance, were to be implemented by Regional Development Councils (RDCs) which in turn were to oversee the activities of DDCs.

was agreed[47]. From this point onwards, market liberalisation reforms were implemented, including major changes in the agricultural sector, such as the ending of input subsides and pan-territorial pricing (Agriculture Sector Development Strategy [ASDS] 2001, 15; Bryceson 2002, 728; World Bank 2001, 50)[48]. In addition, stretched agricultural and livestock extension services were to become privatised, leading to their collapse, particularly in remoter rural areas.

In parallel with market liberalisation policies, the state embarked upon further reform of local government. Representative local government had been re-launched in 1983[49], although it was marginally democratic, and prone to inefficiency, lack of resources, corruption and overlapping control by central government (Max 1991 cited in Shivji and Maina Peter 2000, 26; Tax and Hauck 2003, 5). The poor state of local government began to be acknowledged in 1996 with the tabling of a proposal for a Local Government Reform Programme (LGRP)[50]. The LGRP was finally launched in late 1999 (Shivji and Main Peter 2000, 30-32).

The key components of the LGRP - improving democracy and achieving decentralisation via district councils - are seen by many economists and development experts as not only vital but inevitable for the continued development of the national economy (for example, Watson and Baek 2001 cited in Kelsall 2004, 34). Districts are now to be increasingly responsible for directly implementing central government policy, with central government releasing financial grants and giving guidelines and advice as to how to best implement policy (e.g. Tax and Hauck 2003, 4-5). In the natural resource sector, this process has been accompanied by a raft of new policies and legislation, which on paper set out to achieve varying interpretations of devolved natural resource management (see Section 3.2.3).

However, the LGRP has a long way to go to achieving its goals (e.g. Tax and Hauck 2003, vii-xiii; Kelsall 2004, 70). The roles and funding mechanisms between central, regional and district government remain insufficiently clarified (Tax and Hauck 2003, vii-viii), and a case study shows that institutional capacity remains weak and local government is frequently corrupt, inefficient and

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[47] See Bigsten and Danielson (2001) for a detailed review of Tanzania's economy since independence.

[48] The termination of input subsidies resulted in farmers being unable to afford or gain sufficient access to agricultural inputs (e.g. Jambiya 1998 cited in Bryceson 2000, 728). Correspondingly, household agricultural income is reported to have declined – perhaps as much as 71 per cent between 1979 and 1992 (Mung'ongo' 1998 cited in Bryceson 2000, 728).

[49] The District councils were reinstated in 1983, but the Party continued to heavily control them. This remained the case until prior to the first multi-party elections in 1995, when the state and the Party (CCM) were devolved from each other (under the Eight Constitutional Amendment Act of 1992) to enable the theoretical possibility of a political opposition winning the election and taking power. However to this day, the CCM continues to retain control of the majority of District Councils in Tanzania.

[50] Part of the initial reform included transferring the locus of local government power from the regions (Regional Commissioners and Regional Administrative Secretaries) to the districts (District Executive Directors and District Councils).

insufficiently accountable to its electorate[51] (Kelsall 2004). To date, the LGRP has focussed little on how local government reform is to be achieved at village level, which is the locus at which local government in Tanzania is theoretically founded and legitimised (Shivji and Peter, 2000, 35).

3.2.3 *Control and space: state and nature*

The post-independence expansion of state control and space has not been limited to the administration of people but has also applied to their natural resources. Grievances against the historical loss of land[52] to protected areas, and the colonial state's control over local people's relationship with the environment, had been a source of political capital for the pre-independence nationalist movement of the 1950s (Gibson 1999). Yet despite the pre-independence nationalist rhetoric against colonial wildlife policies, the post-independence policies of *Ujamaa* were to provide further opportunity for the continuation, if not acceleration, of the wildlife and forestry policies inherited from the British colonial period.

As many African colonies gained independence, a coalition of international and western conservation organisations successfully lobbied the newly independent Tanganyikan government to maintain the *status quo* in regard to conservation policies inherited from the colonial era. Their lobbying led to a conference on wildlife conservation in Africa that was held in Arusha, in northern Tanzania in 1961. At the conference, in a staged[53] and now famous speech that became known as the 'Arusha Manifesto[54]', President Nyerere delivered his landmark commitment to the continued preservation of Tanganyika's - and Africa's - natural heritage. In effect, a *de facto* deal was arrived at, in which the conservation lobby would provide the majority of the funding for the protected area network, if the Tanzanian government would continue to maintain and support the protected area system inherited from the colonial period and its legislative framework (Nelson *et al.* 2003, 17).

The expansion of the 'wild nature' estate and increasing control over its use continued through *Ujamaa* underpinned by, for example, the Wildlife Conservation Act of 1974. The continued expansion of the protected area estate[55], mostly but not exclusively through re-designation of existing protected

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[51] Admittedly this case study was of Arusha only and looked at wider issues of civil society and local politics. However experience indicates that Kelsall's insightful findings are likely to hold for much of Tanzanian local government.

[52] Large areas of land had also been alienated for European and Indian owned plantations and ranches during the colonial period. The Meru Land case in is perhaps the most well known example (see Spear 1997, 209-235; Kelsall 2004, 16-19). Between 1949 and 1952, in order to make way for new European farms, the colonial administration summarily evicted local African farmers from their land at Engare Nanyuki on Mount Meru in northern Tanzania. The evictions resulted in large protests by Tanganyikans who took a petition to the United Nations in New York which failed.

[53] European conservationists purportedly wrote the speech (Bonner 1993, 11 cited in Nelson *et al.* 2003, 18).

[54] Not to be confused with the totally separate and different Arusha Declaration of 1967.

[55] Between 1964 and 1994, the number of game reserves and national parks increased from six to twenty and from four to twelve respectively (Swai 1996, 51-52 cited in Neslon *et al.* 2003, 3). Further reserves (for

areas to higher levels of protection, further moulded the post *Ujamaa* political landscape. People were precluded from returning to previous settlement areas which now had become national parks or game or forest reserves or, in some cases, barely inhabitable as a result of the spread of the tsetse fly. Natural resource management control was retained at ministry level with agriculture, natural resources (fisheries, forestry and wildlife) and livestock offices at regional and district levels.

The re-organisation of local administration in 1982 provided a new legal apparatus for making local (village) level resource use and management regulations as village councils were given the power to legislate bylaws subject to the approval of their respective District Council (Charnley, 1994: 59). However, the ability of village councils to regulate and control natural resource use was heavily structured within the then current policy and party-controlled environment. Central ministries continued to exercise tight control (through their officers at regional and district level) over formal rights to manage and benefit from wildlife and forest resources. Until the early 1990s, very few villages bordering areas of protected forests and wildlands had been formerly allowed to develop even the most simple of local management regimes[56]. Thus despite rural people now being enabled - nominally through their village councils - to legally exercise some limited control over their land and natural resources, ultimately real control continued to lie with central government departments (for example the Forestry and Wildlife Divisions) and the regional administrations.

Today, wild nature, and particularly wildlife, is largely controlled by the state, which derives substantial revenues[57] from a centrally regulated tourism and hunting industry. The ability of rural people to similarly benefit has never much mattered to the modern state or most of its partner stakeholders in the wild nature industry. In the late 1970s and through the 1980s, as Tanzania's economy faltered and went into crisis, the ability of the Tanzanian government to administer properly its centralised protected area network of national parks and game reserves collapsed. The outcome was that by the late 1980s, substantial declines in the elephant population[58] had occurred and the rhino had been effectively extirpated in all but a few refuge areas (Nelson et al. 2003, 24). In addition, many Tanzanians took advantage of the *de facto* open access status of wildlife for bushmeat. By the late 1980s, several conservation and donor organisations, natural resource experts and a number of senior Tanzanian civil servants decided that the current *status quo* needed to be

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example, the Usangu Game Reserve) and national parks (for example, Sadani National Park) have since been, created.

[56] One exception was a wildlife meat provision scheme introduced in the western Serengeti in the late 1980s as part of the Serengeti Regional Conservation Strategy which began in 1986. However, the scheme could hardly be called 'community-based natural resource management' since the scheme was run and tightly controlled by Wildlife Division officials.

[57] Annual gross income from both tourist hunting and photographic tourism has grown from about US$9million and US$60 million respectively in 1990 to US$28million and US$725million in 2001 (World Bank 2002, 21-22 cited in Nelson *et al.* 2003; Baldus and Cauldwell 2004, 10).

[58] In 1970, Tanzania's elephant population was estimated at 350,000; by 1990 it had declined to 55,000 (WSRTF 1995, 37 cited in Nelson *et al* 2003, 24).

addressed urgently. Firstly, the continued *de facto* open access needed to be brought under control. Secondly, the then current protected area system of national parks and game reserves was perceived as being unlikely to maintain viable wildlife populations in the long term. It was becoming increasingly clear that the cooperation and support of rural people - herders and farmers - living around protected areas and in seasonal wildlife dispersal areas was to be key for securing the continued and long term existence of wildlife. Furthermore, if these herders and farmers were to conserve wildlife, then they must be enabled to manage it sustainably and, most importantly, derive sufficient, tangible and continued benefits from it.

Operation '*Uhai*' (Swahili: life) brought the *de facto* open access situation to wildlife across Tanzania rapidly under much greater control. An extended paramilitary and somewhat heavy-handed operation was designed to stop illegal hunting and to confiscate the weaponry, particularly at the village level. While the Tanzanian state was swift in its crack down in the closing years of the 1980s, its track record on re-endowing rural Tanzanians with the right to manage and benefit from wildlife has been much less successful.

A five-year wildlife sector review process[59] (heavily donor driven) was carried out during the first half of the 1990s. The planning review provided recommendations for a new wildlife policy advocating a fundamentally different approach to wildlife management in Tanzania (Nelson et al. 2003, 26). A key part of the recommendations was that local communities should be re-endowed with wildlife management and benefit rights. The new wildlife policy[60] was finally passed in 1998 and explicitly supports this key recommendation. As a product of the wildlife sector review, and reflected in the new wildlife policy, Wildlife Management Areas (WMAs) were conceived of as being the protected area category in which local communities would be enabled to manage and benefit from wildlife. Yet the WMA regulations, when published in 2002, were not what many had envisaged.

The guidelines are heavily bureaucratic and inflexible in their stipulations of how a community can be granted and allowed to manage a WMA. Moreover the guidelines refrain from setting out what proportion of the revenues derived from tourist hunting communities can expect to receive, leaving this to the discretion of the Director of Wildlife. When taken together with the Hunting Regulations of 2000, communities are effectively barred from carrying out any wildlife related enterprise (hunting or photographic) in any hunting block (see Figure 3.3 for an overview of the areas hunted in Tanzania[61]) without the express permission of the Director of Wildlife in Tanzania. Given that hunting blocks - over which the Wildlife Division has authority - cover a large area of Tanzania, community-

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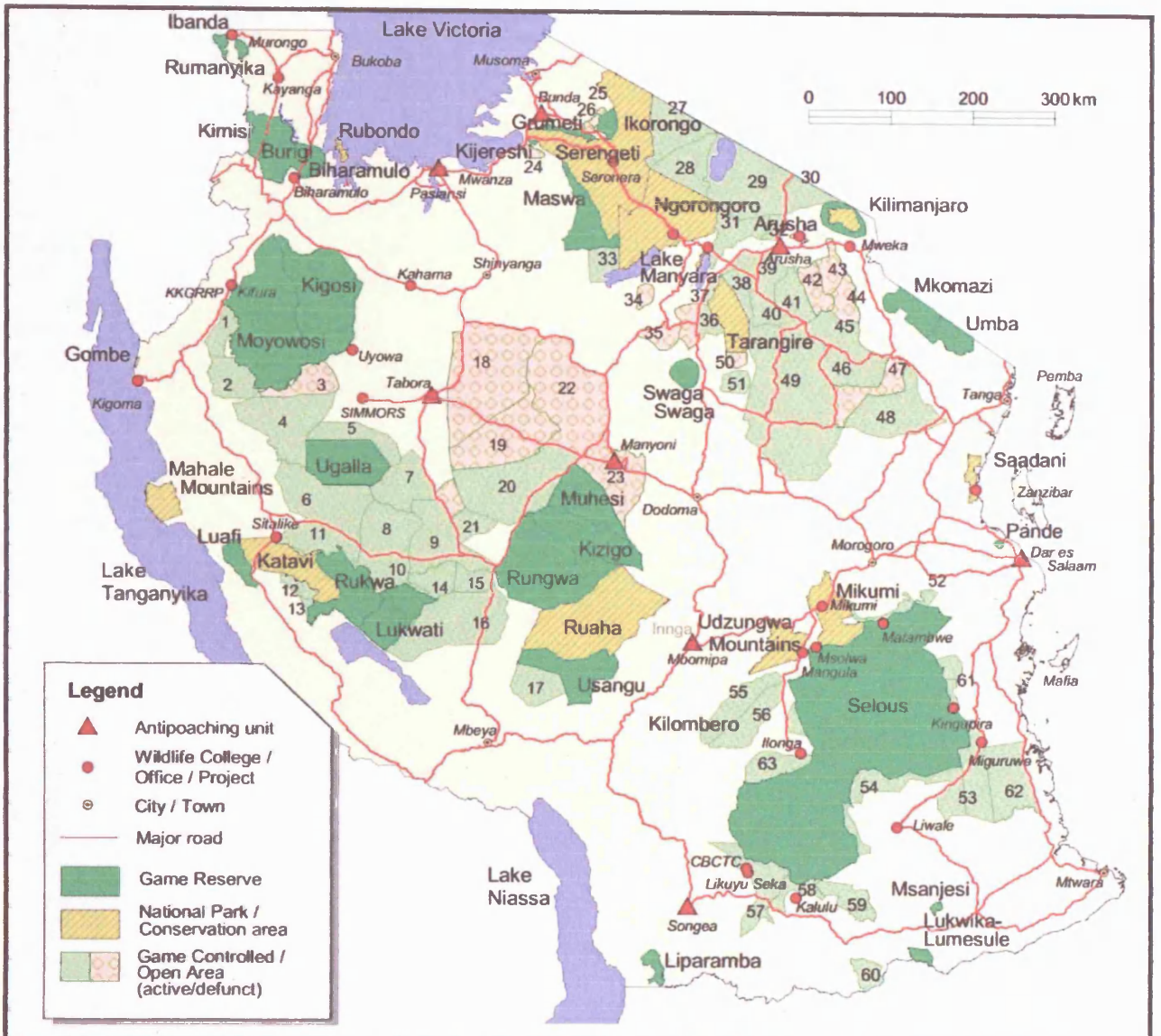
[59] The review was carried out by the Planning and Assessment for Wildlife Management (PAWM) project, funded by USAID, and based within the Wildlife Division in Dar Es Salaam.

[60] The Wildlife Policy of Tanzania, 1998.

[61] The map appears to erroneously omit the Lunda Mkwambi Game Controlled Area (see Chapter Four and Figure 4.1). The northern part of the Game Control Area is a tourist hunting block, and the southern part is reserved for resident hunting.

Figure 3.3: Wildlife protected areas in Tanzania in 2004 [not including forest reserves] (Baldus and Cauldwell 2004)



Western Tanzania	6 Msima GCA	12 Mlele South GCA	18 Wembere OA North
1 Makere Forest	7 Ugunda GCA	13 Lake Rukwa GCA	19 Wembere OA Central
2 Uvinza OA	8 Inyonga West GCA	14 Piti West OA	20 Wembere OA South
3 Gombe GCA	9 Inyonga East GCA	15 Inyonga East	21 Itulu Forest East
4 Luganzo GCA	10 Rungwa River GCA	16 Chunya OA	22 Singida OA
5 Ugalla OA	11 Mlele North GCA	17 Utengule Swamp OA	23 Manyoni OA
Masailand			
24 Maswa OA	31 Mto wa Mbu GCA	38 Lolkisale	45 Ruvu Masai
25 Nyichoka OA	32 Monduli Juu	39 Simanjiro West	46 Kitwai North
26 Sibora OA	33 Maswa Makao	40 Simanjiro Kitangare	47 Kitwai Central
27 Loliondo GCA	34 Yaeda Chini OA	41 Simanjiro Naberra	48 Kitwai South
28 Loliondo South GCA	35 Lake Balangida	42 Simanjiro East	49 Masai OA
29 Lake Natron GCA	36 Babati OA	43 Sanya Lelatema	50 Mkungunero
30 Longido GCA	37 Burunge	44 Ruvu Same	51 Kondoa OA
Selous / SE CoastaSouthern			
52 Gonabis / Jukumu WMA	56 Kilombero GCA South	60 Tunduru Forest	63 Mahenge OA South
53 Liwale OA North	57 Namtumbo WMA	61 Tapika OA	
54 Liwale OA South	58 Tunduru WMA	62 Kilwa OA North, Central & South	
55 Kilombero GCA North	59 Sasawara Forest		

based wildlife management currently remains under the direct centralised control of the state - contrary to the substance of the new wildlife policy.

The process that led to the development of the new wildlife policy during the 1990s was heavily mediated by a coalition of donors, yet the WMA regulations which eventually emerged were largely the product of the Wildlife Division, with relatively little donor involvement. The result was that Wildlife Division has retained its control over wildlife, particularly in regard to hunting revenues, unlike the Forestry and Beekeeping Divisions that have devolved extensive control over forest resources in an innovative way to local communities. In part, the relative revenue generating capacity of the forest and wildlife sectors underpins the difference. Logging of upland natural watershed forests was banned in 1977, and while the forest sector remains a high value resource (not least in terms of fuelwood, bee products and plantation lumber resources used by most Tanzanians), the wildlife sector constitutes a far more elitist as well as immediate and easily captured form of high value revenue for the state (particularly for the Wildlife Division).

Land-use planning is a major component of the formal WMA development process. In reality, the land-use planning process means that large areas of land will continue to be set aside for wildlife - often exclusively. There is a strong danger, as is already happening in parts of northern Tanzania, that a large proportion of village members, particularly the poorest who are likely to depend most on farming, will loose access to land ear-marked for WMAs. Also, farmers cultivating land adjoining those areas ear-marked for WMAs will increasingly have to contend with crop damage by wildlife. The decision to participate in a WMA rests with the village council. However, village councils remain democratically weak and poorly accountable to their constituent village assemblies (see Chapter 3). Often the wider interests of the village may be disregarded in favour of the interests of the council and its members. In the absence of careful support and intervention by appropriate organisations, this may be particularly the case for the WMA creation process. While WMAs may lead to relatively substantial increases in village council incomes and benefits for communities, the danger exists that this income will be to the wider detriment of people's farming and herding livelihoods.

Nelson *et al.* (2003, 47) aptly sum up the current situation in regard to the large wildlife estate that has been set aside in Tanzania for the benefit of a few when they state:

> The political economy of over 110 years of wildlife law in Tanzania has overwhelmingly functioned to increase the centralisation of wildlife resources over time, and any attempts at devolution must confront this legacy. In Tanzania, the partnership between donors and western conservation NGOs and central government has been decidedly ineffective in achieving these institutional changes. Overcoming this legacy and achieving genuine local empowerment for wildlife management is critically important in terms of both sustainable management of the country's biodiversity as well as for local livelihoods and land rights.

Thus, rural herders and farmers continue to make choices about the management of their rangelands heavily structured and supervised by the state, with insufficient power to negotiate or express their underlying objectives and livelihood priorities. In most wildlands of Tanzania, they continue to derive

little or no benefit from the wild resources around them relative to the substantial revenues received by the state, while bearing the significant costs of crop loss from wildlife.

3.2.4 *New Tanzanian land tenure legislation and its implications for herders and farmers*

The nature and legacy of land tenure laws in Tanzania are extremely complex (e.g. Wily 1988)[62]. However, a major trend is very clear. From the outset of the colonial period, customary land rights and practices have, one way or another, been redefined and increasingly overridden and extinguished by the pre- and post-colonial state. Shivji (1998, 15) concludes that by the end of villagisation what little was left in the security of deemed (customary) rights derived from the country's original land legislation (the colonial Land Ordinance of 1923) had been destroyed. Instead villagers were apprehensive of loosing even more of their land - a process which the Presidential Inquiry into Land Matters of 1992[63] documented in twenty volumes over its two year investigation. Shivji (1998, 16) describes the legal framework of village land tenure in the late 1980s as utterly confused[64]. In fact, days before the Commission submitted its findings to the government, Parliament passed a law which extinguished all customary land rights for many villages in the Tanzania[65] (Lane 1996, 170).

The findings of the Presidential Commission of Inquiry into Land Matters of 1992 were supposed to have formed the basis for the reform of Tanzania's land tenure laws. Unfortunately the state was to disagree with key parts of the Commission's recommendations on how land could be more equitably held and democratically administered for the benefit of all Tanzanians. Perhaps most importantly, the Commission's recommendations aimed to stop the long-term appropriation of land from ordinary Tanzanians by the state and other interests through: establishing the legal inalienability of village land to non-village members; endowing villages with full land rights to manage their lands free of interference from the state; strengthening the accountability and equitability of land management processes at village level based on customary land laws and practices; setting up local land circuit courts to better facilitate village-level land dispute resolution; transferring radical land title[66] from

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[62] Wily (1988) provides a detailed review of the political economy of land tenure in Tanzania between 1891 and 1988.

[63] The Presidential Commission of Inquiry into Land Matters of 1992 was set up to review land matters in Tanzania as the basis for developing new land tenure legislation. The Commission toured the whole of Tanzania and consulted with a very wide cross-section of Tanzanian society.

[64] Shivji makes this description on the basis of the inconsistent and contradictory opinions of the judges who presided over a major land alienation case brought by the Barabaig against the State (Shivji 1998, 16; see also Section 2.2.5 and Chapter Six for further details on the appropriation of land from the Barabaig)

[65] The law, the Regulation of Land Tenure (Established Villages) Act of 1992, was passed as a reaction by the state to put an end to the legal proceedings brought by the Barabaig to have their appropriated land returned (Lane 1996, 169-170).

[66] Radical title is taken here as meaning the President of the United Republic of Tanzania holds all land in trust on behalf of the nation and therefore exercises ultimate ownership and control of all land in Tanzania.

the President and diversifying it into national land institutions accountable to parliament, and; making land a constitutional category.

Perhaps the most significant and important objection on the part of the State was that the Commission's recommendations, if implemented, would stop the appropriation of land by the State for promoting external investment projects - for example, those in the natural resource sector such as commercial farming, ranching and wildlife enterprise (see Sundet 1997, 109). In essence, as the State's reply to the Commission's report put it, the Commission's recommendations would make the state a beggar to the villages and the proposed national land board (Shivji 1998, 81). The State considered the prospect of having to consult and respect the wishes of villagers and the decisions of a national land board unacceptable.

A new Land Policy (passed in 1995) was developed by the State with very little further public consultation in relation to how the Commission's recommendations could form the basis of the new policy (Sundet 1997; Shivji 1998). The Land Act (1999) and Village Land Act (1999), together with a first amendment in 2004[67], were subsequently developed and enacted[68]. The development and consultation process for these acts, given their significance for Tanzanians' livelihoods and well-being, was totally inadequate[69].

The Acts are long, complex and very bureaucratic[70], but their combined thrust can be simplified to the following (see Shivji 1998, 111-118). In essence the new land laws are designed to ensure that the on-going neo-liberalisation reforms, advocated by international financial institutions (IFIs) and now much favoured by the State, proceed regardless of the interests of ordinary Tanzanians - particularly

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[67] This is the Land (Amendment Act) of 2004 which strengthens the alienability of land and the transfer of derivative land rights to citizens or non-citizens for investment projects approved under the Tanzania Investment Act of 1997. The amendment also replaces previous sections of the Land Act governing mortgages. Arguably, mortgages have failed in Africa for last century and are likely to continue failing (e.g. Shipton and Goheen 1992, 317). Put simply, European and American mortgage models ignore agronomic, economic, social and cultural realities that make them inappropriate for an African setting (see Shipton and Goheen 1992, 317-318).

[68] The land laws came into force in May 2001 with the passage of 16 sets of supporting regulations, which are not yet widely available.

[69] The development process for the new land laws was highly elitist and only included key government officials, international consultants, and representatives from international financial institutions (IFIs) and bilateral donors (see Shivji 1998).

[70] For example, 50 different forms are to be filled in at one point or another by 'Village Land Officers' (see Sundet's 2005 useful critique of the Land Acts (especially the Village Land Act). Also, the District Land Officer is stipulated as having to approve all customary right of occupancy applications which may run into their thousands for a single district. All villagers who currently occupy land under customary right of occupancy must have their land claim adjudicated before a certificate of customary title can be awarded them. Given the millions of land plots in Tanzania and their associated on-going dispositions, what is in effect a land titling process will be a very long term and cumbersome undertaking. Resting the power of approval with the District Land Officer will lead - as it has done in the past - to partial decisions influenced by patronage.

rural people. Although villages are provided with the right to manage and administer their land (designated 'Village Land'), village rights are subordinate and defer to the State. Thus the President and the State may relatively easily transfer village land to 'General Land[71]' or 'Reserved Land[72]' without the agreement of villagers[73]. Either of these latter land categories can then, one way or another, be allocated to an outsider, such as an investor, as the State sees fit. Village land can also be leased to outsiders[74], and the Land Commissioner can intervene if a village council refuses a lease application. Parastatal and other organisations can obtain customary title to village land, and given the weak state of village governance in much of Tanzania, this can only lead to the continuation of land grabbing. In this regard, it is understood that district councils have been encouraged to set-up 'land-banks'[75], in part by identifying village land for potential transfer to general land for the purposes of commercial investment and enterprise[76]. Rangeland that is seasonally used by pastoralists (and therefore seasonally 'empty') is particularly at risk, as wetter rangelands are often arable and potentially viable for commercial agriculture[77].

Lastly, the Courts (Land Disputes Settlements) Act 2002 was passed to address the fact that the new land acts had failed to provide a viable and affordable land dispute resolution mechanism above that of village councils. The draft strategic plan for the implementation of the land laws (URT 2005)

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[71] This land category is under the direct control of the state through the Commissioner of Lands.

[72] Reserved land comprises wildlife, forest and marine protected areas as well as other land as defined in section 6 (1) of the Land Act (1999).

[73] An important clause in the new land laws is the contestable right of the state to transfer village land to general land for allocation to outsiders. This arises from a contradiction in the land laws in the definition of 'General Land' given in the Village Land Act and that given in the Land Act. (In the former it is defined as, 'all public land which is not reserved land', and in the latter it is defined as, 'all public land which is not reserved land or village land and includes unoccupied or unused village land'.) The contradiction strongly lends itself to the possibility that villages can lose land (Wily, 2003). Furthermore, the state can transfer large amounts of village land to general land by deeming it in the public's interest. 'Public interest' is defined in sections three and four of the Land Acquisition Act (1967) as basically anything the President deems, not least large-scale private investor-driven enterprise. While the village council is ostensibly legally enabled to decide upon land areas below 250 hectares, the Minister (at the direction of the President) has the right to transfer areas larger than 250 hectares to General Land.

[74] As per the Land (Amendment Act) 2004 – see above. When exploited by the wrong hands, this amendment is likely to lead to expropriation of large tracts of village land with serious lack of transparency.

[75] For example, see section 19 of the United States Department of State's investor guide to Tanzania http://www.state.gov/e/eb/ifd/2005/42185.htm (accessed 25th February 2005). Also an article in the Business Times of Tanzania, 'Land Bank scheme pulls in agro-investments' on 15th January 2005.

[76] This is consistent with the Agricultural Sector Development Strategy (2001, 4) which states in italics, 'The Government will work towards creating an enabling environment for medium and large-scale investors to make use of the abundant land resource in the country'.

[77] Loss of dry season grazing land can severely disrupt pastoral rangeland management systems, leading to unseasonable pressure on the remaining range and increases in livestock morbidity resulting from nutritional stress. Pastoralist livelihoods suffer as a consequence.

although recognising the importance of land-use conflicts and disputes, pays scant attention to developing the capacity and supporting the development of village land councils and ward tribunals. Although a cross-sectoral issue, this is a particularly significant inadequacy given the growing occurrence of land disputes in rural Tanzania. Moreover, the system's design appears to remain focussed on formalising land rights and systems of managing resource conflicts within state institutions, in spite of extensive evidence pointing towards the importance of maintaining an interplay between 'formal' and 'informal' systems (Maganga 2003, 66; see Chapter Seven).

In summary, there are some strongly beneficial aspects to the new land legislation - for example, the recognition of local or customary forms of land tenure[78] and the move to locate land management in rural areas at village level. Moreover, the Village Land Act provides for land-sharing agreements between pastoralists and agriculturalists, although the process through which these land-sharing agreements are to be developed are heavily and adjudicatory in design. Village land title is to be vested in the village assembly, and village land managers, accountable to their village council and assembly, will be given responsibility for village land management. Yet at the same time, the new laws are heavily overshadowed by their failure to incorporate some of the most important recommendations of the Presidential Commission of Inquiry into Land Matters.

3.2.5 *People cascades: landlessness, insecurity and wanderings*

In relation to past and recent developments in Tanzanian land and natural resource policy and law, there is growing evidence pointing towards a trend of increasingly heavy internal migration in Tanzania, and growing land insecurity and landlessness (Odgaard, 2002). In this regard, many semi-arid rangelands and particularly dryland-wetland areas in Tanzania are today home to a polyethnic assemblage of farmers and herders. Most immigrant people have arrived in these areas seeking new land and livelihoods. More often than not, they have been compelled to leave their natal areas as a result of long-term declines in the availability and access to land and natural resources. Growing landlessness among farmers and herders has been caused or further exacerbated by an increasing and already extensive protected area system and an expansion in commercial agriculture - such as the Canadian Wheat Project in Hanang District (Lane 1996; Niamir-Fuller *et al.* 1994; see below). Often this land has been critical to the viability of customary resource managements systems - such as dry season grazing key for pastoralists.

Perhaps the most marginalised groups of rural Tanzanians who have been impacted by these contemporary land-use developments are pastoralist groups, such as the *Ilparakuyo* and the Barabaig. Their societies and production systems have often been viewed, particularly by the state and international development institutions, as primitive and backward (Coulson 1982, 161). Thus, apart from the poorly conceived and implemented USAID livestock development project in the 1970s (Moris 1981; Arhem 1985a; Hodgson 2001; see Section 4.2.2), pastoralism has tended to be

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[78] On the condition that local land tenure practices do not contradict state law – particularly in regard to the land rights of marginalised or vulnerable groups in society.

disregarded and marginalized. Instead state policies and land-use planning have favoured other production systems, such as commercial agriculture, the wildlife sector and small-scale farming.

In the last 50 years, there has been an increasing southward movement of herders, particularly *Ilparakuyo*[79], Barabaig[80] and Sukuma peoples in search of new pastures and land. Pastoralists and agro-pastoralists have had to accept the risks of moving their stock through tsetse infested rangelands in search of more favourable tsetse-free pasture and water (Galaty 1988, 168). Aided by techniques such as moving through tsetse-infested areas at night when the tsetse fly rests up, and using modern anti-trypanosomal[81] drugs, pastoralists are able to move their herds with much reduced risk over long distances (Mtemisika *pers com*). The reasons underling the movements of these herding groups are similar but different, and therefore they are individually described as follows.

The migrations of the *Ilparakuyo*[82] have been much longer-term in comparison to other herder movements. The origins of the *Ilparakuyo* movements southward can be traced to the Maasai *Iloikop* wars of the nineteenth century (Galaty 1993, 172-182). Having lost the wars to their *Kisongo* Maasai adversaries, the *Ilparakuyo* began to move south-eastwards into parts of Pangani, Bagamoyo, Dodoma[83] and Morogoro (e.g. Galaty 1993, 179-182). More recently over the last 50 years, the *Ilparakuyo* have continued their movement southwards, entering the Kilombero valley and also settling to the southwest in the rangelands of lowland Iringa District - in particular, Ruaha Mbuyuni, Ismani, Pawaga and Idodi (*pers com* Mgemaa, Mtemisika and Katei; Odgaard 2002). They arrived in Usangu in Mbeya District in south-western Tanzania in 1953 (Charnley 1994, 85). During *Ujamaa*, the *Ilparakuyo* were subjected to land evictions in some of the Districts in which they live. In Bagamoyo District, the state alienated about 61,000 acres of land from *Ilparakuyo* herders and 18,000 acres from cultivators (Ndagala 1974 & 1986 cited in Rigby 1992, 153). While the farmers were compensated with other land, the *Ilparakuyo* were not. In recent years, as farming and herding populations have grown, the *Ilparakuyo* have increasingly come into conflict with farmers over land (e.g. Odgaard 2002), even in areas in which they have resided for many years, as occurred in December 2000 in Kilosa District, central Tanzania.

While retaining extensive kin-networks over hundreds of kilometres, many *Ilparakuyo* have become increasingly sedentary as they have moved into agro-pastoralism and are increasingly tied to their

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[79] The orthography adopted for *Ilparakuyo* terms and words follows that of Rigby (1983 & 1985).

[80] There are two recognised spellings: – 'Barabaig' (in common usage – for example, Huntingford [1953]; Klima [1970]; Lane [1996]; Wilson [1953]) and '*Barbayiig*' (after Rekdal and Blystad [1999]). The orthography adopted for all Barabaig terms follows that used by Lane (1996).

[81] 'Samarine' is favoured, for example, by many herders (Galaty 1988; pers obs).

[82] Rigby (1992, 152) relates the *Ilparakuyo* migrations more generally to extensive and prolonged land alienations (particularly of dry season grazing range [Maa: *isupuko pl.; osupuko sing.*]) suffered by the Maasai in East Africa during the pre- and post-independence periods.

[83] The semi-arid plains of Dodoma - the domain of the Gogo - appear to have been historically frequented by the Maasai - not least the *Ilparakuyo* - who raided into this area in the 19th century (Rigby 1985).

fields. However, their growing agro-pastoralism does not preclude sporadic migrations to other distant areas (especially to locations where they have kin) if the local socio-ecological and political environment becomes unfavourable (*pers com* Mgemaa, Mtemisika and Katei). Nevertheless, as the most productive semi-arid rangelands - in terms of pasture and farming - fill up with people, continued movement is likely to become an increasingly difficult option given the time and investment required to build the social relations necessary for securing adequate access to land and landed resources.

The Barabaig migration is of more recent origin. Although there have been long term losses of Barabaig land in northern Tanzania to their northern *Iraqw* neighbours, the expansion of the tsetse fly belt (see Chapter Six) and even historically to the Maasai, it is the recent loss of dry season pastures which have most impacted on the Barabaig (Lane 1998, 152-4). These *muhajega* (Barabaig: wet season forage regime) dry season grazing areas were lost through state-enforced land alienations for commercial wheat farming[84] in the Basotu Plains during the 1970s (Lane 1998, 151). Groups of Barabaig who could no longer access sufficient grazing moved southwards seeking pasture through Singida, and then via Tabora towards the Rukwa valley in the far southwest of the country. Others moved south into central Tanzania via Dodoma, Ismani, Pawaga, Idodi and the Usangu (e.g. Lengisugi 2000). Some Barabaig herders have settled into more localised seasonal range use patterns in particular localities, for example in the lowlands of northern Iringa. These families have increasingly integrated themselves socio-economically with locally resident farmers and herders. Others Barabaig herders remain heavily transhumant moving substantial distances as pasture needs and unit security[85] dictate.

For several decades now, Sukuma and Nyamwezi agro-pastoralists have moved through Tanzania from their homelands in Shinyanga in northwest Tanzania (Brockington 2004, 1). As part of Sukuma cultural ecology and a longer term 'expansionism' (Brandström 1985; Charnley 1994 & 1997; Galaty 1988), this movement initially began as Sukuma agro-pastoralists entered the rangelands of Maswa, Shinyanga and Geita (Brandström 1985, 20-21 cited in Galaty 1988, 168) as well into Nyamwezi[86]. Cotton production was introduced during the German colonial period, and began to be expanded from the 1930s onwards, as a result of the colonial drive for increased agricultural exports (Iliffe 1979, 348-349). The growth in cotton production by the Sukuma continued over the next 40 years such that by the end of the late1970s, 90-95 per cent of all cotton produced in Tanzania came from Sukumaland (Hankins 1974 cited in Charnley 1997, 606). While the Sukuma re-

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[84] The *muhajega* range areas in Hanang District were identified as being particularly suitable for mechanised farming of wheat by a Canadian Wheat Project that was subsequently started in the 1970s (Lane 1996, 151).

[85] These groups of migrant Barabaig are often the subject of much complaint by locally resident farmers and herders and conflict is common. In such instances, when the situation becomes untenable, especially after an out break of conflict, a Barabaig *ged* (Barabaig: unit) may move out of the area swiftly to avoid further conflict and/or the intervention of the state.

[86] Nyamwezi is the domain of a people with the same language. The Nyamwezi are largely agriculturalists - in contrast to the agro-pastoralist Sukuma (Galaty 1988, 169).

invested their profits in livestock, less and less grazing land remained available for their growing herds of livestock[87], particularly as the Shinyanga rangelands had been increasingly converted to cotton fields (Birley 1982 and Brandström 1985 cited in Charnley 1997, 607). This process is thought to have precipitated the southwards expansion of the Sukuma and their herds into Tabora and Chunya Districts in western Tanzania (Galaty 1988, 169). Today they are successfully established in many of the semi-arid rangelands of Tanzania - for example Pawaga, the Kilombero valley the Usangu plains and the Rukwa valley in the southwest of Tanzania.

Over the last 50 years migrations into the semi-arid rangelands of Tanzania have also occurred among farming populations. The underlying reasons for these migrations are not well understood, but evidence points towards processes of growing landlessness and possible declines in soil fertility in some parts of Tanzania. It has been established that the introduction of new perennial cash crops to local farmers sometimes led to changes in customary land tenure practices and inheritance patterns. For example, in the Nyakyusa highlands of south-western Tanzania, the introduction of coffee led to growing landlessness among a younger generation of men as their elders evaded giving up valuable land earmarked for coffee growing (Gulliver 1958 and Odgaard 1986 cited in Charnley 1997, 598). Landlessness was further compounded during the colonial period in Nyakyusa by the creation of forest reserves, alienation of land for European farming and a growing population (Charnley 1997, 600). Charnley (1997, 601) posits that young landless men instead chose to move to the lowlands of the Usangu (Mbeya), where highly fertile and uncultivated soils could be farmed. Similar processes of land loss or declines in soil infertility in other parts of the southern highlands of Ubena and Uhehe may have led to the movement of further groups into the lowlands. Thus today's lowland farming communities living in the Usangu are polyethnic and at least half of the total population consists of Hehe, Bena, and Safwa and Wanji immigrants (Charnley 1994, Mwakipesile 1976 and Walsh 1984 cited in Charnley 1997, 598). A similarly ethnically diverse farming community lives in the Idodi and Pawaga rangelands of Iringa District (see Chapter Five)[88].

In summary, over the last 50 years, key wetland areas in the semi-arid rangelands have become a focus of heightened competition for land and water, as farmers and herders converge on these centres - or 'frontiers' - of relatively high fertility and productivity. Most significantly, much of the in-migration of herders and farmers into the semi-arid rangelands has been caused by the alienation of large areas for wildlife conservation, commercial agriculture and ranching schemes, and the expansion of small holder cash-cropping. Today, there are increasing shortages of arable land and pasture in these dryland-wetland areas. This is leading to growing levels of competition over land and natural resources, and outbreaks of violent conflict between herders and farmers.

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[87] Between 1944 and the mid-1960s, the livestock population of central Sukumaland doubled from an estimated 1,728,400 animal units to 3,360,000 animal units (Charnley 1997, 607).

[88] Nahonyo *et al.* (1998) identify 35 ethnic groups as living in the Idodi and Pawaga area.

3.3 Conclusion

The political and socio-ecological control of people initiated during the colonial period was taken to an extreme by the modern Tanzanian state during the *Ujamaa* years. The colonial and then the modern state restructured the semi-arid rangelands through moving people into settlement concentrations and alienating large areas of land for the creation of a protected area network, commercial plantations and ranches. The centralising control of the state can be seen as having been driven by a number of factors. These included its need to: capture the production of rural herders and farmers in order to maintain and further develop an export-led economy; achieve greater political and economic control over a dispersed farming and herding population, and; improve its ecological and political control over the semi-arid rangelands in order to increase the now substantial revenue to be derived from wildlife tourism. The combined effect of these policies and developments has been increasing shortages and insecurity in land and landed resources, and increasing competition and conflict over these resources. The long record of state appropriate of land together with other related factors has led to substantial movements of herders and farmers across Tanzania, who have been compelled to search out new fertile land, grazing and water.

From the mid 1980s, with economic collapse threatening, the Tanzanian state was forced to adopt neo-liberal reforms to its economy and political ideology. In the early 1990s, as it re-introduced multi-party politics, the state began to slowly modify some of its systems of governance. In the late 1990s it embarked on the reform of local government, in part to be achieved through decentralising service provision and natural resource management. The decentralisation project is widely viewed as a key strategy for Tanzania's development. In natural resource management, decentralisation has been more fully supported and developed for some sectors than in others. The forestry sector has set about devolving partial and full rights to villages to manage and benefit from the country's extensive protected forest area. In comparison, the wildlife sector has resisted decentralisation, essentially retaining full control of wildlife, arguably in deference to powerful interests and centralised flows of substantial revenues to the central state.

A land reform process started in the early 1990s failed to sufficiently build on a number of bold and highly consultative recommendations of a Presidential Commission of Inquiry into Land Matters. Amongst other findings, the Commission had found that many Tanzanians had been denied the right to equitably administer their own land, were chronically land insecure, and that the State together with other interests continued to appropriate large amounts of land. In not taking the Commission's recommendations fully in hand, the new land laws have not sufficiently addressed the insecure land rights of many Tanzanians. While a new system of village-based land administration has been created, it is extremely bureaucratic and fails to provide sufficient safeguards for the continuing inequality in greater access to land by local and other elites at the disadvantage of poorer and more marginalised groups. To date, little progress has been made at village level in developing the capacity and systems of accountability required for promoting equitable, efficient and participative village-based land administration and land-based dispute resolution.

While much focus has been given to the reform of government, piloting decentralisation into the districts (e.g. Shivji and Maina Peter 2000, 35), and finalising land reform legislation, insufficient consideration has been given to understanding how local people at village level, and in the context of this thesis, farmers and herders, will be able to respond and adapt to these reforms. In the semi-arid rangelands, as human populations grow and migrate through the landscape, and as demand increases for key seasonal rangeland resources (arable land, fertility, water and pasture), the likelihood for land and natural resource based conflict may be expected to increase. A longstanding challenge for local government, land and natural resource reform is the need to understand and support the development of equitable local management systems and natural resource conflict management practices. This process is likely to remain under-realised and problematic, undermined by conflicting interests of control, and handicapped by understandings and attitudes within central and local government that remain entrenched in well established, but now critically discredited knowledge.

4 The dryland-wetland frontier of Idodi and Pawaga

4.1 Introduction

The rangelands of Idodi and Pawaga are located in northern Iringa District in south-central Tanzania. They were chosen for the site of the field study as they provide an example of a 'frontier' rangeland (see Chapter Three) which has been subject to successive local resettlements and wider in-migrations of farmers and herders from neighbouring districts, and from further afield. In the past, both Idodi and Pawaga have also been heavily impacted by colonial land-use management and protected area creation, as well as more recently by post-independence *Ujamaa* policies and state wildlife management practices.

In this chapter I introduce the Idodi rangelands and their people, and provide an overview of their agro-ecology and socio-economy. I then provide an account, with the aide of selected vignettes, of the nature and functioning of village government and jural systems (the latter are important in land dispute resolution). I focus my attention on village government since it has the most impact on people's daily lives and also has considerable influence and control on how village lands (see Section 3.4.3) are managed. This leads into a discussion about current modes of land tenure in Idodi for farmers and herders, particularly in relation to the recently introduced new national land laws. Finally, I discuss the position of pastoralists in relation to local government power structures centred on the farming community.

4.2 The Greater Ruaha Ecosystem: Idodi and Pawaga

The southern extent of the greater Ruaha ecosystem lies in northern Iringa District, central Tanzania. It covers approximately 30,000km^2 of different designated rangeland-use areas - the Ruaha National Park, the Rungwa, Kisigio and Muhesi Game Reserves, the Lunda-Mkwambi Game Controlled Area[89] as well as overlapping village lands (see Figure 4.1). The area is internationally significant in terms of biodiversity conservation in that it contains the only protected area system covering the transition between the vegetation communities of the Sudanian *Acacia-Commiphora* zone of East Africa and the *Brachystegia* (miombo) woodlands of southern Africa[90]. The area is of substantial national economic importance for a number of reasons: It comprises the greater part of the upper catchment of the Ruaha, Njombe and Kisigo Rivers which feed the Mtera Dam, one of Tanzania's most important hydro-electric schemes; the Kisigo and Rungwa Game Reserves together with parts of the Lunda-Mkwambi Game Controlled Area North (LMGCAN) are prime tourist hunting blocks generating

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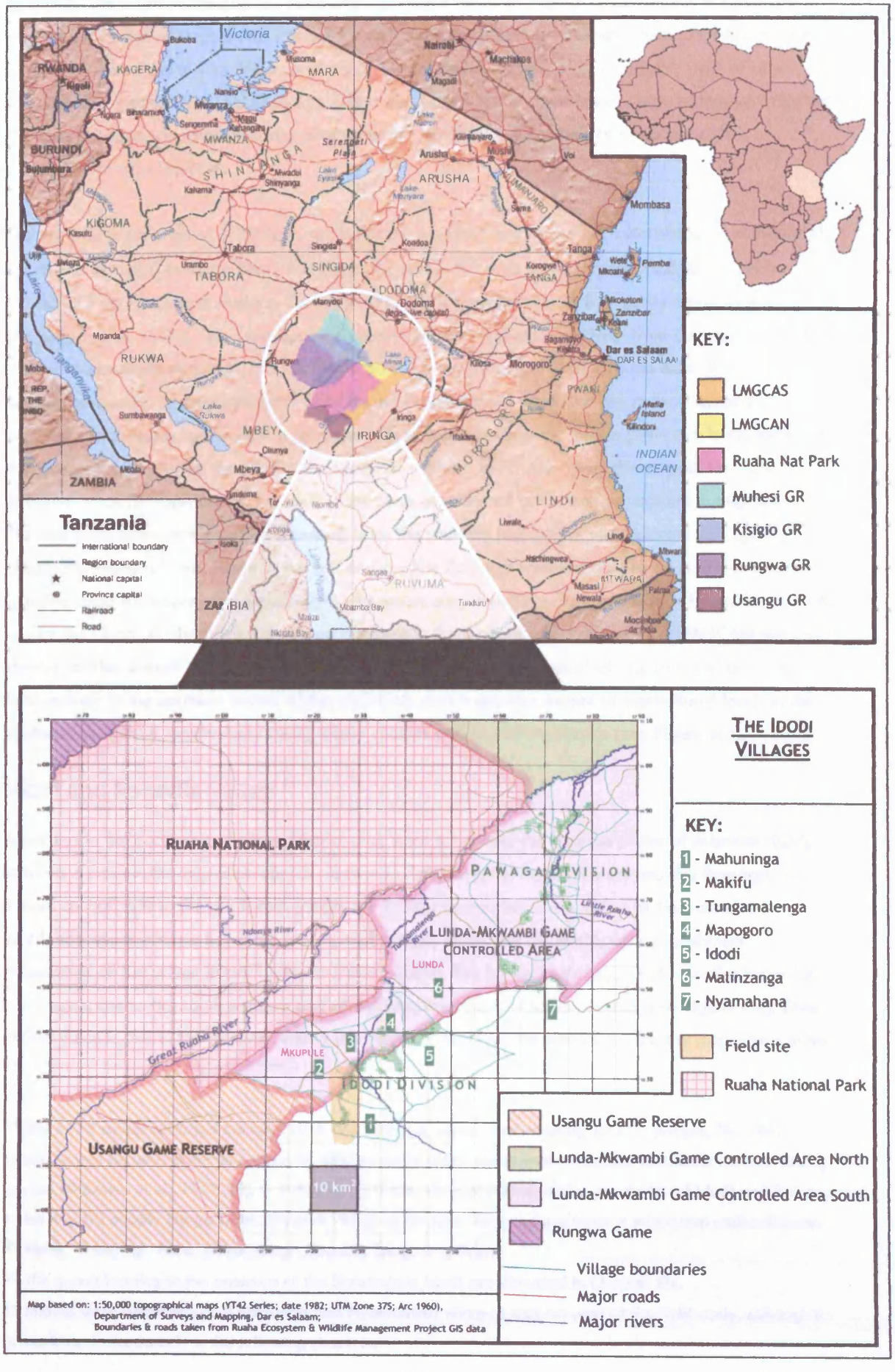
[89] The southern extent of the Game Controlled Area (GCA) may become the MBOMIPA Village Association WMA (see Section 3.4.1).

[90] Bjørnstad (1976) and Nahonyo (1998) provide useful reviews of the vegetation of the Ruaha National Park and the Lunda-Mkwambi Game Control Area immediately to the south.

Figure 4.1: The location of the study site in Tanzania - the Idodi villages, Iringa District



relatively substantial revenues for the state; the Ruaha National Park is becoming an increasingly developed and important tourist attraction, and; the Lunda-Mkwambi Game Controlled Area South (LMGCAS) (see Figure 4.1), while currently of lower wildlife significance, constitutes part of an important rangeland for pastoralists (mostly around its periphery), an increasingly extensive irrigated agricultural area for farmers and a pilot area for MBOMIPA, a community-based wildlife management development.

The LMGCAS, an area of 1,850km^2, straddles the northern half of the two administrative divisions of Idodi and Pawaga in Iringa District (Figures 3.2 and 3.3) and is home to over 70,800 people[91] (National Population and Housing Census [NHPC] 2002), comprising of 8 majority ethnic groups[92] (Nahonyo et al. 1998). The area lies on a gently undulating plain, stretching from the base of the Rift Valley escarpment northwards to the Great Ruaha River (see Figure 4.1). To the east of the LMGCAS lies the confluence of the Great and Little Ruaha Rivers around which lies the natural seasonal wetland of Pawaga. To the west a range of hills reduces the breadth of the plain in a bottleneck with the Great Ruaha. During the 1980s, the seasonal wetland in Pawaga was developed for more intensive irrigated agriculture. Today it is the focus of seasonal and more permanent in-migration of farmers from elsewhere (many originating from the southern highlands) who cultivate rice paddy during the seasonal river spate in the wet season. The Pawaga wetland also forms a dry-season grazing area for *Ilparakuyo*, Barabaig[93] and Sukuma pastoralists who move some of their herds south across the Great Ruaha once wet season pastures in the National Ruaha Park and LMGCAN become depleted. The overall land-cover of Idodi and Pawaga consists of relatively open woodland and bush mosaic in the northern extent of the LMGCAS, and a greater extent of agricultural lands in the southern periphery, particularly along water courses and in wetland areas (see Figure A2).

4.3 Idodi and Ikwavila valley

Idodi lies in the northwest of Iringa District and, since it borders the Usangu plains of Mbarali district, it forms a pastoralist migration corridor between the Usangu in the southwest and the Pawaga and Ismani rangelands to the northwest. Iringa, the District centre, lies some 90km to the east in the highlands. Idodi division has three wards, Mahuninga, Idodi and Mlowa[94], with a combined population of just under 20,991 people (NHPC 2002). The Ikwavila Valley, which was the focus for field work, lies to the south western end of the inhabited part of Idodi division (see Figure 4.4). Over 9,000 people live in the Ikwavila valley (see Table 4.1). Over the last 20 years, the population in the

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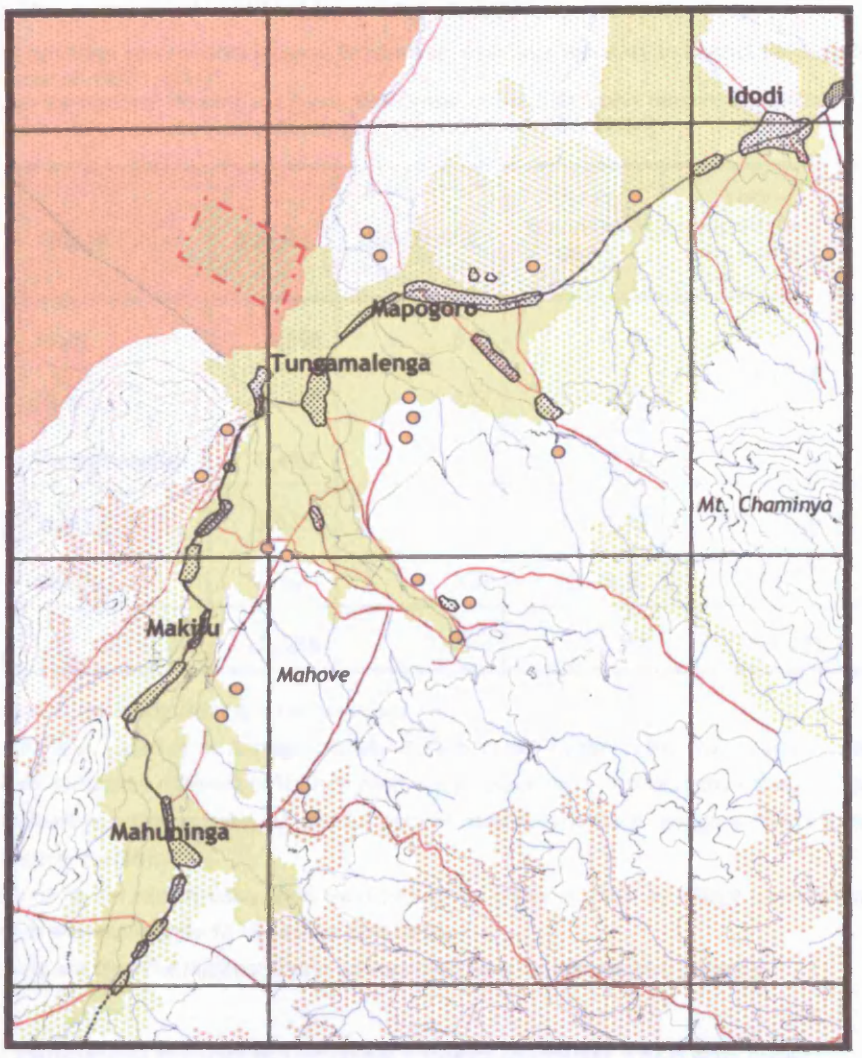
[91] The 1978 census recorded the total Idodi and Pawaga populations as being 27,000 people. The 1967 census cannot be used in the time series as administrative areas underwent substantial revision in the intervening period (Nahonyo *et al.*, 1998:19). In 1996, Iringa District Council estimated the population of Idodi and Pawaga to be 46,000 people (Iringa District Council 1996), at the time likely to have been a substantial underestimate.

[92] Hehe, Nyamwezi, Bena, Kinga, Gogo, Sagara, Sangu and Wanji

[93] The events leading to the presence of the Barabaig in Idodi are discussed in Chapter Six.

[94] Mlowa ward (consisting of Malinzanga and Nyamahana villages) was not part of the field study, although it is mentioned occasionally in the following chapters.

Figure 4.2: The villages of Idodi, herder homesteads and land-use areas



Legend:

- Ilparakuyo homesteads
- Village settlements
- Mixed wetland & dryland fields
- Land leased to expatriate farmer
- Main road - unsurfaced
- Water course
- Scattered dryland fields
- Sparse & isolated dryland fields
- LMGCA
- Settlement and use disallowed
- Track - unsurfaced
- Contour

Scale: 0 — 5 — 10 kms

Map adapted from: 1982 Series Y742 Sheet 214/3 Edition 1TSD Surveys and Mapping Division, Ministry of Lands, Housing and Urban Development, United Republic of Tanzania. Agricultural land cover overlay modified from FAO-AGROMET 2002 data -

Notes: (i) Malinzanga and Nyamahana villages are also in Idodi Division and lie to the north-east lies of the map; (ii) Land-use areas are approximate and not definitive; (iii) Unshaded areas are a mixture of *Acacia-Commiphora* bushland at lower altitudes, *Brachystegia* woodland at slightly higher altitudes, and treed grassland in other areas; (iv) Cultivation and livestock are permitted by law in GCAs. In LMGCA, farming and herding have been 'banned' for a large extent of Mkupule and Lunda, and these areas are often referred to as 'hifadhi' (Swahili: Reserve) - as depicted in the map (see also Figure 4.1).

Table 4.1: The population of Idodi by village in 2000

Data collected by village governments [Source: Report from Divisional Secretary to District Commissioner, dated 14/12/2000, loose un-filed report]
Data taken from the National Housing and Population Census online (full report remains unpublished) [Source: http://www.tanzania.go.tz/sensa/districts/iringarural.htm; accessed 29/30/04]

Ward	Village	People	Households	Average household size[a]	Total population by ward	Total number of households by ward[b]
Idodi	Idodi	3,598	810	4.44	10,286 (9,205)[c]	1,735 (2,290)
	Mapogoro	3,208	452	7.10		
	Tungamalenga	3,480*	473	7.36		
Mahuninga	Mahuninga	3,638*	750	4.85	5,802 (4,040)	1,008 (1,085)
	Makifu	2,164*	258	8.39		
Totals		**16,088**	**2,743**	**5.87**	**(15,007)**	**(2,743)**

* Villages defined in this study as lying in the Ikwavila valley.

[a] The reason for the variation in average household sizes is not known - but may relate to variations in how households were defined by different officials in each village. National census data show the average household size of Idodi and Mahuninga wards as being 4.0 and 3.7 persons respectively. More disaggregated national census data at village level are not available.

[b] When compared to the census data, total ward population numbers given by village governments for Idodi and Mahuninga wards are respectively 12 and 44 per cent higher.

[c] Data in brackets are from the National census and provided here for comparative purposes.

Table 4.2: Population growth in the Idodi villages between 1976 and 2000

[Sources: Report from Idodi Ward to the Divisional Secretary in 1976 (File IDO/A40/11); Report from Mahuninga Ward to the Divisional Secretary dated 11/07/1976 (File IDO/A40/11, Ref: H/R 12/2/27)]

Village	People		Households		Annual population growth rate
	1976	2000	1976	2000	
Idodi	1,933	3,598	350	810	3.58%
Mapogoro	1,874	3,208	330	452	3.89%
Tungamalenga	2,145	3,480	350	473	4.11%
Mahuninga	1,472	3,638	430	750	2.70%
Makifu	899	2,164	255	258	4.15%
Total	**8,323**	**16,088**	**1,710**	**2,743**	**3.69%**

Figure 4.3: The Lunda-Mkwambi Game Controlled Area looking west from Idelemule Mountain in Tungamalenga in the dry season

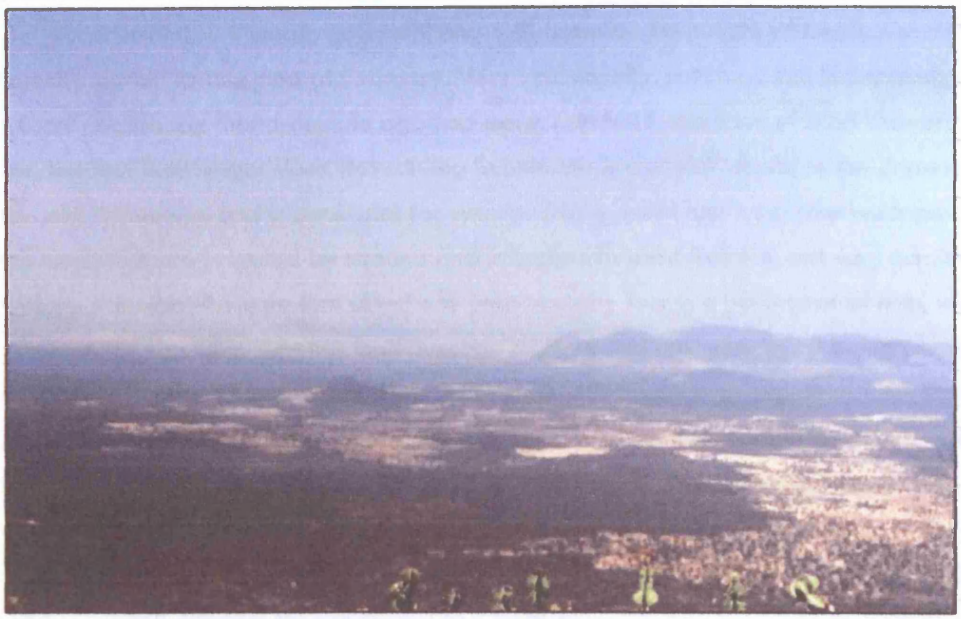
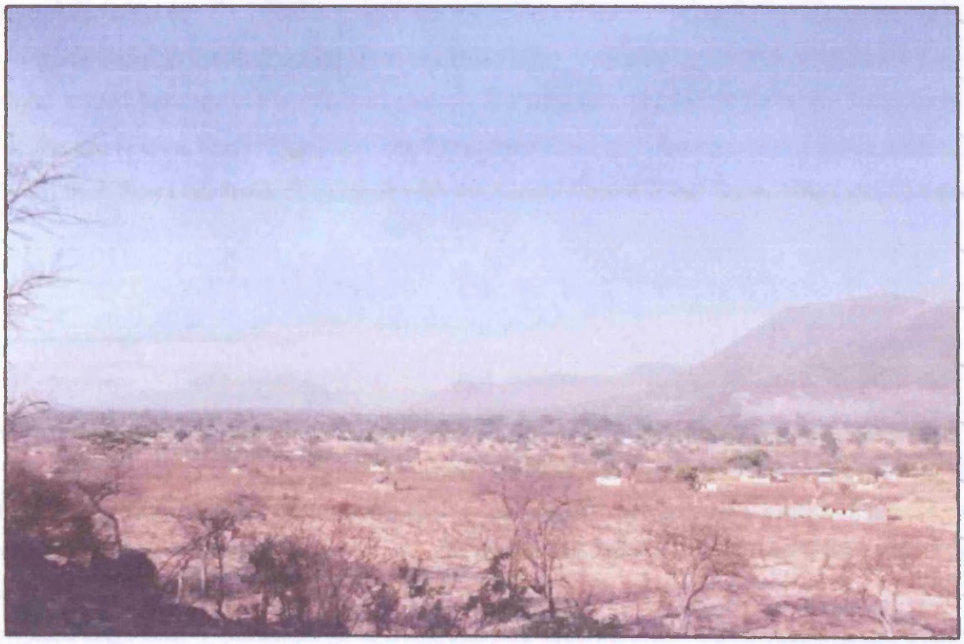


Figure 4.4: The Ikwavila valley looking south towards Mahuninga from Tungamalenga in the dry season



valley has doubled (see Table 4.2) with an average growth rate of 3.7 per cent. Two of the villages in the Ikwavila valley - Makifu and Tungamalenga - have relatively the highest growth rates. This is almost certainly due to continuing in-migration of farmers (see Chapter Five).

4.3.2 *The agro-ecology of Idodi and the Ikwavila valley*

The rangelands of Idodi have a semi-arid climate with an average annual rainfall of about 388-960mm per year[95]. Rainfall is usually unimodal and falls between the months of December and April, with a short dry period lasting most of February. Very occasionally, rain may fall in September or October. Local people say that a decade ago and more, rain fell in the form of short showers during September, but that it no longer does. Rain during September is a useful respite to the dryness and heat of the mid-dry season and is beneficial for *vynungu* (Hehe: moist low-lying riverbank gardens) dry season crops that are irrigated by streams and irrigation furrows. Rainfall can vary considerably between years. It is often the case that about one year in every four is a poor year of rain, with another year usually receiving a better than average amount, and one year in 10 being particularly dry. Such trends are not hard and fast and longer term climatic cycles may impact on inter-annual rainfall patterns - for example, many local people in Idodi consider that much of the 1990s were locally drier than the preceding decade. During the dry season, daytime temperatures as well as evapotranspiration rates are high and thus seasonal crop cultivation outwith irrigated areas is not possible. The growing season is therefore of limited duration but variable depending on any one year's rainfall, ranging from about 60 to 120 days.

The Ikwavila valley is bounded to the south and west by a steep range of hills, and to the east, by the gently rolling foot-scarps of the highlands (see Figures 3.2 and 3.4). The mouth of the valley is broad and marked by Idelemule Mountain to the west and by the impressive Chamyina Mountain (see Figure 4.2) rising nearly 1000 metres from the valley floor in the east. The Ikwavila valley is watered by seasonal streams draining from the hills to the west and perennial ones to the east from the highland massif (except in the driest of years). The streams combine to form the Tungamalenga River[96] at Iliango (Hehe: first bridge) and the Mazombe River (a tributary of the Tungamalenga River), which then flows northwards to meet with the Great Ruaha River some 40km downstream.

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[95] No long term data is known to exist for rainfall in Idodi – the data quoted here relate to information collected 30km to the northwest between 1995 and 2000 and include an exceptional year of rainfall during the El Niño Southern Oscillation (ENSO) of 1998 (960mm of rainfall). If this event is excluded, rainfall ranged between 388 and 527 millimetres per year during this period. This data is consistent with the national rainfall map shown in Figure 3.2.

[96] The Tungamalenga River is remembered as always having been perennial but, in recent years, it has not always continued to flow during the latter part of the dry season (although there is a substantial sub-surface flow). It is suspected that this trend is a result of increasing levels of dry season irrigation and the diversion of stream water onto cropland cultivated with cash crops such as rice, tomatoes and most recently, paprika.

Prior to the in-migrations of people during the second half of the twentieth century, much of the valley was a mixture of *Acacia-Commiphora* bushland and *Combretum* woodland. The area is remembered as being frequented by large wildlife which declined as the valley became more populated and cleared for cultivation. Today, although Mahove remains a relatively extensive drier, higher, area of woodland and bush (see Figure 4.3), much of the valley has been cleared for cultivation. Pastoralists seasonally graze their livestock in the areas of uncleared woodland and bush, except for parts that are particularly prone to tsetse fly infestation (in the west). The woodlands above the villages also contain wildlife, although a lesser amount than the *Acacia-Commiphora* bushland and *Combretum* woodlands stretching out northwards and westwards towards the Great Ruaha River below the villages.

The intensively farmed valley bottoms are characterised by rich brown soils (supplemented by alluvial sediments from the highlands) of clays and loams (see MAFS 2002). The valley bottoms form the *mabonde* (Swahili: pl. low-lying ground; sing. *bonde*) in which farmers have constructed a network of irrigation canals and furrows. Irrigated rice and some maize is grown in the wider, more extensive, low lying flatland '*mabonde*' while in the narrower stream margins - the '*vynungu*' - perennial and dry-season food crops such as plantain and cassava are cultivated. These eutrophic *bonde* soils are regarded as the most fertile and are where the highest value crops are planted. The higher ground, away from the *mabonde*, is called '*nchi kavu*' (Swahili: dryland) and the soil here is generally loamier, less fertile and with a much higher incidence of heavily sandy and dystrophic soils. Lower value crops - mainly maize and peanuts - are generally grown in mono-stands on this less fertile land. The two different *bonde* and *nchi kavu* agro-ecological systems underpin substantially different agricultural production and livelihood strategies for Idodi's farmers (see Chapter Five). A further, underlying, character of the land is the heterogeneity of soils and soil conditions even within relatively small areas, not only in a spatial context, but also in regard to intra- and inter-annual variations in soil productivity and nutrient status. This heterogeneity is the result of a complex interplay between soil content, structure, status, nutrient release processes and varying rainfall regimes (Scoones 2001, 22). This variability underpins the high degree of uncertainty and risk faced by farmers in semi-arid dryland agriculture (see Chapter Five).

4.3.3 *The people and socio-economy of Idodi and the Ikwavila valley*

Idodi is today home to a diversity of people of different origins[97]. There are a small number of Hehe kingroups who have lived in the valley since before the arrival of the first German colonialists in the nineteenth century. These Hehe kingroups may be viewed as autochthonous 'hosts' who have received different types of 'newcomer' over the years. Many Hehe farmers arrived from the Ruaha River valley as a result of protected area creation and *Ujamaa* resettlement during the 1960s and 1970s. Others arrived from the Hehe highlands in search of new land. These farmers, although in a sense 'newcomers', can almost be described as autochthonous as they identified themselves as Hehe and

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[97] More detailed accounts of the arrival of different people in Idodi over the last 50 or more years are provided in Chapter Five for farmers and Chapter Six for herders.

were relatively easily assimilated by their hosts (see Chapter Five). During the 1970s and 1980s other non-Hehe 'newcomer' strangers (such as Bena, Kinga, Wanji and other farming groups) arrived from much further afield to farm in Idodi. Over the years, these non-Hehe farming 'newcomers' have become accepted by their local Hehe hosts, although they may be viewed as still - albeit varyingly - remaining 'strangers'. While 'newcomer' farmers have been either assimilated or accepted by their Hehe hosts, the experience of arriving herders has been different. Thus although the *Ilparakuyo* have been resident in the landscape since the 1950s, their status has remained much more strongly that of 'stranger' as compared to non-Hehe farming 'newcomers'. Despite developing increasingly strong labour, land and exchange relations with their 'hosts' and other farming 'newcomers', the *Ilparakuyo* have remained excluded from participation in village government, and are far less accepted than other more recent farming 'newcomers'. Finally, the 'newcomer' Barabaig - as a collective group - are the least accepted 'strangers'. To a certain extent, this is because they often remain highly mobile in the landscape (with exception), and have generally invested the least in socio-economic relations with the host communities and their 'newcomer' associates.

For the purposes of analytical clarity and ease of description, from hereon the term 'farmer' is used to refer collectively to Bantu Hehe, Bena, Wanji and other groups of farmers, despite the fact that some households in some of these groups may keep a limited amount of livestock. The term 'herder' is used to refer to Nilotic *Ilparakuyo* and Barabaig pastoralists, both of whom may farm to a greater (*Ilparakuyo*) or lesser (Barabaig) extent. The socio-political and socio-ecological factors underpinning the use of these labels will become increasingly clear in the thesis.

Most farmers today live in villages along Idodi's major roads. In addition, there are a number of smaller *vitongoji* (Swahili: hamlets; sing. *kitongoji*) in out-lying areas, often long established settlements that survived or were re-established after the villagisation era. The villagisation programme of the 1970s substantially disrupted previous settlement patterns as people were evicted from their hamlets and homesteads and forced to live in collectivised villages. People were supposedly allocated one acre plots on which to build their houses during resettlement. In practice, many people found themselves building much closer together leaving little room for household expansion or for the well-tended gardens envisaged by central TANU party officials. Although not exclusively, in more recent post-*Ujamaa vitongoji*, extended family and kin can be found living in relatively close proximity to one another in loose kin groups, as people have been able to choose where they live. This is especially the case, for example, for a group of Bena living in Makifu. Originally from Lupembe in Ubena, these families arrived during and immediately after the villagisation period to farm Makifu's fertile wetlands.

Most people live in traditional thatched-roof houses, although increasingly thatch is being replaced with corrugated galvanised iron sheeting. Wealthier households are today building fired-brick and mortar houses. Each village has a market place, a primary school, usually a dispensary and at least one beer club. People's fields are often some distance away from their homesteads and the village settlement, and individual households may own a number of different plots of land located in different parts of the outlying village area. Households may also have a small plot of land farmed as

part of the homestead area. In contrast, herders live away from the main village settlements and agricultural areas, but within relatively short walking distance. Their homesteads are often located in the woodland periphery and include an enclosure for their livestock. Herders (both men and women) may spend varying amounts of their time in the village settlements trading, shopping and socialising.

The socio-economy of people living in Idodi is primarily centred on farming, mostly of maize and rice, and to a lesser extent, peanuts and sorghum (see Chapter Five). Rice is an important cash crop for those able to access suitable land and afford cultivating it, and it can frequently be very profitable, particularly depending on when the crop is sold in the agricultural calendar. There are a few large rice growers, who have become comparatively wealthy, gradually expanding the area of rice they farm. These larger farmers have additionally expanded their businesses through buying cheap rice locally from other rice farmers immediately after harvest, often in repayment of cash loans given at the start of the agricultural calendar. Young men, migrate to Idodi for the rice-growing season from their homes (often in the highlands), to farm rice by renting fields from locally resident farmers. Rice growing, as an extremely labour-intensive crop, is generally farmed by households and individuals able to hire labour, or physically able to carry out the labour themselves. Most of the rice grown in Idodi is eventually sold in Iringa town to millers as *mpunga* (Swahili: husked rice) who then may de-husk the rice and trade it on the national market.

Although rice is the highest value large-scale crop in Idodi, maize is the most important subsistence crop, in terms of both total acreage and the proportion of households who grow the crop. Most households will grow at least some maize, as the staple food. Many households need to sell some of the maize they have grown immediately after its harvest for a cash income, but often the value of maize at harvest, like rice, is at its lowest in the agricultural price cycle, unless the harvest is early[98]. Maize is also used for beer making by women, and is sold locally. Mbege (Hehe: maize beer) is an important part of recreational and cultural life in Idodi for both farmers and herders, and is additionally seasonally supplemented by *Ulanzi* (Hehe: bamboo wine) brought down by vendors from the highlands during the early dry season months of April to August.

[98] This is explained in more detail in Chapter Five – agricultural commodity 'farm-gate' prices are generally at their lowest during harvest, and rise to their highest just before the onset of the next harvest.

Table 4.3: Reported livestock numbers in Idodi Division in 1984 and 1999

[Sources: Livestock Census 1984 (File /DC/V.10/1/70 dated 08/05/1987); Report from Divisional Secretary to District Commissioner, 1999]

Village	Cattle		Goats		Sheep		Donkeys	
	1984	1999	1984	1999	1984	1999	1984	1999
Idodi	572	1200	174	500	51	150	1	29
Mapogoro	1338	250	302	120	149	90	2	10
Tungamalenga	141	230	127	110	6	70	0	13
Mahuninga	46	550	116	115	116	70	17	8
Makifu	517	320	29	100	29	52	0	7
Total	**2614**	**2550**	**748**	**945**	**351**	**432**	**20**	**67**

Note: The data are almost certainly an under-estimate of the livestock present in Idodi as it is likely that livestock keepers will have evaded enumeration to avoid paying livestock tax. For example, the total *Ilparakuyo* herd for 2001 was 2253 cattle (see Table 6.3). No field data are available for Barabaig herds which may number perhaps as much again as the *Ilparakuyo* herd in Idodi (albeit given relatively large seasonal variations as a result of transhumance).

While farming is central to Idodi's economy, herding also plays an important, albeit lesser, role. *Ilparakuyo* agro-pastoralists and Barabaig pastoralists are the major livestock keepers in Idodi, although a minority of farmers - particularly wealthier Bena farmers, may also keep some livestock. Village-based records suggest that livestock numbers in the Idodi villages have remained stable (see Table 4.3). If this is the case, then per capita livestock holdings over the same period are likely to have declined with an increasing herder population. In addition to the role that livestock plays in the socio-economy of individual agro-pastoralist and pastoralist households (see Chapter Six), livestock is important for district tax revenues and individual herders tend to pay proportionately far more in tax than farmers do. Both pay district development tax (levied per adult person) but herders also have to pay livestock tax[99]. Livestock products - particularly meat - are sold in village markets, especially on market days. Farmers may additionally benefit from livestock as they rent their harvested fields to herders during the dry season for crop residue grazing. Although field grazing can be a mutually beneficial arrangement for both farmer and herder, it is often the cause or catalyst of farmer-herder tension and conflict, increasingly common in recent years. For example, in the last ten to fifteen years references to farmer-herder dispute occur quite often in village records, but prior to 1990 there are very few. Dispute particularly occurs when livestock stray into neighbouring fields. This type of dispute is becoming increasingly symbolic of socio-political struggles between herders and farmers over access to land and security of land tenure for herders, discussed in further detail in Chapter Seven.

[99] In 2001, district development tax was TShs 4,000 per person. Livestock tax was levied at TShs 500 per head of large stock (cattle and donkeys), and TShs 200 per head of small stock (goats and sheep). While farmers may pay agricultural cess taxes, they do so only on the produce that they sell in bulk (e.g. in 80kg sacks) which is transported out of Idodi.

4.4 Village-based administration and land tenure

4.4.1 Village governments in Idodi

The aim of this section is not to provide a comprehensive account of the workings of local and village government (see Appendix A1 for a short overview of local government structure), but through vignettes and focussed descriptions, to briefly transect the contemporary nature and functioning of village government in the Idodi rangelands to illustrate its impact on peoples' livelihoods and land relations (discussed in Chapters Five, Six and Seven).

The village council is the key institution of village government. In Idodi, with occasional exception, all village council members and the village chairman are members of the ruling CCM party who have been elected through municipal elections, which occur every five years. Council members then elect village council office holders for the village council's main committees which are responsible for coordinating village affairs and services[100]. In the Idodi villages, although the village councils meet quite regularly (about once a month and sometimes more), it is the village chairman[101] and the village executive officer (VEO)[102], together with the chairs of the three major committees of each village who tend to hold most of the day to day influence in village administration.

Village government in the Idodi villages is often constrained by low levels of capacity and standards of governance. For example, may be a tendency for office holders, particularly the village chairman and VEO, to take advantage of their positions and village councils are often unable or unwilling to hold them totally accountable. The village assemblies tend to expect a certain amount of impropriety as the norm, but as long as the affairs of the village run relatively smoothly, improper practices are tolerated, albeit grudgingly. There may be other, sometimes more important, socio-political reasons as to why a particular office-holder or chairman holds their position. These may revolve around kinship, identity, patronage and (factional) village and ward politics. However, in relative terms, large corruption scandals may result in the dismissal of the village chairman by the village council (this occurred in Tungamalenga in 2002).

In addition the every-day world of politicking also impacts on village government. In this regard, it is sometimes the case that one or other village council office holders loose their position not so much from an abuse of power as due to a political power struggle between factional groups. For example, a long-standing and effective ward councillor lost his seat, not because he was particularly corrupt, but because it is thought the local MP wanted to shore-up his political powerbase. The MP sponsored his uncle in the elections, who was able to use his local identity and his nephew's influence to subsequently win the election. Finally, there is a high turn over of council-employed VEOs and WEOs

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[100] The three main committees at village level usually are the planning and finance committee, the defence and security committee, and the social services committee.

[101] During fieldwork no women held the position of village chairperson in the Ikwavila valley.

[102] The VEO is employed by the district council as an administrative clerk for the village.

(Ward Executive Officers) as these positions are poorly paid, working and living conditions are at best basic, and as a result impropriety can be quite common. For example, between 2000 and 2002, VEOs and WEOs left or resigned in at least three villages and two wards in Idodi.

Village governments in Idodi have low levels of financial capacity -in terms of revenue and the ability to manage what little revenue they receive for supporting the public needs of the village assembly. The nature of financial constraint that village governments face on a day to day basis can be illustrated by the following vignette from Tungamalenga. The water system that supplies the village is a very well designed and constructed low maintenance gravity-fed system, which has one simple flaw. During the wet season, occasional large thunderstorms in the highlands cause the river feeding the village's water system to flood. When this happens, the water intake often becomes blocked (about four times a year). Given the importance of clean water for everyone, it might be expected that it would be a simple matter for the village council to pay the local water *fundi* (Swahili: handy-man or technician) the required TShs 2,000[103] to cycle two hours to the intake to clean it out. However, what usually occurred when the intake became blocked, was that the village would often go for days without water, because the VEO claimed there was no money in the village water 'account' to pay the *fundi*. Instead, the VEO would go about asking the wealthier members of the village for the required money. They would make their excuses as they had already paid a premium for piped water to their houses. No money would be forthcoming until the water tanks in one or more of the wealthier village member's households had run out, at which point it would be made available. However, during the days that it took the VEO to find the needed funds, the stand-pipes that most households in the village depended on for their water would remain dry. Instead women would have to walk two to three kilometres to the nearby river to draw and use dirty river water. The shortage of village funds might have been more understandable had it not been for the fact that every year many of the village's 473 households pay a water charge of TShs 200. On being asked by some irate villagers what had happened to the water funds, the VEO was unable or unwilling to explain where the money was or what it might have been spent on.

This is not to say that the money had been stolen or used up for council 'allowances', although this remains a possibility. Village revenues are limited, and are mostly derived from licensing local trading, from levying charges - such as the court and water charges, and in some instances collecting land rent[104]. The district council is supposed to return ten per cent of the district development tax annually collected in the villages back to their respective village councils. However this had yet to happen in the Idodi villages, despite repeated requests by village councils for the money over a number of years[105]. Revenue from a local community-based wildlife management project

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[103] In 2000, one US dollar was equivalent to 800 Tanzania Shillings (TShs).

[104] Land rents are more frequently applied in Pawaga than in Idodi. However in the Idodi villages, particularly in Tungamalenga, village governments are starting to collect rents from non-village members who have leased land from the village (*pers com* Chengula).

[105] For example, on 17th July 2001, in a heated argument in front of the District Commissioner, a village chairman angrily complained that the district council was demanding that the village council open a bank

(MBOMIPA[106]) is the single biggest source of village funds and even this does not amount to very much[107]. Thus village governments are chronically short of funds, leading to incongruities such as a water shortage in the middle of the rainy season. This situation is compounded by frequent financial irregularities and chronically low levels of administrative capability.

In recent years, the Idodi village councils have become much more directly involved in natural resource management issues, particularly with regard to wildlife. In the mid 1990s, as part of the 'community-based conservation' component of the Ruaha Ecosystem and Wildlife Management Project (REWMP)[108], community wildlife management committees were set up in the Idodi villages. The supposed focus of these committees was subsequently widened when they were re-designated community natural resource management committees under MBOMIPA. The MBOMIPA committees - essentially this is what they are - can be seen as fulfilling two roles in the villages. Firstly, they organise and supply a quota of scouts for joint patrols (with other MBOMIPA villages from Pawaga) that are carried out in the Lunda and Mkupule sections of the LMGCA. The function of these patrols is primarily to deter and apprehend illegal village-based subsistence and other hunters[109], and to stop unlicensed resource use such as timber harvesting. Secondly, the MBOMIPA committees sometimes act as a land-use militia, particularly as the MBOMIPA committee is part of the village defence and security committee. Thus MBOMIPA scouts are occasionally used to intervene in land-use disputes and their presence may be used to ensure or sometimes enforce the resettlement of herders from one particular area of a village to another.

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account first before the funds would be made available. The village chairman argued that the village did not have sufficient money for the minimum opening balance (TShs 50-100,000 depending on the bank), and that the district's requirement was just an attempt at evading payment. To be fair, local government rules require that the money be paid into a bank account for accounting reasons, although the district council could have been less obstructive and more helpful in enabling poorer villages to open the required bank account.

[106] Matumizi Bora ya Malihai ya Idodi na Pawaga (Kiswahili: Sustainable Use of the Wildlife Resources in Idodi and Pawaga) – a joint Department for International Development (UK) (DfID)/Wildlife Division / Tanzania National Parks (TANAPA) project which worked towards developing community-based wildlife management in the Lunda and Mkupule parts of the LMGCA. The project has since closed, but a MBOMIPA Village Association consisting of 19 villages continues to operate and is trying to complete the application process for re-gazetting part of LMGCA as a WMA.

[107] In 2002, each village received about TShs 438,000 which is equivalent to about TShs 141 (US$ 0.175) per person for the villages of Tungamalenga, Makifu and Mahuninga.

[108] This TANAPA/WD/ODA (Overseas Development Administration - now DfID) project ran between 1993 and 1996. It had two components – strengthening the infrastructure and management of the Ruaha National Park (partly in response to the wildlife crisis at the end of the 1980s discussed in Chapter 2) and developing community-based conservation in LMGCA as part of piloting the new wildlife policy. The latter component was to be further developed by MBOMIPA, the successor project.

[109] Arguably, by far the most damaging and unsustainable hunting is carried out by a hunting company from the Usangu Game Reserve. This hunting company has connections with senior Tanzanian politicians and, amongst other things, a reputation for irresponsible and highly improper hunting practices. Given this situation, MBOMIPA scouts have been powerless to intervene.

The village council is also responsible for making village bylaws - for example, bylaws about domestic water usage in the village, or prohibited natural resource uses in certain parts of village lands. Bylaws can become white elephants, particularly those that are instigated and passed by the district council, but which have little support at village level. Certain land-use bylaws, such as those banning livestock grazing of field crop residues rented from farmers by herders, are a case in point (see Chapter Seven). Also, villagers' knowledge and observance of district bylaws are often minimal, except when the bylaws are applied by local district council employees - such as in the case of agricultural commodity charges, or frequently flouted livestock movement restrictions. Bylaws declared by the village council may receive popular support from villagers, and after a period of occasional enforcement by the village militia and prosecution of offenders, become respected by all. An example is the banning of livestock watering in the upper reaches of local water catchments to prevent the pollution of the village water system. However, not all bylaws are official in the sense that they have been approved and passed by the district council according to stipulated procedure. This is because the approval process for bylaws may take many months, and the district council may return a set of proposed bylaws to a village council for modification, further delaying the process. In general, although bylaws do play a role in regulating village affairs and land-use management, they amount to more of a loose framework upon which, by choice or compulsion, people in a particular context may or may not structure their socio-political and socio-ecological relations (see Chapter 6).

Finally, the past dictatorial tendencies of local government continue to occur from time to time. In part, this is a result of the continued existence of autocratic government at divisional level, but district councils may also be equally implicated. For example in December 2001, it was announced by the Idodi village government that each household had to farm four acres of land (irrespective of how much land a household owned or could afford to rent, assuming land was available to rent). Two acres were to be cultivated with subsistence crops, and two with cash crops. Failure to farm the stipulated four acres would result in internment in the local village lock-up. Three farmers were subsequently arrested in Idodi village for ignoring the decree, interned and then subsequently released. After a while, the order lapsed into ignominy as farmers totally disregarded it and as the village government gave up pretending that it could enforce it.

4.4.2 *Local level courts*

Local level courts are an important part of land-use dispute resolution processes in Idodi. I provide a very short overview of the structure and state of local government and other jural institutions in the Idodi villages as they exist today[110] as background material for a more extended discussion on land-use relations and land conflict in Chapter Seven.

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[110] In essence the system of land courts - village land councils, ward tribunals and district land and housing tribunals - set out in the new land laws are similar to current courts and tribunals already in place.

The *Baraza la Makahama ya Kijiji* (Swahili: village tribunal) is the first court level in which all minor disputes and crimes (such as minor land or water disputes or avoidance of village levies) are heard. The ruling of the *Baraza la Makahama ya Kijiji* may be appealed against and the case referred to the *Baraza la Makahama ya Kata* (Swahili: ward tribunal) - which hears more serious cases, for example those including land-use conflict, protracted domestic disputes, public disorder and inheritance disputes. The *Baraza la Mahkama ya Kata* and *Baraza la Mahkama ya Kijiji* are convened on a regular basis, and hear most local cases that do not involve serious crime or do not directly involve the state[111]. The primary court[112], which is the next level of appeal, is located in Idodi village and barely functions, as the magistrate only visits on a monthly basis. As a result the *Baraza la Mahkama ya Kata* may handle cases which the primary court magistrate might ordinarily hear, particularly since people are reluctant to travel to the primary court at Kalenga where they have been directed to go instead. This is because having a case referred to the primary court at Kalenga or, even more inconveniently the district court in Iringa, is an expensive undertaking in terms of travel, other costs and time - particularly if a case is being heard during the wet season when most people are heavily occupied farming.

A further aspect of local level legal systems is that there are different systems of customary law in existence - in addition to the more formal village government jural process. Thus whereas Hehe customary law is more closely integrated with village government jural process[113], *Ilparakuyo* and Barabaig customary law remains separate. In particular pastoralists, engage in parallel systems of jural process - often using their customary law and jural institutions to mediate and resolve dispute that occurs internally within their own societies, and engaging as necessary with formal government-based jural process when seeking to resolve disputes with others - for example, with Hehe farmers (further discussed in Chapter 6).

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[111] State-prosecuted cases tend to be brought by national parks or the Wildlife Division's regional anti-poaching unit for illegal resource use within Ruaha National Park or the LMGCA respectively.

[112] Tanzania has five levels of court - the judiciary court of appeals, high courts, resident magistrate courts, district courts, and primary courts. However, for the great majority of rural Tanzanians, most civil disputes and petty criminal cases are heard at ward or village level. The Primary Court in Idodi has been without a full time magistrate since 1987 (when its previous incumbent retired) despite repeated requests for a replacement by the Divisional Secretary. The court is in a state of disrepair with the roof missing its ridge allowing rain to cascade in. Hundreds of case files (somewhat insect infested) are stacked in such a way as to avoid the worst of the rain that pours in.

[113] According to Magistrates Court Act of 1984, primary courts are supposed to have not less than two court assessors who preside over cases together with the magistrate to enable plural jurisprudence. The assessors are members of the area which the court serves, and their role is to apply interpretations of customary law in cases that come before the primary court (Maganga 2003, 64). The ethnic identity of the assessors underlines the balance of different interpretations of customary law and the relative roles of individual agency and institutions in the application of the law (Maganga 2003, 64).

4.4.3 *Land tenure categories and practices in Idodi*

The contemporary Idodi landscape is divided into variously overlapping land tenure categories, in terms of rights of occupancy and permitted land-use zones (see Table 4.4). In the Idodi rangelands, there are two overarching categories of land as set out in the new land legislation: Reserved Land

Table 4.4: Land tenure categories in the Idodi villages

Land Category[1]	Sub-Category	Rights and characteristics	Example
RESERVED LANDS (National)	National parks, marine parks, game reserves, forest reserves, declared watersheds and hazardous lands[2]	Large areas of land set aside by the state. Entry and/or userights are mostly extremely restricted. Areas mostly managed entirely by the state (jointly managed forest reserves being an exception).	Ruaha National Park, Rungwa Game Reserve, Usangu Game Reserve
VILLAGE LAND			
Farmland[3]	↳ Indigenous customary land[4]	Land owned by Hehe kin groups who have lived in Idodi for a very long time - some families (e.g. Chambulila) for over 100 years. Some land has been given to extended kin as they arrived in Idodi to settle. This land category continues to be governed by contemporary Hehe customary law and practice.	A relatively large piece of land in the centre of Mahuninga village that remains uncultivated but belongs to Mzee Chambulila
	↳ Allocated land[4]	Land allocated by the village government, particularly to newly arriving farmers, for example during *Ujamaa*. Once allocated, this land category is then governed by contemporary customary law and practice as understood by the respective land owner (e.g. Hehe/Bena/Wanji). Village government very rarely intervenes further (except in case of disputes which may be resolved through village and ward courts). Also includes group farmland[7].	Many of the farm fields in Idodi are allocated land, owned both by farmers and herders.
	↳ Purchased land[4]	Land (either allocated or indigenous customary land) that has been purchased by a villager or, relatively less often, non-village member. The purchase may often be recorded on paper and stamped and witnessed by the village chairman and/or VEO as a deed of sale / ownership.	An increasing number of rice fields are being bought by wealthier farmers in the villages due to their value
	↳ Rented or borrowed land[4]	Land (in one of the above categories) that is rented for a set fee and period, or borrowed for a season or more. This practice is quite common and people from neighbouring and more distant villages may rent land - particularly rice fields.	Both maize and rice fields are rented and borrowed

Table 4.4 cont. Land tenure categories in the Idodi villages

Land Category[1]	Sub-Category	Rights and characteristics	Example
Bush/Forest[3]	↳ Open commonage[5]	Land that is not perceived as belonging to anyone, but which is Village Land. Usually permission must be obtained from the village council before the land can be cleared for farming - or settled. Herders (*Ilparakuyo* and Barabaig) rely on this land for their homesteads and livestock grazing, but their rights are often no more than those of squatters. This land is often the most marginal land (i.e. its agricultural potential is limited).	Most of the lower lying uncultivated land lying away from the village settlements. Herders have been made to move increasingly into the lower reaches of this land (see Chapter Seven).
	↳ Reserved land (Village)[6]	Village and that has been declared to be off-limits for settlement, agriculture and livestock grazing by the village council. Minor non-timber forest use often continues - such as firewood and thatch collection. District and other authorities (e.g. TANAPA) may play a substantial role in influencing the location and creation of village reserved land.	The upper catchment areas in Idodi are reserved by the village councils to protect water sources. Also much of the LMGCA[8] in Idodi is *de facto* 'reserved village land', in which most use has been stopped - largely through the agency of the Wildlife Division and TANAPA. In recent years, increasingly supported by village councils due to income from MBOMIPA with hopes for further wildlife-derived revenue.
Farm/Bush/Forest[3]	↳ Leased land[4]	Land that has been formally leased by the council to wealthy outsiders (native nationals, nationals of foreign extraction, and expatriates). Leases are for varying periods, but not less than 33 years. The village council is supposed to have agreed to these leases which are often surveyed and certified by the District Land Officer.	Previously leased land, re-leased to an expatriate farmer for farming to supply his tourist lodge nearby the Park; two campsites leased by Tanzanian nationals; other leased land.

Table 4.4 cont. Land tenure categories in the Idodi villages

Land Category[1]	Sub-Category	Rights and characteristics	Example
GENERAL LAND	General land	Areas of land that are not Reserved Land or Village Land, and which fall under the direct control of the Commissioner for Lands.	No examples in Idodi. Nationally, land that falls between village boundaries, e.g. in very remote areas.

Notes:

1. These categories correspond to the three major land categories set out in the Land Act (1999) and Village Land Act (1999).
2. These reserved areas are governed by separate sets of legislation e.g. the National Parks Act (1959), Wildlife Conservation Act (1974).
3. The different eco-types of land existing in the village.
4. This land is recognised and governed in the Village Land Act (1999) as 'individual and family land'. It also includes residential plots of land in village settlements.
5. Open commonage is recognised and governed in the Village Land Act (1999) as 'communal village land'.
6. Reserved village land is recognised and governed in the Village Land Act (1999) as 'reserved land' - not to be confused with reserved land set aside under the Land Act (1999). According to the law, this land remains as village land and comprises spare land for future or individual use as decided by the village council. Any rights issued to individuals for this land can only be derivative, and cannot be made permanent (i.e. the land continues to belong to the village assembly).
7. Farmland that was allocated in some of the villages for group/communal production, partly associated with the *Ujamaa* years. For example, in Tungamalenga village, plots of group farmland are still owned by a youth group, the local branch of the Tanzania Women's Union (Swahili: Umoja wa Wanawake wa Tanzania), a parents group, the Lutheran Church and the Roman Catholic Church.
8. A Game Controlled Area (GCA) comprises an area of village (or general) land in which wildlife use is prohibited without a licence from the Wildlife Division or District Wildlife Officers. In large parts of LMGCA, many of the legal usufruct rights permitted in GCAs under the Wildlife Conservation Act (1974), such as settlement farming and grazing, have been extra-legally suppressed. The President of Tanzania has the right, according to Section 19 of the Wildlife Conservation Act (1974), to declare specific human land-use practices prohibited in a particular GCA in the interests of wildlife conservation. No notice to this effect for LMGCA has been published in the Government Gazette - as far as is known.

and Village Land (see Table 4.4). Village Land[114] is managed by the village council which has the power to allocate village land to members and non-members of the village[115]. Village members can own land in one or more ways: as customary land (mostly inherited), as land allocated by the village government, or as land purchased from another villager. In addition, there are a number of non-village members who have leased farmland (and also bush/forest land) on a long-term basis from the village council (see Table 4.4). Remaining Village Land comprises commonage upon which herders depend for grazing and land for their homesteads, but for which they have yet to be able to obtain sufficiently secure rights (see Table 4.4 and Section 4.6). The state has imposed restrictions on the use of large parts of reserved village lands in the LMGCA (see Table 4.4, note 8).

The allocation of land by village councils may not always be accountable, nor decided in an equitable manner nor made in consideration of the best interests of all the different village groups such as pastoralists (see also, for example, Maganga 2003, 66). Land ownership matters are rarely discussed in public meetings, unless the issue impacts on a significant number of villagers, who may have lobbied the village council to have the issue discussed more openly. Some of the weaknesses of village-based land management in the Idodi villages can perhaps be best illustrated through telling two short stories.

The first story shows that irregular allocation of land is not new in the Idodi villages, and that there are long-term conflicts both between farmers and also within villages over land ownership. In the late 1970s, Makifu village council leased eleven acres of some of the most fertile land in the Ikwavila valley to an outsider (*pers com* Chengula). However, when the land was demarcated, twenty acres instead of eleven were allegedly allocated to the individual in dubious circumstances. In recent years this alleged misallocation of land has become an increasingly contentious issue as farmland is now in short supply, particularly land as fertile as that leased to the outsider. As a result, the village council has been pressured into holding a number of public meetings to discuss if the nine acres were corruptly allocated as alleged and whether they should be returned to the village. The individual remains intent on retaining his lease over the disputed nine acres of farmland as the land is locally very valuable and productive. As far as is known, the individual has successfully managed to avoid returning the disputed land back to the village for its redistribution. His claim has remained relatively strong as some years previously he had foresightedly obtained a supporting lease document from the district land office

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[114] While Village Lands are shown as being formally demarcated on district land-use planning maps, as far as is known the village boundaries have never been formally surveyed. The boundaries remain disputed in several instances and although such disputes are occasionally brought up in village assembly (public) meetings, most are long-standing and remain unresolved..

[115] The distinction between a villager member and non-member may be defined by their presence or absence in the village household (tax) register.

A second story demonstrates how pastoralists' lawful entitlement[116] to own grazing land is often cursorily treated by village governments, however long they have been members of the village. In Tungamalenga Village, two *Ilparakuyo* families who had lived for seven years in an area about two kilometres east of the main village settlement were forced to move to a new area. The land which they had lived on had been designated by the village council, together with experts from a World Bank irrigation scheme[117], as suitable for small-scale irrigation expansion. Unfortunately, the area of village commonage to which the *Ilparakuyo* families were sent had a number of drawbacks. Firstly, it was a very narrow strip of land (only a few hundred meters wide). Secondly the area was on the edge of thick *Acacia-Commiphora* bushland prone to tsetse fly that would likely result in an elevated trypanosomaisis threat for their herds. Thirdly, they were not alone. A thousand acre farm lease (see Figure 4.3) had been recently given by the village council to an expatriate farmer without the prior knowledge of the two *Ilparakuyo* families. Although the farm lease was first established in the 1960s, it had been long abandoned upon the unfortunate death of the then tenant. The new tenant was able to persuade the village chairman, VEO, the ward councillor and the village council that he needed the land to grow produce for a tourist hotel he was constructing. Thus, for an undisclosed sum, the lease was renewed, resurveyed by the District Land Officer and a new title deed re-issued. It is likely that the *Ilparakuyo* families will be forced to move again, particularly if the tenant starts to farm his leased land[118], because the *Ilparakuyo* are effectively squatters and thus have no rights of ownership over the commonage that they live in and depend on for their livelihoods.

4.5 Pastoralists and village government in Idodi: Living on the edge or edging in?

Herders are now long established in Idodi and, although a minority, play a noticeable part in village life and the socio-economy of the villages. Herders and farmers maintain trade and exchange relations (for livestock and livestock products), engage in client-patron relations (herders may often hire agricultural labour for their fields), and negotiate access to land and seasonal grazing (harvested farm fields are often rented from farmers by herders). Herder homesteads - both *Ilparakuyo* and Barabaig - are located on the margins of settled lands (see Figure 4.2). While this is partly pragmatic in terms of minimising the incidence of dispute from livestock incursions into farm fields, it is also reflective of herders' status within the villages. Pastoralists are, to a lesser or greater degree, part of an on-going farmer narrative that identifies them as 'outsiders'.

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[116] The Village Land Act (1999) allows for group registration of land holding such that, for example, a family or association can lawfully secure collective rights of customary occupancy over land. The law ascribes grazing land equal status as that of farmland and makes it possible for pastoralists and agriculturalists to hold different rights in the same land through 'land sharing agreements'. Importantly, the law provides for collective pastoralist land rights across different villages.

[117] This irrigation scheme has since been completed (URT 2002). It covers an area of 350 hectares / 865 acres (Keenja 2003, 14)

[118] I am not suggesting here that the tenant would manoeuvre to have the pastoralist families evicted. Rather a combination of circumstances will likely cause them to move – since they already consider the location not a particularly good place to live.

The 'outsider' status of herders has meant - in part - that they continue to be denied sufficient rights to land, as the story about the loss of land by two *Ilparakuyo* families demonstrates. An additional underlying reason for this situation is that pastoralists are perceived by the Hehe majority as living on land which is Hehe, land which at some future date may well be required for farming for future generations - as has been raised in farmer - herder land disputes - (see Chapter Seven). This distinction by local Hehe society is the focus of a recent paper by Odgaard (2002) who carried out field work in Ismani - a rangeland that lies immediately east of Pawaga. As Odgaard (2002, 73-74) describes it, '*wenyeji*' (Swahili - indigenous, sing. *mwenyeji*) are people in Ismani who are recognised by the majority as being 'indigenous', in contrast to '*wageni*' (Swahili - guest, sing. *mgeni*), who are 'visitors' - not least pastoralists - with less than full rights to land, but who may nevertheless have been resident in the area for many years. When Bena farmers first arrived in Idodi, they experienced similar perceptions and treatment. However, as their numbers have grown, and as they have intermarried with the Hehe, and given their much closer cultural and agricultural affinities, they are far less a part of this distinction today as compared with pastoralists.

A further problem for herders is that their status has meant that their efforts to participate in village government have been frustrated. For example, the *Ilparakuyo l'aiguenoni* (Maa: murran spokesman) has attempted to participate on the Tungamalenga Village Council as a herder representative. However, he was repeatedly not informed of village council meetings, or his views (on behalf of the *Ilparakuyo*) were ignored. Thus despite their long-term established presence in the Idodi villages, herders have remained on the periphery of village government in terms of their effective participation in village council and its decisions - particularly those pertaining to land and natural resource management.

Village governments often regard herders as an inconvenience since their land-use practices are little understood and may directly interfere with longer term aspirations of farmers (see Chapter Five). Herders' seasonal mobility and migration are frequently perceived as a nuisance, and they are often viewed as 'backward', 'uncooperative' and 'belligerent' towards authority. Moreover, herders often seek and sometimes may manage to evade taxes for which they are liable.

Herders - and *Ilparakuyo* in particular - often see themselves as trying to participate in village government so as to represent their pastoralist interests. They see themselves as longstanding members of the village who are treated as a collective group as second-class citizens, with rights commonly inferior to farmers'. Herders often see themselves as being marginalised from village council meetings. Some herders have remarked that it is more effective, given that they are a minority, to pursue their own individual networks of influence with village office holders. However, such strategies may be disadvantageous in the long term.

There is a growing realisation among herders, as a collective group, that pursuing individual strategies with village governments and individual farmers to secure access to key resources is leading to their continued marginalisation in the landscape. They have missed opportunities to participate in collective village land-use and planning decisions that have made way for new

developments - such as the rice irrigation scheme that has been extended in several of the Idodi villages. These decisions have led to their homesteads being pushed further to the village periphery.

Recently herders have begun to form pastoralist committees in their villages - particularly in the last three to four years, a process catalysed by recent events and almost demanded by local government at district level. Each committee has appointed office holders, recognised by village and local government, to better represent herders in village government, and thus more effectively engage in village politics and administration. The need to form village-based herder committees has been underpinned by a recent and substantial increase in out-breaks of land-use conflict between some herders and farmers (see Chapter Seven).

Thus herders are gradually becoming more successful in engaging with village governance processes, particularly through their newly formed representative committees, although these committees remain relatively weak. Their office holders often lack the experience and skills needed to successfully carry out the difficult leadership and negotiation roles required of them, and they may not be able to always depend on the support of the wider polyethnic herder community.

5 The peoples of 'Kwigongo': the old and the new

> There could hardly be a more marked difference between the valleys lying either side of *Idelemule* Mountain and the landscapes that stretch beyond them. To the west lies the *Mudweka* valley. Stretching far off into the haze of the mid-morning blue, one looks on the magnificent panorama of *Mkupule*, a brown, gently rolling carpet of woodland, grassland and wetland from which rise hill range and mountain. Apart from the gentle play of the wind in the dry tree branches, there is neither sound nor movement. Eastwards, is an altogether different spectacle. The scarps of the highlands bound one's view, and down below in the valley of *Mahuninga*, a tight sea of colours and shapes, of metallic glints and lush greens, lozenged fields and winding paths, pattern the landscape. One becomes aware of the day's work going on below as a column of smoke winds its way upward from the stubble of a harvested field. The faint but unmistakeable sounds of village life are carried up - the distant clatter of a mill grinding maize and the faint clanging of a far-off school bell.

5.1 Alienations and catastrophe: the loss of the old way of life

This chapter is the first of two chapters in which I examine people's livelihoods and land use practices in *Kwigongo* (Hehe: a term used for the lowlands of Idodi and Pawaga). In this chapter, I provide a more detailed account of the current livelihoods and landscape occupancy of the farmers of Idodi, and in particular, the Ikwavila valley. I begin the chapter by describing how and why the Ikwavila valley came to be settled by different waves of immigrant farmers. I then move on to describe and provide an explanation for people's current farming livelihoods and the increasing socio-economic differentiation between wetland and dryland farmers. The former represent an older way of farming the land (in Idodi) while the latter represent a new face to farming, since wetland farming is far more productive than dryland. Throughout this chapter I will demonstrate that many farming households remain desperately poor, locked in a cycle of poor soil fertility and dryland crop yields, labour shortage and poverty, with a minority less constrained by these factors due to their access to wetland fields, and who have experienced improving fortune. While in theory, there remains plenty of new dryland for farmers to clear, the area available for expanding cultivation is limited by the topography of the valley, its vegetation, restrictions on further land clearance and wildlife crop damage on the periphery of the field area.

5.1.1 The old hamlets and the way of life in early colonial times

Large parts of the Lunda-Mkwambi Game Controlled Area (LMGCA) are today a wildlife preserve devoid of human settlement. At the turn of the twentieth century this area, which comprises the

southern bank of the Great Ruaha River and rangeland stretching southwards to the rift valley scarps, was home to diverse[119] but interrelated peoples who variously farmed, herded stock, hunted and fished in small scattered settlements. These were mostly set along perennial stream courses with many sited along the northern and southern banks of the Great Ruaha River (see Figure 5.1). Stretching east and west were the contiguous areas of Njongomeru, Mdonya, Kayela, and Ilolo which were bounded by the northern scarps of the Ruaha River Valley. Above the escarpment to the north lay a number of hamlets including Igula. These northern hamlets formed the northern periphery of Uhehe having been incorporated into the Hehe chiefdom in the late nineteenth century[120].

The Hehe Chiefdom was founded and militarily much expanded from the small chiefdom of Ng'uluhe[121] by the most notable of the *Muyinga* (Hehe: pl *Vayinga*) chiefs, Munyigumba, and subsequently his son Mkwawa, during the latter half of the nineteenth Century (Brown and Hutt 1935; Redmayne 1964, 1968). Following the rout of the Hehe in 1894 by a German expeditionary force[122] (culminating in the death of Mkwawa in 1896), the succession of the Hehe Chiefdom was effectively suspended, until Mkwawa's son, Sapi, was successfully reinstated in 1926 by the British colonial administration under a system of indirect rule. During the intervening years, the Hehe were ruled by upwards of 70 of *vansagila* (Hehe: headmen[123]; sing. *munsagila*) who were appointed across Uhehe by the German colonial administration (Brown and Hutt 1935, 49).

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[119] In this area a number of major tribal groupings have variably overlapped and intermingled in the past century or more – principally those of the Hehe to the south, the Gogo to the north-east, the Kimbu to the north-west and the Sangu to the south-west.

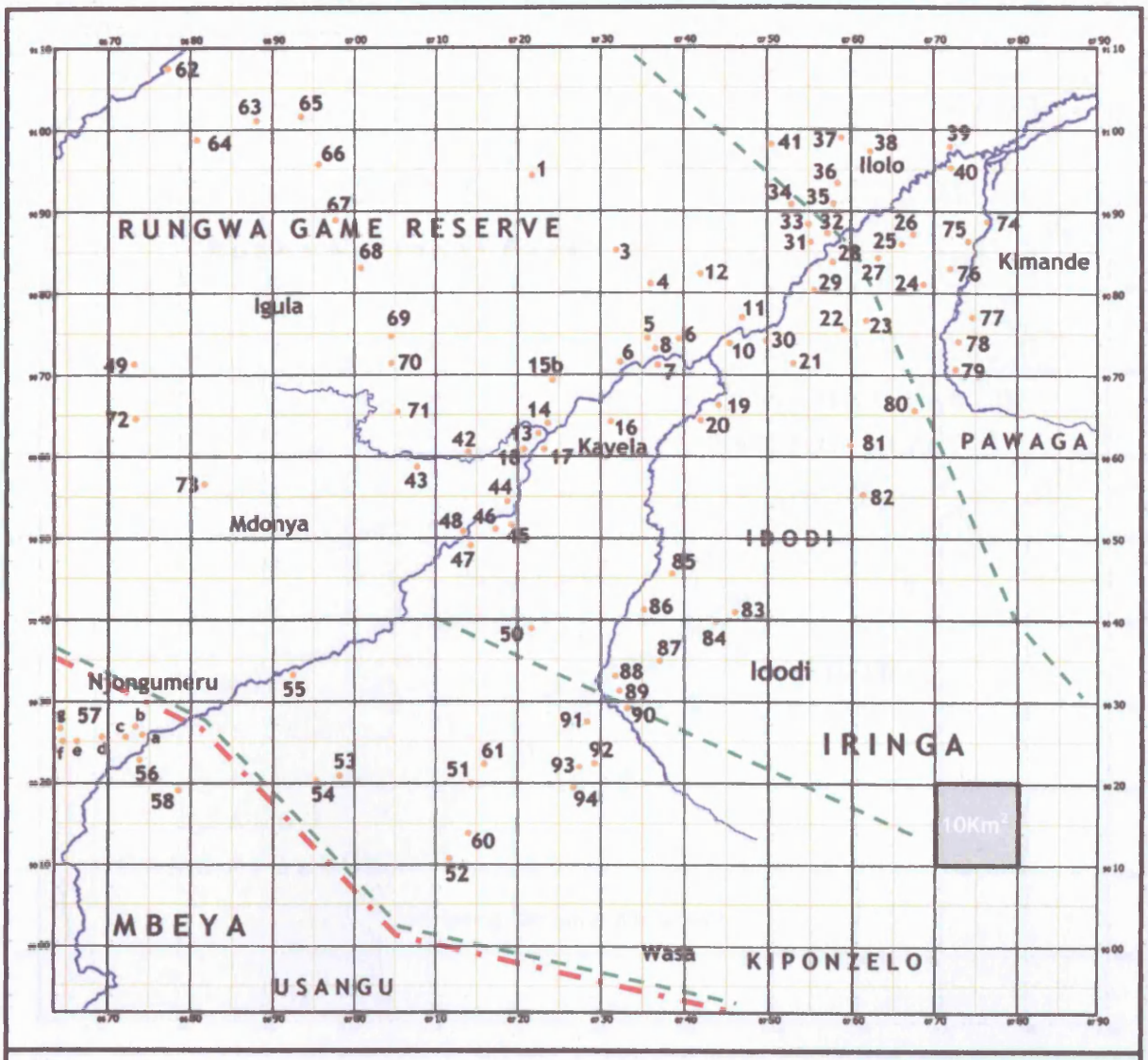
[120] According to Walsh (*pers com*) it is likely that the Hehe did not fight these northern - previously Kimbu and Kosisamba - chiefdoms until 1892/3, when they capitulated. This period corresponds to similar attacks elsewhere recorded by Nigmann (1908).

[121] Ng'uluhe was one of several small chiefdoms that existed during this period in what is now largely central Uhehe and Iringa District.

[122] Redmayne (1968) provides a succinct account of the war campaigns of Mkwawa and, in particular, of the Hehe-German war that led to the demise of Mkwawa and Hehe military and socio-political hegemony.

[123] This is more a corrupted version of the term that was adopted by the German Colonial Administration. A more correct translation would be that of 'sub-chief' each of who had been accountable to the Muyinga Paramount Chief. The *vansagila* were the appointed successors of the numerous chiefs (Hehe: *mutwa* sing; *vatwa* pl) who had ruled small chiefdoms that had been subsumed by the then expanding Hehe Chiefdom of the mid to late 19th century (Brown and Hutt 1935, 59).

Figure 5.1: The Ruaha River valley during the British colonial period circa 1950



Key:

KIPONZELO - Sub-chiefdom boundary

MBEYA - District boundary

Idodi - jumbeate

- Old settlement / homesteads

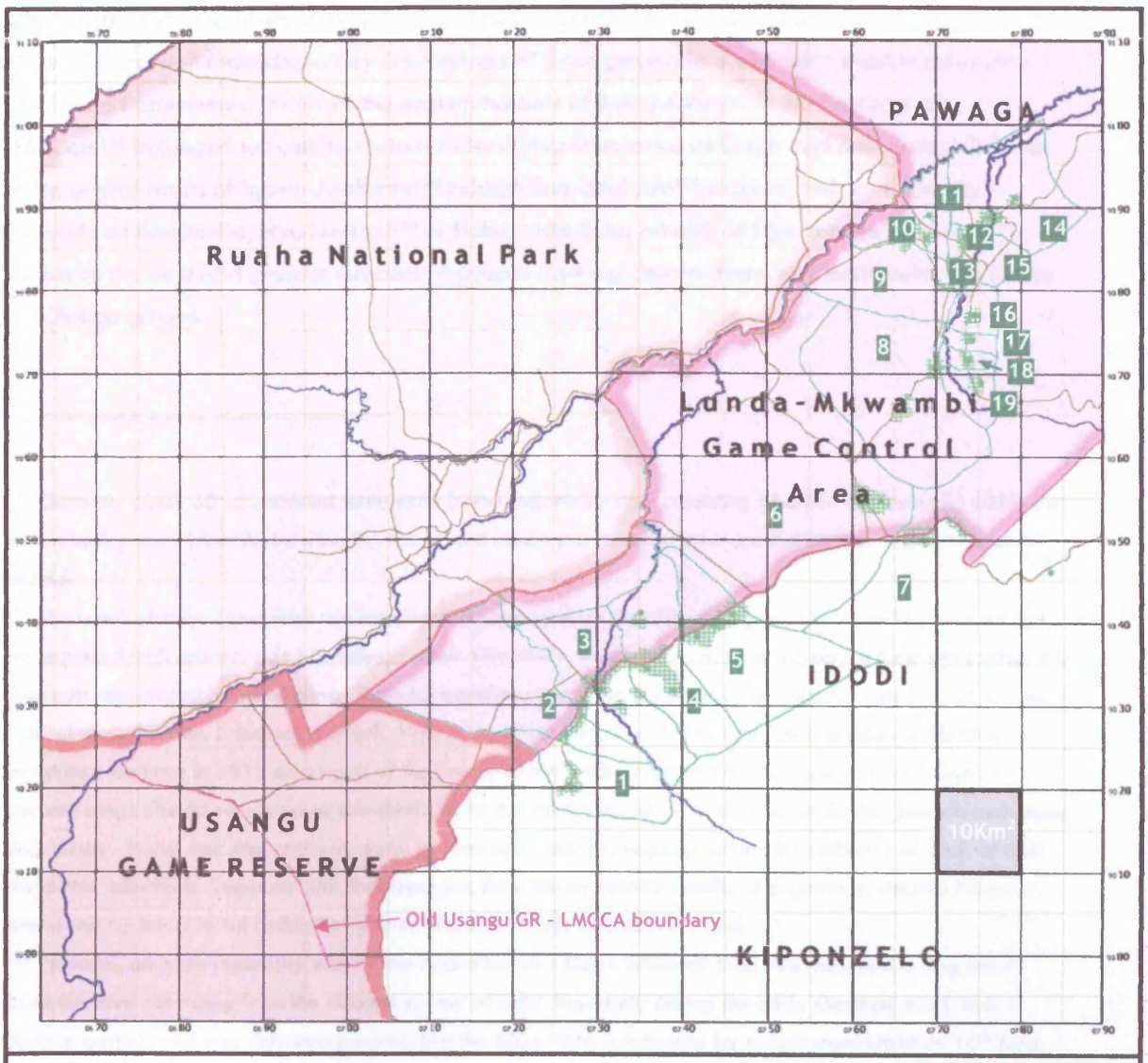
- Major river

Key to old hamlets: [Note that the locations are indicative. Refer to Appendix A3 for further detail on each]

1 - Mwa Mlele
2 - Chemchem ya Magombwa
3 - Magombwe
4 - Makutupa
5 - Chamguite
6 - Mdeya
7 - Igawa
8 - Mwaliganzi
9 - Nyirenge
10 - Ilkelekembe
11 - Uzimoto
12 - Chauumu
13 - Mwagusi
14 - Ifugulu
15a - Ididimoto
15b - Kigoga
16 - Mkwata
17 - Makuluga
18 - Ilala simba
19 - Ilusi (S)
20 - Nyawagulu
21 - Wheluka
22 - Uwalinzota
23 - Kihanga
24 - Kisoloka
25 - Cheleganza
26 - Kikulwe
27 - Mgondale
28 - Kimaling'oko
29 - Ikorongo
30 - Ilunda
31 - Mugaga
32 - Nyatele
33 - Ihwani
34 - Makutupa
35 - Ilolo
36 - Talangwe
37 - Udindamisi
38 - Ny'angai
39 - Mkombilenga
40 - Unynyamala
41 - Mpangile
42 - Unylinge
43 - Ibagi
44 - Mtumbulikwakwa
45a - Nyamakala
45b - Fihwawi
46 - Kiganga
47 - Matinga
48 - Msembe
49 - Mdonya
50 - Nyamtupa
51 - Nyaluhanga
52 - Waga
53 - Kitagasa
54 - Sanzala
55 - Kinyangesi
56 - Mkupule
57 - Njongomeru
58 - Mpama
59 - Lwani
60 - Wota
61 - Mudweka
62 - Mpanga
63 - Lungwa
64 - Igula
65 - Kangaro
66 - Mandwa
67 - Mtovelisusi
68 - Makutupa
69 - Ilusi (N)
70 - Mukombe
71 - Itunundu
72 - Igohungula
73 - Mbagi
75 - Kimande
76 - Ndolela
77 - Mlengi
78 - Chimamba
79 - Magangamatitu
80 - Magoya
81 - Sasamambo
82 - Mloa
83 - Msimbi
84 - Idodi
85 - Nyangano
86 - Kitisi
87 - Mapogoro
88 - Kidangwe
89 - Tungamalenga
90 - Isanga
91 - Makifu
92 - Ikwavila
93 - Nykapembe
94 - Mwitikira

[Note: This map is a work-in-progress. Some of the settlements listed were abandoned prior to 1950, others had not been established until after this date. The colonial boundaries drawn on the map are only indicative.]

Figure 5.2: The Ruaha River valley circa 2003



Key:

- Village settlement area
- Village boundary
- KIPONZELO - Division
- Major road (unsurfaced)
- Major river

Key to current villages:

1 - Mahuninga	5 - Idodi	9 - Isele	13 - Mbuyuni	17 - Ilolo Mpya
2 - Makifu	6 - Malinzanga	10 - Kisanga	14 - Mbolimboli	18 - Magozi
3 - Tungamalenga	7 - Nyamahana	11 - Kinyika	15 - Itunundu	19 - Luganga
4 - Mapogoro	8 - Mafuluto	12 - Kimande	16 - Mkombilenga	

Cartographical information for Figures 4.1 & 4.2

Maps adapted with modifications from: 1982 Series Y742 Sheet 214/3 Edition 1TSD, *Surveys and Mapping Division, Ministry of Lands, Housing and Urban Development. United Republic of Tanzania.* Map Projection: UTM Zone 37s, Datum Arc 1960

The groups of small settlements - comprising well over 60 hamlets[124] - along the Ruaha River were ruled by a number of (then) *Vansagila*[125] and their subordinates during the German period. These *Vansagila* are well remembered by the survivors of those generations who once lived in these now abandoned settlements. Many of the eastern hamlets of Ilolo *Jumbe*ate in the Pawaga sub-chiefdom[126] belonged to families variously identifying themselves as Gogo and Kosisamba[127]. Those in the central areas of Igawa *Jumbe*ate[128] in Idodi Sub-chiefdom[129] claimed their own identity - variously as Kosisamba, Nyambarazi[130] or Hehe, while those hamlets in Njongomeru *Jumbe*ate[131] further to the west had greater numbers of people claiming descent from, or identity with, the Kimbu and Sangu groups.

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[124] Currently about 65 abandoned settlements (some reportedly only consisting of a few homesteads) within the Ruaha valley were identified during fieldwork, and others are denoted on maps dating from the late colonial period.

[125] The administrative categories are complicated somewhat by the different systems adopted by German and subsequent British colonial administrative systems. Essentially, the large number of *Vansagila* (headmen under the Germans) appointed by the German Colonial administration were much reduced when the category of sub-chief was reinstated by the British after World War I. The British acquired Tanganyika as a League of Nations mandated territory in 1919 as a result of the Treaty of Versailles. Four of the *Vansagila* in what had now become Iringa District remained as sub-chiefs, while the remaining majority became *majumbe* (Swahili: headmen; sing. *jumbe* - Hehe: sing *Munsagila mudodo;* pl *Vansagila vadodo*) retained under the authority of each of their respective sub-chiefs. Together with their lineages, they locally retained political hegemony, despite frequent tampering by the colonial authorities (Brown and Hutt 1935; Redmayne 1964).

[126] Pawaga, an area reputedly with at one time a heavier Gogo influence than now, retained a degree of administrative autonomy from the colonial system of Hehe *Vansagila* during the early German and British colonial periods and was only incorporated into the Hehe Native Authority by mutual agreement on 16th June, 1927, the year after Chief Sapi was appointed as paramount chief of the Hehe.

[127] From Walsh's (c2002) summary notes on the Kosisamba, 'The Kosisamba are a people who are reputed to have originated from the Sungwa and migrated from the highlands in the south to Pawaga' (Musso 1968, 46-47). Musso provides a short account of the group and they are also mentioned by Mnyampala (1954, 11), Rigby (1969, 15) and Shorter (1972, 205 & 304). However, considerable uncertainty remains as to their identity and origins. This group has now been fully absorbed by the much larger Hehe and Gogo groups and that the Kosisamba language is now commonly spoken only by those generations who were born, at the very least, before *Ujamaa* (*pers obs*).

[128] A *Jumbe*ate was the smallest administrative area in the British colonial administration, overseen by a *Jumbe*.

[129] Idodi sub-chiefdom was re-created in about 1929 when the Kalenga sub-chiefdom was split in two, the other sub-chiefdom created being that of Nzombe. However, Idodi had previously had a *Munsagila* in pre-colonial times that had been appointed by Mkwawa.

[130] 'Nyambarazi' is a term collected during fieldwork and refers to a particular cluster of hamlets and their environs along the Ruaha River in what was the *Jumbe*ate of Igawa. One previous incidence of this name being recorded has been found in a colonial report (dated 24/09/1935, TNA A/8/8) on the construction of an emergency landing ground in the area for Imperial Airways during the 1930s.

[131] Njongomeru is on the border between the Usangu and Uhehe – and during the British colonial period paid hut tax to the Sangu chiefdom.

These hamlets would have each have consisted of a cluster of homesteads set apart by fields and uncultivated areas in small communities inter-connected by footpaths through the bush - very different from the relatively densely packed post-*Ujamaa* villages of today. People lived in these homesteads and hamlets often as extended families and members of one or more closely inter-related clans - for example, the Kayela clan. People farmed subsistence crops of finger millet[132], maize[133] and peanuts and, in good years of rain, produced food surpluses that tided them over in some measure during drought years. While important, farming constituted only part of the rural economy during the first half of the twentieth century[134]. The villages to the west especially appear to have had a vibrant honey collecting economy trading with people from the highlands for grain (e.g. Kjekshsus, 1995, 39) and sundry items - for example, metal products[135]. Subsistence hunting and fishing were practised although hunting appears to have been limited to a much smaller number of specialist hunters across the hamlets. Many settlements, especially those further east towards Pawaga, had varying amounts of livestock. Cattle were kept where the disease challenge allowed, especially in the Makuluga and Igawa areas south of the river and Pawaga to the northeast. Elsewhere small stock were kept - for example, at Mdonya where the tsetse fly and is recounted as having been endemic for most of the twentieth century. In the Igawa area, livestock tended to be grazed away from the main Ruaha river on the higher range both north and, particularly, south of the river during the wet season and then brought down to graze pastures closer to the river during the dry season. The rangelands to the north of the Ruaha, immediately east of Ilolo, were important dry season grazing areas for herders in Pawaga.

There appears to have been a certain degree of fluidity in the movement of people between hamlets as well as to and from neighbouring areas. Villages in the southwest maintained ties with the Usangu - for example, people living in Njongomeru had livestock lodging arrangements with relatives and associates in Mawato and Ulanga villages in the Usangu. Mdonya received a number of immigrants from the Hehe highlands during the 1930s and 1940s - drawn by news of good harvests and hunting. Villages to the north-east had close relations with the more central villages of Pawaga, seeking refuge there on more than one occasion when famine struck.

Oral histories paint a general, if somewhat romanticised, picture of a lightly populated landscape in which people led lives of sufficiency, with years of plenty and others of vicissitude in which drought

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[132] There is some anecdotal evidence from oral accounts indicating that millet was grown in drier areas with maize cultivation occurring in areas of more predictable and higher rainfall or being irrigated from watercourses close by.

[133] As Redmayne (1964, 98) remarks, maize came to increasingly replace finger millet as the crop of choice during the mid to latter half of the twentieth century (see next footnote).

[134] In direct contrast to the post-colonial period when farmers in areas of central Tanzania, which were to become the grain-heartlands of the country, specialised in producing grain under the state's pan-territorial pricing and input subsidies (Mung'ongo' 1998 cited in Bryceson and Bank 2001, 728).

[135] It would appear that no iron making occurred in the area (due to a lack of ore – as opposed to much further west in Ukimbu where exploitable deposits were utilised).

was coped with through a range of strategies - reliance on food surpluses, trading livestock and wild products for grain and, ultimately, in successive years of drought, falling back on wild collected famine foods. In the few worst years of famine, people temporarily migrated to the *vynungu* of Pawaga and Idodi - areas fed by perennial watercourses in which, even during some of the driest seasons, grain could often be grown.

5.1.2 *Increasing epidemiological and ecological challenges*

The onset of the colonial era was marked by a number of remarkable events that contributed to the collapse of, or major changes in, the rural economy of the Idodi rangelands. Unfortunately, little oral information with regard to this period can now be gleaned for the Idodi and Pawaga areas[136].

It is clear (e.g. from Thompson 1881, 212) that towards the end of the nineteenth century, Uhehe[137] was rich in livestock and although not expressly mentioned[138], it is likely that the peoples inhabiting the Ruaha rangelands were largely agro-pastoralists[139]. In contrast, after the rinderpest pandemic of 1889-1891 the cattle economy was shattered and the country was described as being 'destroyed and deserted' by Adams in 1898[140] (cited in Kjekshsus 1995, 40). However, despite the undeniable disaster of the epidemic, the rinderpest may have, in some cases, paradoxically resulted in the opening up of new, previously stockless wildlife areas, that had been plagued by tsetse, as wildlife populations - for example, buffalo (*Syncerus caffer)* - were equally decimated by the rinderpest[141]. It

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[136] A relatively large amount of German material is available which Redmayne (1964) consulted for her thesis and which, due to language constraints, could not be effectively re-consulted. Further, for similar reasons, German colonial records archived in Potsdam that exist from the early 1890s up to the outbreak of the First World War in 1914, were also not consulted. Instead Redmayne's own diligent reading of these texts, where appropriate, has had to be relied upon.

[137] It would appear, despite Kjekshsus' inferences (1996, 40), and from a close reading of Thompson's account, that he did not pass through, nor 'visit', northern lowland Uhehe, having approached the highland plateau of the Hehe chiefdom directly from the Usungwa lowlands in the east in early to mid August 1878.

[138] Thompson (1881) records that the Hehe highlands were largely devoid of cultivation save for small plots. However, it might have been the case that there was little sign of other cultivation left during the middle of the dry season - the time of year he passed through the country, especially if his travels coincided with a period of drought, which he indeed twice implies (p. 213 & 216). Thompson arrived in Uhehe during what appears to have been a year of very poor harvests and yet, interestingly, there is no mention of people being adversely affected. This perhaps indicates that they were able to fall back for subsistence on the substantial herds of cattle that existed during this period.

[139] Redmayne (1964; 97) describes the ancestors of the Hehe in the first half of the 19th century as having had a mixed economy, cultivating and owning herds of sheep, cattle and goats.

[140] While this statement likely may not be uniformly applicable to the wider study area, it may have been most applicable to the eastern-most extent of Pawaga and the Ismani area even further east.

[141] In Tour Report No. 5, dated 01/07/1931, the then District Agricultural Officer makes reference to information he gathered that (part of) the Pawaga area had previously been stockless prior to the rinderpest pandemic of 1893 due to the presence of large numbers of buffalo and accompanying high levels of tsetse fly and endemic sleeping sickness. It was only after the end of the rinderpest and the demise of the buffalo

It is thought that by the onset of the British colonial period at the end of the first world war, the inhabitants of the Ruaha river valley had re-built their livestock herds but now came to increasingly face a different epidemiological challenge - that of the tsetse fly and trypanosomaisis. As has been well documented (e.g. Ford 1971; Kjekshsus 1995) throughout much of the twentieth century, substantial areas of the Tanganyikan mainland were invaded by expanding fronts of tsetse fly - due to the disruption of previous agro-ecological management regimes by the pandemics that swept through east Africa at the end of the nineteenth century and the beginning of the twentieth century. The Ruaha area lay in between the eastern and western[142] tsetse fly belts[143] and a substantial number of the Ruaha villages - previously stockless parts of Pawaga not withstanding - had to contend with an increasing level of tsetse exposure and associated higher morbidity levels to their livestock[144].

As already discussed, it is certain that people inhabiting the rangelands of the Ruaha have long had to cope with periods of more extreme environmental variability. However, it is also probable that the disruptive epidemiological events (both the rinderpest and smallpox pandemics) of the late nineteenth century may have substantially challenged people's capabilities to cope with extreme environmental events, especially when considered in the light of extended general socio-political unrest during this period up until the end of the First World War. In addition, throughout the twentieth century people had to contend with expanding tsetse fly belts and the associated sleeping sickness threat to livestock. A much incomplete, yet sufficiently illustrative, qualitative overview of ecological and epidemiological events during the twentieth century is given in Table 5.1. After the rinderpest pandemic of the early 1890s, people's cattle herds slowly recovered up until the 1930s (Redmayne, 1964; 98). For example, both colonial[145] and oral history sources describe the settlements of Igawa *Jumbeate* as being well stocked, with cattle herds of up to 1,000 head[146]. However from the 1950s onwards, people who lived in Igawa *Jumbeate* describe a period in which their herds declined drastically as they succumbed to sleeping sickness. By the late 1960s far fewer cattle were left. In contrast, in areas where the tsetse had not arrived, further to the east in Ilolo *Jumbeate*, even during the 1960s, up to 1 in 3 households are described as then still owning cattle (Petwa, *pers com*) supporting a vibrant ghee industry and cattle market. Overall, it would appear that from the end of the nineteenth century

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population - and thus an initial decrease in the incidence of tsetse fly and sleeping sickness - that people built up large herds of cattle by exchanging their goat herds for cattle in Ugogo to the north-east (TNA P4/1/III).

[142] These belts were largely characterised by two different tsetse fly species - *Glossina morsitans* in the western belt and *Glossina pallipides* in the eastern belt.

[143] The local colonial administration was at pains to note that the two fly belts should not be allowed to meet. In the late 1940s the administration instigated some experimental bush clearances in the Mlowa area (see Figure 5.1) to prevent this from happening. A report (ref 3/3/263) dated 20/07/1942 by the Department of Veterinary Science and Animal Husbandry documents the steady advance of the western fly belt some 50 kilometres eastwards during the period 1930 to1947 (TNA 70/1).

[144] The spread of the tsetse fly and related developments in colonial policy are discussed further in Chapter Six.

[145] For example, Tour Report No. 6, 1938 by P.A.P. Robertson (ADO cadet) (TNA P4/1/III).

[146] This number should be seen as indicative and not definitive.

Table 5.1: An overview of some significant events in the Idodi and Pawaga rangelands impacting on people's livelihoods, 1916-1974

Date	Event	Date	Event
1916-1919	Repeated rinderpest outbreaks[a]	1940	Western tsetse belt reaches Mloa, spreading eastwards[c].
1918	Poor harvest, widespread drought[a]	1943	Severe drought and shortage of food Cattle moved from Mloa due to sleeping sickness threat[c]
1919	Influenza pandemic[a]	1946	'Njaa ya Ihambwa' Severe drought and famine; outbreak of small pox
1922-1924	'Njaa ya malale'- famine 3 successive locust plagues, possible further rinderpest outbreak (reports of wildlife die-off)	1947	Western tsetse belt reaches Pawaga, spreading eastwards[c].
1923	Poor harvest	1948	Rains fail
1925	Poor rain; rinderpest brought in by Somali stock-traders[a]	1949	'Njaa ya Foloboto/Ikungu' Severe famine
1929	Moderate rainfall[a]	1950	Sufficient rain
1930	Large rainfall event - floods in Pawaga Western tsetse belt reaches Idodi, spreading eastwards[c].	1954	Large rainfall event - Ruaha river floods
1932	Locust plague	1955	Poor rain[b]; Locust plague
1933	'Njaa ya Panzize (?)' - famine Locust plague - despite good rain	1964	Locust plague
1934	Average rain but continued locust problem[a]	1965	Floods in Pawaga
1935	Bumper harvest in Pawaga despite locust persistence	1966	Floods in Pawaga
1936	Good rainfall[a]	1967	Moderate drought
1937	Average rainfall - rinderpest outbreak in Pawaga	1969	Heavy drought
1938	Sufficient rainfall and food	1972-1974	Prolonged drought

Sources: [a] From Iringa Provincial Book, Rhodes House, Oxford; [b] From File V1/8/III (TNA); [c] Report 3/3/263 of the Department of Veterinary and Animal Science Iringa (TNA 70/1); Other events compiled from collected oral histories - open to some margin of error with regard to the exact year they occurred.

onwards[147], people living in the Idodi rangelands had weathered a considerable amount of environmental adversity. By the beginning of the 1950s a number of settlements had been abandoned in the tsetse affected areas as ecological conditions forced movement to less challenging environments.

5.1.3 *Depopulation and eviction*

The major *foloboto* famine of 1949 forced many people in the Great Ruaha valley to leave their homes to take refuge in the more central, better watered, settlements of Idodi and Pawaga Sub-

[147] There is little, if any, earlier long-term record similar to that provided in Table 4.1 that would enable a longer-term qualitative comparison of environmental history of the area to be carried out. Indeed Redmayne (1964; 89) laments this paucity and the poor quantity and quality of historical sources for this earlier period.

chiefdoms, but thereafter many returned. In the years immediately preceding the famine, the colonial administration had begun to consider the expansion of the Rungwa Game Reserve, and its gazettement as a National Park[148]. The move was controversial as there was a debate in the colonial administration between those who, on the one hand, sought to expand the wildlife estate as well as simultaneously seek benefits resulting from the consolidation of the 'African population' through eviction and resettlement (also see Chapter Three), and those who, on the other hand, were alarmed at the continued expansion of the tsetse fly belts. The latter were apprehensive about the subsequent risks of the tsetse fly expanding into currently un-infested rangeland as result of increasing the area of wildlife estate.

Undoubtedly the *foloboto* famine of 1949 - together with the area's reputation for tax evasion and illicit wildlife hunting - influenced the district administration's support of protected area expansion. Indeed, the famine of 1949 was seen by the district administration as a provident excuse for beginning the eviction process of the estimated 800 families, 'if at all possible that year' (Letter 21/15/7, dated 03/08/1949; TNA G1/1, 7). The Rungwa Game Reserve was finally expanded with the passage of the Fauna Conservation Ordinance on 1st October 1951. Subsequently, G.W.Y. Hucks (the District Commissioner) wrote to the Sub-chief of Idodi (Hassan Mwakibumu[149]) in 1952 informing him that the *Jumbe*ates of Mdonya, Kipera, Igawa and Ifuguru were now designated as part of '*Shamba la bibi*' (Swahili: the Queen's (Elizabeth II's) estate) (Letter 25/08/1952; TNA G1/1, 507). No weapons (of any kind) were to be permitted. Actions by people against crop-raiding animals were not to be permitted. If people were to actively guard their crops from the depredations of wild animals, they would have to farm outwith the Reserve (i.e. in effect move) - 'with regret' (sic). Three years later, the Forestry Department declared a Forest Reserve in 1954 (Mapogoro FR: GN No. 230/6/8/54) adjacent to an area to which a substantial proportion of the evictees from the newly extended Rungwa Game Reserve were ultimately to settle. The Forest Reserve was only degazetted when the District and Native Authorities realised that such an arrangement was untenable.

All the settlements between the Great Ruaha and Kisigio Rivers lying in the new reserve were subsequently evicted in the following years. In 1955, Njongomeru appears to have been the first set of settlements along the Great Ruaha River valley to be evicted, as soon as the rains had abated and vehicular transport could make it through. An eyewitness describes people as being ordered to move and they were subsequently burnt out of their homes (Nganylika, *pers com*). Many of the former inhabitants of Njongomeru moved to the Usangu, whilst others moved south-eastwards to settlements in the Mkupule area, especially Kinyangesi and Mkupule. The Mdonya settlement was officially moved to Msembe in the following year, although a substantial number of people are reported as having moved to Waga (Kabande, *pers com*) and Tungamalenga (Mbunde, *pers com*). Overall, by

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[148] On 12th May 1949, G.G. Rushby, Senior Game Ranger in Mbeya proposed that Rungwa Game Reserve be expanded (adding the area to its east between the Msombe and Great Ruaha Rivers) and turned into a National Park.

[149] Sub-chief of Idodi, 1949-1953 (Redmayne, 1964; 410)

1960 all settlements along the north bank in the reserve had been abandoned, people either having moved to the settlements immediately south of the river, or with the persuasion of the native authority, to the more central villages of Idodi (for example, Kitisi) and Pawaga (for example, Kisanga). The Native Authority, notably through *Munsagila* (Sub-chief) Vangisada MwaMakendi[150], actively exhorted people living in the more peripheral hamlets of Idodi sub-chiefdom to move to more central villages where health and education services could be more easily provided. A similar trend occurred in Pawaga, where in 1964, people living in the outlying hamlets of Ilolo were compelled to move to Ilolo where a school and clinic were built. By the time the southern extension of the Rungwa Reserve was gazetted as the Ruaha National Park in 1964[151], all the area north of the Great Ruaha from the district boundary with Mbeya east to Ilolo had been entirely depopulated. Within 10 years, all the settlements immediately south of the Great Ruaha River would also be abandoned as people were evicted as part of the new Tanzanian state's villagisation programme.

5.2 The Ikwavila Valley

5.2.1 The populating of the Ikwavila valley

The descent of people from the hills into the Ikwavila valley (and beyond) is a theme that repeats itself continually in the twentieth century. Initially, farmers who seasonally came down to the lowland Ikwavila valley to farm the rich soils during the growing season, are reported as having returned to the highlands (notably the Wasa area to the east) after harvest to avoid the oppressive heat of the dry months. Not only was the Ikwavila valley a fertile area for agriculture, but it, together with rangelands further west, was also a rich hunting ground for hunters from the highlands[152] (at one point under the patronage of the *Muyinga* chiefs). Thus it would seem that, on the basis of oral history, the Ikwavila valley remained lightly populated (see Figure 5.3) until the 1950s when the depopulation of the Ruaha settlements began. However, during the late 1950s and early 1960s, the Ikwavila valley became subject to a relatively substantial in-migration from the highlands. The small hamlets or *lilungulu* (Hehe: settlement or small cluster of houses - after Brown and Hutt, 1935) spread out along the river margins in the valley (which can still be traced through the occurrence of mango trees that were often planted in and around the hamlets and homesteads) gradually grew and were eventually consolidated during *Ujamaa* into today's settlements as shown in Figure 5.4. Although today's villages in their present administrative status date back only as far as the *Ujamaa* period, they remain representative of the villages that existed before the resettlements of the mid 1970s. The arrival of people in the Ikwavila valley can thus be traced by reviewing the history of a sample of fields from each village in the valley.

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[150] Sub-chief of Idodi, 1953-1962 (Redmayne, 1964; 410); thereafter, the Native Authority was abolished and replaced with the current administrative system.

[151] The Ruaha National Park was created on 7th July 1964 through Special Notice 464 under the National Park Ordinance (CAP412) of 1959.

[152] There is some material from oral histories collected to suggest that the people living in the Wasa highlands – the '*Wasavila*' had long had a hunting relationship with the Kimbu to the northwest.

Figure 5.3: The Ikwavila valley during the late British colonial era - circa 1950

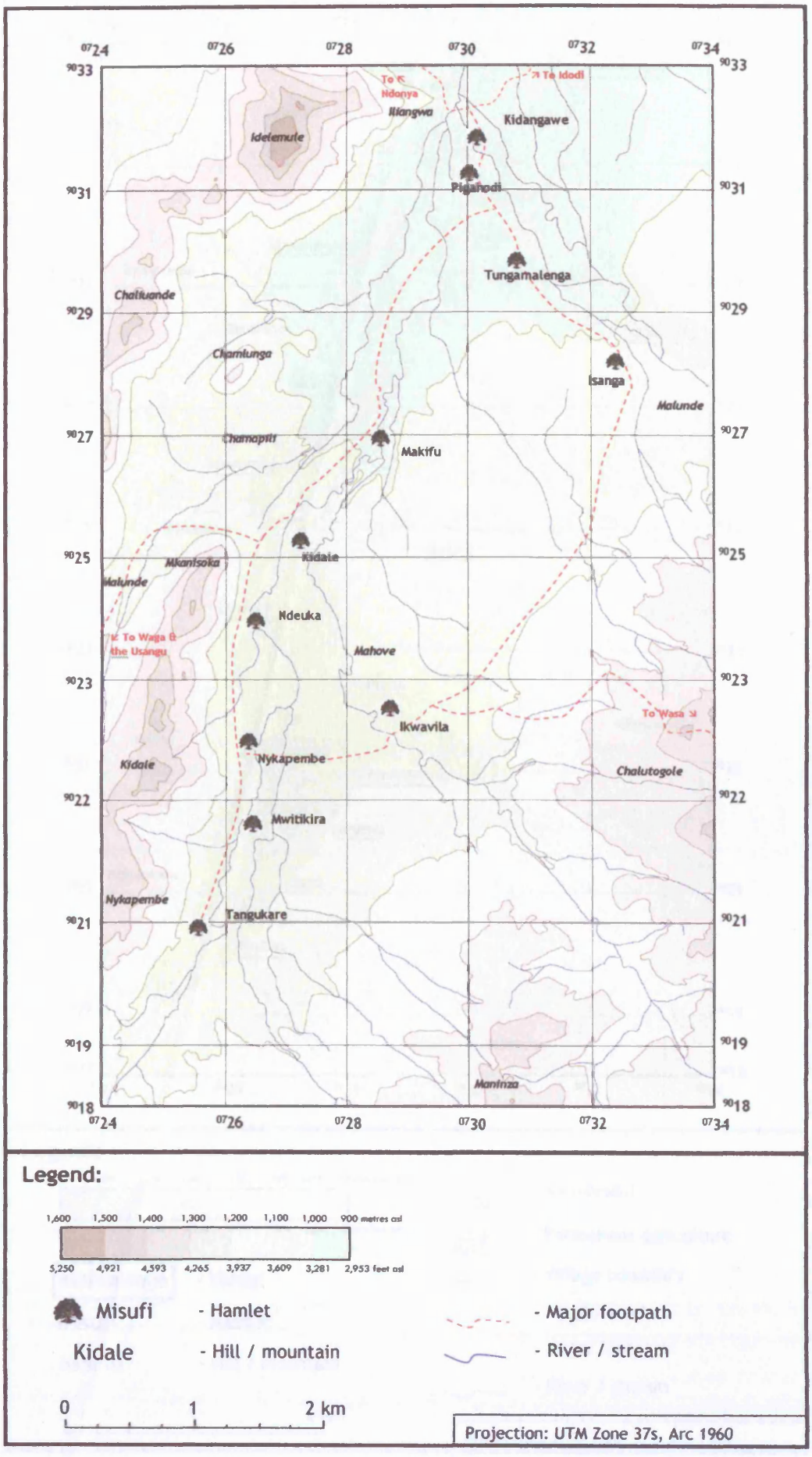


Figure 5.4: The Ikwavila valley today - circa 2003

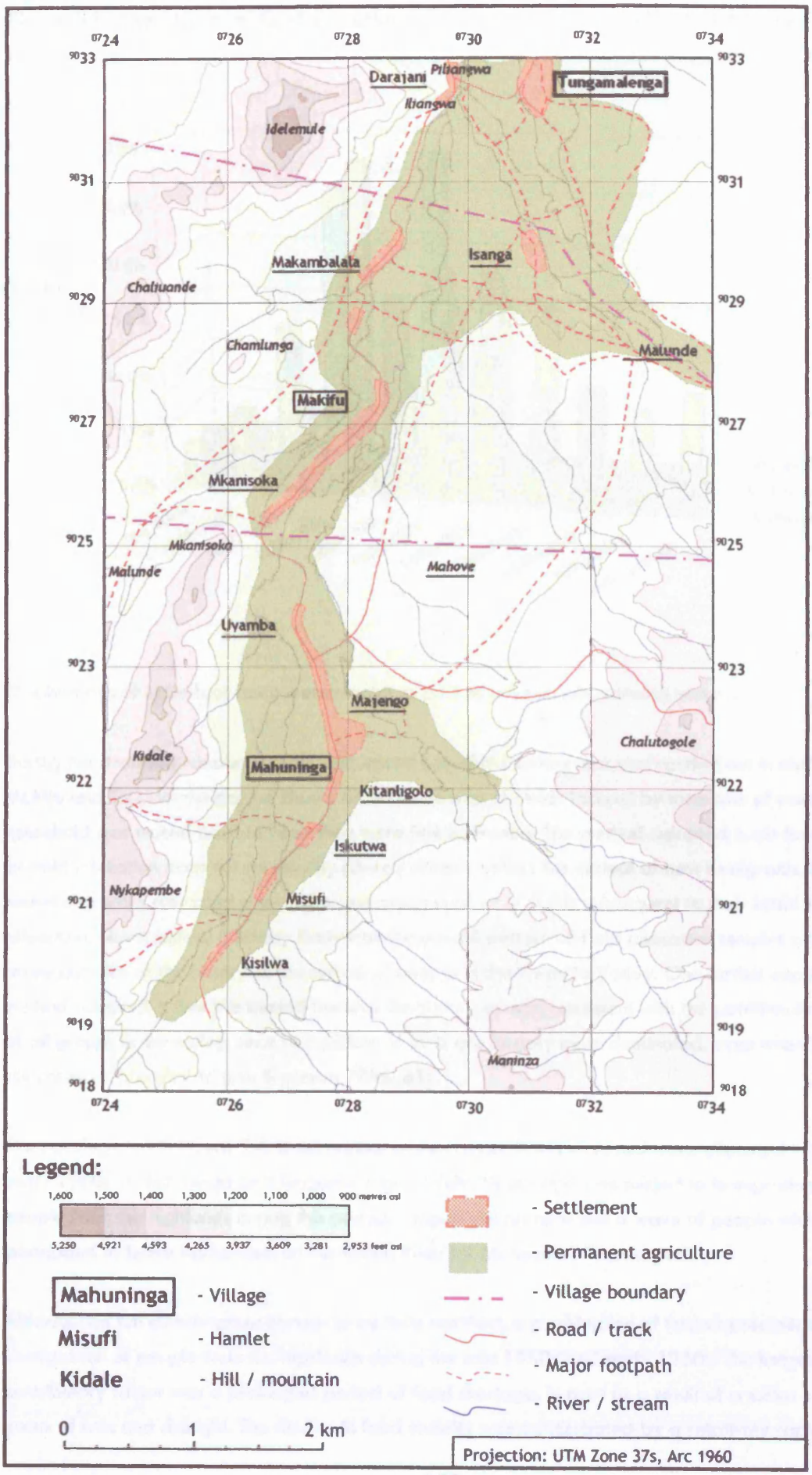
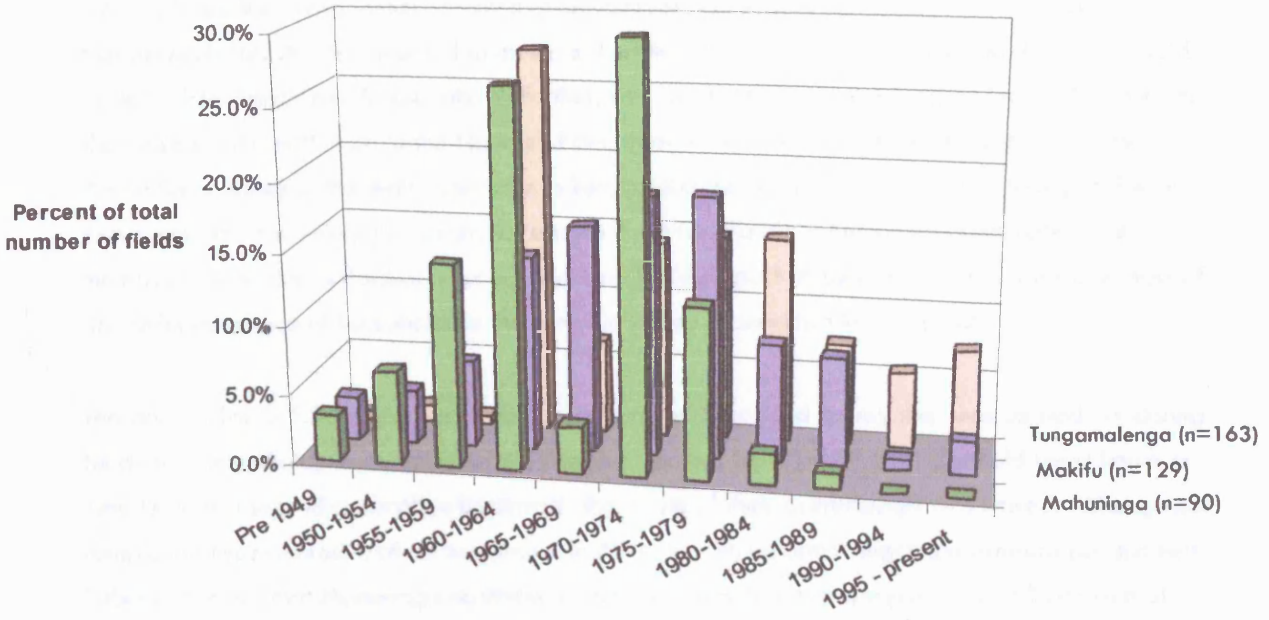


Figure 5.5: The history of field allocation in the Ikwavila valley in the last 50 years



[The histories of individual fields were traced as part of a household-farming survey]

During the stratified random sample multi-round household survey that was carried out in Mahuninga, Makifu and Tungamalenga, the history of the ownership of fields farmed by members of each household was traced back to when they were first cultivated. The method adopted is not foolproof, as field allocation does not necessarily always directly reflect the arrival of new immigrants. Some households were allocated a second or successive number of fields subsequent to their initial field allocation. Nevertheless, it is very likely that the overall pattern of field allocation remains a fair representation of the history of the arrival of people in the Ikwavila Valley. One further aspect to the method adopted is that it is biased towards the history of men, consistent with the patrilineal nature of all groups in the valley, since dispositions of land are largely male dominated, even when land is allocated to 'households' (see Bryceson 1995, 61).

Thus, as depicted in Figure 5.4, a substantial proportion of fields surveyed were allocated in the early 1960s in Mahuninga and Tungamalenga. While Mahuninga was subject to in-migration of people from the highlands during this period, Tungamalenga received a wave of people who were persuaded to leave the hamlets on the Ruaha River by *Munsagila* MwaMakendi.

Although the full circumstances remain to be fully clarified, a combination of factors precipitated the in-migration of people from the highlands during the late 1950s and early 1960s. The largest contributory factor was a prolonged period of food shortage, in part as a result of a series of poor years of rain and drought. The decline in food security was exacerbated by a relatively rapid

decline in livestock numbers in parts of the highlands - possibly as a result of East Coast Fever[153] from the late 1950s onwards. Cattle are remembered as being important to the maintenance of fertility of the long-cultivated soils of the Wasa highlands through a system of organic fertiliser production[154]. It is recounted how those people who lost their cattle, or were unable to access manure during this period, found their crop yields declining drastically. Many people, often the poorest, finding themselves in this situation, elected to move to the Ikwavila valley where it was said that good yields could be harvested from fertile soils[155]. Further, with the extension of the Rungwa Game Reserve and the subsequent creation of Ruaha National Park, there was a steady in-flow of people from the Ruaha River valley settlements especially to Tungamalenga during the 1960s. The steady trickle of immigrants into the valley (for example, see the data for Makifu in Figure 5.5) culminated in the massive, nation-wide, villagisation programme of 1974 as part of *Ujamaa*. An indicative overview of the different origins of households in the Ikwavila valley is provided in Table 5.2.

The data in Table 5.2 are derived from the multi-round household survey that was carried out during fieldwork. Households were asked where they had moved from, and if the household head (male or female) was a second generation immigrant, the origin of their patrilineage was traced. Although not completely representative of all households in the valley[156], historical migration patterns are evident. Table 5.2 shows that Mahuninga received a very high proportion of people - over 70 per cent of current households - from the Hehe highlands, while Tungamalenga was settled by a more eclectic range of people, not least those from the Ruaha River valley. Makifu in particular was later settled (during the late *Ujamaa* years and into the 1980s - see Figure 5.5) by a number of extended Bena and Wanji families attracted there by rice growing. Thus is reflected in Table 5.2 which shows that the village has the highest proportion of Bena and Wanji households in the valley.

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[153] Although East Coast Fever is endemic to the southern highlands, cattle began to be dipped less and less during the 1950s and 1960s as government cattle dipping services became more expensive. Livestock that had been regularly dipped, and once challenged, retained their immunity to the pathogen (*T. parva*), but immuno-deficient calves when exposed to the pathogen suffered from much higher morbidity levels without the protection of dipping.

[154] Pits were dug into which the dung of cattle (from their stalls) was deposited. Chopped grass was added to the manure and the fertiliser was then spread on the fields on an inter-annual rotational basis. However, there is some anecdotal evidence to suggest that this system of fertility maintenance was, in fact, a result of colonial agricultural extension, and that the practice was only adopted in the 1940s and 1950s. Nevertheless, cattle were an important livelihood component and hose people who did not own stock are likely to have been drawn to the fertile Ikwavila Valley.

[155] People also came from further afield - for example, Mufindi in the Hehe highlands to the southeast, an area in which there were a relatively large number of European farms. People also subsequently arrived from the Bena highlands to the southwest. From collecting life histories, it is likely that these people were frequently the poorest who were unable to make a living from the demanding soils in the highlands. A number of Bena who were labour migrants in the Sagara sisal plantations also heard of the Ikwavila valley's fertility and came to farm.

[156] Please see table note 'b' for Table 5.2.

Table 5.2: The origin of heads of households living in the Ikwavila valley

[(n=222 households; ~20% sample).]

	Mahuninga [a, b]	Makifu [a]	Tungamalenga [a]	Total
Locale	1.5%	0%	4.2%	2.1%
Hehe highlands	77.6%	34.4%	33.7%	45.3%
Hehe lowlands	3.0%	6.3%	14.7%	8.5%
Ex GCA/NP [c]	0%	4.7%	15.8%	7.7%
Bena highlands	11.9%	32.8%	17.9%	19.7%
Wanji [d]	0%	25.0%	0%	6.8%
Other	4.0%	9.4%	13.7%	14.8%

[a] These data exclude *Ilparakuyo* (and Barabaig) pastoralists who are treated separately in Chapter Six.

[b] Due to practical fieldwork difficulties only 2 out of the 5 sub-villages were sampled in Mahuninga - and therefore the figures are not entirely representative of the *status quo* - for example, there are a limited number of people who, formerly living in the Mkupule area, were subsequently evicted, and now live in Mahuninga, but are not represented in the data.

[c] Ex-GCA/NP - people who formerly lived in the Ruaha villages which now lie in what is now the Lunda Mkwambi Game Controlled Area and the Ruaha National Park.

[d] An area to the west of Ubena and south of the Usangu.

During the villagisation campaign of 1974, all the remaining settlements in the Mkupule and Lunda areas were evicted and people were moved to the designated villages[157] of Mahuninga, Makifu, Tungamalenga and Mapogoro in the Ikwavila valley as well as Idodi and Mlowa further to the east. A proportion of people did not move voluntarily and once evicted returned to their old hamlets as soon as they could - only to be subsequently re-evicted. One such settlement was that of Waga, where there was a protracted battle of wills between the government (both at village and higher administrative levels) and the people of Waga, who repeatedly returned to, and were evicted from, their homes after villagisation. Eventually, as the villagisation campaign waned, they were left in peace to live in Waga. The settlement exists today, and has now been incorporated into the village administrative structure of Mahuninga having its own *Mwenyekiti ya Kitongoji* (Swahili: sub-village chairman) who sits on the village council[158].

Today, the Ikwavila valley is inhabited by a diverse range of people, but with noticeable differences between settlements - see Table 5.2. Whereas a majority of people living in Mahuninga originate from the Hehe highlands - over 75 per cent of household heads or their parents were born in the Hehe highlands (mostly in the Kiponzelo division), people living in Tungamalenga come from a greater range of backgrounds - only 34 per cent claim origins in the Hehe highlands.

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[157] Some people living in the southern Mkupule villages chose to move to the nearby Usangu instead.

[158] A similar example exists in Pawaga for the settlement of what once was Ilolo and what is now officially called 'old Ilolo'.

Even within the relatively small confines of the Ikwavila valley, there have been substantial changes in the pattern and nature of human settlement and farming in the last 50 years (compare Figure 5.3 and Figure 5.4). Today, the valley is relatively heavily populated by a diverse range of people and most arable land has now been cleared for cultivation.

5.3 Livelihoods

Having established how many of the farmers came to live in the Idodi villages, and the Ikwavila Valley in particular, the rest of this chapter is taken up with a quantitative overview of Hehe/Bena livelihood strategies and practices. The analysis is based on data gathered from multi-round household surveys and information derived through interviews and conversations with farmers. The data are presented in the context of the increasing population density in the Ikwavila valley, the growing commoditisation of land, a long term fall in crop yields for many poorer farmers, and the development of a new class of wealthier rice farmers. Thus the data have been gathered with an emphasis on contrasting people's different land holding and agricultural production patterns in order to better understand overall livelihood trajectories in Idodi.

5.3.1 Households

The household level was chosen as the most appropriate level at which to collect data - refer to the methodology discussion in Chapter Two. Thus in practical terms, a household was taken as being a family sharing a cooking hearth and living in the same compound or close in proximity to each other. However, polygynous marriages are quite common in Idodi and usually arranged such that partner wives live in separate households, often locally distant from each other. In this case, the households of co-wives were treated as separate and not included in the survey, unless they independently appeared in the sampling protocol. Households were sampled in Mahuninga, Makifu and Tungamalenga villages, as these are the main villages of the Ikwavila valley.

Overall household size distribution as derived from the household survey is depicted in Figures 4.6 and 4.7. Figure 5.6 presents data based on the number of people per household. Mean household size for all households sampled was 4.2 people per household. Figure 5.7 presents the same data but analysed through conversion to 'Reference Adults' (RA)[159] index. A RA index is used, as it enables standardisation of household composition - in terms of the varying numbers of adults, children, infants and older people that often live together as a domestic unit. Mean household size for all households sampled was 3.63 reference adults.

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[159] Reference adults (RAs) or average adult mean equivalents (AAMEs) can be calculated for each household from household constitution data (Little 1980). Thus an adult male = 1 RA, adult female = 0.86 RA, children 0-5 = 0.52 RA, children 6-10 = 0.85 RA, male child 11-15 = =0.96 RA, female child 11-15 = 0.86 RA.

Figure 5.6: The distribution of household sizes in the Ikwavila valley as measured in total people per household (all adults and children).

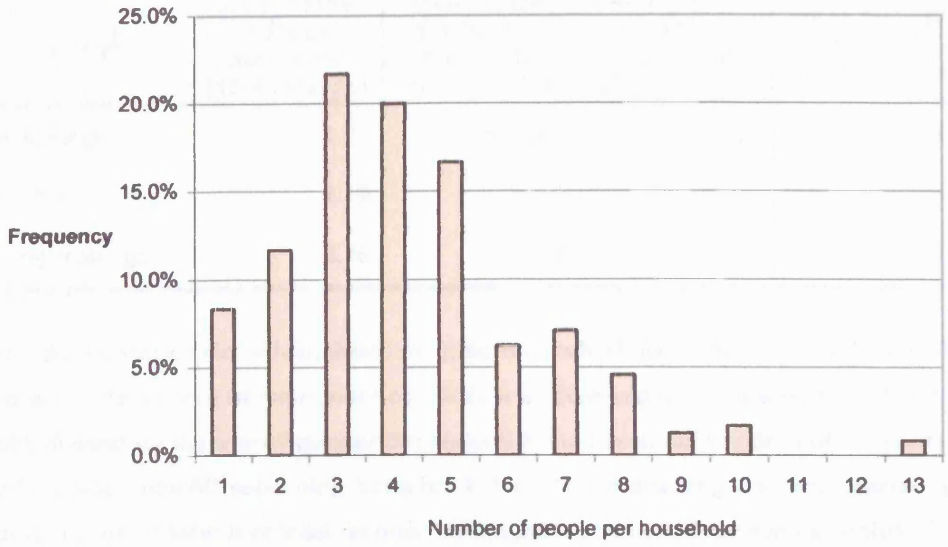
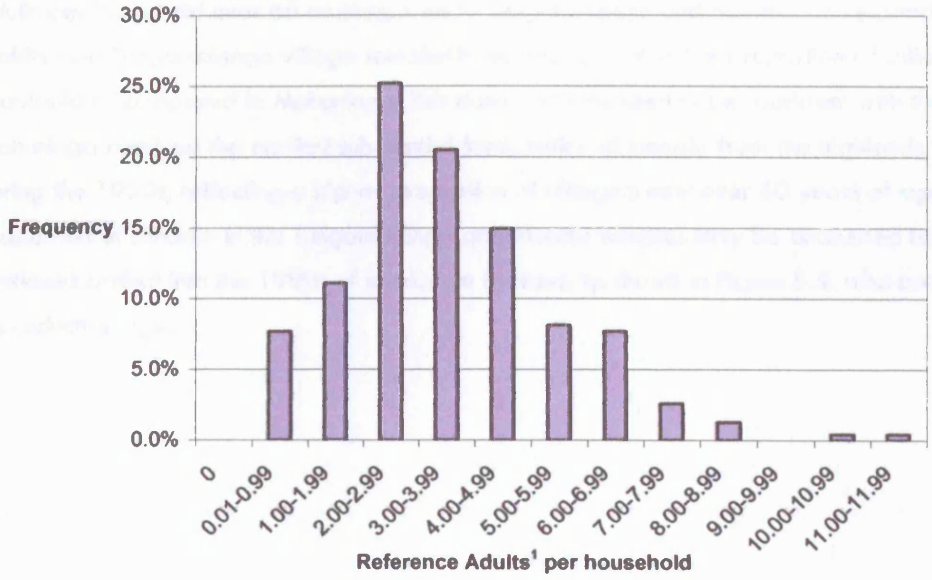


Figure 5.7: The distribution of household sizes in the Ikwavila valley as measured in Reference Adults



Note: The number of households surveyed =234 for Figures 4.6 & 4.7.

Table 5.3: The dependency ratio of households analysed by villages

Village	Mean number adults per household (15-64 yrs old)	Mean number of adults per household (>65 yrs old)	Mean number of children per household (0-14 yrs old)	Mean number of dependents per household	Mean dependency ratio
Mahuninga	1.72	0.58	1.22	1.81	1.05
Makifu	2.19	0.23	1.99	2.21	1.01
Tungamalenga	2.36	0.23	2.09	2.32	0.98

The dependency ratio of households sampled for each village is shown in Table 5.3. The dependency ratio is defined here as the number of adults in a household above the age of 16 but below 60 years old, divided by the overall number dependents in the household (children of 16 years or younger and adults older than 60 years old). Care has to be taken in asserting the demographic validity of this data, as the dataset is at least an order of magnitude too small for normal statistical demographic analysis (which was not an objective of the household survey). However, as an indicative measure, the mean dependency ratio of households sampled in each village was 1.05 in Mahuninga, 1.01 in Makifu and 0.98 for Tungamalenga. These similar dependency ratios mask possible underlying differences, as shown in Table 5.3. The Mahuninga sample has more than double the proportion of adults per household over 65 as compared to Tungamalenga and Makifu. Correspondingly, both the Makifu and Tungamalenga village samples have nearly double the proportion of children per household as compared to Mahuninga. This data could be seen to be consistent with the fact that Mahuninga received the earliest substantial immigration of people from the highlands (in particular) during the 1950s, reflecting a higher proportion of villagers now over 60 years of age. The higher proportion of children in the Tungamalenga and Makifu samples may be accounted for by the continued arrival into the 1990s of immigrant farmers, as shown in Figure 5.5, who are likely to be of reproductive age.

Table 5.4: The dependency ratio of households analysed by derived wealth index

Wealth index	Mean number adults per household (15-64 yrs old)	Mean number of adults per household (>65 yrs old)	Mean number of children per household (0-14 yrs old)	Mean number of dependents per household	Mean number of people per household	Mean Dependency Ratio
1 - high	1.88	0.22	1.22	1.44	3.33	0.76
2	1.88	0.29	1.31	1.60	3.48	0.85
3	2.17	0.38	2.34	2.72	4.89	1.25
4 - low	2.52	0.42	2.31	2.73	4.25	1.04

The household dependency data can also be analysed with regard to a derived wealth index generated from total household agricultural productivity (see Box 5.1), and as presented in Table 5.4. The data show that, in terms of the dependency ratio for households are evenly spaced across the wealth index, although there is an anomaly in that the third poorest group has the highest dependency ratio, for an unknown reason. Wealthier households - as defined by their derived wealth index - have a substantially lower dependency ratio than poorer households: i.e. the households in the two poorer derived wealth indexes have a substantially larger proportion of dependents than those in the two wealthier index categories. The sample size is not sufficiently large (in relation to usual demographic data sample sizes) to draw any further or statistical inferences from the data, except to observe that the wealthiest households have the smallest overall household size, and the poorest, the largest. However, the data are consistent with a tendency for poorer households to have a higher dependency ratio than wealthier households, and therefore proportionately less household labour available (in terms of able adults) for agricultural production.

Box 5.1: The methodology used to generate the derived wealth index for households

The derived wealth index was generated by calculating the total agricultural productivity in cash equivalents (see Figure 5.20) of each household expressed as the total agricultural productivity per reference adult per year for each household. The entire index dataset was then ranked and each household given an inter-quartile wealth derived index number between one (the wealthiest) and four (the poorest). The derived wealth index does not include income from other sources which may be significant for some households - such as wage labour, beer making, fishing, bee-keeping, small trading, and firewood collection. The poorest households may especially rely more on seasonal wage labour for their day to day livelihood security than on farming. That said, it would have been difficult to collect this diverse data systematically and evenly for the purposes of generating a consistent and replicable wealth index for all households. Agricultural production is, in the main, the most important form of livelihood strategy for the great majority of households, and is relatively easily measured in a consistent and replicable way. Thus agricultural production has been used as the basis for the derived wealth index employed in this chapter and modified accordingly for use in Chapter Six.

The household developmental cycle, although variable, may be characterised as follows: children and adult children[160] tend to live with their parents until such time as they marry. At this point, in the case of sons they begin their own household as soon as they are able, or if daughters, they move away to live with their husband's family. Thus parents whose children have married and moved away may live by themselves although they frequently will look after, for example, granddchildren or be supported by any adult children - especially daughters - who may have divorced or temporarily separated from their husbands or become widowed. Thus a household will frequently consist of two generations, and sometimes three, all contributing in one way or another to household production[161].

There is a noticeable amount of seasonal migration to and from the valley with up to 18 per cent[162] of households having one or more members who leave on seasonal labour or farm migration. Out of these seasonal migrants, young men especially may often leave the valley during the wet season to farm elsewhere, particularly rice, either in Idodi, Pawaga or, less commonly, Madibira[163]. During the dry season, household members may seek casual employment away from the valley - for example with the national park nearby, or further afield (even as far as the capital, Dar es Salaam). Labour or farm migration may often be undertaken in order to generate capital. This may be made over to family commitments, or, in the case of young men, may be saved for the future acquisition of farmland, a marriage bride wealth and associated marriage costs.

5.3.2 *Farming and the farming calendar:*

The farming calendar - refer to Table 5.5 - dominates the lives of people for the whole of the rainy season. From early November onwards, as thunderstorms break out across the highland massif to the southwest, farmers may begin clearing and burning off what dry vegetation has remained from the previous dry season. Many of the Ikwavila valley's soils have a high clay content and are therefore too hard to cultivate by hand or ox-plough before the rain. Prospective tenants and landlords often make agreements about field tenancies during the months immediately preceding the onset of the rains. Once the rain begins to fall - usually any time from mid December onwards - and has sufficiently penetrated the soils, people begin to till in earnest. The great majority of farmers till their fields by hand and it is only the richer farmers - farming both *nchi kavu* (Swahili: dryland) and *bonde*

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[160] However, adult sons may leave on a seasonal or longer basis on farm or wage migration – see the next paragraph in this section.

[161] Although the household is treated as the domestic unit in this analysis and that of Chapter 5, Creighton and Omari (1995, 3) draw attention to a number of assumptions that are inherent in household level analysis. The differing, and at times antagonistic, interests and priorities of men and women, young and old, within the domestic group, and the relations of exploitation that may exist between them, are often insufficiently taken into account. Creighton and Omari also question the discreteness of the household as often members may have interests beyond the household which influence their individual priorities and allocation of time and resources.

[162] This figure is derived from a household survey over a two year period undertaken during field-work (n=234).

[163] Madibira lies to the south across the hills and is part of the Usangu. There are a number of large rice irrigation schemes that support smallholders. However, access to these schemes depends on having the right contacts and capital.

Figure 5.8: A Wetland *'bonde'* rice fields with a *'vynungu'* banana patch in the distance

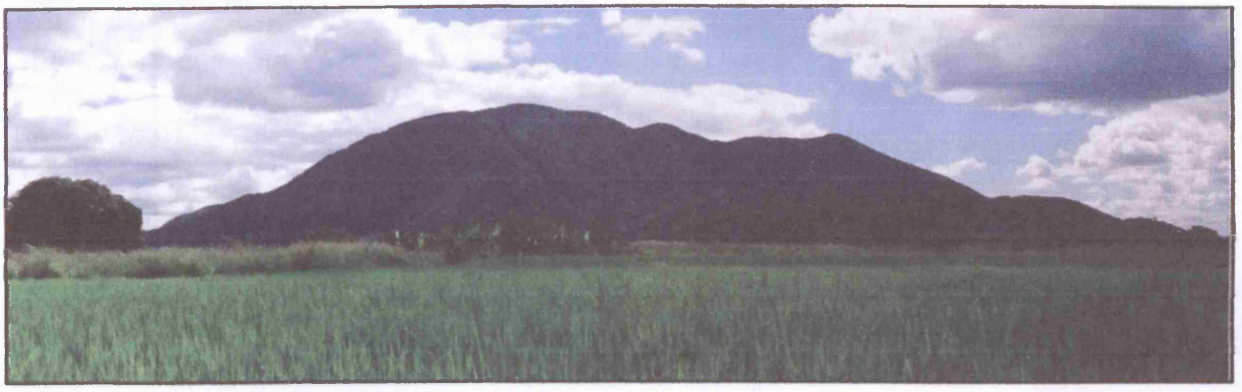
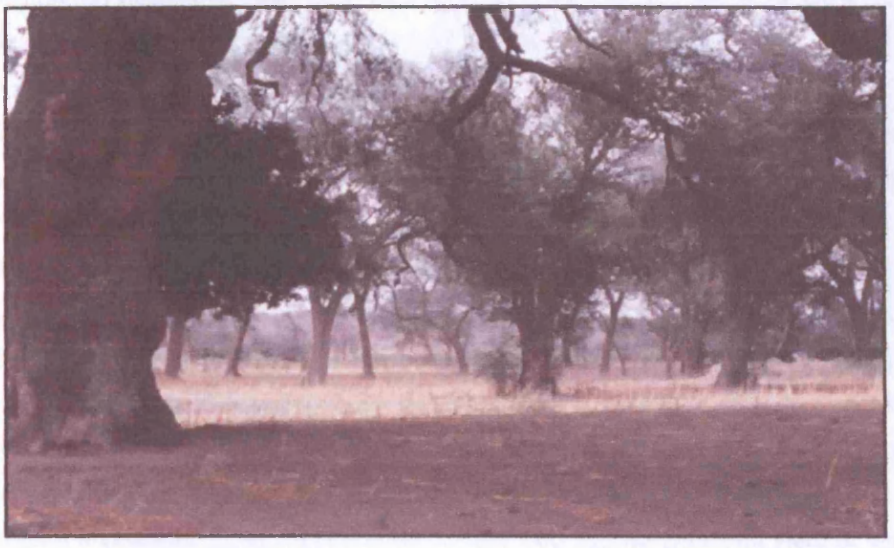


Figure 5.9: Harvested dryland *'nchi kavu'* fields with nitrogen fixing *Acacia albida* trees



The density of *Acacia albida* trees in this picture is higher than in other parts of the *Ikwavila* valley.

Table 5.5: The lowland Hehe farming calendar and Swahili equivalent.

Calendar month	Hehe equivalent	Associated meaning [a]	Swahili equivalent	Swahili [b] seasons
November	Minga	The rain is coming	11. Novemba[c]	↓
December	Mbando	The beginning of farming	12. Decemba	Masika/kifuku
January	↓	↓	1. Januari	↓
February	Kivalila	The suspension of rain	2. Februari	↓
March	Mudope	The final rains	3. Machi	↓
April	Ny' wanule	The clearing-up of the weather	4. Aprili	↓
May	Mpubutu	Very light rain/heavy dew which creates good track marks in the dust	5. Mei	Kiungazi
June	Mlagasa	The shedding of the trees' leaves	6. Juni	↓
July	Likoloiana	-	7. Julai	↓
August	Likololiny'lio	-	8. Augosti	↓
September	Mutanatwi / Mbosmakomalelo	The short rains (if they come)	9. Septemba	(Vuli)
October	Muchamia	-	10. Octoba	↓

[a] The Hehe calendar has locally increasingly fallen into disuse and the meaning of some of the terms have been locally forgotten. Instead the Swahili calendar is commonly used.

[b] Lexigraphically, the terms can be - and are - applied loosely to local seasonal weather conditions despite their greater relevance to coastal weather patterns.

[c] Both the name of each month derived from the English equivalent as well as the number (in Swahili) of each month are commonly used.

(Swahili: wet valley) fields that have access to, or can afford paying for, the services of ox-drawn ploughs. Mechanised cultivation, once much more common in the valley, does occur but is expensive and hired in only by a minority of the richest on *nchi kavu* fields.

When cultivating, many farmers are aware of a range of considerations and limitations impacting on the likely success of their agricultural endeavours. While it is important for a household to cultivate their fields as quickly as possible in order to make maximum use of the rainy season - once they are confident that the rains have finally arrived, this may not always be possible or necessarily desirable. Households, especially the poorer or smaller ones, may face conflicting demands on their labour - between earning income from casual labouring on other people's fields to ensure their food security, participating in social labour-sharing networks (Hehe: *Mgowe*[164]) and cultivating their own fields. A farmer may choose to delay the cultivation of a field in order to allow the herb and grass weed foliage, which springs to life with the new rain, time to grow sufficiently to be incorporated in the new tilth. This practice is believed to help improve soil fertility and thus the potential yield of the field. The different types of soil recognised by farmers and influencing the type of crops they plant in their fields are shown in Table 5.6.

[164] *Mgowe* are further discussed later on in this section.

Table 5.6: The different types of soil recognised by farmers in the Ikwavila valley.

Local soil type name[1]	Description
Vynyanzi	A very fine clay, which may be used for pottery
Kinongo	A less fine clay, widespread, especially in lower valley reaches
Kivako	A clay able to absorb high amounts of water
Lemunda	A loamier clay which is less able to tolerate water-logging
Kihaloga	A coarse sandy loam
Tifu-tifu	An alluvial and friable clay with small quartz particles visible
Kichanga	A sandy soil, with low amounts of clay present.

[1] The etymology of these terms is unclear and mixed: some appear to be derived from Swahili (e.g. 'Vynyanzi'; 'tifu-tifu'), others, it would appear, come from Hehe (e.g. Lemunda; Kihaloga).

The great majority of *nchi kavu* fields are tilled in a ridge-furrow (Swahili: pl. *matuta;* sing. *tuta*) system. It is also generally held by farmers that this makes weeding easier although it can make the soil-bed heavily prone to leaching and rain run off (*pers obs*). Flat bed (Swahili: *sese*) cultivation is locally much rarer although potential yields are identified by the minority of farmers adopting this method as being higher as there is less leeching of nutrients from the soil. Leaching of nutrients in the wet season, particularly in the already nutrient-limited *nchi kavu* soils, appears to be a critical factor in determining crop yields. Fertilisers, of any kind, out with rice cultivation in the *bonde* are not applied and never have been - with the exception of one known farmer[165]. Crops tend to be grown in mono-stands and as dictated by soil conditions. On the *nchi kavu*, maize is mostly planted on the clayier soils together with sunflower and sorghum. Legumes - groundnuts in particular - are planted on sandier soils as farmers say that the development of the groundnut pods is not restricted in sandy soils as it is by clay soils. This pattern of associating and planting particular crops with particular soil types is widely practised and little deviated from. On the *mabonde*, wetland rice is predominantly grown and supplied by a network of irrigation channels dug and maintained by farmers - increasingly organised into water-user associations. The position of a *bonde* field in the valley in relation to the irrigation network may heavily influence the amount of irrigation water a farmer can potentially secure[166] - some *bonde* fields receive a relatively secure supply of water during the growing season whereas others, especially those at the extremities of the network, may often not receive enough water in wet years or even any in drier years.

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[165] This issue is discussed further in Section 5.3.5.

[166] *Bonde* farmers may often be forced to continually revisit their fields at all hours, particularly during the latter part of the wet season, to ensure that their irrigation inlets have not been stopped and diverted by another neighbouring or upstream farmer: such practices often result in dispute. However, as recently found by a local ward tribunal, usage rights to an irrigation channel may normally reside with those people who constructed it, and other users are obliged, in theory, to seek the consent of these right holders before taking water.

Farmers recount that over the years, crop preferences have changed substantially. Previously, sorghum was grown more than maize and variably intercropped with castor oil plants[167] as a cash crop. Today, maize is ubiquitously grown, with sorghum and millet far less so. Castor oil is largely no longer cultivated in the valley. Ground-nuts, a crop that has a long history in the area, form a cash crop for many of the poorer households (maize also fulfils this role to an extent), with rice being a popular and potentially highly profitable investment for those households able to afford its cultivation costs - labour, land, and agricultural inputs.

With most of the crops planted in January[168], farmers turn their attention to successive rounds of weeding (usually twice for each maize crop) which continue throughout February and much of March, without which the crops would be almost entirely weed-smothered. The availability of labour is crucial, especially for poorer households' ability to weed their fields sufficiently. This is particularly so as a substantial amount of poorer household's labour may be employed in earning a low wage income from working on others' fields, and as a result some fields lie un-weeded. Mgowe may often take place during field preparation, crop planting and weeding. Mgowe are particularly practised in Mahuninga (in up to 65 per cent of households), although they occur much less frequently in Tungamalenga and Makifu[169]. Today, a Mgowe takes the form of one or more households (or members therefrom) arranging a day upon which people associated with the Mgowe will meet to carry out one or more agricultural tasks. Once the work is complete for the day, the participating members return to the host's house where beer is usually provided. *Umoja*[170] (Swahili: together/united) work-shares, a relict of the *Ujamaa* years, are also practised in Mahuninga, and consist of farmers arranging to come together and work as a group to complete each others' field tasks, so that each participant benefits in turn from the shared work of the group.

By the end of March, the first maize will show signs of ripening and, instead of being immediately harvested the ripening crop is usually left in the field to dry out for several weeks. New 'compound'

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[167] Castor cultivation was promoted as a cash crop by the colonial administration and subsequently by the new government in the early independence years.

[168] The crop cycle described here mostly refers to maize since it is this crop which is most widely grown. For those households farming rice, this crop is planted in two stages – seedlings are initially raised in a nursery and subsequently transplanted into paddy fields. Rice tends to be harvested later than maize due to its longer growing season.

[169] This is possibly due to the fact that many people in Mahuninga have wider kin and social networks locally, since the majority of people originate from particular localities in the highlands – especially villages in Kiponzelo – for example, Wasa.

[170] During the *Ujamaa* period people were compelled to work the fields of the village cooperative two or more days a week. The resulting crops were then sold at market and the revenues were supposedly to be returned to the members of the village cooperative – although many farmers remember that this tended to be the exception rather than the case. Ultimately, with the decline of the *Ujamaa* years and as a result of irregularities in the village cooperatives, most farmers increasingly refused to farm the cooperative fields.

seed varieties[171] recently introduced have a much shorter growing season than older maize stocks of about 60-70 days, having been introduced by an agricultural extension project to help promote greater levels of food security. However, older, noticeably larger and longer growing season (90 days) maize varieties are still planted by many farmers, as it is said that, while these varieties are slower growing, they produce a good yield in wet years, and the ripening maize can be left in the field to dry without rotting (as the maize kernel inverts itself). Also, once harvested the maize is less prone to insect damage. By the end of May, nearly all the maize has been harvested and the rice in the *mabonde* too.

As the rains end, the landscape begins to dry out very rapidly. From this point onwards, many of the harvested fields are rented out to be grazed by the herds of resident *Ilparakuyo* agro-pastoralists and, in parts of the valley, by Barabaig pastoralists. Grass fires are often set[172], or break out, at this time of year hastening the transformation of the landscape into a parched dryland.

5.3.3 *Farm holdings*

Most households practice smallholder subsistence farming on land that is locally recognised as being owned by people through a form of customary freehold or *lungulu* (Swahili: land sanctioned by custom; refer to Chapter Four and also Odgaard [2002, 77]). From the early 1940s onwards, as increasing numbers of people began to arrive in the Ikwavila valley from the highlands, land was allocated to these people by resident and ruling lineages - for example, the Chambulilas in Mahuninga. In Mahuninga, people who were able to claim relatedness to families already resident in the area were able to relatively easily secure acceptance and land for themselves. In contrast, it is reported that others, who could not claim ties with known families either locally or in the highlands[173], were treated with a degree of wariness and had to negotiate their access to land. Thus people arriving who were able to claim closer ties secured land free or for a small gift, but it was prudent and necessary for those who could not claim ties, to make more generous gifts to the ruling and influential lineages[174] in order to gain acceptance and access to the land they sought. However, with the depopulation of the Ruaha River valley culminating in the villagisation campaign, the villages in the Ikwavila valley were forced to quickly accept and allocate the arriving evictees land so that previous systems of patronage appear to have been overtaken - to an extent - by government (and

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[171] These varieties – such as Kilima, Cargill '41','42', or 'Limited' are viewed by some farmers as being suitable only for cash crop purposes as they claim that the maize varieties have a tendency to rot if left in the field to dry and if brought in for storage on the cob, they are particularly locally vulnerable to insect borer pests. Thus this maize may often be sold shortly after harvest.

[172] The use of fire and its role in land use conflict is discussed in Chapter Seven.

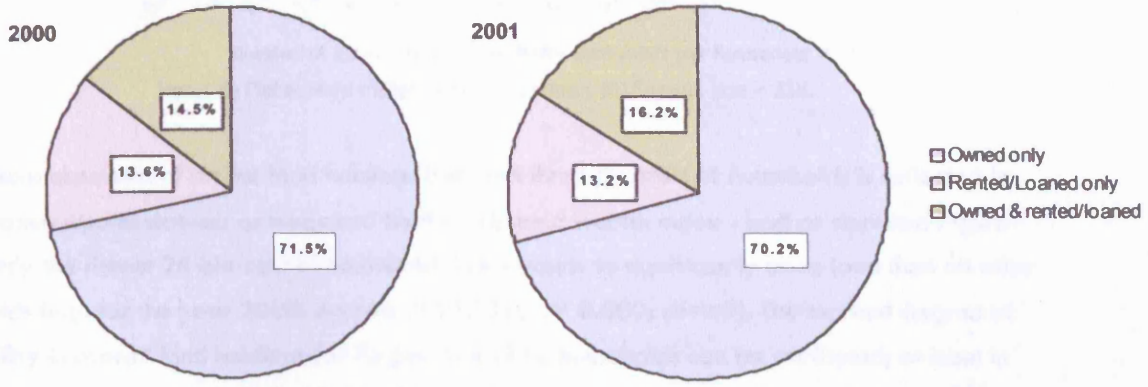
[173] There were, and continue to be, close social and kin networks between the Kiponzelo/Wasa area of the highlands and the lowland Ikwavila valley.

[174] During the colonial period, the '*karani*' was responsible for allocating land in the villages under his control, and, apparently, rarely the *jumbe*. A *karani* would be appointed by a *munsagila mudodo* (*jumbe*) although it would appear that the *jumbe*'s choice, at least in the case of Mahuninga, reflected local lineal hegemony.

Party[175]) intervention. With the growing and intensifying network of fields, land boundaries[176], initially unimportant and vague, have become very important and are not infrequently the source of dispute between neighbouring farmers.

Today, about 70 per cent of households surveyed in the Ikwavila Valley own all the land which they use, slightly over 10 per cent also farm additional land rented by them from landlords, and just under 15 per cent of households are landless, compelled to rent any fields they farm from other villagers - as shown in Figure 5.10. With rare exception, nearly all land rented is owned by individuals in the same village, although some of the larger land owners may not reside in the valley (despite being native to it) as they pursue business interests away from the valley.

Figure 5.10: Overall land tenure patterns in the Ikwavila valley

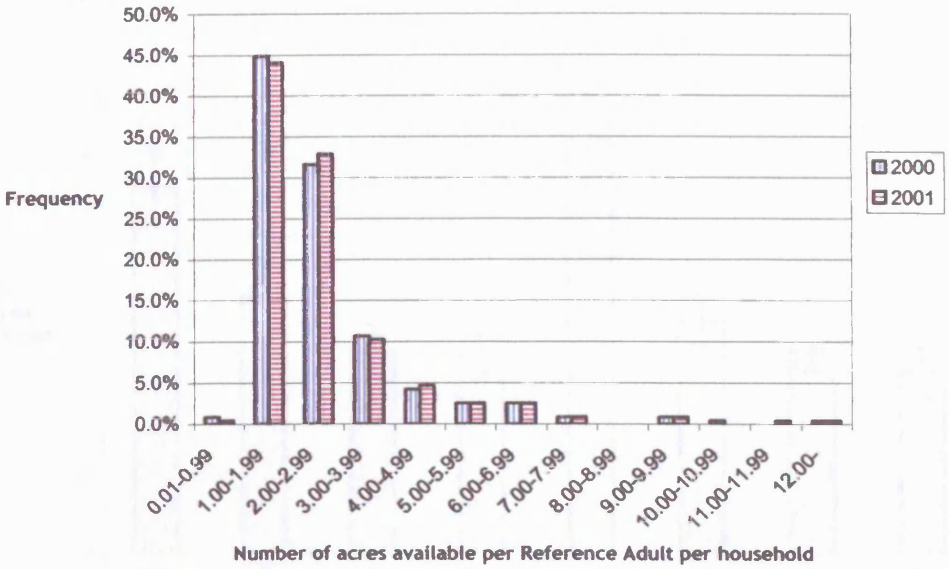


Most households - nearly 75 per cent of those surveyed in Figure 5.11 - have access to 1-3 acres of land per reference adult with a small minority, no more than about 10 per cent, having access to much larger areas of land of 5 or more acres of land per reference adult. These land-rich households often belong to lineages that are among the longest established in the valley, although a number of larger rice farmers (not represented by those in the household survey) have also acquired substantial land holdings of 20 or more acres.

[175] As discussed in Chapter Two, during this period, the government administration was highly politicised, with little, if any distinction drawn between the ruling Party and local and village government administration.

[176] Land boundary markers are often trees, tree stumps, seemingly insignificant sticks and larger stones.

Figure 5.11: The pattern of household access to all arable land in the Ikwavila valley

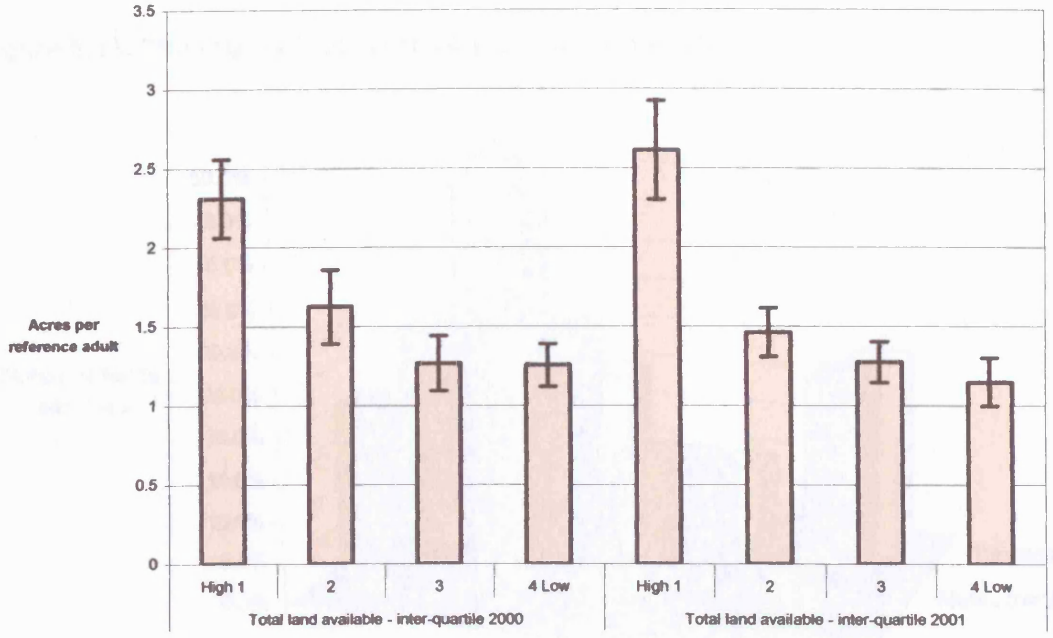


Note: (i) Fields were either owned or rented; (ii) Sample size = 234.

The pattern observed of similar land holdings between three quarters of households is reflected in their relative wealth statuses as measured by their derived wealth index - and as depicted Figure 5.12. Only the richest 25 per cent of households have access to significantly more land than all other households (e.g. for the year 2000: Annova F=21.770; p= 0.000; df=49). The marked degree of equitability in overall land holdings for 75 per cent of all households can be attributed, at least in large part, to the *Ujamaa* period of the 1970s, when it was government policy to allocate 'three acre' plots to every household to farm. The long established, larger land owning lineages in the valley were able to retain much of their land holding during this period, as they were the lineages who held government office or were locally influential. Moreover, during this period, there was sufficient land available for allocation which largely obviated any conflict of interest in this regard.

Most land, where families were male-headed, was implicitly allocated to men, in line with the norms of a patrilineal society. In this regard, women appear to have had secondary rights at the discretion of their husbands who might or might not give over land to them, if it were available, in a usufruct context. Otherwise, women would share-cultivate their husband's land. Although not a focus of field research, some women today may be recognised, in their own right, as owning land, which can be passed on to their offspring or other kin. Women who own land do so when, for example, female-headed households have been allocated land by the village government - especially during the villagisation period, or when their husbands have died and they have inherited, at least with a usufruct right over, usually part or sometimes all, of their late husband's land. However, for the most part, reflecting a heavily patrilineal society, most land continues to be owned by men and is largely inherited by them with women largely only having transitory usufruct rights in any land that they may inherit or be gifted.

Figure 5.12: The equitability of overall land holding per household by relative inferred wealth status



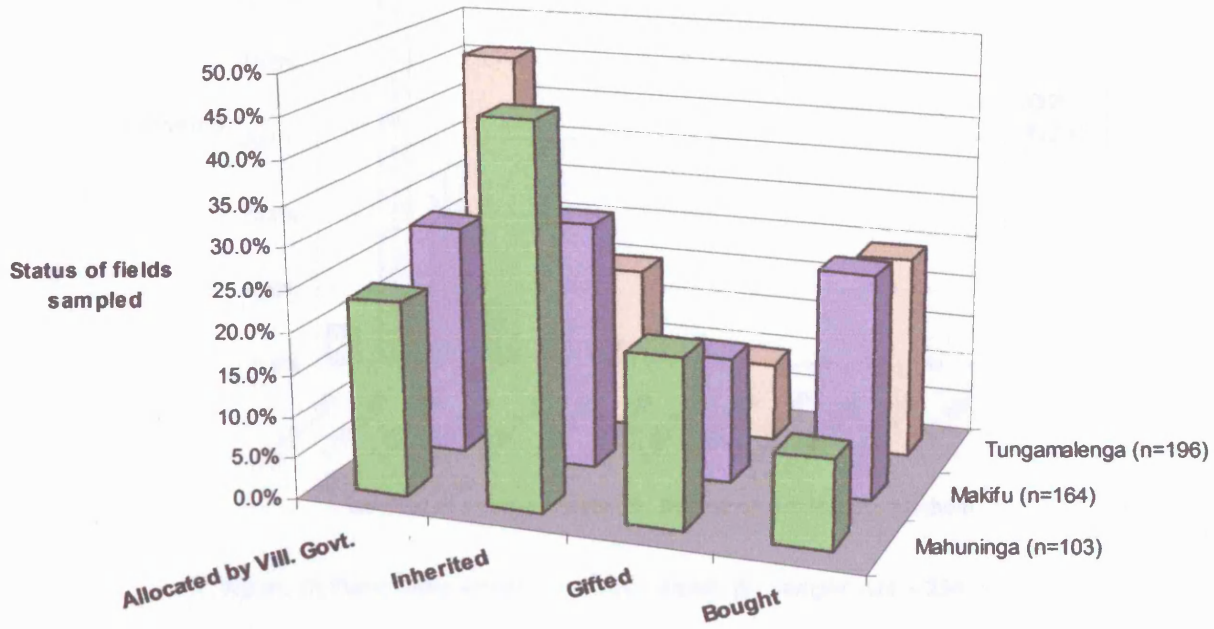
As the population density has grown, especially in the last 20 years, free previously uncultivated and arable land has become less easily available. In large measure this has resulted in a new, informal and growing market in land (which began in the late 1970s). The variation between villages in how each household has come to be in possession of their land - as an indicator of the trend of an emerging market in land - is shown in Figure 5.13. Although the data must be treated with a little circumspection, some trends are nevertheless evident. Overall, Mahuninga has the oldest set of fields, and thus the highest number that have been inherited from one generation to the next. Because the village in large part is far less eclectic in origin than the others (see Table 5.2), and the amount of *bonde* land in the village area the least extensive, land has generally tended to be inherited within families, instead of being sold, or even re-allocated by the village government[177]. Moreover, it is said that in the late 1950s and early 1960s, the established lineages in Mahuninga allocated arriving people large tracts of virgin land on the understanding that these areas would be sub-divided and given to their kin as they arrived from the highlands. In contrast to Mahuninga, land has continued to be allocated to people in Tungamalenga, as the population grows with a small trickle of immigrants continuing to arrive, and as the village possesses a large extent of unallocated arable land to the north of the main village settlement. The market in land has grown particularly in Tungamalenga and Makifu as these two villages have continued to receive immigrants in contradistinction to Mahuninga[178]. The land market in Makifu and Tungamalenga has been stimulated, at least in part, by a large extent of high value *bonde* land - relative to that in Mahuninga. The

[177] Re-allocation of land is infrequent, but does occur.

[178] Although this is statement needs to be qualified by the reality of continual seasonal and incidental movement between the Wasa highlands and Mahuninga, especially within extended families and kin networks.

current pattern of land ownership in Makifu is indicative of the likely future trend in land transfers, as less un-allocated land remains available, and as increasing numbers of fields are inherited and

Figure 5.13: The origin of land currently owned by households

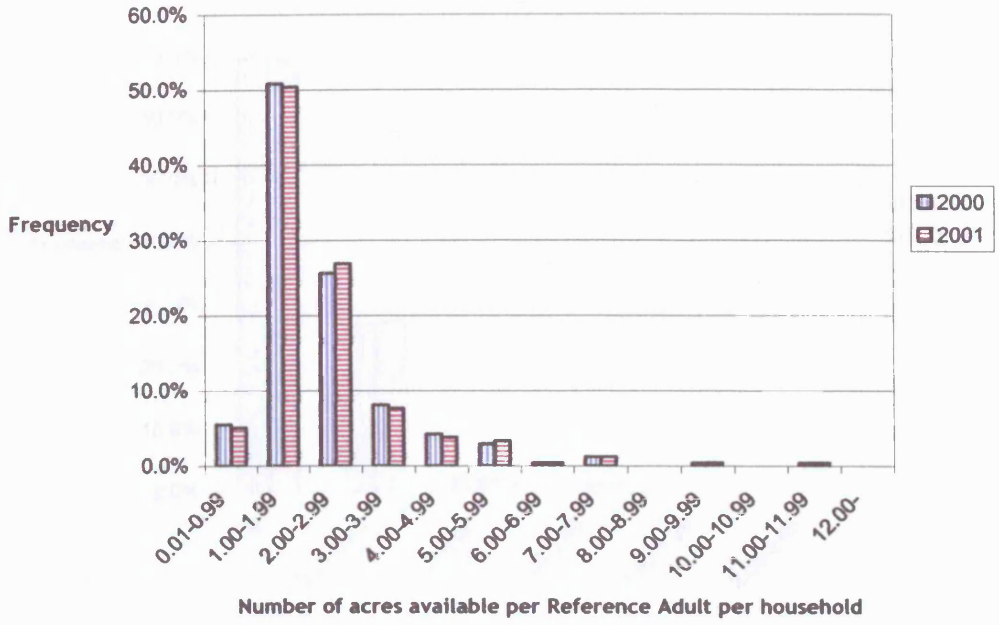


Note: (i) Land rented is included but categorised according to how each owner acquired the land. (ii) Land 'gifted' has been included as a category in order to represent land which is, for example, given by a living parent to a daughter, son or other relative to cultivate but which cannot yet be said to have been definitely inherited - not least due to the fact (and arising implications) that the inheritance ceremony - which proceeds the death and funeral of a person - has not been carried out. (iii) Sample size = 234.

perhaps, most noticeably sold. Although difficult to systematically investigate, there is circumstantial and anecdotal evidence to suggest that the price of land has increased markedly in recent years, especially *bonde* land, reflecting the differential in the profitability of farming *bonde* (wetland) as opposed to *nchi kavu* (dryland) land.

Access to different types of land varies considerably between households, especially those falling into different derived wealth index categories. All households have access - and most long-term tenure - to lower value and less productive dryland fields with over 75 per cent of households holding acreages of between 1-3 acres per reference adult - see Figure 5.14. The relatively equitable pattern of overall access to land is reflected in dryland tenure (the largest land type category in terms of surface area), with only about 20 per cent of households holding land areas larger than 3 acres per reference adult. The richer half of households possess substantially more dryland than the two poorer categories - see Figure 5.15.

Figure 5.14: The pattern of household access to lower value dryland suitable for wet-season cultivation only (*'nchi kavu'*) in the Ikwavila valley



Notes: (i) Fields were either owned or rented; (ii) Sample size = 234.

Figure 5.15: The average size of dryland holding for households categorised by relative (inferred) wealth status.

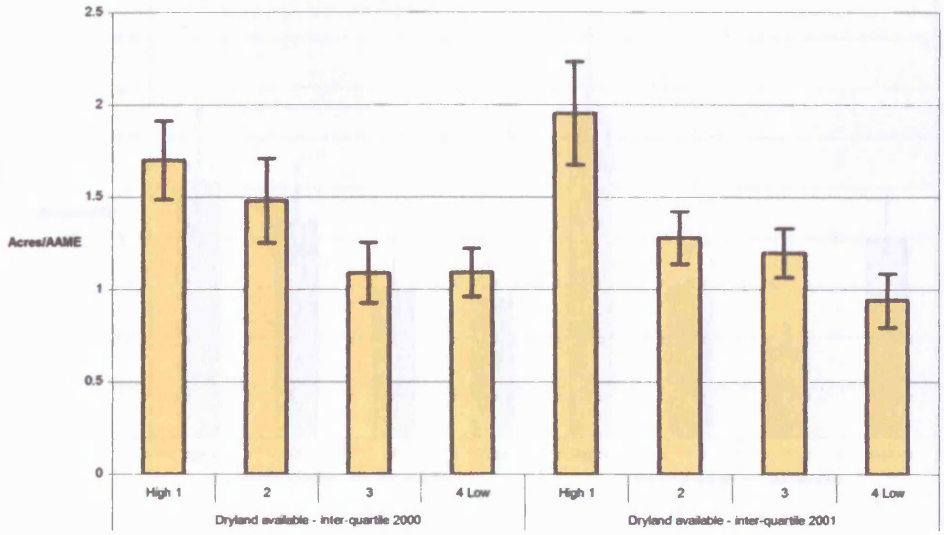
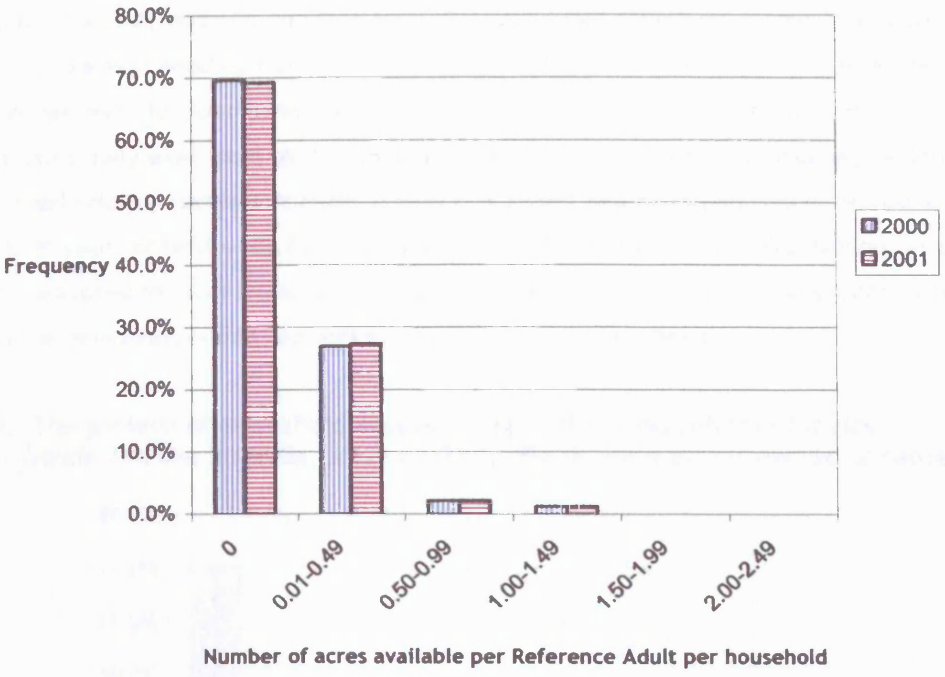
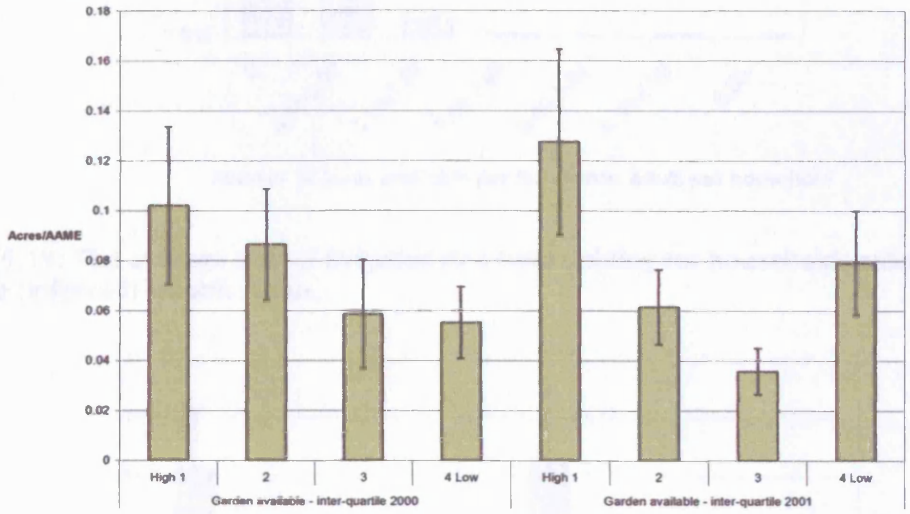


Figure 5.16: The pattern of household access to high value garden land suitable for dry-season cultivation (*'bustani' / 'vynungu'*) in the Ikwavila valley.



Notes: (i) Fields were either owned or rented; (ii) Sample size = 234.

Figure 5.17: The average size of riverine garden holding for households categorised by relative (inferred) wealth status.



The pattern of access to *vynungu* (riverine gardens), is different, with the great majority - nearly 70 per cent - of households, entirely lacking access to this land category and with more than 25 per cent of the remaining households holding up to 0.5 acres per reference adult - see Figure 5.16. Riverine gardens are in short supply as the number of perennial watercourses is limited and suitable sites must be found which have not yet been cultivated by others or by rice farmers. While ownership of these gardens is limited to a minority of households, it is not strongly determined by relative wealth status - refer to Figure 5.17. To some extent this is because gardens have often been allocated to some households in order to help facilitate greater levels of food security especially for the poor, since

these small gardens may remain productive throughout much of the dry season. During dry years, local government leaders and the local Member of Parliament have exhorted people to farm riverine gardens as a food security measure and they have demanded that village governments allocate plots to those people most needing them. In as much as food aid is a source of patronage, in recent years the continued need for food handouts has increasingly been seen as an embarrassment nationally, as was irately expressed by the local Member of Parliament at public meetings in Idodi (*pers obs*). Ironically despite statements to the contrary, food aid was arranged and delivered in Idodi during both years of field work. Finally, in addition to their food-security role, riverine gardens are often also cultivated for cash crops - such as tomatoes, bananas, sugar cane and greens - which may be sold in local markets or into regional and national commodity chains.

Figure 5.18: The pattern of household access to high value land suitable for rice cultivation (*'bonde'*) in the Ikwavila valley (n=234). Fields were either owned or rented.

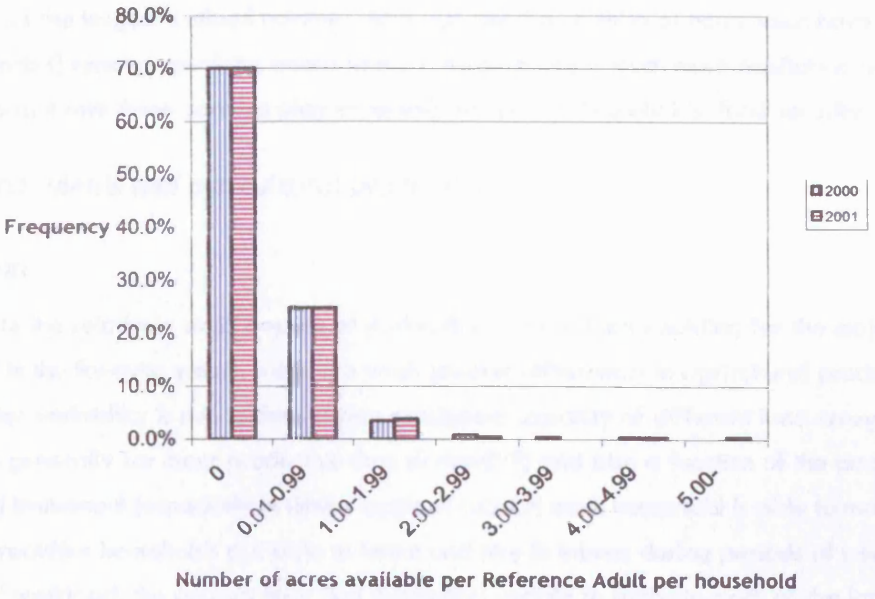
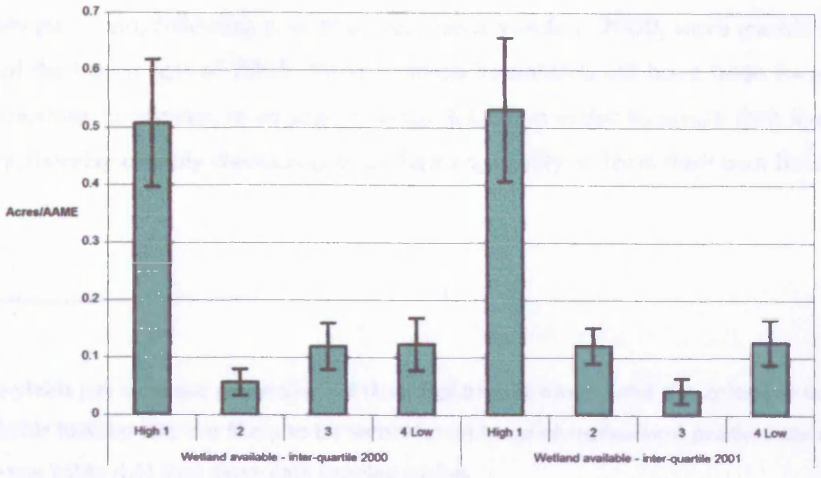


Figure 5.19: The average size of irrigated rice field holding for households categorised by relative (inferred) wealth status.



Access to the *bonde* (wetlands) suitable for rice growing is substantially different when compared with all other land categories. As with garden land, the majority of households - 70 per cent - do not hold any *bonde* land, with a quarter of households holding up to one acre - see Figure 5.18. However, the distribution of access to land across households of different wealth categories is such that wealthiest households have by far the largest holdings of *bonde* land - on average about five times as much as other wealth categories - refer to Figure 5.19. Although the data are not independent of each other[179], it is generally, although not exclusively the case that the wealthiest households in the valley are those that farm larger areas of rice - especially a number of farmers who have *bonde* holdings in excess of 20 acres.

Thus, with the exception of the wealthiest 25 per cent of households, overall household holdings in land appear to be relatively equitable. While access to dryland fields is ubiquitous, access to wetland *bonde* is lacking for the majority of households, with the wealthiest 25 per cent of households having by far the largest wetland holdings. Although less than a third of households have access to riverine (market) *vynungu* gardens, access to this land category is much more equitable, not least due to the important role these gardens play especially for poorer households' food security.

5.3.4 *Cultivation, yields and agricultural productivity*

Cultivation

In contrast to the relatively small degree of variability in overall land holding for the majority of households in the Ikwavila valley, there are much greater differences in agricultural productivity. This much greater variability is due to the varying productive capacity of different land categories held (wetland is generally far more productive than dryland[180]) and also a function of the amount of agricultural investment (especially in timely inputs of labour) each household is able to make. Whereas wealthier households are able to invest and hire in labour during periods of peak agricultural workload, the poorest may find themselves unable to cultivate much of the land available to them, let alone invest in other subsequently necessary time-dependent agricultural interventions - see Figure 5.20. Thus most households cultivate about 80 per cent of the land they have access to, except the poorest 25 percent which are frequently unable to do so. Many of these latter households are extremely poor and, following a year of very poor yields in 2000, were unable to take advantage of the better rain of 2001. Many of these households will have been forced, as a result of their long-exhausted granaries, to engage in wage labour in order to secure their livelihoods and food security, thereby directly detracting from their capability to farm their own fields.

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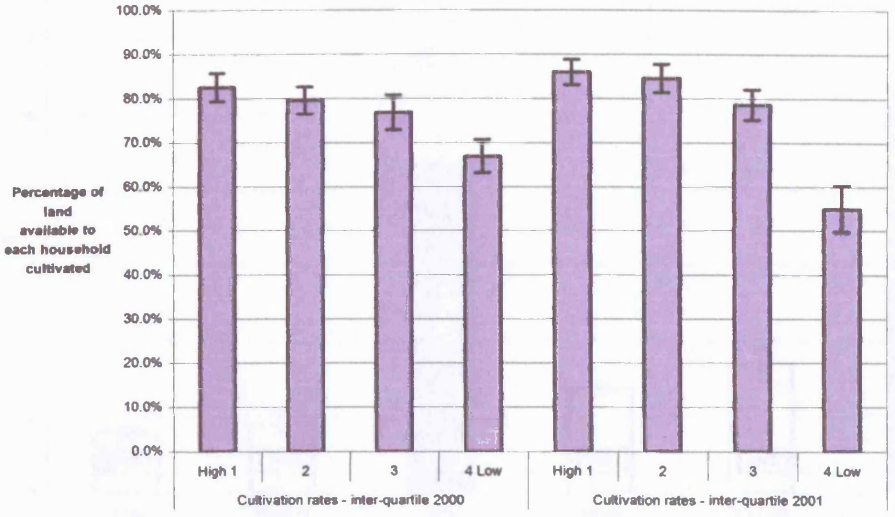
[179] Since rice yields per acre are generally 3-4 times higher than maize, and rice prices up to double those of maize, households farming rice are likely to be wealthier (in terms of agricultural productivity and cash equivalents – see Table 4.6) than those only farming maize.

[180] In part, this is due to the fact that fertiliser may be applied on wetland, but as previously discussed, with rare exception, never on dryland.

Figure 5.20: The proportion land cultivated in relation to total land held by households categorised by relative (inferred) wealth status.

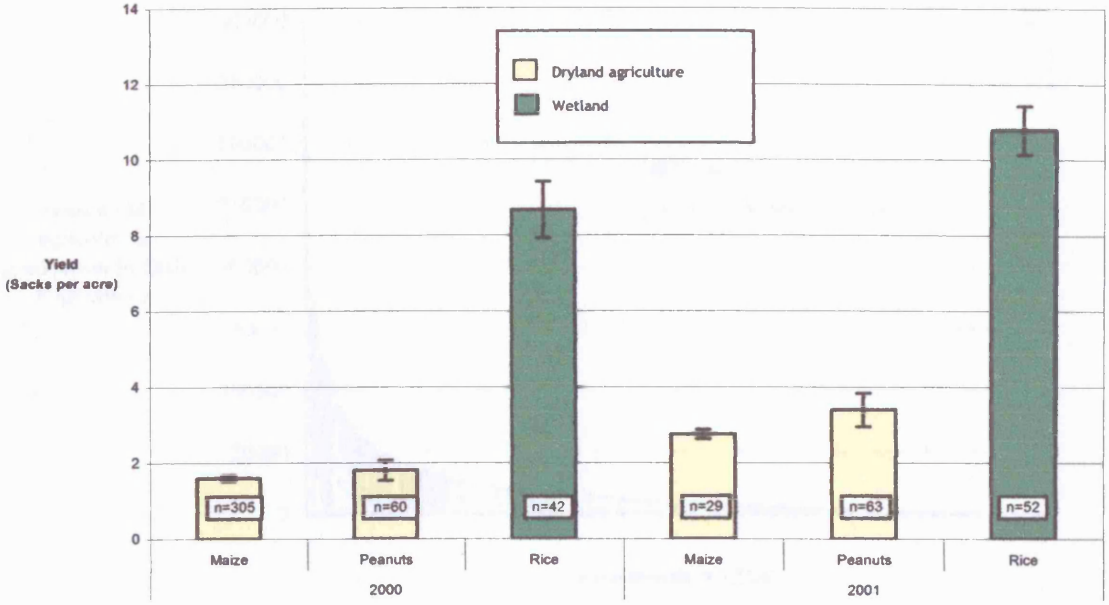


Yields

Dryland crop yields in the Ikwavila valley are generally very low - up to a tenth the level of what might be harvested in a similar but large scale dryland commercial context. However, and as discussed further in section 5.3.5, the smallholder dryland agricultural system in the Ikwavila Valley is very different from a commercial agricultural system. Smallholder dryland agriculture in the valley is based on the absence of artificial nutrient inputs and little mechanisation, relying instead on the regenerative capacity of the soils - which is generally low. Thus a low input - low output system results in dryland crop yields being consistently low - as shown for inter-annual maize and peanut (groundnut) yields in Figure 5.21. Wetland rice agriculture is very different to dryland agriculture, and is more akin to a high input - high output system, with yields on average 3 to 4 times higher than the dryland system[181]. Improved rainfall between 2000 and 2001 resulted directly in improved crop yields for both dryland and wetland agriculture.

[181] Although perhaps not strictly comparable since the two systems produce different crops, the comparison is useful for illustrating the difference in gross agricultural productivity between the systems.

Figure 5.21: The inter-annual variation in overall crop yields for individual fields (sample sizes individually indicated for each data set in parenthesis).

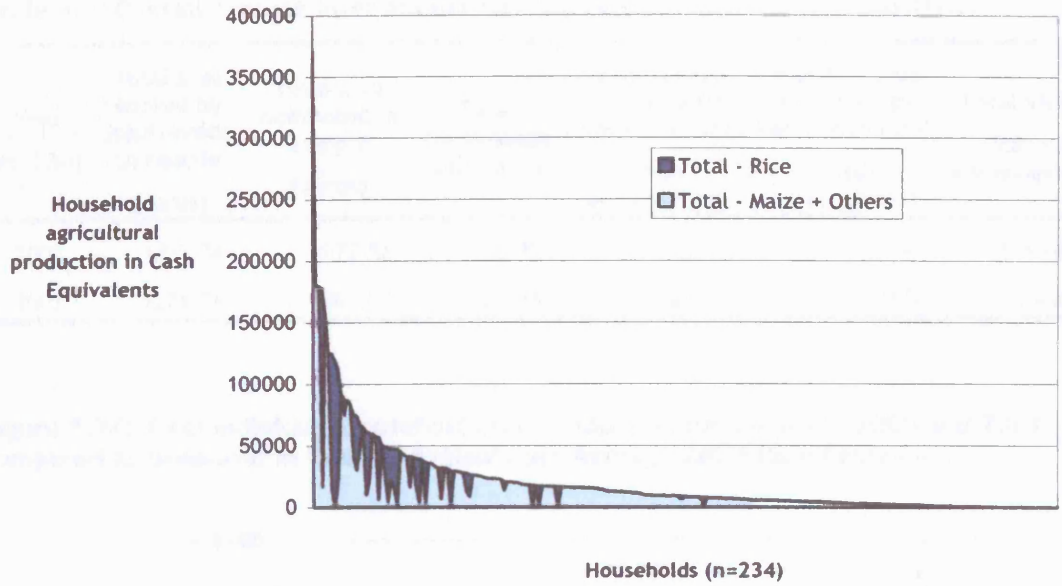


Household agricultural productivity

The variation in agricultural productivity between households in both drier (2000) and wetter years (2001) as measured in total cash equivalents is shown in Figure 5.22 and Figure 5.23 respectively, and corresponds to the data presented in Figure 5.19. The production of rice in relation to total household agricultural production is particularly significant in those households with the highest agricultural productivity. Households with lower agricultural productivity, with rare exception, all rely on dryland crop (maize in particular) production, which not only is of lower yield, but also of lower market value.

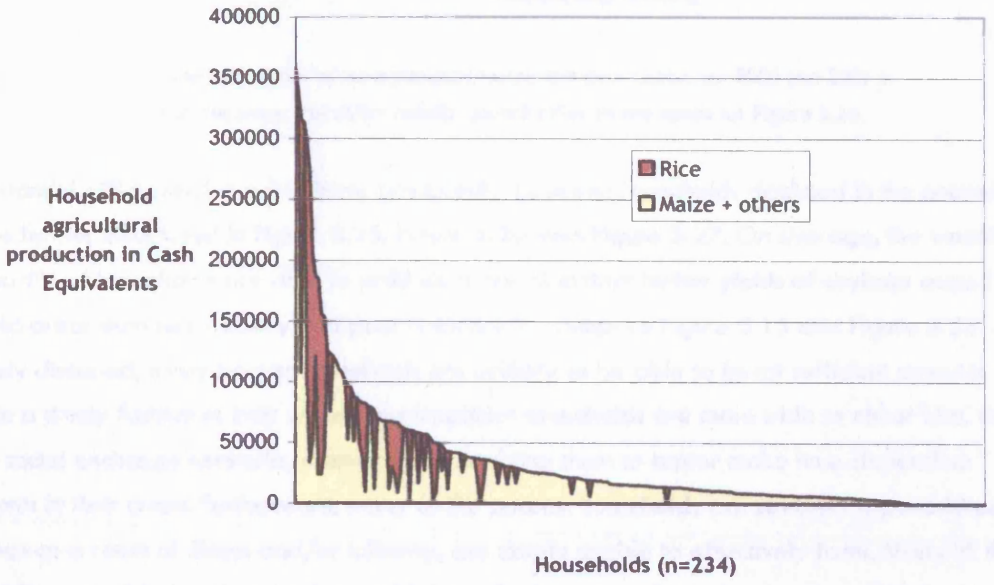
Nearly all households are able to benefit from an improved rainfall regimen - a large proportion increasing the value of their agricultural productivity between drier (2000) and wetter (2001) years by a third or more - see Table 5.7 and Figure 5.24. As many farmers continually stated, rain is a major limiting factor in their agricultural livelihoods, a claim supported by the data, although as discussed in the next section, constraints to agricultural productivity are rather more complex than these claims and data initially suggest. Nevertheless, the inter-annual variability in agricultural productivity in a semi-arid dryland production system, even during the two years of field work in which the difference in inter-annual rainfall was not severe, is extremely evident.

Figure 5.22: Total individual ranked household crop production for the year 2000 as measured in Cash Equivalents per Reference Adult.



Notes: (i) Cash equivalents are derived from reported crop yields (measured in sacks and 20 litre cans) as collected through household-based recall survey. Yields, all converted in sacks or parts thereof, are then changed into cash equivalents using average local farm-gate unit prices for each crop class (Dryland crops - Maize, peanuts etc; Wetland crops - Rice); (ii) Cash equivalents are based on the unit price of each major crop during the middle of the harvest - when prices are generally at their lowest. Thus frequent and significant inter- and intra- annual variation in farm-gate prices is controlled for as much as possible by adopting the least elastic price point in the calendar; (iii) Ranked individual household identifier labels (on the x axis) are not shown for purposes of diagrammatic clarity.

Figure 5.23: Total individual household crop production for the year 2001 as measured in Cash Equivalents per Average Adult Male Equivalent.

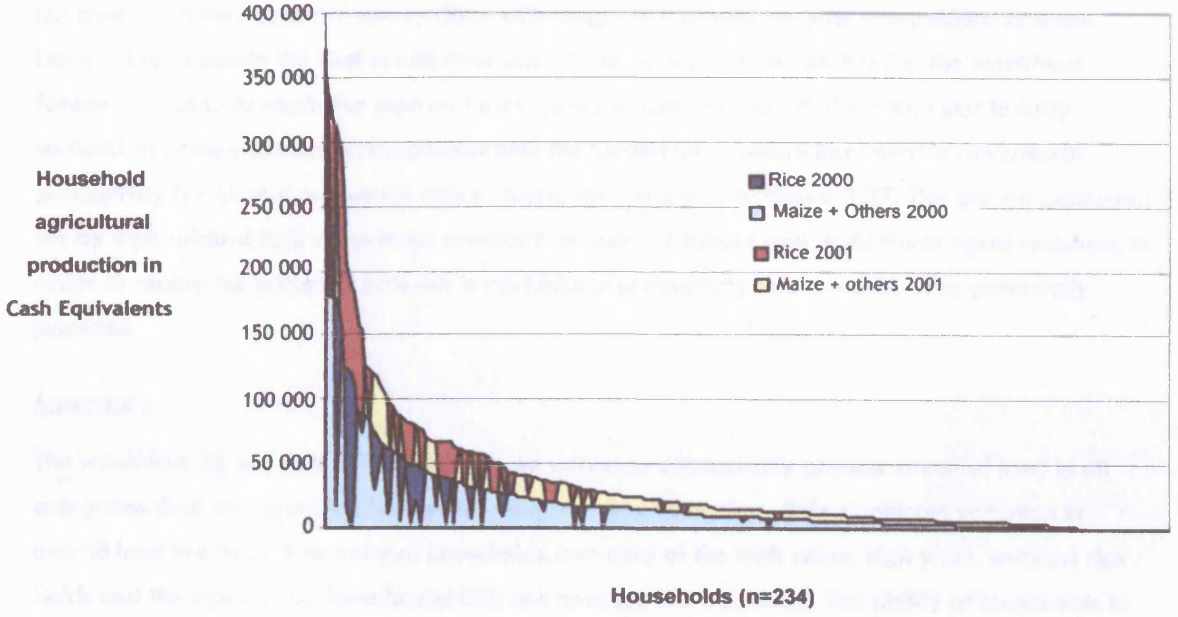


Note: Please refer to the notes for Figure 5.20.

Table 5.7: Overall average inter-annual agricultural cultivation and productivity

Year (n=234)	Total area owned by households in sample (acres)	Total area cultivated in sample (acres)	Total percentage cultivated	Dryland Crop cash value per Reference Adult (cash equivalents)	Wetland crop cash value per Reference Adult (cash equivalents)	Total yield (cash equivalents)
2000	1252.74	872.86	69.7%	15532	5832	4999144
2001	1271.74	862.08	67.8%	25722	9772	8305687

Figure 5.24: Total individual household crop production for the years 2000 and 2001 compared as measured in Cash Equivalents per Average Adult Male Equivalent.



Note: The order of households between the data curves for 2000 and 2001 is not the same. For other details, please refer to the notes for Figure 5.20.

The substantial differential in agricultural productivity between households depicted in the preceding figures is further elucidated in Figure 5.25, Figure 5.26, and Figure 5.27. On average, the wealthiest inter-quartile of households are able to produce proportionately higher yields of dryland crops from their field areas than less wealthy and poor households - compare Figure 5.15 and Figure 5.25. As previously discussed, many poorer households are unlikely to be able to invest sufficient amounts of labour in a timely fashion in their crops. Thus wealthier households are more able to either hire, or through social exchange networks, share labour, enabling them to better make time-dependent investments in their crops. Furthermore, many of the poorest households are severely impoverished, and, often as a result of illness and/or infirmity, are simply unable to effectively farm. Many of these households are unable to take part in social labour sharing networks and some may often even

struggle to find work as labourers on richer farmers' fields. Instead they may depend on the support of relatives and networks of patronage for their livelihood and unpredictable food security.

Although the differential between households in dryland crop production is substantial, it is not as marked as that in rice production. Although, as previously stated the data are not independent of one another[182], there is a much greater differential between households of all wealth categories in rice production, which is not fully accounted for by the variation in household wetland holdings derived by derived wealth index category - compare Figure 5.19 and Figure 5.26. Essentially, although some of the poorest households may have access to wetland, they are simply unable to afford entry into rice production. Apart from the richest households, others may enter rice production but are far less successful at rice farming than the wealthiest farmers - as shown in the comparison between Figure 5.19 and Figure 5.26. The differential in agricultural productivity is best explained by the in-affordability of labour and agricultural inputs - notably fertilisers and herbicides. From anecdotal evidence, it is likely that many wealthier farmers, and certainly the minority of larger scale farmers not covered in the household survey data, with longer experience, may be more skilled and are better able to obtain the best results from using these agricultural inputs. Finally, the wealthiest farmers are able to capitalise most on better years of rain, for both dryland and particularly wetland rice crops, producing proportionately the largest inter-annual increment in agricultural productivity for all derived wealth index categories - as shown in Figure 5.27. This can be accounted for by their relative lack of resource constraint, in terms of labour and agricultural inputs required, in order to realise the potential increase in agricultural productivity that a wetter year potentially provides.

Summary

The wealthiest 25 per cent of households have access to substantially greater areas of land in all categories than the remaining households that, between them, show little significant variation in overall land holdings. A minority of households own most of the high value, high yield, wetland rice fields and the majority of these households are amongst the wealthiest. The ability of households to gain access and to cultivate *bonde* rice fields has the largest relative impact on the quantity and the cash value of total household agricultural productivity - since rice both produces the highest yields and is of a consistently higher market value. Most households unable to farm rice - as a result of insufficient capital assets in land, inputs and labour - are restricted to dryland production for their livelihoods. For many households this consists of concentrating on farming maize and less frequently groundnuts - sufficient for a subsistence living and a mostly very limited and unpredictable income from the sale of surpluses. However, there are a limited number of specialist maize farmers, who are wealthier than others, better able to accomplish timely and sufficient labour investments in their crops and who skilfully produce relatively far greater dryland crop harvests than others. A smaller minority of households - the poorest and most destitute - fail to secure a subsistence living from their land.

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[182] A large measure of confidence can be expressed in the overall pattern of data interpretation as a result of the trend apparent in dryland crop production being consistent with that of rice production.

Figure 5.25: Inter-annual household dryland crop production measured in cash equivalents per reference adult and classified into inter-quartile ranges.

Note: Household wealth indexes remain consistent between years and across categories of crop production

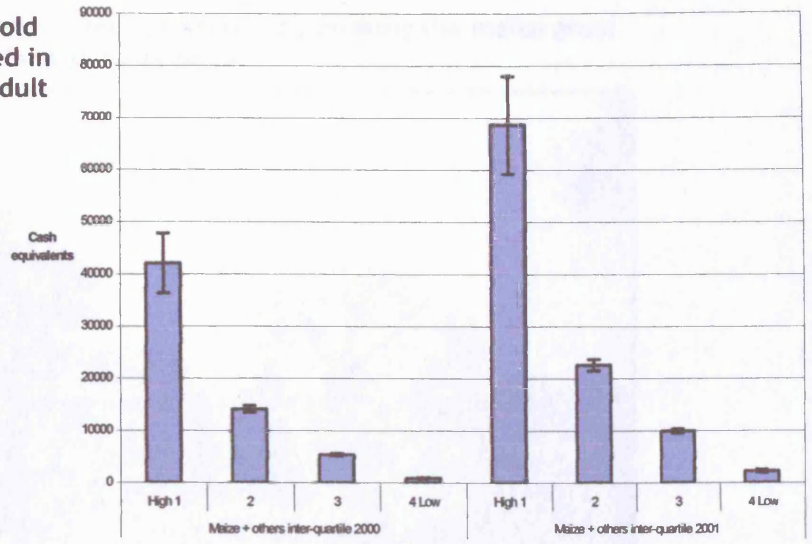

Figure 5.26: Inter-annual household wetland crop production measured in cash equivalents per reference adult and classified into inter-quartile ranges.

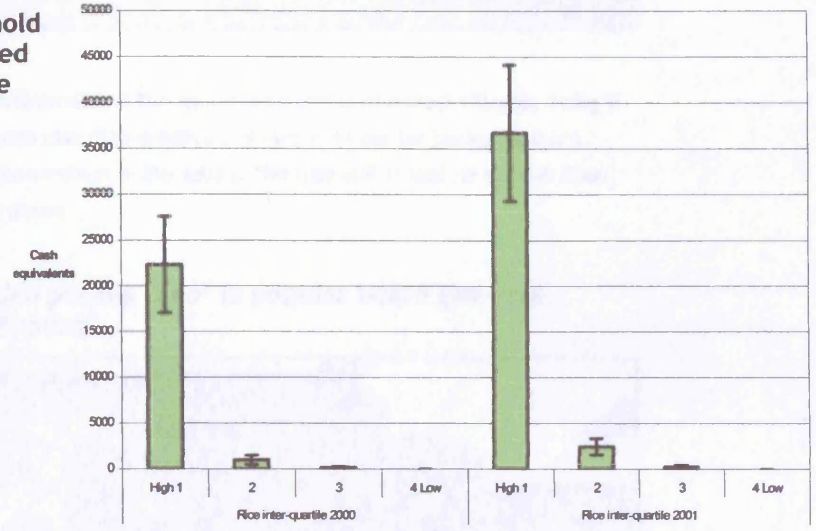

Figure 5.27: Inter-annual household total crop production measured in cash equivalents per reference adult and classified into inter-quartile ranges.

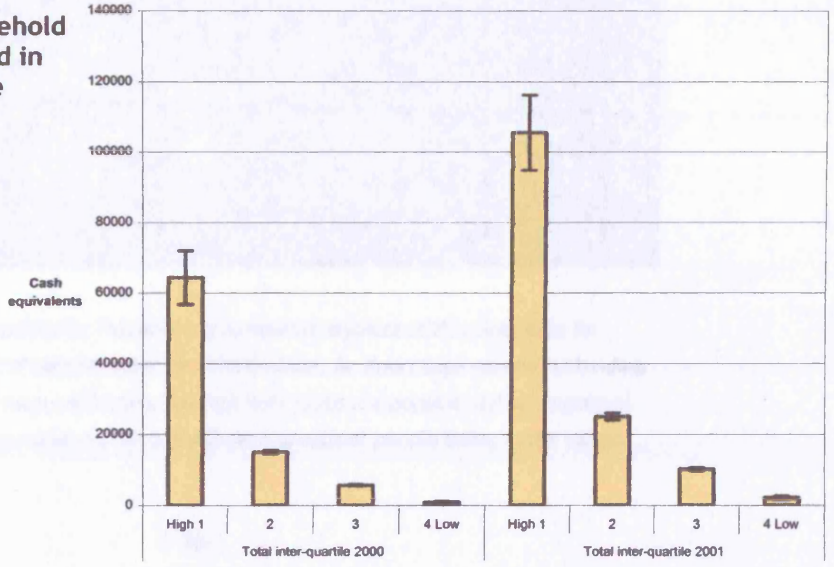

Figure 5.28: Women brewing *mbege* together - by cooking the maize gruel wort in the early stages of the brew-process

In the background are houses characteristic of the poorer members of the Idodi villages, while in the foreground is a small homestead plot of long-harvested maize. In the far background is a baobab tree - these trees are quite common in the valley. The tree still in leaf on the left is an *Acacia* that had been planted for shade.

Figure 5.29: A group of men playing *'bao'* (a popular board game) at *'kilubu'* (beer club) in Mahuninga.

Bao is often played very competitively. This scene is somewhat atypical of this beer club (in Mahuninga) which is often full of people and a very lively place. An *Ilparakuyo* woman is standing in the far back right of the picture - reflecting the fact beer clubs are popular and an important social focus for trading and recreation for all the different groups of people living in the valley.

5.3.5 *Dryland agriculture: Rainfall, crop yields and soil fertility*

Farmer narratives: changing rainfall patterns

Many people recount that rainfall patterns have changed substantially in the last 40 years and that these changes have had significant adverse impacts on farming - both in terms of labour and in yields[183]. A well and often rehearsed narrative among many local dryland farmers is that the rains have become much shorter in their duration, and generally overall sparser. Whereas previously the rains frequently began in early December and ran all the way through to the following May, these days, they begin later - often in early January - and end much more abruptly - in early April. From their points of view this has resulted in the window in which planting can be carried out now becoming much narrower. Formerly, farmers aimed to plant up to three times in the growing season - so as to make best use of a restricted amount of household labour, as well as to maximise the reliability of yields. The rains were sufficiently prolonged to achieve this, but today they no longer are. Further, many dryland farmers say that the progressively changing characteristics of rainfall through the wet season must be exactly right to generate a good yield. At the onset of the wet season, the heavy thunderstorms and violent downpours are helpful in making the land workable, but these thunderstorms should not persist too long. Instead, as the rainy season progresses they should be increasingly replaced by a pattern of sunny days interspersed with days of light showers - gradually dying out towards the end of the wet season. It is essential that not too much rain fall just as too little. Underpinning this narrative is the fact that dryland agriculture, especially where soils that have been intensively cultivated without rest for many decades, can be extremely risky and requires very specific climatic conditions in order to be reasonably successful.

Farmer narratives: declining crop yields

Many local dryland farmers say that their crop yields have fallen substantially in their lifetimes. The yesteryears are recounted as being ones of substantial surpluses[184]. Today, substantial surpluses for many farmers are rare if they occur at all, and many see themselves as frequently facing chronic food deficit challenges. Many identify the decline and change in rainfall as being the proximal cause, others think that pastoralists are also to blame from their herding of stock on the dryland fields after the harvest. Other dryland farmers say that they have not suffered from - at least to the same extent as others - the marked crop yield declines described. Farmers do have strategies to help maximise crop yields and they focus on the way the soil is tilled. If tilling can be delayed long enough for the accumulated weeds in the early wet season to be incorporated in to the tilth, then relatively small beneficial effects for yields will occur in subsequent harvests. Clayier soils should be tilled first as their

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[183] As discussed in Chapter Three, there is no long-term rainfall data known to be definitely available for the Idodi area to corroborate this. With hindsight, it would have been useful to have investigated whether any (incomplete but long term) time series data existed at Msembe in Ruaha National Park.

[184] Despite searching through village records from the 1970s and earlier (such as they existed), no reliable crop production figures could be unearthed. However, circumstantial evidence exists supporting farmers' recollections, mostly in passing reference to the existence of large village grain stores which were used to store the maize shipped out of the valley to Iringa particularly during the late 1970s and early 1980s.

early tillage maximises their water absorption and holding capacity. Soils should not be tilled too deeply, to avoid bringing up infertile lower top/sub-soils. A further strategy followed by a minority of the more successful dryland farmers is not to allow pastoralists to graze their cattle on the post harvest residue, which they say helps guard against crop yield declines. These farmers feel that cattle damage the soil's structure, as its friable clay component is compacted and/or blown off in the dust cloud of the grazing cattle. The long-term and cumulative effect of this process is that soils on which cattle are seasonally grazed become increasingly sandy, and with less clay content, more infertile. Furthermore, these farmers argue that the manure that is left on the fields by the cattle while they are grazing is minimal and not significant for improving soil fertility.

Understanding locally held wisdoms

Several decades ago the Ikwavila valley was very fertile and had a local reputation to match that of the former, well renowned grain basket of Ismani to the east. From around the late 1950s, there was a maize market in Mahuninga where much of the valley's surplus maize was sold. Indeed, in a good harvest year during the height of the *Ujamaa* period (late 1970s), when provision of sundry supplies was often unpredictable at best, farmers recount having excess cash derived from maize surpluses which they had difficulty spending. But gradually over the years, soil fertility has fallen - contributing in part to the collapse of the local maize market in the late 1980s. Today, the dryland agro-ecological system is one of low input, low output, relying on the regenerative capacity of the soil as a result of natural nutrient cycling and mineralization. In the dryland fields, little, if any, soil fertility intervention takes place, except for the limited number of tilling strategies described above. Although there is a precedent of active organic soil fertility intervention in the highlands of which many of the valley's dryland farmers are aware, a very large majority of these farmers are stockless, and are thus precluded from practising field manuring. There exists a certain *doxa* (Bourdieu, 1977) in practices and attitudes to farming. There is a prevailing and widespread wisdom that any fertilising the dryland soils is disadvantageous. The wisdom holds that the dryland soils, when fertilised, result in the maize crop growing extremely tall without bearing grain and, in the event of drought, the crop being burnt by the fertiliser application. Exhaustive attempts to track the source and empirical evidence of this wisdom met with little success. One of the few farmers who had, in the past, applied chemical fertiliser to his dryland fields said that he had been pleased with the results - after having been shown by a Greek farmer in the highlands how to do so. Instead, Hehe farmers in the Ikwavila valley view rainfall as the central factor controlling the fertility of the land. Thus people look to rain-making rituals to bring the right type of rain which they view as necessary for the maintenance of the fertility of the land.

While there are a minority of successful and innovative dryland farmers, overall dryland agriculture appears to be characterised by a substantial degree of conservatism about what agricultural practices are appropriate leading to very low levels of innovation in dryland farming. The underlying reasons are complex and underpinned by a number of factors.

Rainfall and soil fertility: synergistic dynamics?

Scoones (2001) states that the agro-ecology of African soils in the semi-arid zone is extremely complex and varied - even on a local scale - and this is much in evidence in the Ikwavila valley. Perhaps most critically, the productivity of these soils is a function of the synergistic interplay between rainfall and soil fertility status. At any given moment, soil fertility is a product of spatial variation, the history of its cultivation and the long- and short-term rainfall regime. These factors impact on a soil's properties - nutrient cycling, acidity, organic matter levels, water holding capacity, microbial activity and soil structure. Moreover, within an agricultural season, all these soil properties are likely to continually change. A farmer has to interpret these prevailing conditions and make strategic choices as to whether and when to fertilise, when, what, where and how much to plant. Furthermore, the high levels of unpredictability in rainfall, soil status and thus crop yields may be compounded in situations where the nutrient and organic stock of the soil is low or has become depleted (see also Scoones and Toulmin 1999, 21-62). Thus farming remains a high risk and unpredictable undertaking for all dryland farmers in the Ikwavila valley.

Expensive investments and uncertain returns

Soil fertility intervention for many farmers in the Ikwavila valley is currently not a viable option. Not only does locally received wisdom weigh against this option, but also the lack of indigenous experience with chemical and organic fertilisers is a persuasive disincentive, in what is an unpredictable and high risk environment. Moreover, the economic and labour costs of farming are challenging for many. Chemical fertilisers are expensive, not easily locally available and are also required at a time of year at which household cash resources are least available and most in demand. Organic fertilisers are available from livestock *bomas* (Swahili: cattle kraal or enclosure) but these are frequently far removed from the fields and little viable means - or, indeed, precedent[185] - exists for transporting the manure from *boma* to field. The labour involved in transporting manure from *boma* to field would be substantial, particularly during the peak of labour demand and income-earning pressure, especially for poorer households[186]. Critically, there is little guarantee that the substantial investments required in labour and cash to improve soil fertility would yield results in the short-term. In an environment where the discount factor is extremely high, such a risk is therefore untenable for the poorest and dissuasive for wealthier households, irrespective of the long-term potential for agricultural dryland productivity gain that soil investment may represent.

5.3.6 'Twililage pe twiwumi!' - Let us eat while we are still alive!

The agro-ecological and socio-economic constraints hereto described are alone insufficient to provide adequate explanation of the nature of dryland agricultural production. Socio-cultural norms and

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[185] Although in the Kiponzelo highlands immediately to the southeast, manuring appears to be increasingly important in farming systems, with a developing market for manure (Scoones and Toulmin 1999, 109).

[186] Cultivation on boma sites, apart from that carried out by herders themselves (see the next Chapter) does not occur, because these sites are recognised as belonging to the herders since it is they who cleared them from the bush.

expectations play a significant part in how many people in the Ikwavila valley approach and view farming and their wider livelihoods. Attaining a sophisticated understanding of socio-cultural norms, given the nature of the fieldwork carried out, was a difficult undertaking, but at the risk of generalisation and over-simplification, some insights gained are useful in providing further nuance. Candid and not infrequent reference was made by close informants to wealth-equalisation pressures and the competing worlds of social and economic reproduction. This can be best illustrated by the reflection of one Bena farmer who had arrived in the valley in the late 1970s. He recollects how he and others had heard about the farming potential in the Ikwavila valley and came down to see for themselves. Having been allocated land they began to farm leaving their families in the highlands. With time as they established themselves, they became very much aware that it was incumbent upon them to remit their profits (whether in cash or in kind) back home to their families. Moreover, they came to understand that it was socio-culturally unacceptable for them to display their new found wealth to their Hehe neighbours. For many Hehe farmers, land is not only the source food, but it is also central for social relations mediated through beer brewed from the land's produce (*pers com* Mdindile). Until recently, re-investing the wealth of the land in ways which set one apart from extended kin and associates (for example, in seemingly relatively ostentatious houses or processions) remained outwith social norms. It is only over a protracted period of 20 or more years that it has become more acceptable for the Bena to display their success more openly and to invest more heavily in wetland fields and material holdings. This demonstrates the degree to which orthodoxy and the universe of the undisputed (Bourdieu, 1977) prevails in local Hehe society, and how heterodoxy and the universe of discourse - and therefore innovation in, for example, fertility intervention - have been resisted and suppressed. There is indeed direct symbolic relevance in the emergence of a new, competing and entirely different heterodoxy of agricultural and social reproduction - that of wetland agriculture.

A further factor impacting on people's attitudes to farming is the historical legacy of the *Ujamaa* years and its command economy, where people were forced to grow specific types and quantities of crops, not only for their own consumption, but especially for the state via village co-operatives. Often these policies were unpopular and not particularly successful, and are likely to have been disincentives for agricultural innovation and diversification.

5.3.7 *Wetland agriculture: rainfall, crop yields and soil fertility*

High inputs and high returns: predictability and profits

Wetland agriculture in the Ikwavila valley presents a very different context to dryland agro-systems for those farmers able to afford the capital outlay in high labour investments and agricultural inputs. Whereas agricultural inputs may be largely dispensed with - in the short-term - at the risk of reduced yields, labour investments cannot, and are thus a pre-requisite for rice farming. Thus only those households with sufficient access to labour are likely to farm rice. The *bonde*, especially those fields with guaranteed/more assured irrigation water flow, are far lower risk environments than the dryland fields. Since many of the households farming the *bonde* for rice are among the wealthier, they are able to afford the high capital outlay in the face of reduced risk and relatively assured - and high - yields. In stark contrast to dryland agriculture, fertility interventions are frequent as

immediate short-term benefit is assured and the long-term costs of not continuing fertility interventions are high. For example, it is frequently held by rice farmers that once a field has been fertilised with chemical fertilisers, these fertilisers must be re-applied in successive years or else yields will not only drop, but drop below the level of yields achieved before the onset of fertiliser application. Wetland rice cultivation - as demonstrated in Figure 5.19 - is far more productive than dryland maize production and market prices are consistently, although with exception, higher than maize. Overall, wetland production is very different to that of dryland as yields, while still dependent on rain, are much higher and more predictable. Thus innovations and investments in wetland crop husbandry are much less at risk and far more liable to return a direct and immediate net benefit to the farmer.

5.3.8 *Livelihood options*

Livelihood diversification

Agriculture remains central to nearly all households' livelihoods in the Ikwavila valley. Alternative modes of production are limited and predominately lie in wage labour and in dry season garden cultivation. In this regard up to 45 and 40 per cent of households surveyed engaged in wage labour and dry season garden cultivation respectively. Wage labour on wealthier farmers' fields is most important during the wet season when labour may be paid for in cash, or less frequently, grain. Dry season wage labour may involve the clearing of fallow fields or virgin land. A range of other diversification possibilities exist including beer making, bamboo wine trading, artisanal work (carpentry, pottery, brick-making and construction), fishing, plant and grass harvesting, honey gathering, bee-keeping and hunting. However, many of these activities are limited to those with the knowledge and skills, or they are socially delineated and restricted - for example beer making and grass collection are culturally in the woman's domain; hunting, fishing and honey gathering are in the man's. In addition, perhaps with the exception of bee-keeping, most activities have a relatively low return on the amount of labour invested, although their value should not be measured just in terms of their potential economic potential.

Beer making is especially important for women as a means to benefit monetarily and socially from the household harvest. Whereas farming may often be nominally a joint endeavour between a wife and her husband, the disposal and sale of the household's harvest is likely to be most controlled by the husband. In this regard, a woman may claim or effect access to part of the household maize crop for the production of beer, as a means to adding value to the crop and securing a useful income. Although large amounts of labour are involved in beer-making (maize preparation, wood collection, beer brewing), women are able to retain at least part of the proceeds from the sale of the beer to neighbours and villagers, an activity that is socially important and one in which women may invest in reciprocity and network building.

Debt, market speculation and value adding

While dryland agriculture generally remains important for subsistence and social production, wetland agriculture represents a greater opportunity to diversify and expand household wealth. However, despite the relatively poor productivity of dryland production, many households - up to 65 per cent - may sell a substantial part of their harvest either to obtain a cash income or to pay off the year's

accumulated debts. Debt is a notable feature in the socio-economy of the Ikwavila valley - with households in long-term debt to patrons who will have loaned them cash or food particularly during the wet season when all households, not least the poorer, are under the greatest stress. Interest rates are extremely high. It is not uncommon for a loan of money or food to be repayable within one year (usually at harvest) with an equal amount again in interest. While small loans and gifts are commonplace within social and kin networks, larger loans are often the domain of wealthy rice farmers who operate extremely profitable loan businesses that are often integrated with agricultural commodity speculation. Thus a small rice farmer will take out a loan from a patron in cash to be repaid at harvest at twice the value in rice. At harvest, the patron collects the rice to the value of both the loan and interest accrued from the farmer. He then stores it locally until the early wet season when the regional and national rice price is at its highest - often up to, or more than, twice that at the farm gate at harvest - when the patron will sell his large rice stocks and make a considerable profit.

Thus many households are unable to maximise the potential value of their agricultural production since they face substantial pressures - not least debt and tax obligations - to dispose of their crop immediately instead of having the freedom to wait for seasonal price improvements[187]. In contrast, many of the wealthier households are able to add value to their harvested crops by delaying their sale on local and regional markets.

5.4 Conclusion

The nature and way in which people occupy and relate to the landscape of the Ruaha River valley and the Idodi rangelands has changed much in the last 50 and more years. While substantial parts of the landscape have been depopulated and turned over to the national wildlife estate by pre- and post-independence governments, the remainder has become increasingly settled by a range of peoples evicted from their former settlements in the Ruaha valley and by many others from the highlands seeking new agricultural fertility. The old mixed production and exchange economy that once existed in the Ruaha valley and which resettled people continue to practice, has gradually started to be eclipsed by a market economy, based heavily on rice, and dominated by a wealthier minority of the population, many from the highlands. While dryland-based agriculture has suffered from the effects of soil exhaustion compounded by the unpredictability of a semi-arid climate regime, wetland-based cultivation has come to constitute a far more reliable and productive livelihood component for those in the position to benefit from it.

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[187] The impact of food-aid may be extremely disadvantageous to farmers who have successfully managed to store part of their crop in order to benefit from seasonal price increases. Food aid was delivered in both years of field research and while there was a genuine need for its distribution, due to its poor targeting and ubiquitous availability, it resulted in the local maize market price collapsing and a number of angry and dispirited farmers who were compelled to sell their maize at a deflated price far below the opportunity cost incurred (i.e. the production cost together with the loss in increased potential earnings as well as the loss of use of the valuable cash tied up in storing the maize for an extended period).

Thus a distinction may be drawn between the 'old' and the 'new'. The 'old' constitute the majority of dryland farmers who are having to unsuccessfully contend with long term declines in agricultural productivity, faced with limited diversification opportunities, and constrained by socio-economic circumstances and cultural norms. The 'new' are a varied group of farmers - largely more recent immigrants to the valley - who are successfully developing their rice-based agro-economic production and business interests and expanding their social networks of patronage. Some households are in the process of trying to enter into the new more market-oriented economy and are investing in wetland fields and rice production. Many others remain unable to do so, whether as a result of socio-economic or cultural constraint, or both.

6 The *Ilparakuyo* of Idodi: Contending with change

> The peak of Idelemule mountain presents an ideal vantage point from which to view the mosaic of the landscape stretching out across to the foot of the highland scarps in the Mahuninga valley several hundred feet below. If one looks hard enough, through the dry season haze and dust, away from the rich-green irrigation furrows and streams in the 'bonde', casting one's gaze up on to the grey leafless woodland slopes, brownish circular clearings scattered across the landscape will, with some concentration, begin to take shape. All of these clearings lie a certain distance away from the shiny tin roofs of the more easily definable farm settlements. Seldom can a clearing be seen sited close to the lush-green gardens in the stream courses, nearly always instead being located, at the very least, several stone throws away. Other less-easily distinguishable clearings emerge from the dryland, shimmering in the heat waves, only to disappear before one's eyes to be replaced by other phantoms of the mid-morning haze.

In this second chapter on people's land use practices and livelihoods, I present an analysis focussing on the pastoralist *Ilparakuyo* together with a short review of the Barabaig in Idodi. I examine how *Ilparakuyo* livelihood status and land-use practices have changed in relation to the increasingly crowded nature of the rangelands in which they find themselves today. I first trace some of the key events and processes in the *Ilparakuyo's* past which led to their arrival in Idodi and were increasingly impacted upon by the state. I similarly consider the events leading to the arrival of the Barabaig in Idodi, before presenting an overview of the Barabaig domestic unit, livelihoods, social organisation and range-use. I then focus on *Ilparakuyo* herding patterns and farming practices in the Idodi landscape, leading into a detailed analysis of their households and herds, and their farming and herding livelihoods. I demonstrate that the *Ilparakuyo* are increasingly relying on farming for their livelihoods. I argue that the *Ilparakuyo* herd has declined as the landscape has become demarcated and zoned as a result of villagisation and land-use planning. Other factors - such as increases in livestock disease, a growing cash economy and higher levels of commoditisation - are likely to have compounded the trend. I argue that for many *Ilparakuyo*, particularly the poorest, an increased reliance on farming and decreasing access to livestock has led to growing entrapment in increasing poverty relative to other *Ilparakuyo*. While some *Ilparakuyo* families remain relatively wealthy, many are now on the verge of falling out of livestock-based livelihoods or already have done so, and thus *Ilparakuyo* socio-economic relations with farmer communities are becoming evermore important and significant.

6.1 The establishment of the *Ilparakuyo* in Idodi

6.1.1 Pre-Ujamaa: new frontiers

The *Ilparakuyo*, to whom many of these clearings are attributable, are an agro-pastoralist people who, together with the more recently arrived Barabaig, constitute the two major herder groups that live in Idodi. The *Ilparakuyo* are Maasai speaking and forming one of the 22 associated sections the comprise the wider Maa-speaking peoples of eastern Nilotic origin (Sommer & Vossen 1993, 30) who live in the rangelands in an area stretching from what is now northern Kenya to south-western Tanzania. Although distinguishing themselves from other Maa-speaking groups, not least the *Kisongo* and *Salei* Maasai of the plains and highlands of northern Tanzania, the Idodi *Ilparakuyo* make reference to themselves as being Maasai[188] and as being part of the Maasai socio-cultural diaspora - especially in regards to the timing and practice of ritual. During the *Ilparakuyo-Kisongo* (*Iloikop*) wars which occurred from the 1820s to the 1880s[189] (Galaty 1993, 74), the *Ilparakuyo* progressively lost control of their previous territory in Maasailand to the Kisongo. The *Ilparakuyo* began to withdraw from their former homeland in what is now central northern Tanzania, moving southeast towards the central plateau and the coastal lowlands from the mid-nineteenth century onwards. This dispersion is unlikely to have been their first foray south as Gogo oral histories record *Ilparakuyo* raiding in the eighteenth and nineteenth centuries into Ugogo (what is now central Tanzania) (Maddox 1995, 14). The *Ilparakuyo* were initially resisted and fought against by the Gogo with the help of the Hehe during the earlier part of the nineteenth century. However, over time the *Ilparakuyo* increasingly built close relations with the Gogo through intermarriage and exchange practices. The Gogo adopted a modified version of the *Ilparakuyo* age-grade system, and began to speak Maa in addition to their native CiGogo. Some of the *Ilparakuyo* families living today in the Idodi rangelands are recognised by other *Ilparakuyo* as being of Gogo extraction.

Although the *Ilparakuyo* were present in southern Ugogo by the end of the nineteenth century, they only moved more permanently into Pawaga and what is now the periphery of north-eastern Uhehe in the early part of the twentieth century (Redmayne 1964, 392). The first official reports of *Ilparakuyo* pastoralists migrating into the Pawaga area occurred in 1928 and 1934. By 1953 *Ilparakuyo* pastoralists had reached Idodi (*pers com.* Lemu Lebere) and the Usangu (Charnley 1997, 97). It is likely that the *Ilparakuyo* initially may only have been seasonal transhumant residents in north-eastern Uhehe, but by the late 1930s they had become more permanently established in the area. Redmayne (1964, 396) remarks that the *Ilparakuyo* were allowed to utilise the rangelands by the resident Hehe on the condition of refraining from stock raiding, and paying tribute to the *Vanzagila*[190] of Pawaga (Redmayne 1964, 360). Hehe oral accounts suggest that initially the *Ilparakuyo* came to be

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[188] Particularly when interacting with Hehe/Bena farmers or with village or district government and NGOs.

[189] The history of the series of battles/wars has been reconstructed by Galaty (1993), Waller (1979) and Fosbrooke (1948, 1956) by deducing the period in which each age set was extant at the time of each event described in oral history. Rigby (1992, 66-77 & 106-127) also provides an account of *Ilparakuyo* history particularly for the British colonial period in relation to that of the Maasai in general.

[190] See previous chapter

recognised as occupying - although not necessarily exclusively - particular range areas of what is now the southern and south-eastern periphery of the Ruaha National Park - in what was previously known as *Ukosisamba*[191]. Singularly pastoralist[192], they coexisted and traded with resident Hehe-affiliated and Gogo agro-pastoralist farmers.

By the mid 1950s, the *Ilparakuyo* had continued their expansion southwest into the Idodi area, establishing their presence at particular sites, many of which have been more or less continuously occupied since. Subsequently expanding to the southwest, groups of *Ilparakuyo* arrived in the *Usangu* plains by the early 1950s (Charnley 1992; Walsh 1983), arrivals that are likely to have been precipitated, in part, by contemporary developments in the Idodi and Pawaga rangelands.

The *Ilparakuyo* appear to have largely followed a semi-transhumant lifestyle in the hundred or more years that they have occupied the wider drylands of Idodi and Pawaga. More recent *enkang'* (Maa: homestead; pl *inkang'itie*[193]) site histories have been traced and show, for example, how one or more families would arrive in a particular area. Staying anything from less than a full cycle of seasons to several or more years, they would move on, sometimes a substantial distance to another site, perhaps drawn by news of better conditions. Ecological changes, for example, an outbreak of disease, a build-up of parasites, and the depletion of grazing and watering conditions due to inter-annual rainfall variations are likely to have been major considerations in compelling an *enkang'* to move to a different area. However, as is the case today, ecological perturbations alone may have been insufficient cause for the movement of an entire *enkang'*. Not least, strategies, such as temporarily establishing a sub-*enkang'* for a family's herd in a seasonally more favourable area, are likely to have been more appropriate and convenient. Conversely, different concerns, for example, those of conflict and security (both physical and magical) or life-cycle events (for example, the dispersal of family members after the inheritance ceremony of a deceased patriarch) are recounted as having been cause, perhaps especially if occurring simultaneously with ecological perturbation, to have resulted in migration to a different area.

The extension of the Rungwa Game Reserve in 1951, and the eviction of the farming peoples living along the northern bank of the Great Ruaha River in 1954-5 (see Chapter 4), can be seen as the beginning of government-mediated changes in how the landscape was to be occupied and used by the *Ilparakuyo* and their farming neighbours in Idodi. Although extremely difficult to trace with the *Ilparakuyo* themselves due to their sporadic movements, oral accounts by Nyambarazi and Kosisamba

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[191] The Kosisamba are a group who have been assimilated themselves as Hehe in the last 50 years, but who previously had close links to the Gogo and Kimbu. They formerly lived in what became northern Uhehe, much of which is now the Ruaha National Park

[192] It is very likely that these *Ilparakuyo* did not farm and they will have purchased their grain requirements from local Hehe, Gogo and Kosisamba farmers.

[193] The terminology used to describe the complex and variable structure of *Ilparakuyo* homesteads and households is discussed in Section 6.3.1. Here, an all encompassing term for homestead - *enkang'* (or *inkang'itie* pl.) is used for simplicity. However this term may not always be technically correct for all homesteads.

agro-pastoralist farmers living in the area at the time suggest that significant and adverse changes in the disease challenge to livestock occurred concurrently with the creation of the new reserve.

People living in Idodi recount a noticeable increase in tsetse fly and the incidence of trypanosomiasis. Oral histories collected by Jennings in Idodi and Pawaga in the early 1990s concur with those collected during fieldwork. Colonial records show that the period of the 1940s to 1950s was certainly characterised by an expanding tsetse front in the area, but local explanations for such a phenomenon may also have further significance. Outbreaks of other fly-related parasites (which have not been identified[194]) are remembered, which, together with tsetse advances, are associated by people present at the time as occurring simultaneously with the extension of the Rungwa Reserve and the effective creation of a 'hard' boundary between wildlife and livestock. As Ford (1971, 492) remarks in his seminal work on the role of trypanosomaisis in African ecology:

> Equally undesirable, on the other hand, are the activities of conservationists who have often succeeded in the past in invoking the law to preserve inviolate as natural parks and wildlife reserves known major foci of (human) trypanosomaisis.'... 'The real danger lies in their preservation not of wildlife as such, but of populations of pathogenic trypanosomes.

Previously, before government intervention, the boundaries between livestock and wildlife had been gradual and fluid, thereby probably facilitating the modulation and suppression of disease transmissibility and challenge. The extension of the Rungwa Reserve, and then the creation of the Ruaha National Park, resulted in the effective hardening of the boundary between wildlife and livestock. Further, the resettlement of people as a result of protected area creation lead to an increased concentration of people and livestock on the protected area boundary, in juxtaposition to higher wildlife densities in the protected area immediately across the Ruaha River[195]. The relatively high densities of wildlife and livestock in close juxtaposition to each other, particularly during the dry season, may be sufficient grounds to explain, to some degree, people's memories of a substantial increase in disease occurrence in livestock during the 1950s and early 1960s. If this was the case, then it is ironic that the then colonial Game Preservation Department, in an agreed policy with the then District and Provincial colonial administrations, extended the Rungwa Game Reserve as a solution for minimising human-wildlife conflict, both in terms of physical conflicts, and increasing epidemiological threats[196]. A further reason - and probably the underlying and driving motive - for the extension of the Rungwa Reserve (as discussed in Chapter Five) was the need to respond to the demand from the then Governor of Tanganyika and his superior - the Colonial Secretary in London - to create an ' adequate' estate of nature preserves.

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[194] The description of one set of symptoms which were associated with a parasitic fly are ambiguous and cannot be definitely used to point towards any particular affliction or other.

[195] The Ruaha is, with some minor exceptions, the only perennial source of fresh water in thousands of square kilometres in what is now the Ruaha National Park. Thus wildlife may be drawn in to water from substantial distances during the dry season.

[196] These were East Coast Fever in the southern Tanganyikan highlands, and in the lowlands, the expansion of the tsetse fly belt southwards as far as the rift valley scarps which constitute the boundary with the highlands.

Thus, whereas previously the *Ilparakuyo* had been at liberty to move relatively freely in the landscape, the extension of the Rungwa Game Reserve as a result of the developing land-use planning policies of the then Colonial administration can be seen as the beginning of a series of events, that were to precipitate substantial changes in *Ilparakuyo* livelihood strategies and landscape occupancy.

6.1.2 *Ujamaa and its consequences*

The depopulation of greater Idodi through the induced movement[197] of people to officially 'preferred' settlements during the 1960s had culminated in the abrupt *Ujamaa* evictions during 1974 and 1975 of the remnants of the farming population in Unyambarazi. In marked contrast to their agro-pastoralist and farming neighbours, the *Ilparakuyo* living in the remoter areas of Idodi and Unyambarazi appear not to have been compelled to move into *Ujamaa* villages. There are no recollections of attempts to create the communal *Ujamaa* pastoralist villages that were created, for example in Kisongo Maasailand, although pastoralist evictions from the south-eastern periphery of the Ruaha National Park occurred in the late 1960s (Jennings 1994, 23), and indeed continue to occur sporadically to the present day (Mtahiko *pers com*). Aside from their removal from the national park, it would appear that the *Ilparakuyo* were overlooked or left largely to their devices, perhaps since they were a minority group in lowland Uhehe[198]. A similar process is reflected in Rigby's account of the *Ilparakuyo* in Bagamoyo District (Rigby 1983, 38).

However, the *Ilparakuyo* who had chosen - some of them 20 years previously - to site their *inkang'itie* near the now rapidly expanding *Ujamaa* villages were to face tenure challenges to the rangelands they were using. The trickle of immigrant farmers now erupted into a flood of hundreds of evicted and landless farmers requiring land as part of the villagisation process. The *Ilparakuyo* recount that they had to make way for the new farmers and move to more marginal areas, as land was allocated by the villages to these new farmers. Thus areas of rangeland previously used by the *Ilparakuyo* for grazing their stock were converted to farmland, a trend that has since continued.

The depopulation of farmers from the outlying rangelands of Idodi left those *Ilparakuyo* still living in these outlying areas without trading opportunities and services provided by the now defunct farming communities. Most importantly, grain could no longer be purchased. Faced by growing socio-economic remoteness, and perhaps, likely further increases in the disease threat to their livestock as wildlife re-colonised the deserted farmland and its outlying areas, the *Ilparakuyo* began also to gravitate to the periphery of the recently expanded *Ujamaa* farmlands. The villages were less remote and provided trading opportunities, closer livestock markets, easier access to grain and basic but increasingly popular medical services.

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[197] Advocated by the late colonial and early independence local administrations – see Chapter Five.

[198] Many Hehe were no longer agro-pastoralist, having lost much of their livestock to disease (Jennings, 1994, 23).

A further factor contributing towards the *Ilparakuyo* migrating to the physical periphery of farming communities was the creation of the Lunda-Mkwambi Game Controlled Area (LMGCA) in 1984[199], and the associated subsequent evictions in the late 1980s and early 1990s of the *Ilparakuyo* in the Lunda section[200]. To the south-west in Idodi, local Wildlife Department officials were persuaded by wealthy resident hunting interests to extra-legally[201] evict pastoralists from the area in the interests of securing their wildlife hunting prospects. Although the few documentary records (found in village government reports to the District Game Officer) of these evictions are far from conclusive, oral accounts by *Ilparakuyo* individuals nevertheless are. Pastoralists have remained in the Lunda North section of the Game Controlled Area - however tenuously - more recently accompanied by farming communities moving back to restart their old settlements post-*Ujamaa*. Yet in 2002, there was a further round of evictions (Walsh *pers com.*).

There is strong cause to consider (as this Chapter attempts to demonstrate) that the depopulation of the larger part of the Idodi rangelands and the more reason eviction of pastoralists from parts of the LMGCA has led to substantial changes in the livelihoods and land-use practices of the *Ilparakuyo*. The *Ilparakuyo* have undergone a relatively rapid and, for many, an arguably irreversible transition from pastoralism to agro-pastoralism. Once leading a more semi-transhumant lifestyle, the *Ilparakuyo* now maintain a predominantly sedentary way of life in a tightly bounded landscape. The arrival of the Barabaig in the early 1980s from northern Tanzania was to further impact on the *Ilparakuyo*, their landscape-use practices and their relations with the Idodi Hehe/Bena farming community.

6.2 The Barabaig in Idodi

The Barabaig pastoralists are a minority ethnic group in Idodi. I explain why the Barabaig came to settle in Idodi as relative newcomers, and provide an overview outlining some of the key reasons why their use of the landscape and their socio-ecological situation has led to poor relations with other land-users, an increase in land-use conflict and their continued marginalisation. Although these latter themes are taken up in more detail in Chapter Seven as part of a discussion about land-use conflict, some key ethnographical and context-setting data is provided in this section, in relation to that provided about the *Ilparakuyo* later in this chapter. Much of the information below, where not specific

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[199] Prior to the creation of the LMGCA, there had been an 'Iringa Controlled Area' (ICA) probably created in 1951 or 1952, under the Fauna Conservation Ordinance of 1951. It is thought that the ICA became defunct after a number of years. Certainly there is no mention of the ICA during the gazettement process for the Ruaha National Park in 1964 (*pers com* Walsh). The LMGCA was created by Government Notice No. 33 published on 1st February 1985 under the 'Wildlife Conservation (Game Controlled Area) (Declaration) (Lunda Mkwambi) Order, 1984'.

[200] Pastoralist and farmer evictions in the Pawaga Lunda North section of the LMGCA have continued to occur over the years, but these events have had a less-direct impact on developments in Idodi. More recently, the authorities have especially targeted Barabaig herders who take advantage of seasonal grazing in the Ruaha National Park.

[201] This issue is also discussed in Section 3.5.

to Idodi, is necessarily derived from Lane 1996, as this is the most comprehensive and recent ethnography available on the human and political ecology of the Barabaig people.

6.2.1 *The arrival of the Barabaig in Idodi*

The Barabaig are a sub-group of the Tatoga peoples who have lived in Hanang District in northern Tanzania since the nineteenth century (Lane 1996, 1). The Barabaig first arrived in Idodi in 1984 (*pers com* Kipilipili) and many have since settled in the area on a permanent basis, becoming residents of the Idodi villages. The arrival of the Barabaig now living in Idodi is part of a larger long term trans-migration of Barabaig people from northern Tanzania southwards as far as south-western Tanzania in search of new pasture and farmland. Lane (1996, 152) explains that the emigration of the Barabaig from their homeland southward has been due to the long term loss of their land over the last 50 years and more. Over this period, Iraqw agropastoralists have gradually expanded south from the Mbulu highlands north of Hanang District, driven southwards by population pressure in the highlands and attracted by Hanang District's fertile land (Lane 1996, 152; see also Iliffe 1979, 351). Thus over time the Iraqw have occupied some of the most fertile soils of the Barabaig plains as they practise their intensive agriculture, and in surrendering access, the Barabaig have lost some of the most productive elements of their grazing rotation (Lane, 1996, 153)[202]. A second factor has been the expanding and shifting tsetse fly belts, which over the years have reduced the availability of pasture, in concert with the Iraqw expansion. In response to these developments, Barabaig families began to leave Hanang District as early as 1957, moving into Singida District in search of new pasture, in what the Barabaig perceive as being an appropriate relocation response - that of moving effectively and often (Lane 1996, 153-4).

However, perhaps most significantly during the early 1970s, a large extent of Barabaig customary land (100,000 acres) on the Bastotu Plains was alienated by the state for developing large scale commercial wheat farms as part of the Tanzania Canada Wheat Program (TCWP) (Lane 1996, 155). This appropriation of land comprised almost the entire extent of the *muhajega* that was so important for Barabaig pastoral production (Lane 1996, 155). The loss of this *muhajega* land, together with constrained access to other grazing resources, comprised a substantial threat to the productivity of Barabaig herds and led to the emigration of many more Barabaig families southwards.

Today, many of the Barabaig families living in Idodi are environmental refugees who left Hanang District during the late 1970s and early 1980s, either directly or indirectly as a result of the socio-environmental impacts of the Tanzania Canada Wheat Program (*pers com* Gissemoda). For example, eleven Barabaig families living in the Idodi villages arrived from Hanang District in 1984 and a further fourteen families arrived during the 1990s, although these latter families lived in other rangelands, such as Usangu and Pawaga, before settling in Idodi. Many of the Barabaig now living in the Idodi villages maintain a locally mobile lifestyle, moving their homestead encampments within a

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[202] Lane (1996, 153) explains that most Barabaig were often willing to move out of an area in the face of an Iraqw intrusion as the Iraqw and Barabaig had together fought against the Maasai during the nineteenth century, and also share common lineages.

localised area in response to changing grazing conditions. Often these movements follow a regular seasonal range use pattern. Other Barabaig remain predominately transhumant, moving substantial distances across Idodi and Pawaga in their search of grazing and water, and negotiating their access to these resources when compelled to do so with local village governments.

6.2.2 *The Barabaig domestic unit, development cycle and household economy*

The Barabaig domestic unit can be described as usually consisting of a male household head (*gwarwa*), his wives, sons and unmarried daughters living in a *ged*. Each *ged* consists of a thorn-brush enclosure in which there are separate sub-enclosures for people (*samod*) and livestock (*muhaled*)[203] (Klima 1970, 34; Lane 1996, 122). The *ged* requires a large amount of wood which is cut from the surrounding bush or woodland. A firebreak is cut around the *ged* to prevent catastrophe from wild fires that pass through during the dry season (Lane 1996, 123). Each wife has her own *ga* (hut) and there is a men's hut, the *huland*, in which all unmarried males over about the age of six live (*Klima* 1970, 37; Lane 1996, 3). A single gate (*dosht*) opens into the *samod* and *mhalend* enclosures. If the household has enough members and sufficient livestock, it may be split across different sites, so as to enable better access to grazing (Lane 1996, 42). Household work is split strictly along gender lines (Lane 1996, 43). Women are responsible for milking, food preparation, child rearing, domestic hygiene, preparation of skins, hut maintenance and collection of water, wood and thatching grass. Men are responsible for herding, house construction, security and social organisation (see Section 6.2.4).

A *ged* will expand in size over the period of a development cycle as a man marries several wives to whom a substantial number of children may be born. On reaching adulthood, and upon his first marriage, a son and his new wife may initially live in his father's *ged*, before moving away at a later stage to found their own *ged* and larger polygamous family. On marriage, a woman will leave her father's *ged* and move into that of her new father-in-law's, bringing her dowry of livestock with her. These cattle will form part of the matrifocal herd that will be inherited by her sons. Thus different members of the household may have different rights over the livestock in a *ged* depending on the origin of the livestock and the nature in which the livestock became part of the *ged* herd (for example, as dowry, bride wealth, inheritance or gifts) (Klima 1970, 41 & 67-71). This means that although the household head is responsible for managing the herd, he is not entitled to sell his wife's cattle without her permission. Male children are given their first cattle as a gift on the eruption of their milk teeth, and it is from these and subsequent gifts of cattle at different stages of their life that young men build up a foundation herd. After the death of a lineal head, the *ged* will usually split up, each widow either returning to her fathers' *ged* or moving away with her remaining children, perhaps to live with a married son[204] (Klima 1970, 107).

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[203] There may also be a smaller livestock enclosure for sheep, goats and claves (*jaboda muhog*).

[204] Klima (1970, 107) makes reference to leviratic unions as also occurring in order to prevent the dissolution of the family and cattle herd. It is not known how common this practice is today.

Cattle play a central part in the household economy and the social life of the Barabaig - for example, in their role as providers of milk, as a source of income, and as an important part of social ceremonies and jural process (Klima 1970; Lane 1996). The structure of the household cattle herd is managed for the production milk, and herd cows may have a long and productive life, whereas male stock, other than selected individuals, may be sold or passed out of the herd relatively quickly. Cattle are usually only consumed as part of a social ceremony or if they are about to die, in which case the meat may often be shared with neighbours (Klima 1970, 42). Goats, sheep and chickens may also be kept. As is the case for many pastoralists in Tanzania, some Barabaig are farmers[205] as well as herders, cultivating grain (maize and sorghum) to supplement the production of their herds (Klima 1970, 13; Lane 1996, 74). Lane (1996, 64) describes the Barabaig families that he studied in Hanang District during the late 1980s as being relatively food self-sufficient, with just twelve per cent of total household expenditure spent on purchasing food. Although farming may provide the bulk of food consumed in the household, cattle are the main source of income for the purchase of food, other commodities (such as honey, veterinary drugs and tobacco), and livestock. Lane (1996, 67) describes the Barabaig cattle herds in Hanang as likely to be growing only very slowly due to a combination of high mortality and the need to sell cattle to generate a cash income. Thus it is not surprising that Lane describes the Barabaig as, '...active and astute marketers who invest in livestock and maximise economic and social returns' (Lane 1996, 67).

6.2.3 *Barabaig herding in Idodi*

Barabaig herd zebu short horn cattle (*Bos indicus*) that are a relatively small but hardy breed. These cattle are able to tolerate harsh conditions, walk long distances, survive for relatively long periods without water, and still produce milk, albeit in relatively small quantity, but rich in butter fat (Lane 1996, 45). Although cattle are predominantly herded by men, women may help when there is a shortage of labour. Children herd calves and often goats and sheep separately close to the *ged*. The Barabaig view cattle as 'grazing themselves', as the herd is led to a general area and allowed to graze as they choose (Lane 1996, 45-46). The rangelands of Idodi receive a slightly smaller amount of rainfall than the Bastotu plains (average 644mmyr^{-1}). As with the rangelands of Hanang, the Idodi rangelands are prone to both wetter and drier years. Both Hanang and Idodi have some similarities in the types of vegetation that occur, particularly in regard to two types of woodland. *Acacia-Commiphora* and *Brachystegia* (miombo) woodlands occur on the Barabaig plains and across much of Idodi. In Hanang, as also in Idodi, the diversity of grazing resources in space and over time requires the Barabaig to practise transhumance (Lane, 1996, 108).

In Idodi, resident Barabaig families follow a similar pattern of range-use to the *Ilparakuyo*. Towards the end of the dry season, as the first rains begin to fall in the hills to the south, the Barabaig take

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[205] Few Barabaig families living in northern Mbulu District in the Eyasi basin have cultivated much grain for at least the last 30 years because of the aridity of the area and the need to move livestock large distances to forage and water (Sieff 1995, Tomikawa 1970 & 1972 cited in Sellen 2003, 534). In comparison, a much greater proportion of Barabaig living further south tend to farm - for example, in the Basotu area and the Barabaig plains (Lane 1996, 64).

their stock up to the uplands to exploit the new growth. As soon as the rain arrives down in the Idodi villages of Tungamalenga, Mapogoro and Idodi, they move their stock down usually in early to mid December depending on when the rain arrives. The herd may then remain in the village commonages until the head of household decides that the ectoparasite load has reached too high a level, at which point the herds are moved to Malinzanga village for wet season grazing[206]. Once the wet season grazing is depleted, the herds are moved back to Idodi, Mapogoro and Tungamalenga, although many Barabaig families favour living in proximity to each other particular parts of Idodi village[207]. This is likely to be because the neighbourhood is an important unit in the development and sustaining of community cohesion (Lane 1996, 143). The herds are then grazed on farmers' field crop residues and in the *Acacia-Commiphora* and *Brachystegia* woodlands around Idodi for the rest of the dry season. This latter period is frequently a tense time for the Barabaig as they negotiate access (and sometimes not) to farmers' fields and their crop residues. Disputes between Barabaig and farmers often occur, and in recent years have led to outbreaks of violence. Although discussed further in Chapter Seven, tension between Hehe/Bena farmers and the Barabaig has led to the reinforcement of stereotypes of the Barabaig as being backward, belligerent and inconsiderate range-users among villagers and local government officials (see also Lane 1996, 30).

6.2.4 *Barabaig and farmer land-use relations*

The highly mobile nature of Barabaig land-use has tended to result in a lack of strong social relations with local farming communities in Idodi. Although Barabaig families return to particular localities in Idodi in their seasonal use of the Idodi rangelands, they may only be present in these particular areas for relatively short periods of time. In addition, and in comparison to the *Ilparakuyo*, there has been much less need for the Barabaig to enter into client - patron relations with farmers, since their production systems have remained mobile and largely separate - except for the increasing case of dry season field grazing. Nevertheless, particular Barabaig personalities are well known in Idodi, although even some of these resident *Barabanda* (Barabaig: Barabaig individuals) have often been at the centre of conflict over grazing practices.

Barabaig families mostly delegate livestock herding responsibilities to their young men (e.g. Lane 1996, 45) who have sometimes driven herds of cattle into farmers' fields without the consent of farmers, and sometimes before the fields have been harvested. Rice field irrigation furrows and standing crops have been damaged or sometimes destroyed. Farmers claim that Barabaig cattle incursions into their fields have been purposefully and repeatedly perpetrated, despite complaints to both the Barabaig and village government, often to little avail. Farmers have responded to the cattle presence by burning their fields immediately after harvest, as well as purposefully setting fire to the surrounding rangeland areas in the early dry season in an effort to dissuade Barabaig pastoralists from grazing their stock in the area. This has led to an escalation of dispute and sometimes violent

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[206] The Korongo and Nyamdawe areas about ten kilometres north east of Malinzanga village are favoured.

[207] These are the Kibikimuno and Nyangolo areas of Idodi – which feature further in Chapter Seven.

conflict as Barabaig have then had to rely even more on farmers' fields during the dry season as sometimes large rangeland areas are burnt.

6.2.5 *Social organisation, property relations and jural institutions*

Every person born into Barabaig society, is a member of a clan or *dosht* (Barabaig: gate), that is unified by male lineage traced to a common founding ancestor (Lane 1996, 2; Klima 1970, 39). All clans are exogamous (with one exception - the blacksmith clan) and are divided into spiritual (*daremng'ajega*) and secular (*homtka*) clans (Lane 1996, 2; Klima 1970, 81). The clan is the largest unifying and corporate group, and is an important level at which social, political and jural affairs are mediated (Klima 1970, 80-87). Genealogical status is an important part of Barabaig everyday identity (Klima 1970, 83).

Property ownership exists at the private (family), clan and 'tribal' level. The *ged* and its immediate vicinity (which may include particular shade trees, a small delimited grass reserve for young stock, and other milking, shade and rest areas) is perceived as being the private property of the household (Lane 1996, 136). A farm plot that may lie some distance off is also the private property of the household. Other Barabaig herders are expected to respect these areas and their resources and refrain from using them. Outside the vicinity of the *ged* lies a range of other resources which may be owned by the clan[208] - such as particular wells, ritual sites (often associated with funerary monuments and reserves) and certain trees (Lane 1996, 136-138). These latter features are absent in the Idodi landscape. Lastly, in their homelands, the Barabaig perceive ownership of their rangelands as a group, and have in recent years set about to defend their customary rights against the state's alienation of land by convening a special committee (see below).

Lane (1996, 2) describes jural authority over land and property as occurring at the 'tribal' (*Gedahanangwed*), clan (*dosht*) and neighbourhood (*gisjeud*) level[209]. Land relations are mediated

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[208] In former years, clan territories existed.

[209] There are five key institutions that are important in Barabaig society. The first is the 'tribal' assembly (*Getabaraku* – 'meeting of the wide tree'). All adult males may attend, and although the meeting institution has no office bearers, hierarchy is determined by skills of oratory, knowledge, wisdom and status from involvement in the issue being considered. A committee of elders makes the final decision on issues that are debated by all attending (Lane 1996, 138). The *getabaraku* is the ultimate authority on matters of common property land rights, water and trees although its jurisdiction does not extend to authority over clan property (Lane 1996, 139). A *makchamed* may be selected from the ranks of elders to meet in camera to consider matters of gravity or wrong-doing. The secrecy of the deliberation protects *makchamed* members from personal association with decisions made, and enables more effective investigations to be made. The oath on which evidence is given remains particularly effective (Lane 1996, 140). Additionally, a *makchamed* may be convened by two or more elders to address a particular issue independently of a *getabaraku*, as has been the case for the Barabaig's long-term campaign to regain alienated land from the state. An important and powerful institution is the women's council (*girgwageda gadmeg*). The council is often concerned with issues at neighbourhood level, but may also play an important role more widely due to women's special role in Barabaig spiritual life, for example

most strongly at the clan level through clan moots (*hulandosht*). These are courts made up of all adult male members of the clan, that deliberate on conflicts over access to clan property, particularly in relation to matters of marital exogamy and property in livestock (Klima 1970, 84; Lane 1996, 142). Deliberations are led by the clan head (*ashohoda dosht*) who is the senior living male descendant of the clan founder (Klima 1970, 83). There are no jural relations between clans (Klima 1970, 86; Lane 1996, 143).

Disputes of private property are resolved by a 'council of neighbours' (*Girgwageda gisjeud*) convened by any local elder who proposes the meeting (Lane 1996, 143). The 'council of neighbours' plays an important role in mediating matters of public concern, such as controlling and quarantining a disease outbreak in a *ged*, resolving domestic disputes (in private session), sanctioning members of the community mostly through fines of honey (due to its ritual purity) and regulating the arrival of newcomers to the area (Lane 1996, 143). There is an understanding that large herd owners should not live in the same neighbourhood, as this would put stress on the grazing resources (Lane 1996, 143).

6.3 *Ilparakuyo* landscape occupancy

The *Ilparakuyo* today comprise a diaspora stretching from north-eastern Tanzania to the south-western extent of the Usangu wetlands. In Idodi, they live on the peripheries of the Hehe/Bena farmlands in sites that have come to be recognised by these farming communities as '*umaasaini*' - the place(s) of the Maasai.

As discussed in Chapter Four, the Hehe still perceive the land on which the *Ilparakuyo* live - '*Umaasaini*' - as collectively belonging to their (Hehe) domain. Thus the *Ilparakuyo* (and the Barabaig) ultimately have little *de facto* defensible tenurial right in the areas in which they live, although they are able to maintain and defend tenurial rights to farmland through fields which they have bought or rented. The lack of tenurial security for the *Ilparakuyo* (and the Barabaig) living in the village commons that comprise *umaasaini* is also in part due to their customary practices. As Rigby (1983, 136) comments, customarily the *Ilparakuyo* do not conceive of land as being owned, and thus until recently there has been little precedence for claiming tenurial right to rangeland for grazing. However, as discussed in Chapter Seven this situation is starting to slowly change, as the *Ilparakuyo* struggle to secure sufficient access to grazing in Idodi.

The *Ilparakuyo* have established and repeatedly settled particular *enkang'* sites over the years, usually not far from village settlements. These homestead *enkang'* sites have become popular with the *Ilparakuyo*, having developed as result of a complex interplay of considerations. Today these may include access to grazing, the availability of water for the household, the distance to any owned or rented farm fields, established labour networks, and who else is living in the vicinity (this may be

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in mediating socially appropriate access to land and in their jurisdiction in matters involving offences by men against women (Lane 1996, 141).

particularly important in terms of a family's perception of their magical security in the landscape [*pers com* Mtemisika]). Perhaps even more significantly, as discussed in Chapter Four, proximity to farming settlements has provided the *Ilparakuyo* with increasingly integrated relations with Hehe/Bena farmers that have grown out of trade and labour relations and client-patron relationships. To an extent, both farmer and herder have become increasingly reliant on each other for trade and labour opportunities and many friendships have arisen out of such client-patron relations.

6.3.1 *Pastoral ecology and range use patterns*

The rangelands of Idodi, as discussed in Chapter Four, consist of a mosaic of different vegetation communities comprising of *Brachystegia* woodland on the higher hill slopes bounded lower down by relatively narrow bands of *Combretum* woodlands which quickly shift into grassed *Acacia-Commiphora* bushland at the base of the rift valley (Nahonyo *et al*, 1998). The *Ilparakuyo* tend to rely most on the patchy grasslands, woodland glades and herbaceous undergrowth of the *Combretum* and *Acacia-Commiphora* communities for their grazing requirements, and only more occasionally do they make seasonal use of the higher *Brachystegia* woodlands.

The *Ilparakuyo* retain a substantial amount of flexibility in the use of the rangelands - principally driven by the availability of grazing and water contingent on rainfall. While homesteads remain more-or-less permanently placed in a locality, the herd, less young calves and a limited number of milking cows, may be seasonally moved a substantial distance to the homestead of kin or even to a temporary *enkang'*, either to take opportunity of seasonally better range conditions, and/or to avoid increased seasonal disease risks in any particular year.

Dependent on range conditions and if possible, movement of a herd tends to be avoided late in the dry season as other time and labour demands begin to compete with those of herd movement, grazing and guarding - activities that away from the homestead locality tend to be seen as the responsibility of the *ilmurrani* (Maa: warrior; sing *ilmurran*) age set. Such other demands are, for example, arranging the renting of agricultural land, helping to organise labour and carrying out field ploughing and planting.

The rangelands of Idodi are valued by the *Ilparakuyo* in regard to the quality of grazing available - dependent on transient flushes and qualities of grasses, forbs and browse plants, the seasonally varying parasite and disease risks as well as the ground conditions underfoot. In a year that receives an average amount of rainfall, a generalised range-use system may be described as follows:

In the late dry season during the months of late October and November, there is a tendency for the upland *Brachystegia* woodlands, to receive the first rain of the wet season up to six weeks before the main rains arrive in the *Ikwavila* valley and *Kwigongo* lowlands below. This occurs especially on the *Mguhu, Chamyina* and *Chamgong'onzi* hill ranges together with the uplands to the south including *Ngombaguli*. The grass flush that ensues is seen as a critical nutritional opportunity by the *Ilparakuyo* for their herds - especially in years when grazing resources in the lowlands have become heavily depleted and the nutritional value of the grasses and forbs has declined. *Ilparakuyo* households will

cooperate and join together in moving their main herds up onto the upland slopes returning to temporary *enkang'* sites that may have been used the year before or the last time they had occasion to take advantage of the grass flush to economise on labour requirements.

As soon as the first rains arrive in the lowlands, the herds are moved back down into the lowlands to avoid increasing seasonal disease risks in the upland areas and to accommodate pressing commitments in cultivating the year's grain crop. The lowland grasses, once they begin to flush, are also perceived as more nutritionally efficacious than the upland. Thus, with the arrival of the rains in the lowlands, the nutritional security of the herd is reasonably assured for the next 5 months as the herds take advantage of the rapid grass flushes. As the wet season ends and the dry begins, those households with larger herds may divide the herd and send some or most of it to the *Mlowa* lowlands where the green, more extensive grass flush often remains for longer.

By the end of July, the herds have begun to be brought back to the homesteads to graze on the now harvested fields of maize '*mabua*' (Swahili: the residue of harvest crops - usually maize) and other crop residue - for example legumes such as groundnuts. Access to each field is frequently negotiated between herder and farmer most often for cash and it is on these fields that the cattle depend for much of their nutritional requirements for the rest of the dry season. Once there are no longer any *mabua* in the fields, the *Ilparakuyo* are forced to graze their herds in the marginal grazing areas that are left. The interval between the depletion of the *mabua* and the onset of the rain in the uplands is the most nutritionally stressed period of the year for the herds, and their condition continues to deteriorate until the arrival of the next season's grass flushes.

There are a range of grass, forb and tree/shrub species that are recognised as being the most nutritious and beneficial to herd health - see Box 6.1. Many of these species are perceived as having temporal peak productivities as well as nutritional values and thus the grazing strategies of especially the more knowledgeable herd mangers may frequently aim to take greatest advantage of these peaks. Knowledge of the localities of where favoured grasses occur is key to maintaining the condition of the herd especially towards the end of the wet season when stock need to have accumulated as much condition as possible before the onset of the seven to eight month dry season. The annual movement of *Ilparakuyo* (and Barabaig) herds to Mlowa to take advantage of its late wet season grass flush is of note in this regard. The condition of female cattle may be critically important for calf mortality in the latter stages of the dry season when there is a tendency for the many of the mature female herd to be near term and close to calving - which usually occurs from the middle of the wet season onwards, tapering off some way into the dry season.

Figure 6.1: Grazing farm fields during the early dry season

Figure 6.2: Chamyina mountain and highland scarps looking south from Idodi village rangelands near Kibikimuno

Box 6.1: Some of the more important grass, forb and tree/shrub species for *Ilparakuyo* livestock in the Idodi rangelands

Important grass species:

- *Orrmbuliesh* - a nutritionally important and popular wet season grass growing in the lowland grasslands up to a metre high but poorly tolerating dry season grazing, drying out and withering quickly after the end of the wet season.
- *Orrarobai* - a dry season lowland staple that sprouts in the wet season but has unpalatable barbs that recede as the grass dries. Grows up to a metre in height.
- *Orrkerien* - a lowland riparian grass, growing along stream banks and especially important for grazing during the dry season when it may grow up to 2 metres high. It grows especially well in the wettest areas.
- *Orratemii* - an upland grass important in the early wet season when its new flush is relied upon for the new season's grazing.

Other species identified as being of lesser importance include:

- *Orrkawai* - a widespread wet season grass particularly occurring in the lowland grasslands and swampier areas
- *Orrngramnatia* - particularly occurring in the grasslands, of grazing significance during the wet season but its flush carrying over into the early dry season
- *Orrikirian* - a grass occurring on the lower slopes of the uplands as well as in the lowlands. A moderately significant species during the wet season, occurring extensively in the Mlowa area. Growing to about a metre in height, this grass is a wet-season grass and rapidly dries back during the dry season.
- *Orroieti* - an uncommon grass but occurring in river flood-recession areas, A creeping grass with a restricted occurrence, it grows to about a metre tall.
- *Orrlkijuta orruki* - a grass that is grazed in the early wet season while still short but growing to over 3 metres in height, the grass becomes unpalatable and thus is avoided when mature.

Important tree and shrub species include:

- *Oljasilalei* - *Acacia albida* - a large tree which bears orange and purple seed pods which when they fall are grazed by livestock and are perceived to be very nutritious.
- *Oldabesi* - *Acacia sieberiana* - a medium sized tree with black bark which produces a large crop of small fruit which are green immature and beige upon ripening.
- *Olndundulu* - *Acacia stuhlmannii* - a scrub-like species which produces red fruit when ripe early in the dry season. This species is not as important in terms of cattle fodder as compared to the *Acacia sieberiana* and *Acacia albida*.
- *Olmakerekala* - Premna resinosa - a deciduous tree dropping its leaves during the early-mid dry season becoming an important source of fodder mainly for small stock.
- *Embili* - *Spp unidentified* - a short scrub tree the leaves of which are browsed by goats during the wet season flush
- *Mbomboi* - *Spp unidentified* - a creeping shrub with white flowers especially important as wet and early dry season graze for cattle.
- *Oljogirr* - *Spp unidentified* - a creeper which can grow on trees occurring in the low-lying wetlands which is browsed in the early dry season.

Descriptions given by Salum Mtemisika Mtango

6.3.2 *Livestock disease and range-use patterns*

The *Ilparakuyo* herds perhaps most critically are continually exposed to two diseases of special note - Trypanosomiasis (Swahili: *Ndigana*) carried by the tsetse fly (Maa: *liipis enado* [red/brown *Glossina morsitans?*] or *lipiis enarok* [black *Glossina pallidipes?*]) and Contagious Bovine Pleuropneumonia spread directly between animals. The *Ilparakuyo* herds have been locally exposed to trypanosomiasis for many years (since at least the 1930s when the tsetse fly belt was recorded as having expanded south into Idodi and Pawaga). Traditional treatments and prophylaxes are known and, when practised together with the appropriate application of modern drugs, appear reasonably effective in reducing herd mortality. However, the herds' exposure to Contagious Bovine Pleuropneumonia (CBPP) is much more recent, locally associated with the arrival of the Sukuma who may have brought the

disease with their stock from north-central Tanzania. While the symptoms of this disease are widely recognised by *Ilparakuyo*, and are treated with the use of antibiotics, the epidemiology of the disease remains poorly understood by them. The initial arrival of this disease in the early 1980s is associated with much increased general herd mortality and morbidity[210]. An annual vaccination campaign begun in the late 1980s as part of the District's response to controlling the disease has not been particularly effective as it has been severely compromised by the somewhat less than total presentation required of all cattle for inoculation[211] necessary for CBPP control. The disease remains extremely difficult to control with the movement of stock between vaccinated, partially vaccinated and unvaccinated herds maintaining reservoirs of disease carriers.

Both these diseases are locally largely spatially and seasonally unavoidable and although the *Ilparakuyo* avoid use of areas with noticeably higher densities of tsetse - for example, the Mkupule area - they cannot avoid continual exposure to lower densities of tsetse fly endemic to the *Acacia-Commiphora* bushlands. However, seasonal disease problems - such as hoof rot (Maa: *orkuluk*) [212] - may be avoided by temporarily moving the herd to a drier area. A further and seasonally varying impact on livestock morbidity and productivity is tick-borne (Maa: *olmeherr* sing. *ilmeherr* pl.) disease such as East Coast Fever. Currently the *Ilparakuyo* in Idodi do not have access to dip facilities (and have not had) although some *ilmarei* will use back-sprayers (sometimes borrowed from farmers) to spray cattle with an acaricide when the tick load is perceived as having become acute. Disease constitutes a substantial factor in continued herd morbidity and mortality, and disease outbreaks associated with a specific vector or set of climatological conditions, may impact on inter-annual range use patterns from time to time. *Ilparakuyo* also report their livestock as suffering from anaplasmosis (Maa: *olodokolak*) and being irritated by biting flies (Maa: *nemerigesh*) and mosquitoes (Maa: *ngojung'wani*). Divisional veterinary records report that other diseases such as liver fluke, lumpy skin disease and brucellosis are present in the area (see Table A3).

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[210] The authorities have long recognised the significance and importance of CBPP's spread southwards through Tanzania by declaring district quarantines as a means to halting the movement of livestock between the most affected districts. The quarantines have remained difficult to enforce and intermittently broken by itinerant pastoralists and cattle traders sometimes with the collusion of village and other officials.

[211] Largely due to a lack of understanding of the significance of the vaccine but more generally as a result of suspicion on the part of *Ilparakuyo* as to the motive for treatment given that the livestock extension staff have been compelled in the past to act as stock revenue collectors. A bout of adverse immune reactions to the vaccine immediately after inoculation in 2000 in the herds of some *Ilparakuyo* was the cause of much complaint and further suspicion. However this phenomenon has not re-occurred.

[212] Hoof rot/ foot rot is a recognised pathological condition caused by various organisms – principally bacterial but also variably in association with a range of nematode and arthropod parasites. The condition is contagious and often occurs in hot humid circumstances (generally at the onset of the rains). It is extremely difficult to control but may be curtailed by shifting infected stock to drier under-hoof conditions (as the *Ilparakuyo* are very aware) – see Hall (1977: 119) for further information.

6.3.3 *Range agreements, range tenure and farm fields*

While the ephemeral quality of the range is key to how *Ilparakuyo* manage their herd movements, the presence or absence of land-use agreements between the *Ilparakuyo*, Barabaig and the Hehe/Bena may also have a substantial impact on range use. While farmland areas are generally accepted as being proscribed to livestock - a prohibition arising from a variety of rules and decrees at District, Divisional, Ward and Village government levels, this does not prevent farmland-use during the dry season for grazing as informally agreed between farmers and herders. Some general village land-use agreements have been developed between village governments and *Ilparakuyo* herders that designate exclusive herding and farming areas - as discussed further in Chapter Four and Chapter Seven.

While village farmer-herder land-use agreements are starting to modulate herder landscape occupancy, there is a further dimension to rangeland-use and tenure consisting of the interaction between *Ilparakuyo* and Barabaig herders. While both groups of these herders seek to take advantage of seasonal fluctuations in the quality of the range (characteristic of arid and semi arid lands), they may frequently compete with each other for grazing resources. As discussed in Chapter Four, the non-cultivated rangeland areas fall under a number of tenure categories. The village commonages, which pastoralists depend on, are not perceived by village councils and village assemblies as formally belonging to any collective group or individual in the village. Currently in Idodi, since pastoralists have yet to obtain formalised rights over village commonage, the presence of an *enkang'* in a particular locality does not confer *de jure* precedence over the right to use the surrounding range. However, the presence of the *enkang'* and the fact that a herd is locally resident confers some *de facto* degree of tenure over the range, although this remains varyingly non-exclusive and subject to use by others. It is up to the incumbent herders - *Ilparakuyo* and Barabaig alike - to voluntarily co-operate or otherwise in range use and management.

The *Ilparakuyo* (and the Hehe/Bena) generally view the Barabaig as owning much larger herds. Many Barabaig continue to follow highly transhumant range use patterns. This enables Barabaig herders to successfully take advantage of the mosaic of temporal and spatial graze biomass production moving their herds at short notice substantial distances when range conditions require. This high reliability strategy (Roe *et al.* 1998) enables the Barabaig to move into a range area and graze it thoroughly with a relatively large herd before moving on to another grazing area. The *Ilparakuyo*, being much more sedentarised due largely to farming commitments, tend to rely more on localised range resources and only after they have become depleted will they move their herds to alternative range areas - if possible. The arrival of an itinerant Barabaig herder in a locality can severely and adversely impact on an *Ilparakuyo* herder's grazing plans when the range identified as being sufficient for the herd's requirements is rapidly depleted by the Barabaig herder's often larger herd. An *Ilparakuyo* herder's knowledge of local grasslands and their performance in annually varying climatic conditions is critical to the successful maintenance of the overall nutritional security of the herd. The current lack of range-use agreements between *Ilparakuyo* and Barabaig herders is likely to negatively impact on the effectiveness with which the range can be used and managed by the *Ilparakuyo* - who are most disadvantaged since they tend to mange their herds at smaller spatial

scales than the Barabaig. The insufficient range-tenure security currently experienced as a whole by the *Ilparakuyo* is therefore of increasing significance for *Ilparakuyo* pastoral production and landscape occupancy strategies. A practical example of the negative impacts of tenure insecurity is illustrated by the fact that while some *Ilparakuyo* herders still practice the habit of retaining calf grazing reserves[213] - areas of range close to the *enkang'* which are left un-grazed for dry season grazing by milking cows and calves, the habit is not widespread. A key factor identified by some *Ilparakuyo* herders for the lack of grazing reserves was their insecure nature - a result of the high probability of a reserve being grazed clean by another herder without recourse to any recognised and enforceable form of rights over the area (*pers com.* Mtango and Mgemaa).

Farm fields are a key dry season grazing resource, and although access to these fields by herders is usually negotiated for a fee with their owners, field grazing may frequently be a source of tension and conflict. In part this arises from accidents where cattle may stray onto other, sometimes unharvested, fields. When this happens, the field owner will claim compensation from the owner of the straying cattle. Farmers accuse herders of often wilfully or carelessly letting their cattle graze where they please, leading to crop and/or field damage. *Ilparakuyo* herders often claim that such incidents are relatively uncommon, and when they do occur, farmers try to exploit the situation by demanding too much compensation. Another source of tension around crop-residue grazing in fields centres on soil fertility. As discussed in Chapter Five, some farmers believe that livestock can adversely impact the fertility of their fields due to the clouds of dust raised, which they say, blows away the fertility (i.e. the clay content of the soil). Some farmers also believe that cattle can destroy the structure of the soil, compacting and making it more difficult to cultivate. Few farmers think that the manure left by cattle grazing their fields makes a significant increment to the overall fertility of the soil. Finally, cattle are less commonly allowed by farmers to graze their harvested wetland fields as the irrigation furrows are prone to being damaged. In villages where wetland field grazing may be a more common occurrence, for example in Idodi village, outbreaks of dispute and even violent conflict between herders (particularly Barabaig graziers) and farmers have been much more frequent (see Chapter Seven). Many *Ilparakuyo* herders tend to avoid grazing their livestock in wetland fields, due to the heightened risk of dispute occurring, which may often involve costly compensation payments to farmers and also adversely impact on their social relations with the wider farming community (see Chapter Seven).

6.3.4 *Farming*

As the *Ilparakuyo* settled in the farmlands of Idodi, they began to depend increasingly on farming their own crops for their grain requirements, employing labourers to undertake the work. From the late 1960s onwards and through the early *Ujamaa* period, as the Idodi farmlands began to be increasingly settled by migrant and translocated farmers, a tendency of sowing old *enkang'* sites with maize using employed labour began. The use of old cleared *enkang'* sites (Maa: *olmuoate* sing.;

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[213] These reserves should not be seen as necessarily constituting a particular permanent area but as a temporary area that may be identified as being particularly appropriate for a grazing reserve in a particular year given the extant climatic and tenure-security conditions

ilmuaateni pl.) is significant in that the *Ildareto*[214] age set of the elder age class claim a time before *Ujamaa* when as *ilmurran* they did not practice farming to any extent[215]. It is also probable that during the years before they began farming, *Ilparakuyo* families were in the habit of purchasing rights to the crops of Hehe/Bena farmers' fields as occurred in Bagamoyo District (Rigby 1983, 187). As the farmlands became more densely settled and as less transient relations developed between farmers and more sedentary *Ilparakuyo* herders, the practical possibility arose for *Ilparakuyo* herders to copy farming techniques and access a growing labour market with which to cultivate their fields.

As with the Hehe/Bena farming community, the *Ilparakuyo* perceive farmland broadly as constituting either *nchi kavu* - or *bonde*. The *Ilparakuyo* gain access to farmland through a variety of ways. They may often own plots that may be purchased from Hehe/Bena farmers, or sometimes allocated by the village government. They may also rent or borrow fields from *Ilparakuyo* and Hehe/Bena friends and affiliates. Fields belonging to *Ilparakuyo* households are indistinguishable in the patchwork of plots that makes up the lowland farmlands. An exception occurs with crops planted on old *enkang'* sites that are almost exclusively the cultivation of *Ilparakuyo*. An *Ilparakuyo* family may have access to a number of fields that may be spread some way apart, but are most usually clumped around the *enkang'* site and within easy walking distance. Fields that are likely to be further away are those that have been especially sought after and may often be rice paddy *bonde* fields. In contrast to Beidelman's (1960, 254) observation from the 1950s that the *Ilparakuyo* did not farm at all[216] - despite traded grain being an integral part of their diet, today the *Ilparakuyo* not only farm, but may also sometimes carry out the manual labour required themselves.

Ilparakuyo landscape occupancy strategies are heavily and increasingly bounded by farming commitments, largely distinguishing them from the strategies of the Barabaig, many of whom do not farm, although a number of long-term residents increasingly do so. The *Ilparakuyo* are now effectively sedentarised and heavily agro-pastoralist. Many Barabaig remain transhumant for part or all of the year and are able to retain the greatest flexibility in their landscape-use.

6.4 Livelihoods

Having established how the *Ilparakuyo* (and the Barabaig) arrived in the Idodi rangelands and the nature of their landscape use practices, the rest of this chapter is taken up with a quantitative overview of current *Ilparakuyo* livelihood strategies and practices. The analysis is based on data gathered through homestead surveys and information derived from a series of informal interviews

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[214] The *Ildareto* age set was opened in Idodi and Pawaga in the mid 1950s and closed in 1974. It should be noted that the opening and closing of age sets in *Ilparakuyo* society is geographically staggered and is not entirely synchronous with the age set developments of the *Kisongo* Maasai in the north. The *Kisongo* Maasai usually open and close age sets before their closest *Ilparakuyo* neighbours who, in turn, have less of a time lag than those living furthest away in the south and south-west who have a delay of up to several years.

[215] In fact, informants were quite unequivocal about the absence of farming in *Ilparakuyo* before the late 1960s.

[216] Beidelman concedes that many historical sources exist which make reference to the *Ilparakuyo* farming prior to the period he was describing in the 1950s.

and discussions with *Ilparakuyo ilmurran* and *ilpayani* (Maa: junior elders; sing: *olpayian*). The data are presented in the context of the continued transition of local *Ilparakuyo* livelihood strategies towards increasingly agricultural and sedentary modes of production - especially as livestock holdings, while still important both socio-economically and in terms of their socio-cultural ritual significance, continue to decline.

6.4.1 *Households*

Maa terms for household and group household do not directly transliterate into English - for example, see Bekure *et al.* (1991) and Coast (2002). In Idodi the structure of *Ilparakuyo* households is variable and thus not easy to characterise at a single level. This is because polygamy is the norm in *Ilparakuyo* society and their domestic units reflect this. Most domestic units are multi-hearth households - *ilmarei* (Maa: family; *olmarei* sing.), made up of individual houses (Maa: *enkaji* sing; *inkajijik* pl.[217]), each owned by a woman married to a usually polygamous husband. In some regards the house of a co-wife, in which she lives together with her children, constitutes what may normally be defined as a single-hearth household - as for example, in Chapter Five. Since the co-wives of a polygamous multi-household live in the same compound, they may often share domestic tasks, such as livestock kraaling, child care and water and firewood collection. However, two or more multi-hearth households - termed here for clarity as 'super-households' - may also live together as a group in a larger homestead (Maa: *enkang'* sing.; *inkang'itie* pl.) and also varyingly share herding and domestic tasks. For the purposes of clarity, two or more super-households living together in a single homestead are termed here as 'group households'. Super-households living in a larger group-household may be related but not necessarily so. In Idodi, group-households comprise a third of all homesteads, with most super-households living separately but in close proximity to others.

In Chapter Five, a household is defined as those people sharing a common hearth, also usually limited to cohabitation under one roof. However, with higher levels of polygamy in *Ilparakuyo* society as compared with Hehe/Bena society, the level of the household becomes less useful analytically when labour sharing between households is taken into account and also when husbands, brothers and other affines may not always eat or sleep in the same household each night. Instead, the super-household is more analytically relevant, and is therefore given greater emphasis in the following description of *Ilparakuyo* livelihood strategies. The data cover all *Ilparakuyo* super-households in Idodi with the exception of Mlowa and Nyamahana villages. However the data, as collected, does not distinguish between the different households in each super-household in terms of, for example, the numbers of livestock allocated to each household, or the fields that one or more households may have cultivated together as part of the larger super-household.

A domestic unit's size and composition is dependent upon its position in the developmental cycle. For example, a junior *olmurrani*[218] (Maa: warrior; *ilmurran* pl.) may establish an *olmarei* in his father's

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[217] Some of these *Ilparakuyo* Maa terms differ in form to *Kisongo* Maa reflecting the variety of dialects in the Maa language (see Sommer and Vossen 1993).

[218] The age grades and age sets of the Idodi *Ilparakuyo* are presented in Appendix Five.

enkang' upon his marriage. The junior *olmurrani* will continue to use his father's cattle byre and the same gate (Maa: *enkishomi* sing.; *inkishomitie* pl.) into the family *enkang'* as his father, his father's wives, children and other agnatic and matrilateral relatives. Initially, when a woman marries her husband, for example, a junior *olmurrani*, she may move into her new mother-in-law's *enkaji* until such time as she has built her own *enkaji* with the help of the women and, sometimes, men. As the junior *olmurrani* passes into senior murranhood through *eunoto*[219], he will open his own *enkishomi* (gate) into his father's *enkang'*[220] and continue to marry further wives. Thus by the time a lineage head has become a senior elder (Maa: *olpayiani* sing'; *ilpayian* pl.), it may often be the case that several generations may be living together in the *enkang'* in one or more of the following combinations: as an *enkang'* in which the lineage head lives together with his wives, sons and their wives and children in several separate *ilmarei* - each *olmarei* comprising one or more households (*inkajijik*); as a *enkang'* of brothers or sometimes an agnate or age mate living together with their wives and children as well as perhaps a sister and/or a widowed mother; as a single *olmarei* with a husband living together with his wives and children.

Generally, although not always depending on the success of each *olmarei*, the longer an *enkang'* has been established, the larger it will become. A lineage head may aspire to become a respected elder or, 'notable' (Maa: *olkarsis* sing.; *lkarsisi* pl.) in his community[221], presiding over large herds (still possible to an extent in Idodi) and a large kinship group (Rigby, 1983, 145). Yet, as the *enkang'* grows, the lineal head's control over the primary means of production (livestock[222]) is progressively weakened and diluted, since wives, sons, affines and matrilateral kinsmen increasingly claim their rights to, and control of, certain portions of the *olmarei* herd (Rigby, 1983, 145). When the lineage head dies, and usually after the inheritance ceremony, the *enkang'* will, sooner or later, split up with the next generation dispersing to found their *ilmarei*. Women customarily may play a pivotal role in the inheritance process, as it is they who have the right to allocate livestock in their *enkaji* to their sons as they see fit through matrifiliation. Married sons may also leave the *enkang'* of their father while he is still alive to establish their own *olmarei*[223]. Thus over the developmental cycle, a domestic unit may grow from a single *enkaji* (house) to become an *olmarei* (multi-hearth household) and eventually a large *enkang'* (a group of multi-hearth households). A varying range of different relations or age

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[219] A ceremony in which the previous senior *ilmurran* relinquish control to the junior *ilmurran* below, prior to the opening of a new age set some years later.

[220] During fieldwork in Idodi, the largest number of gates in any *enkang'* was four (in one *enkang'* only), with one third of *inkang'itie* having two or more gates[220] and the rest (two thirds) having a single gate.

[221] Women also pass into respected senior eldership (Maa: *entasat* sing.; *intasati* pl.). Men and women senior elders are traditionally keepers and teachers of history , law and cultural unity (Rigby 1992, 69)

[222] Although, as *Ilparakuyo* are now increasingly agro-pastoralist and own farm fields, inheritance patterns and dynamics are likely to change, with fewer kin benefiting from the inheritance of fewer stock and a small amount of farmland.

[223] For a more detailed description of the physical and symbolic layout of an *olmarei* or *enkang'*, in relation to the developmental cycle and matrifilial patterns of livestock inheritance, refer to Rigby (1983, 140-161) .

mates and their wives and children may be brought to live together (as discussed above), before eventually fission occurs[224] after the death of the lineal head of the *enkang'*.

The compositional variety of *inkang'itie* in Idodi is shown in Table 6.1. Some *Ilparakuyo ilmarei* may at one time or another have one or, more rarely, two unrelated labourers[225] living in the *enkang'*. In addition to guests, *ilaiyok* (Maa: uncircumcised herd boys; sing *olayioni*) or *murran* (both sometimes but not necessarily agnatically related to the homestead family) from another homestead may sometimes also live for temporary or longer periods in the homestead principally helping with herding.

Table 6.1: The varying compositional number of households (*inkajijik*) in *Ilparakuyo* super-households (*ilmarei*)

Number of households (*inkajijik*) in each Super-household (*olmarei*)	1	2	3	4	5+
Number of super-households (n=52)	8	17	11	10	6
Percentage proportion	15%	33%	21%	19%	12%

The data presented in Tables 5.1, 5.2 and 5.3 are derived from a census survey of all *Ilparakuyo ilmarei* and *inkang'itie* carried out during fieldwork. Average household sizes in all *ilmarei* are very similar irrespective of overall *olmarei* size as shown in Table 6.2, apart from single household *ilmarei* which tend to be larger, the difference however not being statistically significant.

Table 6.2: Super-household (*olmarei*) and household (*enkaji*) sizes measured in Adult Equivalents

Number of households in each Super-household (*olmarei*)	1	2	3	4	5+
Super-households: average size (RAs[a])[b]	5.6 ±0.70	6.4 ±0.42	9.8 ±0.72	13.5 ±0.74	17.6 ±1.53
Households: average size (RAs[a])[c]	5.6 ±0.77	3.2 ±0.21	3.4 ±0.23	3.7 ±0.19	3.0 ±0.29

[a]RAs -Adult Equivalents (after ILCA 1981) - calculated for each household from household constitution data (adult male = 1, adult female = 0.86, children 0-5 = 0.52, children 6-10 = 0.85, male child 11-15 = =0.96, female child 11-15 = 0.86) - total RAs in 100 per cent sample = 501.6; [b] n=52; [c] n=150; Total number of people= 660.

However, there are notable differences in the make-up of *olmarei* in different developmental cycle stages. *Olmarei* and *olmarei* composition in terms of developmental cycle trends, given the fact that a substantial proportion of *ilmarei* and their constituent households may be at different development-cycle stages, can be most easily measured by using the age-set status of the male head of the *olmarei*. While not definitive, age set serves to act as a rudimentary indicator of basic trends for each developmental cycle stage, trends which are likely to be related to variations in livelihood strategies. This approach is heavily androcentric but necessarily so given the context in which the data were

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[224] Refer to Rigby (1992, 139-142) for further detail about the fission of domestic units.

[225] These labourers are often itinerant moving between homesteads following work, and are frequently Hehe or Gogo from Pawaga to the northeast and beyond.

gathered[226]. Table 6.3 provides a summary of *olmarei* characteristics analysed by the age set of the male head of each *olmarei*. Although five age sets are currently extant, only three feature since the oldest age set has nearly completely died out in the area and the youngest has just only been locally opened. The data show that the *ilmarei* of the most senior age class of senior elders (currently the *Ilmedoti* age set) are the largest. This would be expected given that they have had the longest period in which to expand as the patriarch continues to marry and take in relatives from discontinued households out with the homestead.

Table 6.3: Super-household and household characteristics presented by age-set as an indicator of life-cycle stage

Super-households headed by males of the age set[a]:	Senior elders (*Ilmedoti*) (1956-1970)[b]	Junior elders (*Ildareto*) (1972-1987)[b]	Warriors (*Ilkimunya*) (1987-2000)[b]
Number of super-households (n=52)	10	25	17
Percentage proportion	19%	48%	33%
Average number of households per super-household	3.7 ±0.54	2.4 ±0.25	3.1 ±0.34[227]
Super-households: Average size (RAs)	13.4 ±1.78[†] (** df=2)	8.8 ±0.81	8.6 ±0.93
Households: Average size (RAs)	3.7 ±0.25	4.0 ±0.32	2.9 ±0.22[†] (*** df=2)

[a]In *inkang'itie* where different *ilmarei* are headed by males of different age-sets, the most senior age-set male is used to classify the *enkang*;
[b]The period in which the age set was 'open' i.e. all initiates during this period became members of the open age set - the dates are specific to Idodi and Pawaga; [†]*Statistically significant difference - Friedman Test & Kendall's W Test:* * = $p<0.05$; ** = $p<0.01$; *** = $p<0.001$; df = degrees of freedom.

The number of people living in each *olmarei* and household by age class as measured by Adult Equivalents (ILCA 1981) is shown in Table 6.3. As would be expected, the *ilmarei* of the most senior

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[226] While previous studies on Maasai groups have been justifiably criticised by Hodgson (2000) as being overly androcentric in their approach, and despite the central but changing roles that women play in Maasai society (Hodgson, 2001), this analysis is centred around male-informed interpretations of *Ilparakuyo* society, as there was unfortunately insufficient appropriate context and opportunity to adequately engage with *Ilparakuyo* women in this regard. It is also further recognised that not all *Ilparakuyo ilmarei* may necessarily be 'headed' by a man and that women may effectively play such a role. However, for the purposes of this study, given that no cases of women-headed *ilmarei* were encountered during survey work and bearing in mind the relatively small sample size, an androcentric household classification system is adopted.

[227] A slight 'anomaly' is apparent as denoted in Table 5.3 in that the youngest age class (currently the *Ilkimunya* age set) appear to have a larger number of households in their *ilmarei* than the age class immediately above them. This can be explained, and is the case, for a number of *olmarei* that, in the last 5 years or sometimes more, households have been newly formed from recently fissioned *ilmarei*. The larger numbers of households in these ilmarei tend to be constituted mainly of widowed mothers and wives (sisters of the male head of the *olmarei*) who have moved to live with their sons and brothers respectively.

extant age class (currently the *Ilmedoti* age set) are statistically significantly the largest on average (χ^2=4.90; Kendall's W coefficient = 0.490) as compared to the younger age classes. Individual household sizes also show the same trend across age classes with the youngest age class of the *ilmurran* (currently the *Il kimunya* age set) having statistically significantly the smallest households on average (χ^2=14.60; Kendall's W coefficient = 0.730). Overall the data therefore support what would be theoretically expected to be the case and which has been described previously for the *Ilparakuyo* (Rigby 1985; Beidelman 1968; von Mitzlaff 1988).

6.4.2 *Herd structure and management*

Describing *Ilparakuyo* herd structure is a complicated undertaking since herds are nearly always in a state of flux. In addition to normal herd population dynamics of birth, ageing and death, the herd may at any time be added to, subtracted from and split for a wide variety of reasons. The livestock present in any *olmarei* are likely to be made up of those animals belonging to the *olmarei* as well as frequently animals loaned in from affines - usually either for grazing and/or for milking. Livestock within the *emboo* (Maa: cattle byre; *imbootie* pl.) of an *olmarei* may be allocated by the lineage head of the *olmarei* to one of his wives (as part of her matricentral *enkaji*), or if he is wealthy enough, kept as residual stock. Although a wife has certain, usually substantive, usufruct rights over each animal she is allocated for her *enkaji* (for example, rights to milk, hide and fat), these rights are not exclusive, as the cow's milk, blood and perhaps even meat may be used by others from time to time. This is reflected in an *Ilparakuyo* (and wider Maasai) adage: *'Meeta enkiteng' olopeny'*- a cow has no single owner[228] (Rigby, 1983, 142). Yet, despite this adage, women may often (although not always) retain substantial control over herd products and mediate their consumption. In addition to matricentral, residual and affines' livestock, other stock may be present in the *emboo* (byre) of some *ilmarei* which is the property of the limited number of Hehe/Bena farmers in the Idodi villages who own cattle. These livestock are looked after by the *olmarei* as part of a reciprocal agreement, which may include male members of the *olmarei* training the loaned-in stock to plough, or just looking after the animals in return for, for example, a share of their milk production. Conversely, the *olmarei* may have lent stock out to other *olmarei* for grazing and milking and sometimes to avoid disease risks. Some of these arrangements are temporary, lasting only a period of a few months, while other loans are much longer term and last for years.

Herding, while often seen as primarily falling to the *olayioni* (herd boy) age grade and also, closer to the *olmarei*, not infrequently carried out by the *'natoyie'* (Maa: young girls; sing *intoyie*), is closely supervised by head of the *olmarei*. It is largely they who ultimately decide, often in consultation with the women, where the herds are to be grazed, when they are to be moved and where to. Women tend to more closely oversee the herding arrangements of small stock and calves, and men the large stock, although such divisions of work are far from exclusive. Calves and young small stock are left

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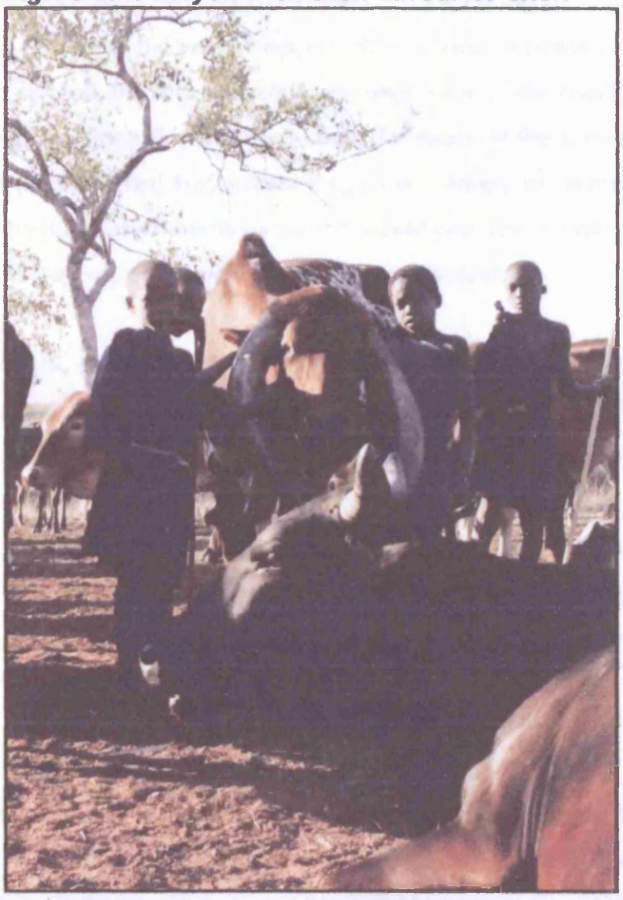
[228] As Rigby (1983, 142) points out, this saying is synonymous with the fact that ownership of things in *Ilparakuyo* society tends towards being inclusive rather than exclusive, although certain things, such as a woman's house, are recognised as being her private property - access to which is governed by strict convention.

Figure 6.3: Tending small stock in the *enkang'* in the early morning

Figure 6.4: *Ilaiyok* with their favourite oxen



behind in or close to the *olmarei* when the main herd is out grazing and only join them once they are old enough to be able to move with the herd without trouble. In a typical day, the herd, once it has been milked, will be taken out to graze one to two hours after dawn. Returning by late morning, they will rest up in the heat of the day before going out again in the early afternoon, returning again towards dusk. In contrast to Rigby's (1983, 137) description of *inkang'itie* suffering from a chronic shortage of labour due to their relatively small size - as compared with *inkang'itie* in the *Kisongo* Maasailand, it is more likely the case that herding labour shortages are increasingly seasonal for *Ilparakuyo ilmarei* in Idodi. This is because there are now nearly two and a half times fewer livestock per person for the *Ilparakuyo* in Idodi than there were in Bagamoyo for the *Ilparakuyo* Rigby described during the 1970s. Thus *Ilparakuyo* labour shortages are worst during the farming season, as all *Ilparakuyo ilmarei* now farm, and now also pertain to both herding and farming.

At the onset of the dry season, male heads of *ilmarei* may especially and increasingly spend considerable amounts of time in the '*kilabu*' (local beer club) drinking with Hehe/Bena farmers. Drinking relationships are cultivated by the *Il Parakuyo* which often enable them to negotiate (preferential) access to fields of crop residue in the dry season which is critical to the nutritional security of the herd. Access to the residue in the fields may frequently be agreed several weeks to sometimes months in advance, to ensure a greater chance of cattle being able to graze the fields.

Analytical considerations

There are two ways of examining stock holding at the *olmarei* level: either by including all animals loaned out and not animals loaned in for each analysis or, by ignoring all animals loaned out and including stock loaned in. Whereas the former approach provides an absolute count of the overall livestock wealth of each *olmarei*, the latter provides an over-view of the availability of livestock in each *olmarei* in contributing to daily livelihoods. Further, for many of the poorer *ilmarei*, the stock present in their *imbootie* (cattle byres) may consist largely or entirely of animals loaned in from relatives. Thus absolute counts of stock holdings owned would provide a misleading picture of the *availability* of cattle in an *olmarei*, especially for the poorest *ilmarei*.

AS discussed in Chapter Two, data on livestock holdings were collected in the form of an annual census annual over two consecutive years (2000 & 2001) during the months of September-December of each year after the majority of the year's calving had occurred[229] and when livestock tended to have been returned from grazing seasonal pastures and were then grazing local fields of *mabua* (Swahili: crop residue). It should be noted here that data collection and therefore this analysis was carried out at the *olmarei* level since acquiring accurate stock census data at the household (*enkaji*) level would have been difficult and compromised by inaccuracy and ambiguity[230]. It is therefore

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[229] For details about how the data was collected, refer to Chapter Two.

[230] It is certainly the case that some or all female cattle may be effectively allocated by the lineal head of the *olmarei* (super-household) to each *enkaji* (household). However, it was concluded during fieldwork that analysis at the super-household level, particularly given the cross-comparative nature and focus of the study between farming and herding groups, would avoid the following potential ambiguities: (i) The fact that frequently not all

necessarily assumed that stock were generally allocated evenly amongst all the households of each *olmarei* and that the overall livestock status of an *olmarei* was representative of individual household (*enkaji*) statuses within each *olmarei*. Studies (citations) have shown that this assumption is often not the case, and that the livelihood status of *enkaji* may vary considerably within *ilmarei*. Unfortunately, the dataset as collected is insufficiently disaggregated to enable analysis of livelihood status variation within *ilmarei*.

An overview and explanation of herd structure is provided before the nature of major herd transactions is discussed.

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stock present in each *emboo* is the property of the *olmarei* and that these stock may be short or long term loans; (ii) All such stock in each *olmarei* is not necessarily always allocated to a specific household, and; (iii) Households may often share or borrow milk and other stock-derived products from each other.

Table 6.4: *Ilparakuyo* large stock (cattle - *Bos indicus*) herd composition and structure for 2000 and 2001

	Household details		Female						Male								
			Engahe kinyi[e]	Engehe olarami	Engahe kikainoti	Engiteng lepong	Engiteng olupii	Emerimeruwa	Ol bu'ngai kinyi	Olaheoeleki	Ol saigorr	Ol ai'ngoyni	Oswate	Orikiteng	Osonash	Endapesi engiteng	
Year	Number of households	Total number of people in household	Young female calf	Weaned female calf	Cow - few offspring	Cow - many offspring	Female - natural sterile	Female - post-calving sterile	Young male calf	Weaned male calf	Early mature bull	Fully mature bull	Steer	Bullock	Male - natural sterile	Asexual animal	TOTAL livestock holding (incl. Loans out)
2000	150	621[a]	379[c]	300	111	834	0	0	258	172	65	31	53	32	1	0	2236
		502.0[b]	121.6[d]	207.1	113.1	850	0	0	82.8	118.7	66.0	40.9	59.2	48.7	1.4	0	1709.5
2001			366[c]	304	92	829	0	0	283	184	59	54	66	31	2	0	2270
			105.9[d]	176	83.6	768.5	0	0	82.4	113.2	55.8	68.6	62.5	39.6	2.8	0	1558.9
Average			373[c]	302	102	832	0	0	271	178	62	43	60	32	2	0	2253
			113.8[d]	191.6	98.4	809.3	0	0	82.6	116.0	60.9	54.8	60.9	44.2	2.1	0	1634.2
Totals			16.6%[c]	13.3%	4.6%	36.9%	0.0%	0.0%	12.0%	7.9%	2.8%	1.9%	2.7%	1.4%	0.1%	0.0%	
			7.0%[d]	11.7%	6.0%	49.5%	0.0%	0.0%	5.1%	7.1%	3.7%	3.4%	3.7%	2.7%	0.1%	0.0%	
			72.6%[c]						27.4%[c]								
			74.2%[d]						25.8%[d]								

[a] Number of people - adults and children combined; [b] Reference Adults (RAs)(ILCA 1981); [c] Number of individual animals in each category; [d] Number of Herd Livestock Equivalents (LEs - inter-annual herd average =184.7kg: young ♀calf 79kg; weaned ♀ calf 170kg; cow [♀] 251kg; young calf 79kg; weaned ♂ calf 170kg; early mature [♂] bull 250kg; fully mature [♂] bull 325kg; young steer [♂] 275kg; mature steer [♂] 375kg) in each category (adapted from King *et al.*, 1984); [e] *Ilparakuyo* categories of cattle status and age. NB: Average LE for large stock herd over 2 years of data =0.74 cf 0.72 (King *et al.*, 1984) and 0.71 (ILCA, 1981).

Table 6.5: *Ilparakuyo* small stock (goats and sheep) herd composition and structure for 2000 and 2001

	Household details		Female										Male											
			Embalo kinyi enkine[e]	Embale engerr kinyi[f]	Emablo ekine botorr	Embale engerr botorr	Embalo ekine ekika onoti	Embale engerr ekika onoti	Enkine lepong	Engerr lepong	Emkine omorumo	Engerr morumo	Orrbalo lekine kinyi	Ositima lekerr kinyi	Orrbalo lekine botorr	Ositima lekerr botorr	Oloro kinye	Ol meregesh kitee	Oloro sapuk	Ol meregesh sapuk/kotok	Orpejaroti oroti lekine	Okerr lembalo	Orrkine sapuk	Orrkerr lplaihe	
Year	Number of households	Total number of people in household	Young female kid/lamb		Weaned female kid/lamb		Mature female 1st offspring		Mature female 2nd & 3rd offspring		Mature female 4th plus offspring		Young male kid/lamb		Weaned male kid/lamb		Early mature buck/ram		Fully mature buck/ram		Young castrate		Mature castrate		TOTAL livestock holding (incl. Loans out)
2000	150	621[a] 502.0[b]	502[c]		393		156		892		3		357		219		119		76		72		59		2851
			331.3[d]										153.3												484.7
2001			374[c]		354		134		681		0		266		195		131		79		63		55		2332
			262.1[d]										134.1												396.4
Average			438[c]		374		145		787		0		312		207		125		78		68		57		2592
			296.7[d]										143.7												440.5
Totals			16.9%[c]		14.4%		5.6%		30.4%		0.0%		12.0%		8.0%		4.8%		3.0%		2.6%		2.2%		
			67.4[d]										32.6												
			67.4%[c&d]										32.6%												

[a] Number of people - adults and children combined; [b] Adult Equivalents (RAs)(ILCA 1981); [c] Number of individual animals in each category;

[d] Number of Herd Livestock Equivalents (LEs = 0.17 average conversion ratio for small stock (ILCA 1981)); [e] *Ilparakuyo* categories of goat status and age; [f] *Ilparakuyo* categories of sheep status and age.

Herd structure and stock distribution

The *Ilparakuyo* herd structure is characteristic of many east African pastoralist herds (for example, King *et al.* 1984; Rigby1983; Jacobs 1965; Swift 1981 cited in Lane 1996, 11) and is managed to maximise (as far as possible) milk production (Bekure *et al*, 1991) and its reproductive potential with a heavy bias towards female stock throughout the herd structure - see Table 6.4 and Table 6.5. The overall ratio of female to male stock is in fact somewhat higher than that reported in other Maasai herds with female constituting an average of 72.6 per cent of the herd (e.g. 66.4% in Kajiado Kenya - King *et al.* 1984; see also Table 6.20). The overall *Il Parakuyo* cattle herd showed a slight increase between 2000 and 2001, although the number of female livestock declined slightly, the number of male cattle in the herd increased to the extent that the overall herd grew marginally - see Table 6.4. The small stock herd declined markedly between 2000 and 2001 (refer to Table 6.5) for reasons that are discussed further on in this section.

Male and female cattle are managed for very different purposes in the herd. Over 4.5 times the number of female stock to male are retained in the herd for at least 6-8 years while they continue to calve successfully and produce milk before they are sold (usually) for slaughter. In contrast to the sustained productivity of the female portion of the herd, the male portion is managed for a wider range of purposes - young male stock are far more predominantly used for cash and ritual exchange requirements[231] and only the strongest and most favoured animals are selected to remain in the herd on a long term basis either as bullocks for ploughing or as bulls for siring the herd. In addition steers may be kept for a limited period of time for later slaughter - especially for ritual ceremonial purposes. A conscientious herd manager will be very much aware of the calving and mating record of his cattle and, in consultation with the women (as the milkers of the herd) of the general milking status of particular animals (especially those not lactating as expected). While the greater number of cows is critical to the reproductive potential of the herd and central to household dietary requirements (milk, and ghee especially), fully mature bulls with a good mating record are regarded with much pride especially by the herd boys of the *olmarei*. Increasingly these days, bullocks have begun to play a seasonally important economic role with the introduction of cattle ploughs, not least reflected by the increasing dependence of the *Ilparakuyo* on agriculture as a mainstay to their livelihoods see Boxes 5.3 and 5.4). While not only much reducing the highly labour intensive land-tillage requirements faced by *Ilparakuyo* households (all of whom cultivate), bullock plough teams are seasonally rented out to Hehe/Bena farmers for considerable profit on an acreage basis.

Small stock (sheep and goats) are managed on a similar basis to that of the large livestock but largely as a source of meat - mostly, although not exclusively, for household consumption, and for

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[231] This is not to deny that a parallel role is played by female stock. Milk, which in itself plays an important symbolic role in many rituals, aside from constituting a major dietary component to the household, is sold by the women to neighbouring farming communities. However, in Idodi, the relative cash gains are marginal from this activity (compared to those derived from stock sales) but nevertheless represent a small but significantly important independent income for women.

sale. The small stock herd exhibits a similar (although not quite as great) bias towards females, which ensures the herd's ability to recover from bad years of drought and/or disease. While not culturally as important as cattle, nevertheless small stock play an important part in the economy of the *olmarei* as they reproduce faster than cattle and are easier to sell locally due to their considerably lower value. As has been previously asserted (e.g. de Leeuw *et al.* 1991), small stock play a critical role in post-drought herd recovery as they tend to better survive and recover faster from drought events. A characteristic of small stock is that they appear to be locally far more susceptible to disease and are generally prone to far greater inter-annual variations in morbidity and morality - but equally conversely, productivity. For example, whereas the overall number of head in the large stock herd in Idodi increased by 1.5 per cent between 2000 and 2001, the small stock herd declined by 22.3 per cent over the same period. The small stock herd suffered extensively from tick borne diseases and a widespread and crippling hoof-rot condition associated with a better than average year of rain in 2001.

The distribution of livestock holdings between *ilmarei* is depicted in Figures 5.5 and 5.6 for the years 2000 and 2001 respectively. Total livestock holdings are measured in Livestock Equivalents (LEs) per Reference Adult (RAs)[232]. The graphs also show the relative proportion of large stock (cattle) to small stock (goats and sheep) in each *olmarei*. *Ilmarei* have been classified into four wealth classes as modified from King *et al.* (1984) - refer to Box 6.2.

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[232] See the explanatory notes below Tables 5.4 & 5.5 as to how the herd LEs and RAs were calculated. It should be noted that LEs are *not* the same as Tropical Livestock Units (TLUs - set at 250Kg). LEs instead are a derivative of the local herd's overall average adult animal metabolic mass. Average herd LE for 2000 & 2001 was estimated at 184.7kg – 0.74TLUs – which compares favourably to that arrived at by King *et al* (1984:26) of 0.72 TLUs for Kajiado herds.

Box 6.2: A description of the wealth categories adopted in relation to *Ilparakuyo* livelihood strategies

Although King *et al*, (1984) do not provide an accompanying explanation, they adopt 3 wealth categories – 'rich', 'medium' and 'poor' in relation to the number of livestock equivalents per reference adult needed to support differing degrees of pastoralism. In this analysis, *ilmarei* which fall into the 'wealthier' category are defined as having sufficient access to livestock to be able to rely totally on their herd for their livelihood. While these households may practice farming, it is complementary and not necessarily critical to household livelihood status. Households falling into the 'middle' category may not have quite enough livestock to solely rely on their herd for their livelihoods. Thus for households in this 'middle' category, farming is particularly important as a complementary livelihood strategy, which also lessens the household's reliance on its herd. In this analysis the 'poor' category has been further subdivided into 'poor' and 'very poor' to simply demonstrate the marginality of livestock holding amongst a large proportion of the *Ilparakuyo* in Idodi. The two latter categories may be characterised by households with increasingly insufficient access to livestock to be able to rely on the little stock they have for their livelihoods. Farming is the main livelihood strategy with livestock providing a nutritional supplement as available.

These wealth designations are somewhat arbitrary and not definitive, but nevertheless help to provide an indication of the relative importance and significance of livestock in individual *olmarei* livelihood strategies. Although etic in their derivation, these wealth categories may be seen to be reasonably representative of emic perceptions of *enkarsisisho* (Maa: wealth) which, for men at least, centre on presiding over a large number of stock as well as a large kinship group (see also Rigby 1983, 145)[233]. All wealth categories are relative and not absolute. Some of the 'very poor' *Ilparakuyo* may still have livelihood resource endowments considerably greater than those of the poorest Hehe/Bena farmers.

It is evident, that as mentioned above, small stock are much more variable in their productivity as compared to large stock, and this can be clearly seen from the Figures 5.5 and 5.6. Thus while large stock may be seen as being more productively reliable, small stock, while less reliable, have greater productive potential, such that in good years small stock surpluses are generated which may be converted into other investments - for example, large stock and agricultural holdings, or invested in socio-cultural relations. However, despite the variability in the inter-annual small stock herd, small stock holdings are reflected in large stock holdings such that those *ilmarei* with the largest cattle herds tend generally to have the largest small-stock herds as well - as depicted in Table 6.6.

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[233] Despite other objects of perceived wealth, which may include radios, bicycles and other modern conveniences, ultimately *enkarsisisho* still lies in cattle and kin, and perhaps more recently, farmland.

Figure 6.5: Livestock holdings for each *olmarei* during the year 2000

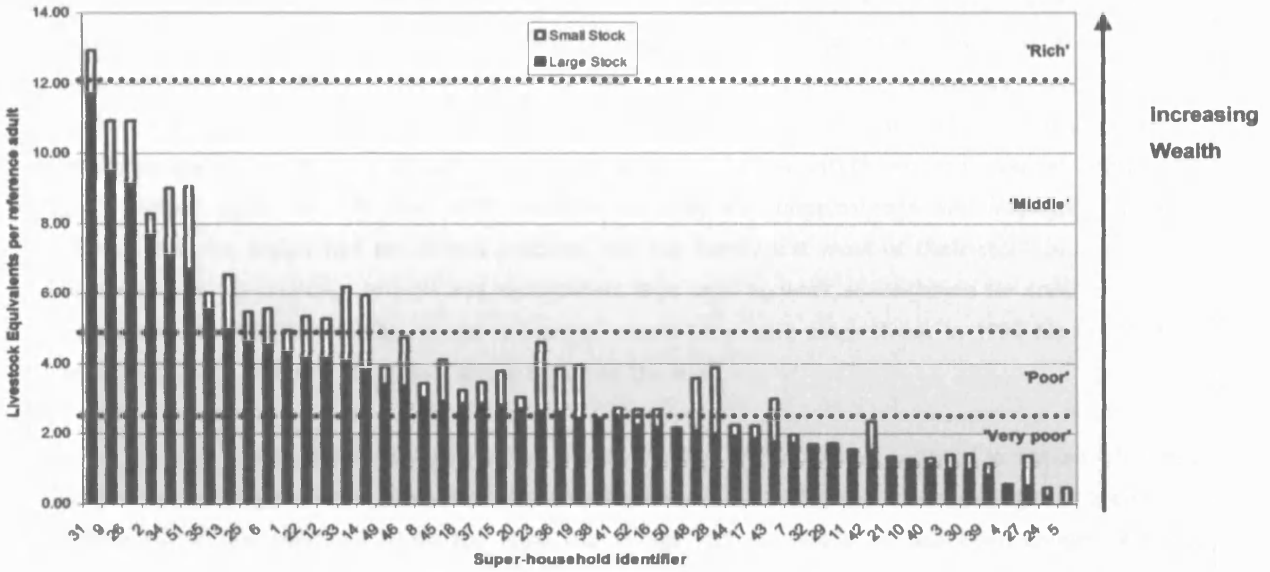
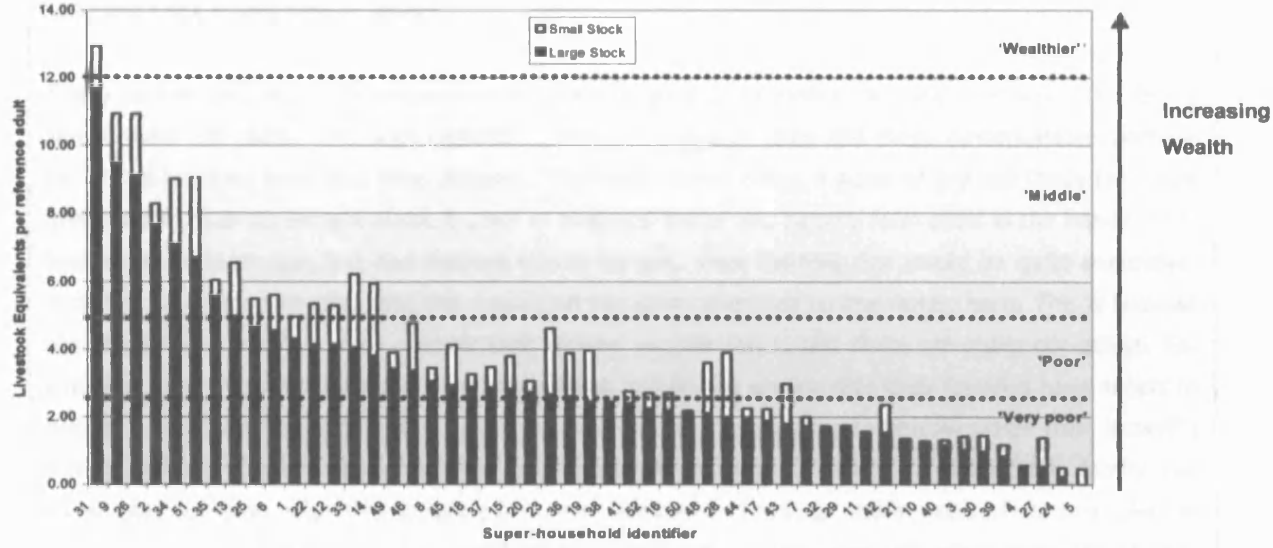


Figure 6.6: Livestock holdings for each *olmarei* during the year 2001



Allowing for some margin of error[234], those *ilmarei* which fall into the 'wealthier' and 'middle' livestock categories occur above the threshold of about 5 LEs per reference adult recognised as denoting the level at which a (super) household can heavily depend on its stock for its livelihood. Thus only 27.5 per cent and 27.0 percent of *ilmarei* in 2000 and 2001 respectively had access to

[234] While the data on livestock holdings would appear to be remarkably robust (see previous footnote), given that livestock weights are estimated, and that the livestock categories employed may not entirely correspond to those utilised and followed by King *et al* (1984) (from which the calculations are drawn), in calculating Livestock Equivalents, the resulting analysis and data points can not be claimed as being totally exact but are instead accurate relative to each other.

Box 6.3: A growing *ilmarei* exerting greater demands on its livestock herd

Ismaeli is one of the better-off *Ilparakuyo* herders in the Ikwavila valley. He lives together with his four wives and six children (two girls and four boys) in Isanga, Makifu village. Ismaeli was born in Ilusi in the Lunda section of the LMGCA in about 1958. His family moved from Ilusi to Malinzanga village while he was still a herd boy. He was initiated into the *Ildareto* age set in 1973. In 1975 his family moved to Tungamalenga village as they thought that the grazing for their livestock would be better there. The family moved again in 1976 and 1977 to different sites in Tungamalenga and Mapogoro villages. Unfortunately his father had an alcohol problem and the family lost most of their stock in one way or another due to his drinking. Ismaeli and his brothers thus went to work as stockmen for another herder, Mzee James. In 1978 the family moved to Isanga, where they have since lived. In 1982 his father died and was taken to be buried in Ismani about 80 km to the east.

During the mid-1980s Ismaeli began to travel around Pawaga and Idodi and engaged in some stock theft in order to start his own herd (since few cattle had been left by his father). He was caught at least once stealing cattle but managed to escape from the village lock-up where he had been caught. After a couple of years, he managed to build his herd up from three cows to twenty seven from stolen cattle and livestock borrowed from relatives. In 1988 he was able to make a bride wealth down-payment for his first wife of fifteen cows. At this point, he and his first wife Nailole moved to their own *enkang'* and from his brother's place where he had been living. In 1990 he married a second time, and then again in 1996 and for a fourth time in 2001.

Today Ismaeli and his family depend on livestock keeping and farming for their livelihood. The family keeps about 200 cattle, and until recently, a similar number of goats and sheep (unfortunately perhaps up to one hundred were lost from disease). The family farms about 6 acres of dryland fields for maize and has also recently bought about 2 acres of irrigated maize and banana farm plots in the *bonde*. They had hoped to farm rice, but had decided not to try yet, since farming rice would be quite expensive, and they were apprehensive that this would put too many demands on the family herd. This is because the family herd supplies most of their cash income requirements, and there are many out-goings. For example, two of Ismaeli's brothers are often drunk and do not ensure that their families have access to enough food. So Ismaeli's brothers' wives may quite often come asking to borrow maize from Ismaeli's wives, and the family may often end up feeding an extended family. In return, the family can sometimes count on help from Ismaeli's brothers' families for herding, and in years when they take the herds up into the higher ground in search of early rain and pasture, they will often share the herding involved by combining their herds. Ismaeli has employed a general labourer (a Gogo) who helps herd and farm, and another local part-time labourer from the village to help with the farming. But labour is often in short supply in the family, and this is another reason why they decided not to farm rice. (In fact, the following year, the family did farm rice.) Ismaeli has also trained two of his oxen to plough and he is able to earn up to TShs 10,000 per acre hiring out his oxen team to other farmers.

Ismaeli sees his family as generally doing quite well. Two of his oldest children (both boys) are going to school, and their mothers say that the girls will follow when they are old enough. Members of the family are often ill though - malaria is a constant problem. Nailole nearly died from malaria in 2001. Ismaeli took her to the Lutheran clinic (the best health facility in the valley) and made sure that the doctor attended her until she had pulled through. The herd has also suffered in recent years from higher levels of morbidity - for example, the family lost over 100 goats and sheep in one year due to disease - a respiratory infection that lingered and hoof rot.

Box 6.4 An *Ilmarei* investing in agricultural production as a central livelihood strategy

Salum was born in Mahuninga village and spent much of his childhood in the Mahove bushlands as a herd boy. Although his family moved away to Makifu for many years, Salum returned to live in the same area that he had grown up in. Today he lives with his mother and two wives and their five children (four boys and a girl). The family say they aren't that well off compared to other *Ilparakuyo* - they have thirty cattle and about sixty goats. The family had recently lost six goats to a hyena and Salum felt that his livestock were not doing very well. He had gradually come to the realisation that he and his family had to diversify into farming in order to secure their food needs and to generate more cash.

So Salum bought a *shamba* (Swahili: *field plot*) from a Hehe farmer for what he said was a ridiculously small amount of money. Many people laughed at him - they thought he was a fool to have bought such a *shamba* as the crops of the previous owner had done very poorly. But Salum had other plans. The field lay next to a stream which flowed for most of the year. About 200 meters upstream, he built a weir out of stones and logs. Together with the help of the family's farm hand, John, he dug an irrigation furrow up to one and a half metres deep in places to his field below. He said that he had never worked so hard in his life as digging that trench. But after 3 months of work, the furrow was ready.

The weir and irrigation furrow worked very well. Salum managed to obtain a plate of thick iron sheet from the village settlement with which he made a sluice gate so that he could control the amount of water running into the furrow from the stream. The *shamba* was thriving. He had planted several different bean crops together with tomato and onion which he planned to sell. He was still learning about farming - his tomato seedlings had been transplanted too early and were in danger of withering in the open sun. But together with John, they had created what they hoped would keep providing the family with a sufficient income and a more varied diet. Salum had already been thinking about the other side of the stream. There was an area that could be cleared for another field. Building another irrigation furrow from the wear was not really possible, but he instead planned to use a hollowed-out log to make a branch of his current irrigation furrow cross the stream.

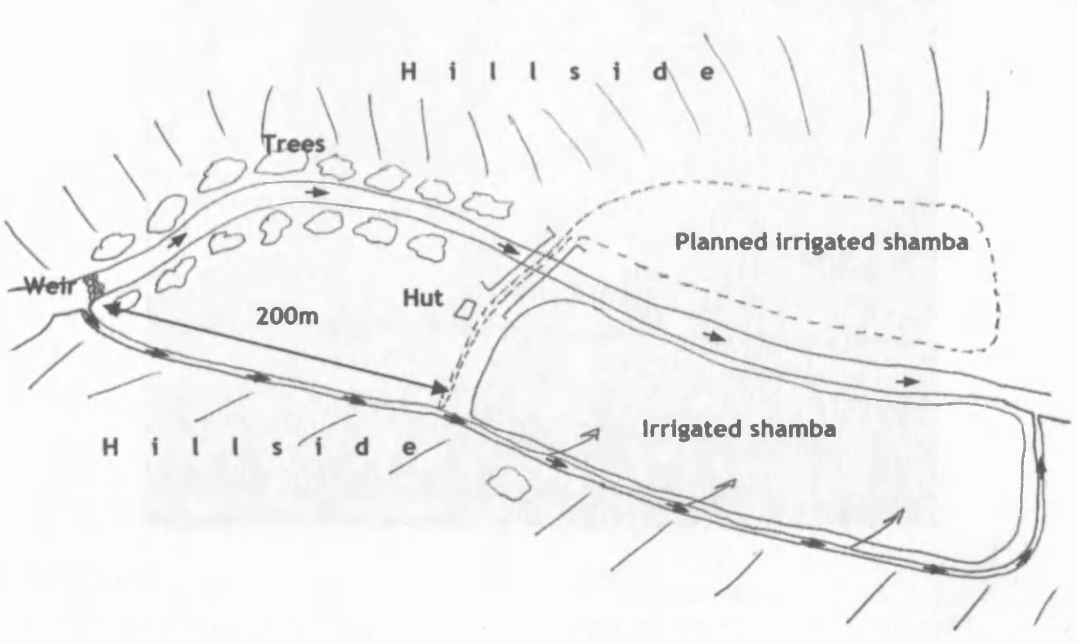


Figure 6.7: A dam built by an *Ilparakuyo* pastoralist to irrigate his crops

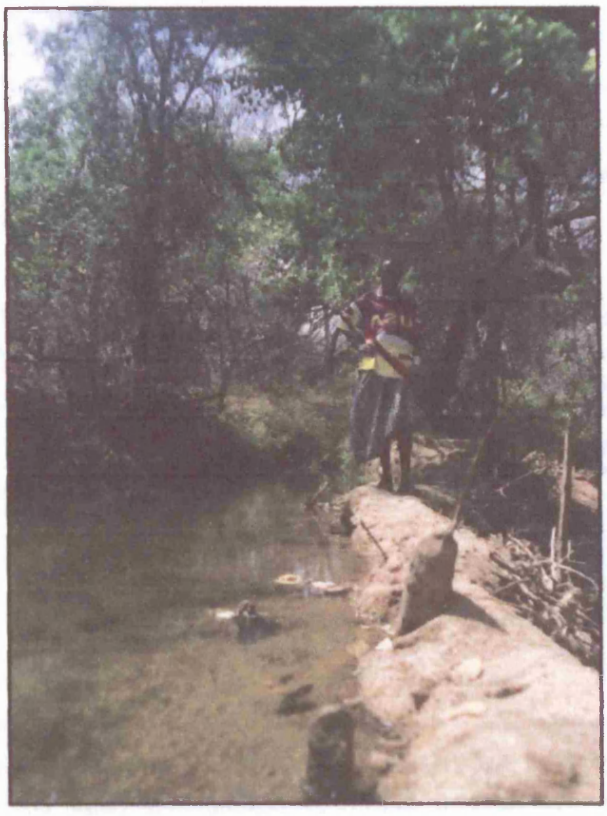


Figure 6.8: The irrigated field with a crop of onions nearly ready for market

livestock holdings above this threshold - as depicted in Table 6.6. The contribution of small stock in LEs to attaining this threshold was substantial with only 15.7 per cent and 13.7 per cent of households in 2000 and 2001 still remaining above the threshold when the small stock herd was discounted. However, the most important insight arising from the data is that nearly three quarters of ilmarei do not have access to sufficient livestock to be purely pastoralists and therefore they have no immediate choice but to be reliant in greater measure on agriculture for their livelihoods. However, this does not necessarily mean that livestock poor ilmarei are absolutely poor, as if farm holdings are taken into account, some of these households may still be relatively livelihood secure, particularly in comparison to the poorer members of the Hehe/Bena farming community.

Table 6.6: The overall proportion of *ilmarei* in different livestock wealth categories

(N=52; n=50[235])	All stock		Large stock only	
	2000	*2001*	*2000*	*2001*
Wealthier[a]	5.9%	2.0%	0%	0%
Medium[b]	21.6%	25.5%	15.7%	13.7%
Poor[c]	33.3%	35.3%	27.5%	35.3%
Very poor[d]	39.2%	37.2%	56.8%	51.0%

[a] Livestock equivalents per reference adult (LE:RA) ratio >12.00; [b] LE:RA= 5.00-11.99; [c] LE:RA= 2.50-4.99; [d] LE:RA= 0-2.49 (King et al., 1984; Bekure *et al.* 1991 - modified).

Table 6.7: Average small stock holding in *ilmarei* of different large stock wealth categories[a]

	Medium[b]	Poor[c]	Very Poor[d]
2000	[†]1.9 ±0.45	1.3 ±0.29	0.6 ±0.12
2001	1.4 ±0.27[***] (df=2)	1.0 ±0.15	0.5 ±0.11

[†] A noticeable trend which approaching partial significance (p=0.131; df=2).

*Statistically significant difference - Friedman Test & Kendall's W Test.

[a] Data independent - wealth categories based on large stock holdings independent of small stock holdings in each *olmarei*. All inclusive (large and small stock combined) wealth categorisations yield greater significance levels (p<0.05 for all years) for differences in small stock holdings between wealth categories.

[b] *Ilmarei* with LE:RA large stock ratio of 5.00-11.99; [c] 2.50-4.99; [d]0-2.49. No *ilmarei* fell in to the 'wealthier' category of LE:RA>12.00 for large stock holdings alone - see Table 6.6.

A further aspect to the distribution of livestock holdings across *ilmarei* is the level of access to livestock according to developmental cycle stage. As previously discussed, many *Ilparakuyo ilmarei* are a

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[235] All data analysis on livestock and farming are derived from census of 52 *ilmarei* of which data from 50 households have been used (one *olmarei* left the area and for another there is an incomplete dataset).

complex construct in terms of kinship, gender and age. Bearing this in mind, as an indicator of the variability in access to livestock with developmental cycle stage, average livestock holdings per reference adult for *ilmarei* at different developmental cycle stages are presented in Table 6.8.

Table 6.8: The livestock holdings of super-households at different stages of developmental cycle

Year	Senior elders[1] (Il medoti[2])	Junior elders[1] (Ildareto[2])	Warriors[1] (Il kimunya[2])
2000 (LE:RA[3])	3.8 ±1.09	4.5 ±0.70*** (df=2)	3.7 ±0.72
2001 (LE:RA)	3.4 ±0.93	4.6 ±0.64*** (df=2)	3.5 ±0.56

[1] Age class of the male head of the *olmarei* (Senior elders the oldest; Warriors the youngest); [2]Age set - see previous box; [3] LE:RA - Livestock Equivalents per Reference Adult; *Statistically significant difference - Friedman Test & Kendall's W Test.

Perhaps somewhat surprisingly, it is not the oldest *ilmarei* that have the largest number of stock per person, as might be expected (but see Stenning 1971, 98) through a lifetime of accumulation. Rather it is those *ilmarei* headed by junior elders which generally have the highest number of stock per person - representing the stage in the development cycle at which *ilmarei* are at their greatest productive potential at a point where they have become well established, a herd has been built up and the *ilmarei* has several households (*enkaji*). Generally, demands on the herd in these *ilmarei* have not grown as great as those of the oldest *ilmarei* which can consist of as many as eight to ten households drawing heavily on the productivity of the super-household's herd. Stock holdings of the youngest *ilmarei* may be generally dependent on inheritance and the degree to which a *murrani* (usually) has been able to build his stock up in the (relatively) short time since the inheritance ceremony or since he moved away from his father's *olmarei*.

Herd transactions

Herd transactions[236] are a central component to herd management and livelihood strategy. Not only are large stock sold for cash, exchanged for other animals, loaned out for either milking and or grazing to kin and associates They fulfil important symbolic roles in cultural rituals- for example at meat feasts (Maa: *ilpuli*), circumcision ceremonies (Maa: *emurata*), age set ceremonies (for example, *eunoto*[237], *olng'esher*[238]) and births. The relative incidence of different herd transactions that were

[236] Transaction is used here in the sense of affecting the removal or addition of one or more animals out of or into a livestock herd.

[237] This is passage of junior *ilmurran* to senior murranhood.

[238] The passage of senior *ilmurran* to junior eldership (Maa: *olpayiani* sing.; *ilpayian* pl.) and, of junior elders to senior eldership and, senior elders to 'retired elders' (Maa *oltasaati* sing; *iltasaat* pl).

recorded in 2000 for the *Ilparakuyo* in Idodi is presented in Tables 5.8 and 5.9[239]. By far the greatest proportion of animals leaving the herd are those sold for cash. During fieldwork the proportion of the herd sold for cash was 14.6 per cent, which is, compared to other studies, average to high (Homewood *pers* com). More male than female livestock tend to be sold - generally as weaned calves or steers, many of which are destined in the short term for human consumption and the urban meat market. Prices fetched at auction are seasonally variable and tend to be lower towards the end of the dry season and early wet when a certain amount of distress selling may occur. Grazing loans are more complex than initially described and may in fact be based on a number of different reasons. Frequently a kinsman may approach a male relative or stock associate asking for one or more cows as a milking loan. The animals will then be loaned to the kinsman or associate who does not have a sufficient number of cows in his *olmarei* to support the requirements of his immediate family. While agreement for such loans is frequently expressed as having been effected in the male domain, women may often be the instigators and catalysts of such loans especially where close kinship relations exist between them. Other reasons for a 'grazing loan' may include: the loaning of steers for plough training; avoiding an occurrence of an outbreak of disease (frequently believed to be associated with a curse) and; access to good pasture nearby the *olmarei* of a kinsman or stock associate. A less common occurrence is the direct and permanent exchange of animals (usually of different age class and/or sex) between *ilmarei* where a stockowner decides that the herd is lacking in certain animals or is aware of an imminent social commitment for which he has to plan. Large stock are only very rarely slaughtered for home consumption and usually as a result of an animal's sickness. However, depending on the developmental cycle stage of the *olmarei,* there may be years where a significant number of large stock are slaughtered for rituals and/or paid out in bride wealth. Local *Ilparakuyo* society still continues to follow traditional forms of social sanction and these too may from time to time take their toll on a super-household's herd.

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[239] These data are likely to have been under-reported for 2000 and certainly appear to have been heavily so for 2001 – precluding the latter's use. Nevertheless, the relative proportion of different transactions affected is likely to have remained relatively robust, justifying the use of the data for the year 2000. An anomaly in the data was the under-reporting of transactions in male stock which appear to be under-represented on two counts: (i) The number of males leaving the collective herd is exceeded by females; (ii) The robust and consistent data generated on stock holdings and herd structure, demonstrate an expectedly skewed sex ratio in favour of females. A significant proportion of young male cattle that are later removed from the collective herd are not accounted for in the dataset on collective herd transactions. This disparity only became evident towards the end of post-field-research data analysis, and therefore, at present, cannot be easily followed up or explained.

Table 6.9: The proportion of different transactions reported for large stock leaving the collective herd[240].

Transaction category	Number	Proportion of stock transactions	Proportion of Total Herd
Sold for cash	327	58.8%	14.6%
Grazing loan out	99	17.8%	4.4%
Fatality/sickness	77	13.8%	3.4%
Bride wealth paid	63	11.3%	2.8%
Exchanged out	4	0.7%	0%
Slaughtered for ceremony	2	0.4%	0%
Slaughtered for home use	1	0.2%	0%
Other - fine	1	0.2%	0%
Total	**574**	-	**25.5%**

Table 6.10: The proportion of different transactions reported for large stock entering the collective herd[241]

Transaction category	Number	Proportion of stock transactions	Proportion of Total Herd
Grazing loan in	120	70.0%	5.4%
Bought for cash	29	17.0%	1.3%
Bride wealth received	15	8.8%	0.7%
Exchanged in	4	2.3%	0%
Received as a present or as compensation	3	1.8%	0%
Total	**171**	-	**7.7%**

A further aspect to stock loans already mentioned is that of wealth equalisation. A notable number of the poorest *ilmarei* are dependent on their wealthier kin for access to large stock and many are able

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[240] The proportion of 25.2 per cent of cattle leaving the collective herd would appear very high and unsustainable. However the figure does not denote the actual proportion of livestock permanently leaving the collective herd since, largely with the exception of those stock sold for cash, the remaining stock re-enter the collective herd at different intervals – either to the *olmarei* from which they left (for example those animals on grazing loan) or to the herds of other *ilmarei* (for example, bride wealth and fine transactions).

[241] It may be noted that the 'grazing loans out' and 'grazing loans in' to the collective herd do not balance each other. This is because the system is not a closed one and many of the *ilmarei* have kin living not far outside the field survey area to whom stock are seasonally sent as grazing loans.

to increase their herd significantly with stock loans - as depicted in Table 6.11. Nearly half of all *ilmarei* falling into the poor stock wealth categories had received stock loans from their wealthier kin and up to 54 per cent of the wealthiest *ilmarei* were loaning stock out to their poorer kin - as shown in Table 6.12. This further demonstrates the fact that livestock loans, particularly from wealthier to poor *ilmarei,* contribute an important component for poorer households' livelihood strategies. Also the more successful and wealthier an *olmarei* becomes, the more likely it is that it will loan stock out, in part due to social obligations.

Table 6.11: The relative increase from stock loans in large stock available to *ilmarei* of different livestock wealth categories

	Wealthier	Medium	Poor	Very Poor
2000	0%	3.2% ±2.32%	14.2% ±7.44%	12.8% ±4.67%
2001	0%	2.7% ±2.75%	20.6% ±7.08%	20.5% ±6.39%

Table 6.12: The proportion of *ilmarei* in different livestock wealth categories loaning large stock in and out

Transaction		Wealthier	Medium	Poor	Very Poor
2000	*Loans out*	100%	45%	0%	10%
2001		100%	54%	6%	0%
2000	*Loans in*	0%	18%	24%	40%
2001		0%	8%	44%	47%

6.4.3 *Farming*

Today all *ilmarei* farm maize plots primarily for food subsistence requirements but more recently many have also begun to farm cash crops - notably rice - that rely on furrow irrigation. Nearly all[242] households (*inkajijik*) within each *olmarei* plant their own fields of maize although this does not preclude sharing of the cultivation of maize fields between households and helping each other in terms of labour requirements nor later in sharing the crop. Many male heads of *ilmarei* may also invest in their own separate fields where the women often have much less involvement in their cultivation or in the control of the crop. This may frequently be particularly the case for rice, where a portion of the harvest is frequently retained for household use (often when receiving visitors) and ceremonial occasions. However, much of the rice crop may be sold for cash. The proportion of *Ilparakuyo ilmarei* farming rice paddy is increasing with time as *Ilparakuyo* rent and purchase fields through a growing network of relations with rice paddy land owners and farmers. As already

[242] In the limited number of incidences where individual households do not cultivate their own crop, they usually instead contribute to the cultivation effort of other households or that of the *olmarei* as a whole.

discussed in Chapter Five, rice is significantly the most profitable and reliable crop in Idodi, and the arduous and intensive labour it entails may be eased if the paddy is tilled initially by ox plough.

Figure 6.9: Areas cultivated by each *Olmarei* for the two major crops - maize and rice - in 2000.

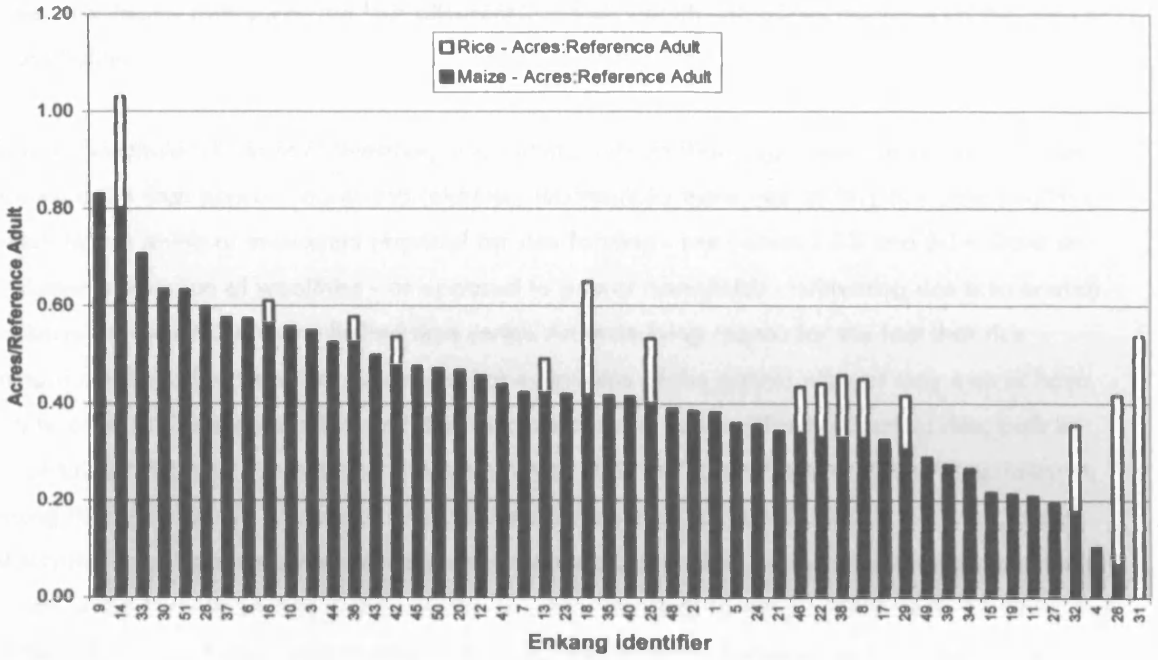
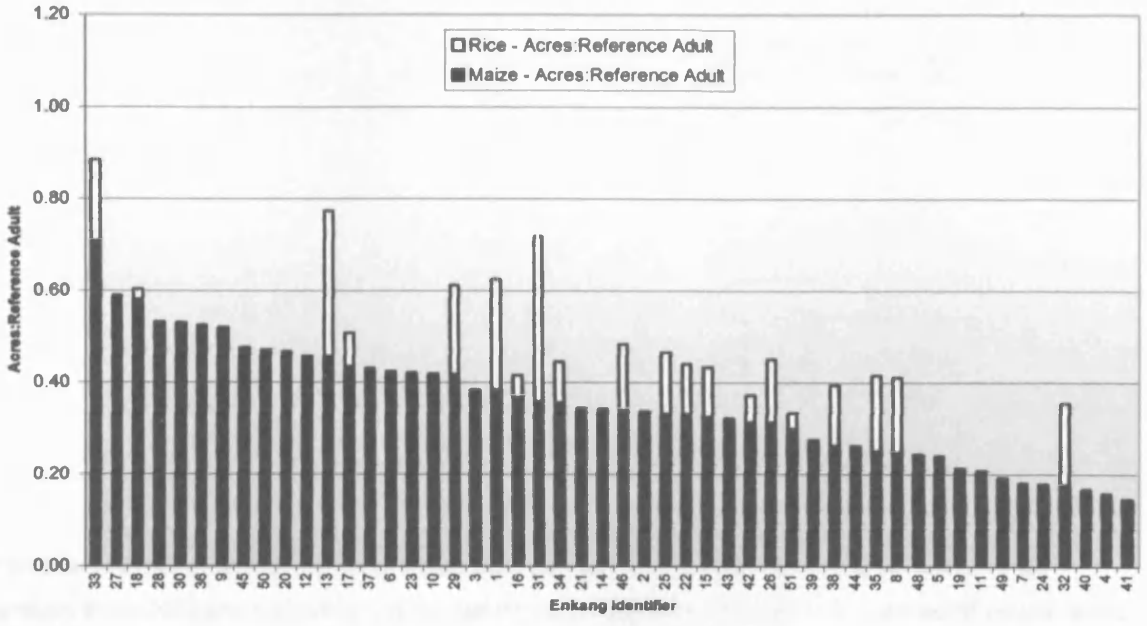


Figure 6.10: Areas cultivated by each *Olmarei* for the two major crops - maize and rice - in 2001.



Ilparakuyo and Hehe dryland farming practices differ little since the *Ilparakuyo* have largely acquired their farming knowledge from their Hehe neighbours. Nevertheless, individual *Ilparakuyo* farmers may receive technical advice and help from Bena rice farmer associates in the husbandry of

their rice fields and also when the potential application of chemical fertilisers, herbicides and pesticides requires additional knowledge and expertise. Figures 5.9 and 5.10 show the crop areas[243] of maize and rice per reference adult cultivated in 2000 and 2001[244] in each *olmarei*. Although the variance in the amount that each *olmarei* cultivates as compared to the amount of stock directly available is less pronounced, there are still distinct trends in crop area and crop types cultivated between the *ilmarei* falling into the four different livestock wealth categories adopted on the basis of livestock holding.

Generally, wealthier (in terms of livestock) *ilmarei* tend to farm slightly greater areas of maize per reference adult than poorer *ilmarei* and relatively substantially more rice as they are able to afford the much higher levels of investment required for rice farming - see Tables 5.13 and 5.14. Data on the relative proportion of wealthier - as opposed to poorer households - cultivating rice is somewhat inconclusive, not least due to the limited time series. An underlying reason for the fact that rice farming is not limited to wealthier *olmarei* is that even some of the poorer *olmarei* may own or have access to oxen and plough (via kin) and thus be able to more easily afford cultivating rice, both in terms of labour and cost savings from the use of oxen. As in the case of poorer Hehe/Bena farmers, assuming that a household has access to a rice field (which may not necessarily be the case), a key consideration may be the decision of whether to farm rice, and when this decision is made relative to the onset of the farming season and in relation to other (dryland) farming commitments. It is likely that wealthier *ilmarei* are better able to afford delaying the decision of whether to farm rice or not, as well as the investment required to expand rice cultivation in wetter years (2001) especially after a drier one (2000) - see Table 6.14. This is especially the case where losses in the previous year's

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[243] Unfortunately it proved impractical to collect data on yields as it was concluded (on the advice of the Iparakuyo themselves) that harvesting was frequently piecemeal and protracted over a period of several weeks as well as carried out by a range of individuals such that establishing yields from recall would be too inaccurate. Where necessary, average yields have therefore been derived from data collected from the Hehe/Bena farmer component of the study and are used with reasonable confidence since they are unlikely to significantly differ overall.

[244] Data on individual *enkaji* (household) cultivation was collected, but for ease of cross-comparison with livestock data, the data are presented at *olmarei* (super-household) level.

Table 6.13: *Ilparakuyo ilmarei* cultivation averages in 2000 by crop area according to livestock wealth category

Wealth Category	Maize (acres per RA)	Rice (acres per RA)	Total Average (acres per RA)
Wealthier & Medium[a]	0.45 ±0.663	0.08 ±0.045	0.53 ±0.056
Poor	0.45 ±0.029	0.05 ±0.018	0.49 ±0.027
Very Poor	0.36 ±0.030* (df=19)	0.03 ±0.012** (df=19)	0.38 ±0.030*** (df=19)

[a] 'Wealthier' and 'medium' wealth categories are combined due to low sample size in the former category.
*Statistically significant difference as compared with the corresponding cultivation means in the 'Wealthier & Medium' category - One sample T-Test.

Table 6.14: *Ilparakuyo ilmarei* cultivation averages in 2001 by crop area according to livestock wealth category

Wealth Category	Maize (acres per RA)	Rice (acres per RA)	Total Average (acres per RA)
Wealthier & Medium[a]	0.39 ±0.031	0.11 ±0.031	0.50 ±0.045
Poor	0.37 ±0.031	0.04 ±0.018* (df=16)	0.41 ±0.034 (** df=16)
Very Poor	0.31 ±0.030* (df=18)	0.03 ±0.015*** (df=18)	0.35 ±0.033*** (df=18)

[a] 'Wealthier' and 'medium' wealth categories are combined due to low sample size in the former category. Wealth categories are based on livestock holdings and are the same as those used in the preceding section.
*Statistically significant difference as compared with the corresponding cultivation means in the 'Wealthier & Medium' category - one sample T-Test.

Table 6.15: The proportion of *Ilparakuyo ilmarei* cultivating rice

Super-households: (n=140 *inkajijik*)(N=52 *ilmarei*)	2000	2001
Proportion of wealthier & medium cultivating rice	29%[a]	57%
Proportion of poor cultivating rice	35%	38%
Proportion of v. poor cultivating rice	25%	25%
Total Proportion cultivating rice	28%	40%

[a] It is possible that this figure may be anomalous either as a result of the poor rain in 2000 or simply as a result of under-reporting during data collection.

agricultural (dryland) activities may have been incurred and extra livestock may have to be sold to cover household food requirements arising from shortfalls in grain harvests. Further, when total crop area per reference adult is taken into consideration, poor and very poor households consistently, and

statistically significantly, farmed less per reference adult than medium and wealthier *ilmarei* in both years.

The significance of hired labour in cultivation

A very high proportion of households - see Table 6.15 - will employ the labour of especially Hehe farmers to till both rice and maize fields and to ease labour shortages especially during peak labour demand times - typically in the early-mid wet season when the herd is calving and fields require cultivation - planting and weeding[245]. This would strongly indicate that nearly all *ilmarei* have a chronically short supply of labour, particularly during the farming season. Labour is typically hired for cash and may frequently be for piece work - for example, the tilling of an acre of dryland field for an agreed sum.

Table 6.16: Employment of labour in *Ilparakuyo* cultivation

(n=50 *Ilmarei*)(N=52)	2000	2001
Proportion of fields cultivated with the help of hired labour	94.5%	94%

Labourers, as well as receiving payment, may enter into long-term client-patron relationships with *ilmarei* and frequently will participate on the margins of *Ilparakuyo* ceremonial events. Long-term labour relations with Hehe labourers may be critical for *Ilparakuyo* households in securing labour during peak labour demand periods when the labourers themselves may be preoccupied with their own agricultural labour commitments - especially in good years of rain[246]. As discussed earlier, while some *ilmarei* have access to oxen and ox-ploughs - usually the households that are wealthier - many *ilmarei* do not and are therefore dependent on reciprocal arrangements with those who do, or on hiring manual labour. Moreover, the propensity of *Ilparakuyo* households to hire labour is also related to a certain distaste humorously displayed towards manual cultivation and the hard labour involved, not least by the most physically capable, but least inclined, *ilmurran*.

6.4.4 *Livelihood strategies*

Production strategies amongst the Idodi *Ilparakuyo* have become increasingly diverse as they develop much closer trading, farming and labour relations with Hehe/Bena society. There are also a small

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[245] The early-mid wet season (and the wet season more generally) is characterised by much elevated levels of malaria and noticeably increased levels of general malaise that may seriously impact on the ability of households to carry out herding and cultivation activities. Indeed, such is the chronic incidence of malaria, that many *Ilparakuyo* were frequently incapacitated by malaria and only when critically ill would they seek medical assistance - instead relying on aspirin and induced vomiting (by imbibing ghee) to ease their condition.

[246] A number of itinerant farm and herd labourers make their living from working with the *Ilparakuyo*, staying and working for one super-household before moving on to another, frequently returning at a later date. Indeed, some of them are colourful characters – one of whom is a flamboyant musician playing the Gogo 'zeze' (CiGogo: zither) instrument much popular at social events in the lives of both the *Ilparakuyo* and Hehe/Bena communities.

number of *Ilparakuyo*, not necessarily stockless, who have been drawn to and reside in Iringa town and who are largely traders in sundry supplies, stock marketing and traditional medicine. These 'urban' *Ilparakuyo*, often through circumstance, have had to diversify out of herding and farming but very much remain part of the wider *Ilparakuyo* network - frequently being visited by, and maintaining close ties with, kin living in the rangelands of Idodi and Pawaga.

Figure 6.11: The relative comparative index value (in cash equivalents) of combined *Ilparakuyo* livelihood strategies for 2000

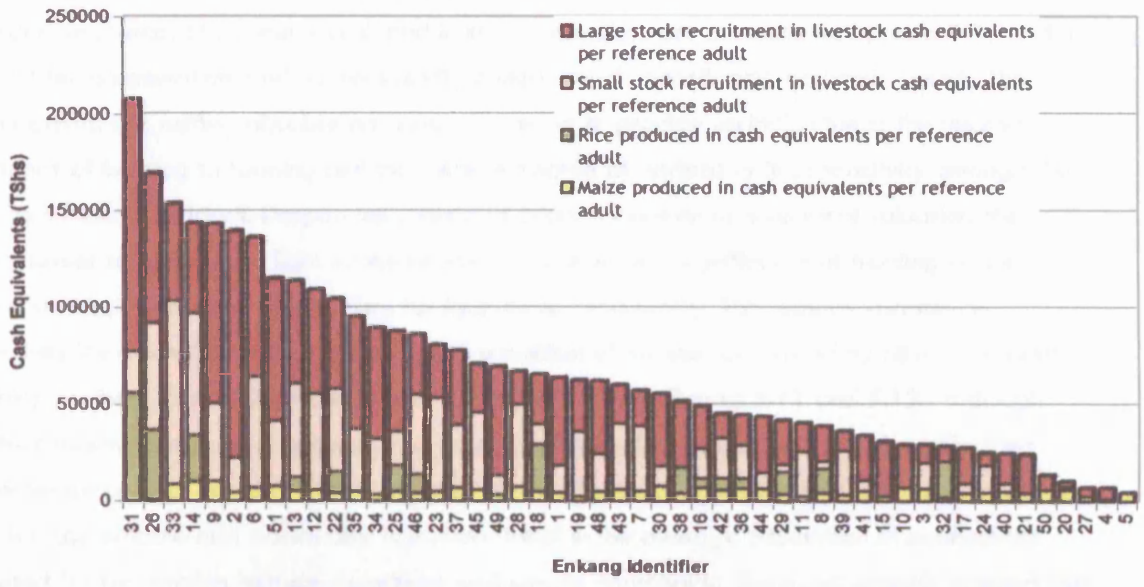
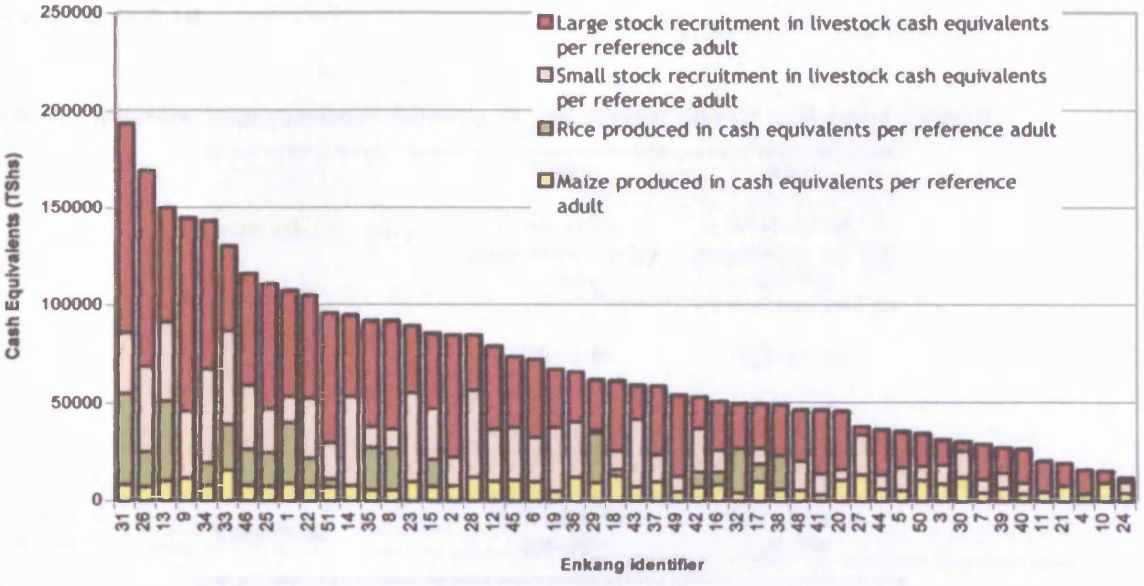


Figure 6.12: The relative comparative index value (in cash equivalents) of combined *Ilparakuyo* livelihood strategies for 2001



A synthetic overview of the major components of *Ilparakuyo* production strategies is useful to compare the relative socio-economic importance of herding to farming - especially given that all Idodi *Ilparakuyo* are, in effect, now sedentarised and recognise themselves as increasingly relying on farming as a central component of their production strategies.

Indices were developed for each *olmarei* by calculating the year's cash value of livestock recruited into the super-household's herd (i.e. calves born into the herd) together with the cash value of the acreage it will have harvested. It should be noted that the data presented here are not fully comprehensive. In particular, they do not take into account other sources of productivity of overall less economic significant value - for example, sales of milk and other livestock products, as well as other miscellaneous sources of income in cash and in kind. The indices are a measure of productivity and the potential for accumulation, and not necessarily a measure of overall socio-economic wealth. The values derived are neither absolute nor exact, but serve to provide an indication of the relative importance of herding to farming and the relative degree of variability in productivity amongst the *Ilparakuyo* Maasai of Idodi. Despite the somewhat arbitrary nature of contingent valuation, the process serves to throw some light on the relative socio-economic significance of herding versus farming strategies and their implications for *Ilparakuyo* productivity. The relative variation in productivity between *ilmarei* is substantial, with a number of *ilmarei* far exceeding others - a trend maintained in both drier (2000) and wetter years (2001) - see Figures 5.11 and 5.12. Although wealthier *ilmarei* tend to farm greater crop acreages in absolute terms, the data also reflect the relative importance of farming as compared to herding for individual *ilmarei* production strategies. There is a discernable and statistically significant trend in the average proportion of productivity accounted for by farming between wealthier and poorer households. The trend strongly suggests that poorer *ilmarei* proportionately rely to a greater degree on farming for their livelihoods as compared to wealthier *ilmarei* - see Table 6.17. Furthermore, although the data are not independent of each other, *ilmarei* falling into the wealthier and medium livestock wealth categories reflect even more pronounced wealth differentials compared with those falling into the poor and very poor categories as shown in Table 6.18.

Table 6.17: Relative importance of farming in the production of individual *ilmarei*

	2000	2001
Wealth Category	**Production accounted for by farming**	**Production accounted for by farming**
Wealthier & Medium[c]	10% ±2.1%	18% ±2.4%
Poor	16% ±2.7%** (df=15)	18% ±2.1%** (df=15)
Very Poor	31% ±5.2%*** (df=19)	32% ±3.3%*** (df=19)

* Statistically significant difference as compared with the corresponding productivity means in the 'Wealthier & Medium' category - One sample T-Test.

If the rank order of the households is compared in Figure 6.11 and Figure 6.12, households of middle wealth category (as defined in Box 6.2 and Table 6.6) cumulatively increase their rank between 2000 and 2001 on average by 2.5 per household. Poor households also increase their rank on average by 3.8 places, while the poorest show a decrease of 2.6 places on average. Although very limited for a time series, this data suggest that the poorer an *olmarei* becomes, the greater the chance it has of becoming poorer still. However, *ilmarei* of moderate means may still be able to improve their livelihood status, particularly in good years, from a combination of herding and farming.

Table 6.18: Overall total productivity indices (in cash equivalents[a, b]) of *ilmarei* grouped by livestock wealth categories

Wealth Category	2000 (cash equivalents per reference adult)	2001 (cash equivalents per reference adult)
Wealthier & Medium[c]	125,190 ±10,493	119,128 ±9,786
Poor	67,844 ±4,050*** (df=15)	70,966±5,253*** (df=16)
Very Poor	27,384 ±2,871*** (df=19)	33,418 ±3238*** (df=18)

* Statistically significant difference as compared with the corresponding productivity means in the 'Wealthier & Medium' category - One sample T-Test.

[a, b] Cash equivalents have been derived from average local market prices.

[a]For the year 2000: 1 Livestock equivalent (184KG) - equivalent cash value TShs 35,000/-[247]; One small stock unit on yields on average an equivalent cash value of TShs 8,000[248]; 1 Acre of rice yields on average yields 8.7 sacks - equivalent to TShs 104,400; 1 Acre of maize on average yields 1.6 sacks - equivalent to TShs 12,800.

[a]For the year 2001: 1 Livestock equivalent (184KG) - equivalent cash value TShs 35,000/-; One small stock unit on yields on average an equivalent cash value of TShs 8,000; 1 Acre of rice yields on average yields 10.8 sacks - equivalent to TShs 129,600; 1 Acre of maize on average yields 2.8 sacks - equivalent to TShs 22,400.

[c] 'Wealthier' and 'medium' wealth categories are combined due to low sample size in the former category.

[247] Large stock, as recruited into the herd, are valued as an estimate of the average contingent sale price they can be expected to fetch as weaned calves. The value used does not reflect any inter-annual or inter-seasonal fluctuation in prices. This is because livestock may be sold – or exchanged - in a range of different social contexts and market locations depending on price differentials. Price differences between years, seasons and locations are extremely difficult to account for without reliable and often unobtainable records.

[248] Small stock recruited into the herd are also valued as an estimate of the average sale price they are expected to fetch, bearing in mind that different stock categories are often sold at different stages of maturity. However, there appears to be an anecdotal tendency to sell small stock while still not fully grown and thus prices fetched may often be lower than those possible – this is reflected in the relatively low value estimate of small stock utilised here.

A number of inferences may be drawn from the data which are supported by qualitative information drawn from conversations with *Ilparakuyo* together with field observations. There is likely to be an increasing disparity among the *Ilparakuyo* in terms of wealth and socio-economic wellbeing - despite compensatory socio-cultural wealth equalisation practices[249]. While some *ilmarei* retain relatively high and sustainable levels of *per capita* livestock holding, and have additionally entered into farming - successfully combining cultivation with herding over the last 15 to 20 years, a substantial number of *ilmarei* are increasingly stock-poor and unable to farm as productively. The issue of rice farming is a case in point.

Households with access to the most stock are able to farm larger areas of rice, a crop which as discussed in Chapter Five, can be very profitable. Moreover, rice may frequently - assuming that irrigation furrows continue to flow especially during drier years[250] - be far more reliable and productive as crop than rain-dependent dryland maize cultivation. However, poorer households, if they can afford it, may invest in rice cultivation if at all possible, as such an option constitutes a more reliably profitable production strategy than maize cultivation, not only in terms of deriving a further form of cash income, but particularly in securing household grain requirements[251]. However, the poorest (in terms of livestock) households are simply unable to afford the investment required for rice cultivation and are compelled to farm maize only, a much less reliable and lower value crop.

The availability of livestock is a strong determinant of inter-annual productivity - especially after a period of drier years. Availability of livestock may also be strongly related to the position of an *olmarei* in the development cycle - as shown in Table 6.19. Although household size may not necessarily always be an accurate indicator of a household's position within the developmental cycle, it is taken here to be a reasonably robust indication.

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[249] As Rigby (1992, 147) states, radical variations between domestic groups in terms of livestock holdings, particularly with regard to milk cows, are at least partially levelled out by mutual access rights among kin and affines, and livestock trustee arrangements (as discussed in the main text). Thus, the concept of 'inclusive control' of most livestock (Rigby 1985, 142) may be seen to play at least a partial role in maintaining or improving *olmarei* or even *enkaji* access to livestock.

[250] As previously discussed in Chapter Five, the location of a paddy field may strongly influence whether or not the irrigation furrows supplying water will continue to flow sufficiently and for long enough for the rice crop to grow properly. Indeed relatively substantial areas of paddy have lain unutilised during recent drier years and their supply furrows have remained dry as up-stream farmers monopolise the water available. Access to paddy fields receiving reliable and less contested irrigation water is at a premium and a key factor in securing reliable and bountiful rice yields.

[251] Rice has a consistently significantly higher value than maize (around 1.5 times that of maize) and given that rice yields (in 80kg bags) per acre may currently be quadruple or more those of maize, the marginal value of rice production becomes salient.

Table 6.19: The impact of *olmarei* (household) size on production and wealth status

Reference Adults per *olmarei*[a]	2000			2001			Sample size[e]
	Average Wealth Category[b]	Average Livestock Equivalents per Reference Adult LE:RA[c]	Average herd and farm productivity per Reference Adult[d]	Average Wealth Category[b]	Average Livestock Equivalents per Reference Adult LE:RA[c]	Average herd and farm productivity per Reference Adult[d]	
0 - 5	3.6	2.7	59098	3.5	2.8	62121	13
6 - 10	3.4	2.8	65648	3.4	2.8	65034	22
11 - 15	3.1	4.5	81807	3.0	4.6	93851	11
16 - 20	4.0	1.6	45612	4.0	1.8	55389	3

Note: Household size is assumed to be indicative of the position of *ilmarei* in the development cycle.

[a]Households were classified by their total size (in Reference Adults) into one of four inter-quartile groups

[b]The average wealth category of the households falling into each inter-quartile size category

[c]The average LE:RA ratio of the households falling into each inter-quartile size category

[d] The average combined herd and farm production for 2000 or 2001 of the households falling into each inter-quartile size category

[e] The number of households that were classified into each inter-quartile category (n=50).

The data in Table 6.19 show that *per capita* household livestock holdings and herd and farm production increase as the household increases. However the data suggest that the largest *ilmarei* which are likely to be nearing the end of the development cycle suffer from a marked decline in *per capita*[252] access to livestock and substantial reductions in their annual herd and farm production. Thus those *ilmarei* with sufficient capital accumulated in stock (i.e. those *ilmarei* tending to fall in the 'wealthier' and 'medium' wealth designations - or alternatively at the peak of their development cycle) are able to transfer and invest a proportion of it in seasonally productive irrigated agriculture especially during wetter years, as an alternative but reliable and effective accumulation strategy. However, those *ilmarei* who do not have access to sufficient livestock capital (for example *ilmarei* at the beginning or end of the development cycle as inferred in Table 6.19) are far more vulnerable to inter-annual perturbations in rainfall - both in terms of household food security during drier years and in being able to mobilise capital during wetter years to take advantage of higher (value) agricultural production (rice). The greater inter-annual reliability in terms of livestock production as contrasted with farming is presented in Figures 5.13 and 5.14[253]. These graphs demonstrate the continued importance and significance of livestock in *Ilparakuyo* livelihood strategies as a reliable mode of long

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[252] In terms of Reference Adults.

[253] After analysis, the data points in Figure 6.7 are not clumped in any particular way in terms of household wealth. The two most extreme outlier points (the first above the line and the second below) belong respectively to *enkang'* 51 and 28. The former falls into the 'middle' and the latter into the 'very poor' wealth category for the year 2000.

Figure 6.13: The inter-annual variation in livestock (both large and small stock) available per reference adult

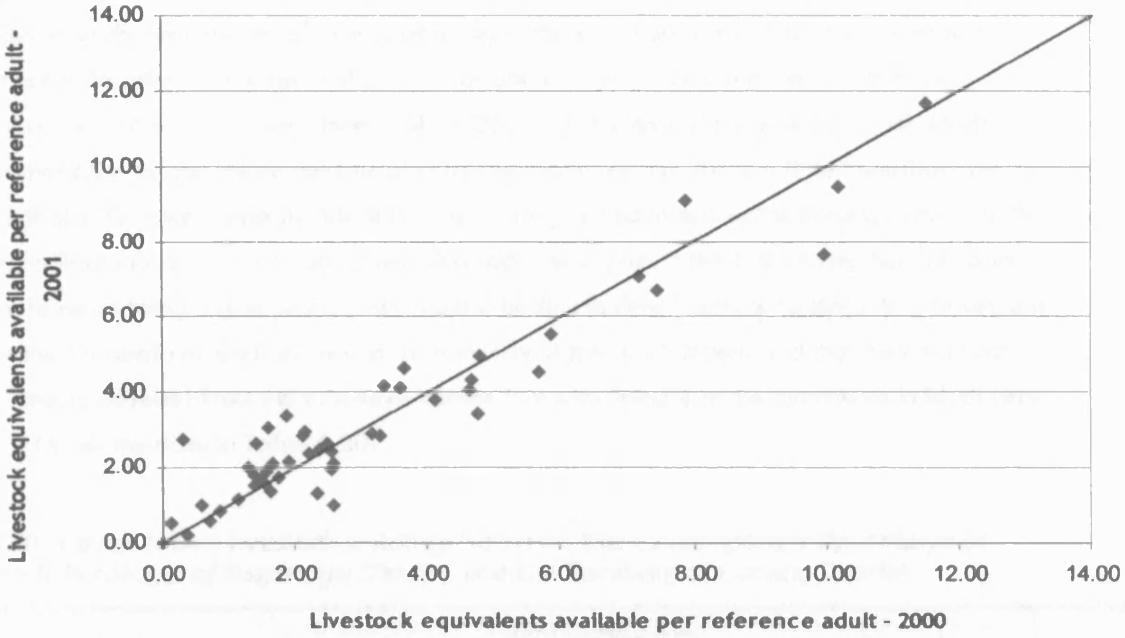
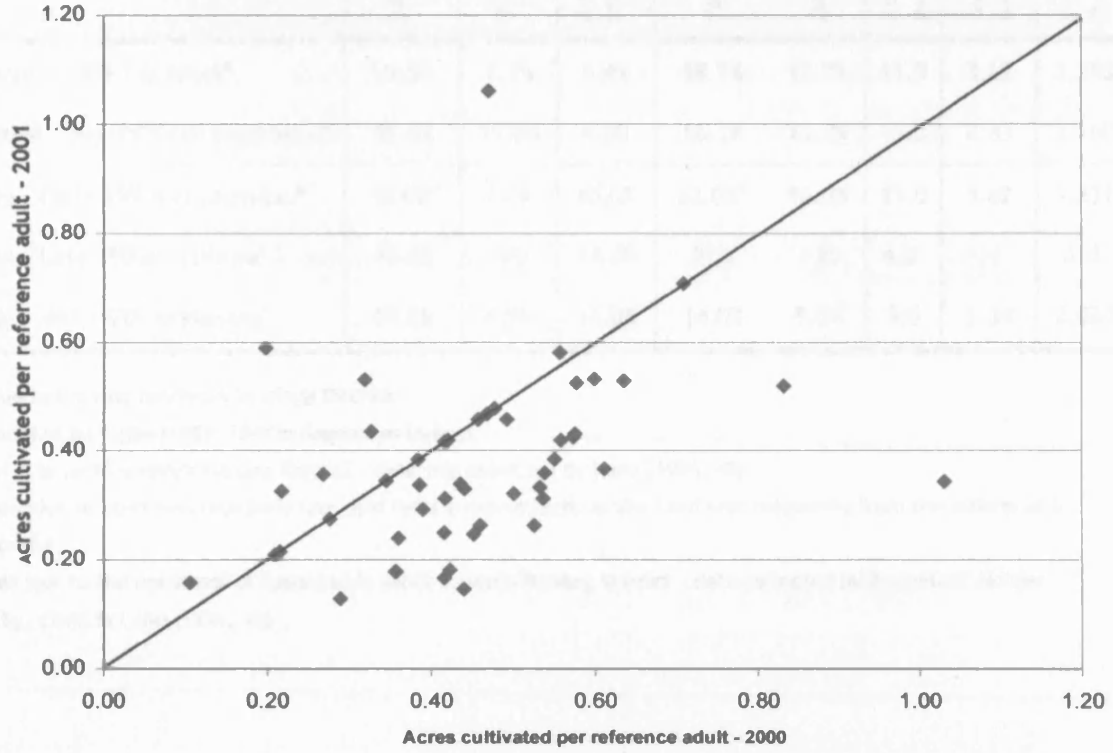


Figure 6.14: The inter-annual variation in area cultivated per reference adult



term accumulation and source of capital for short-term, higher risk but frequently profitable, agricultural investments.

Herd decline and comparative livestock holdings

There is good reason and circumstantial evidence to suspect that the *Ilparakuyo* herd has declined substantially over the last 20 years, as supported by both contemporary and historical comparative data from other locations in Tanzania. If crude livestock indicators are compared for the Idodi *Ilparakuyo* against other pastoralists (see Table 6.20), it can be immediately seen that the Idodi *Ilparakuyo* have by far the lowest number of cattle *per capita* at 3.6. There is little immediate reason to suggest that in the recent past the Idodi *Ilparakuyo* may not have had cattle holdings similar to the *Ilparakuyo* in Bagamoyo District of about nine livestock per capita. If this is the case, then the Idodi *Ilparakuyo* have certainly experienced a substantial decline in their livestock holdings. In contrast, it is likely that the Barabaig in Idodi still retain substantially higher stock levels, and that they may not have necessarily suffered from the extensive decline in stockholding that the *Ilparakuyo in* Idodi very likely have (given the data in Table 6.20).

Table 6.20: Comparative livestock holdings between the contemporary *Ilparakuyo of* Idodi, the *Il Parakuyo of* Bagamoyo District and the Barabaig of Hanang District

	Herd Composition					Average number of persons per *enkang'*	Av. Number of cattle per person	Total number of livestock in sample
	Adult females	Bulls	Bullocks (oxen)	Calves: Female	Calves: Male			
Ilparakuyo - 2000-2 in Idodi[a]	55.5%	7.1%	6.4%	18.7%	12.2%	11.9	3.62	2,253
Il Parakuyo - Mid-1970s in Bagamoyo[b]	55.0%	11.0%	4.0%	16.3%	13.3%	11.3	8.33	2,160
Barabaig - Early 1990s in Lagaujad[c]	40.0%[d]	2.0%	10.0%	32.0%[d]	16.0%	11.0	5.62	1,231
Barabaig - Late 1980s in Dirma[e]	40.0%	8%	14.0%	25%	13%	n.d.	n.d.	n.d.
Barabaig - Mid 1970s in Hanang[f]	55.0%	8.0%	14.0%	14.0%	9.0%	9.5	5.34	2,020

[a] Data collected during fieldwork in Iringa District

[b] Data collected by Rigby (1983, 134) in Bagamoyo District

[c] Lagaujad is in south-eastern Hanang District - data was collected by Lane (1996, 48)

[d] The proportion of cows was relatively low, and female calves high, as the herd was recovering from the effects of a recent drought

[e] Dirma lies just to the northeast of Lagaujad in south-eastern Hanang District - data collected by Borgerhoff Mulder and Kjaerby, cited in Lane (1996, 48)

The continuing long term decline in the *Ilparakuyo* herd in Idodi was a re-occurring theme during fieldwork. The underlying causes for the herd's decline are complex but are likely to strongly comprise an interplay of reasons.

The increasing sedentarisation (particularly post *Ujamaa* and villagisation) of the *Ilparakuyo* has reduced their ability to provide sufficient low disease risk and good pasture for their herds, particularly as farming competes increasingly for limited household labour. Thus *ilmarei* are now often less able to graze their herds greater distances away from the *enkang'*, a capability which in some years may be more important that in others, depending on rainfall, range condition and livestock disease levels. A further contributory factor is that as the extent of farm fields expands, and as the landscape becomes increasingly divided and zoned, pastoralists are becoming increasingly restricted in where they may graze their livestock.

The increasing sedentarisation and proximity of *Ilparakuyo inkang'itie* to farming settlements has led to growing demands on *olmarei* herds, as households are drawn further into the village cash economy. This has resulted in the herd's productivity being converted more frequently and extensively into cash for an increasing number of uses such as health, school and village contributions. The herd's production is also perhaps spent a little too often by men[254] (of all age grades excluding *ilaiyok*) in beer clubs, a practice which has contributed, in more extreme cases, to the marked attrition of an *olmarei* herd.

Finally, as already discussed, the herds appear to suffer from a relatively high chronic disease burden, most associated with the arrival of CBPP. Despite skilled management by the *Ilparakuyo* using traditional and basic modern drugs, tick-borne diseases as well as trypanosomiasis continue to have a substantial impact on herd morbidity and, therefore, productivity. This observation is supported to an extent by Rigby's (1983,160) assertion for Bagamoyo District during the late 1970s that *Ilparakuyo* herds were beginning to succumb to an increasing disease load, particularly from East Coast Fever, as well as trypanosomaisis (see also Rigby 1992, 142).

It is likely that these factors may act in such a way that the adverse impact of each reinforces the other, in what might be described as a spiral of dwindling pastoralism. Despite this fact, some *ilmarei* have remained relatively better off and substantially pastoral. These wealthier households are often led by *Ilparakuyo* men and women who, through their own careful and concerted labours, have persevered and prevailed against sometimes substantial odds - for example, Ismaeli and Nailole referred to in Box 6.3. That is not to say that other *Ilparakuyo* households have not also similarly tried, but, through no fault of their own, encountered less success than others in remaining pastoral - for example, Salum referred to in Box 6.4.

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[254] Several *ilpayian* and senior *ilmurran* reflected that alcohol had played its part in the decline of their herds and their livelihoods. It is not possible, however, to draw any conclusion as to whether the varying levels of alcohol use that exist in *Ilparakuyo* society in Idodi have grown, or whether they are as much as they ever were.

Overall, it is very likely that the sedentarisation of the *Ilparakuyo* in Idodi, as an indirect result of villagisation and as a more direct result of an increasingly bounded landscape created as a result of government policies, has led to long-term declines in their herds. A similar process of sedentarisation and stock loss was directly associated with villagisation as independently observed by Rigby, Parkipuny and Ndagala in Bagamoyo District (Rigby 1985, Parkipuny 1975 & 1979, Ndagala 1974 & 1986 cited in Rigby 1992, 146-147).

6.5 Conclusion

The rangelands of Idodi to which the *Ilparakuyo* first came some fifty years ago have undergone substantial change. They have been demarcated into different land-use zones, and those parts of the landscape still open to settlement have been occupied and developed by a diverse and growing assemblage of farmers and herders. The Idodi *Ilparakuyo*, in contrast to their initial semi-transhumant existence in a lightly populated landscape when they first entered Pawaga and Idodi, have become largely sedentary and now live around the periphery of expanding farming settlements. While maintaining seasonally spatially variable grazing patterns, the *Ilparakuyo* are increasingly relying on farming as a key component of their production strategies - both for cultivation and dry season livestock grazing. The agro-pastoralist *Ilparakuyo* have suffered from marked declines in their herds as they have become confined to the margins of agricultural settlements and as the herds have succumbed to the influences of a cash economy and to higher levels of disease. A growing proportion of *Ilparakuyo ilmarei* no longer have access to sufficient livestock upon which to base their production and instead have, for all intents and purposes, become agriculturalist. While those *Ilparakuyo* still endowed with larger herds have been able to successfully adapt and invest in higher value and more reliable forms of agricultural production, a growing underclass of poorer *ilmarei* - despite the continued practice of traditional forms of wealth equalisation among kin - are increasingly dependent on much more unpredictable and lower value dryland farming as a key production strategy. As overall *per capita* livestock holdings continue to decline, there is likely to be increasing wealth differentiation between the relatively richer *Ilparakuyo* domestic units, and those who are the poorest. This trend may be seen to be a result of past and present state development policies and the emergence of an increasingly strong formal market economy in which the social inclusivity of pastoralist production has diminished (see Rigby 1992, 164).

Although this analysis has not adopted a gender-focused approach to household production, the results of this study in the light of previous findings on *Ilparakuyo* production strategies, beg an important question. Rigby (1983, 163) predicted that growing levels of cultivation in *Ilparakuyo* society would result in a reduction in the status of women. The reason he made such a prediction was that, as the importance of cultivation in relation to livestock keeping for household production increased, women could varyingly lose their once stronger position as regulators - or mediators - of household production. Rigby (1983, 163) found that *olmarei* production had become increasingly focussed on agricultural land, labour and commodity relations, placing the major portion of production - particularly in stock-poorer households - in the hands of men This process reflects a similar loss of control by women over production and a reduction in their status in *Kisongo* Maasailand

described by Hodgson (2001, 68 & 253). It would be appropriate to investigate this issue as part of further research on the Idodi *Ilparakuyo*.

Finally, the *Ilparakuyo*, while remaining an independent and distinct cultural identity, have developed increasingly close social ties and client-patron relationships through labour and exchange with the wider hegemonic Hehe/Bena farming community. As they become totally reliant on their access to the finite grazing and farming resources of the Idodi rangelands, the future of the *Ilparakuyo* is entirely bounded by the measure of success with which they will continue to negotiate and secure access to these growingly contested resources through their social relations with the Hehe/Bena farming community. This may be contrasted with the situation for the Barabaig. Although some Barabaig families now follow similar livelihood strategies to the *Ilparakuyo*, other families remain far more mobile in the landscape. It is these latter Barabaig who will likely find it increasingly difficult to continue their current way of using the landscape as other herders and farmers seek to limit their movements which are seen as a source of conflict over land use.

7 Negotiating the political ecology of landed resources

Megel nkishu 'pere - do not separate cattle with a spear (you may destroy many)
Ilparakuyo proverb

7.1 Introduction

In this chapter I investigate the nature of land-use relations between farmers and herders, in the context of Peters' (2004) assertion that there is growing inequality, competition and conflict over land at local level. As the Idodi landscape has become increasingly peopled, so the level of contest for access to key resources - for example, arable land and dry season on-farm grazing - has increased. These resources continue to be perceived differently by herders and farmers in terms of rights of access and cultural norms of use, leading to dispute and, in recent years, sometimes violent conflict. While most *Ilparakuyo* and some Barabaig herders have successfully begun to avoid conflict as they engage with farmer-based perceptions of resource access and use, others - especially transhumant Barabaig herders have continued repeatedly to enter into conflict situations with farmers.

In attempting to understand land-use practices and land-use conflict in Idodi, it is important that a simple but robust analytical framework be adopted. In this regard, Goheen and Shipton (1992, 309-311) identify three key, yet straightforward, sets of questions which provide an entrée to understanding the socio-ecological complexity of land holding - an approach particularly appropriate in the context of a polyethnic landscape in which multiple and contested forms of land-use and production co-exist:

> What does land mean and to whom?' - What kinds of resources do people use and how are land and its resources defined and categorised in local cultures?
>
> What kinds of social affiliations affect land-use and control?'
>
> Who controls the terminology?' - Who gets to interpret and define the meaning not just of land *per se* but of 'the group' itself?

As Goheen and Shipton (1992, 309) note at the outset, the answers to these questions are rarely simple. Any analysis may only necessarily be able to draw out a particular set of contextual nuances and leave others untouched. This chapter therefore employs Goheen and Shipton's three questions as a basis for providing some ethnographically grounded and focused analysis of how the Idodi rangelands are used today by herders and farmers, who controls their use, how this use is decided, and why and how land-use conflict continues to occur.

In this chapter I deconstruct some key components of the complex socio-cultural milieu underlying and moulding current trajectories of landscape occupancy that, nested within a wider policy context, favour farmer over herder. Thus, drawing on the parallel themes developed in Chapters Four and Five, I examine in this chapter how the landscape has come to be defined in terms of herder-farmer relations, within the context of a demarcated landscape, much of which has been reserved exclusively

for wildlife conservation. While seasonal herder-farmer conflict remains a prominent feature of landscape relations, I investigate through the use of extended case study, how social relations and negotiation between herder and farmer have become central for modulating land-use agreements and in influencing landscape and livelihood outcomes. I will argue that while conflict over land has increased in recent years, negotiated land-use agreements between farmer and herder have helped to resolve - or lessen - these conflicts. I argue that the local legitimacy of these agreements has only been possible as a result of the long-term and increasingly interdependent nature of socio-economic relations between herder (particularly the *Ilparakuyo*) and farmer. In villages in which land-use conflict has recently broken out, imposed and hastily contrived land-use plans - largely at the behest of the State, have not improved land-use relations, as they have failed to address underlying tensions and the socio-political dimension of land-use conflict. I will show how land-use plans as envisioned by the authorities cut across existing production relations between herder farmer, while locally based agreements may form more of a flexible agreement with fuzzy boundaries in which socio-economic relations and networks are allowed to continue. Despite the relative success of locally negotiated land-use agreements, I argue that herders' access to key landed resources for their pastoralism remain insecure. While negotiated agreements have enabled their continued access to range resources, they are liable to reversal as farmers seek to secure more land for an expanding population, and as land-use intensifies with an expanding irrigation network. I argue that negotiated land-use outcomes are alone insufficient for herders' access to key range resources and that other forms of action are required if their access as a marginalised and minority group is not to deteriorate further. The insights I draw from the extended case studies in this chapter are then combined with those from the preceding chapters to discursively answer the central questions I asked in Chapter Two - leading into a final conclusion centred around Peters' (2004) discussion about inequality and social conflict over land.

7.2 The socio-ecological context to resource dispute: what does land mean and to whom?

In Idodi, people's past origins and experiences may often bear heavily on their current perceptions and attitudes towards the landscape, land holding and production. Many people living in the Idodi villages, particularly the older generations of newcomers, have memories of eviction and land insecurity. For example, some newcomer Hehe families were forced to move up to three times in the space of twenty years due to state interventions (see Chapter Five). While insecurity is remembered in the past by Hehe newcomers, insecurity has become an increasingly key issue for herder newcomers in the present, who continue to remain little more than squatters on village commonage. Previously this *de facto* status was not viewed as a constraint by *Ilparakuyo* herders, as mobility was more important for their livelihood strategies. However today, as *Ilparakuyo* and Barabaig herders have become increasingly agro-pastoralist and thus more sedentary, access to secure land and grazing rights in their local village commonages has become a critical issue. The growing importance for herders of obtaining secure tenure of grazing land may be seen as part of the continuing conflicts of interest and discord between herders and farming peoples in the Idodi villages over access to key resources.

As farmers and herders have come to live together in the Idodi villages, each group has brought their own socio-ecological, economic and cultural understandings of landscape occupancy. These different normative perceptions, although flexible and negotiable, have variably led to conflicts of interest and tensions between herder and farmer over what are acceptable and unacceptable uses of the landscape, and more fundamentally, which group has socio-political power over the other.

In the following two sections, I first review some of the key findings of Chapters Five and Six that are particularly relevant for understanding the socio-ecological context to dispute, before I continue on to examine the nature of complementing and conflicting herder and farmer land-use practices.

7.2.1 *Farmers: expanding frontiers, fertility decline, and new technology*

For farmers, the Idodi rangelands have been a source of fertility and an expanding frontier for agriculture. The Idodi rangelands are today characterised by two very different forms of agriculture - dryland and wetland farming - as discussed in Chapter Five. Dryland farming can be perceived as representing a long-established means of production as practised by Hehe farmers throughout the Idodi rangelands. However, whereas dryland farming was formerly practised in an extensive way, with the populating of the Idodi rangelands and the villagisation campaign of the mid 1970s, farmers increasingly came to cultivate the same fields year on year as the remaining uncultivated land was allocated by village governments to immigrant farmers. Continual cultivation of dryland fields has led to a slow but continual decline in the overall fertility of the dryland farmland. Declining levels of soil fertility may be compounded by the unpredictable rainfall regime leading to heightened levels of risk in dryland farming. Yet despite the unpredictable nature of dryland farming in a semi-arid rangeland, the area under dryland cultivation continues to form an expanding frontier as the farming population has grown, augmented by a continuing inflow of immigrant farmers seeking land (see Chapter Five).

Wetland rice agriculture was brought to the Ikwavila valley in Idodi from the Usangu in the 1970s[255]. Adopted particularly by newly arrived Bena and Wanji farmers, the riverine wetland area under rice cultivation expanded through the 1980s and 1990s as the growing irrigation furrow system seasonally allowed. Although wetland agriculture requires substantially higher investment in labour and agricultural inputs than dryland farming, it can be very profitable (see Chapter Five), and it has led to the emergence of a wealthy entrepreneurial class of farmer. These farmers now represent a new face of agricultural production and prosperity in the Idodi rangelands, one which is hardly constrained by fertility and is not as limited by rainfall perturbations as dryland agriculture.

Many dryland farmers are unable to successfully take-up wetland agriculture due to its labour and input requirements as well as due to a shortage of easily available irrigable land. Therefore dryland agriculture remains the most important form of livelihood for many farming households. The dryland

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[255] It is probable that wetland rice technology was also brought to other parts of Idodi from Pawaga, itself a significant rice growing area.

soils are extremely difficult to maintain - both in technical terms and also in terms of the availability of labour and inputs. With growing populations, the increasing commodification of land and its rising value, there is a new and growing class of landless farmers who are compelled to rent land from others in order to cultivate (see Chapter Five). It is likely that increasing numbers of destitute farmers are entrapped in a cycle of poverty and poor agro-ecological productivity, unable to sufficiently support themselves from the land, even in years of good rainfall. In the face of these challenges, farmers are increasingly clamouring for the political right to cultivate areas informally 'reserved' for pastoralists.

7.2.2 *Herders: seasonal grazing systems, demarcated landscapes and expanding fields*

For pastoralists, the Idodi rangelands provide a variety of both wet and dry season grazing range as well as corridors of movement between different grazing areas. As for pastoralists in any semi-arid rangeland, the spatial and temporal variability in rangeland productivity is often a key driver in herder landscape occupancy. Thus seasonal flexibility in rangeland-use remains essential for the viability of *Ilparakuyo* and Barabaig herds in Idodi (see Chapter Six). Sufficient access to dry season grazing areas is an important determinant of the productivity of their livestock. As was concluded in Chapter Six, the status of pastoralist herds is a key determinant of the ability of pastoralist households to invest successfully in agricultural - particularly wetland - production. In this regard, many pastoralists, particularly the *Ilparakuyo*, are becoming increasingly agro-pastoral, investing in agricultural production, particularly in wetter years, and then re-investing any surplus back from farming into their herds. Thus agricultural production now constitutes an important part of many pastoralist livelihoods and forms a key determinant of overall pastoralist livelihood success.

As the landscape has become increasingly demarcated and populated, so the ability of herders to seasonally move in the landscape to maximise the reliability of their grazing has become increasingly difficult and constrained. The rangelands available for grazing have shrunk as the area under cultivation has expanded as a result of population growth, and as the areas reserved for wildlife and restricted in one way or another to people, and in particular pastoralists, have been extended. In several of the Idodi villages, pastoralists have found themselves compelled to withdraw into the remaining range lying between farmers' fields and the proscribed parts of the Lunda section of the LMGCA (see Chapter Four). This has also meant that whereas agricultural fields did not previously form an important part of the annual cycle of grazing patterns in the Idodi rangelands, pastoralists have now in incorporated farmer's fields into their grazing cycles, to the extent that field crop residues have become a key, indispensable, grazing resource during the dry season.

The agro-pastoral *Ilparakuyo* have responded to these developments through achieving higher levels of assimilation into farming communities, particularly by engaging in client-patron relations. A number of the Barabaig have much less so, leading to easier expression of differences of interest and to open conflict and violence over access to dry-season grazing. Driven by shortages in grazing, an increased livestock disease burden (see Chapter Six) and heightened demands of a growing population on a diminishing herd, many *Ilparakuyo* Maasai are today investing more in agricultural production to augment their livelihoods. In contrast, many Barabaig have remained highly mobile,

exploiting the range in seasonal patterns contingent on inter-annual climatic variation and local socio-political relations. Other Barabaig have settled in localised areas and are engaged in more sedentary agro-pastoralism, and follow similar livelihoods to the *Ilparakuyo*.

7.2.3 *Farmers and herders: complementary and conflicting land-use practices*

Parts of the Idodi landscape are used by farmers and herders at the same time of year; other tracts are independently used by both groups in different seasons through different periods of the year. The simultaneous use by herder and farmer of similar resource sets may occur with or without disagreement dependent on the relations between them, and contingent on their respective understandings of how these resource sets should or can be used.

Defining terms and describing the nature of disagreement

Before proceeding, it is important to clarify different terms - or labels - that may be used to describe different levels of disagreement between people - for example, between herders and farmers. The objective here is to use definitions that are appropriate for a simple yet robust analytical framework of disagreement, drawing from the work of others. Thus the definitions and concepts defined and described below are adapted from Gulliver (1979, 79) & Nader and Todd (1978, 14-15) cited in Hagberg (1998, 68); and Hagberg (1998, 20 & 68).

A 'claim' is defined as an alleged infringement of a law or customary rule or entitlement perpetrated by one party against another. For example, if a farmer finds that his/her field has been grazed without his/her consent, then the farmer may make a 'claim' against a herder who is alleged to have perpetrated the incursion. The substance of the 'claim' may often be negotiated and privately resolved within a dyad. A 'claim' may sometimes become public knowledge, particularly if tensions are high between herder and farmer, making a private and relatively quick resolution less easy.

A 'dispute' occurs when the person to whom the 'claim' has been directed denies culpability and the disagreement becomes concrete and public (Gulliver 1979, 79 cited in Hagberg 1998, 68). The 'dispute' is most likely to be resolved by adjudication through jural proceedings - usually by village or ward level courts, or in other circumstances, brought before a customary jural body (see Chapter Four). However, depending on the circumstances, disputes may not always be brought before a jural body, and may remain unresolved for long periods of time, to be re-expressed at a later date.

A conceptual distinction can thus be made between a 'claim' and a 'dispute'. A 'claim' may be seen to be mediated often privately through social relations, which avoid adjudication. The disagreeing parties may perceive greater benefit in privately resolving their disagreement through negotiation thereby maintaining good social relations with each other in light of wider socio-economic relations. Contrastingly, a 'dispute' becomes publicly expressed as a perceived breach of legal right or the law, and is most likely to be adjudicated by a jural institution. Adjudication may not necessarily lead to the resolution of the underlying disagreement, and may only serve to maintain or worsen the damage incurred by the dispute to social relations (see Gulliver 1979, 6-7 cited in Hagberg 1998, 70).

Finally, 'violent conflict' occurs when either the claimant/disputant or the defendant or both feel compelled to defend their perceived rights or express their grievance through violence. Although 'violent conflict' may occur spontaneously over a relatively small conflict of interest, it is likely to be as much an articulation of a larger set of circumstances or conflicts of interest.

A disagreement can develop its own dynamics - bouncing back and forth among and between levels and parties, and may have implications far beyond the actual dispute (Nader and Todd 1978, 15 cited in Hagberg 1998, 68), impacting on how other (similar) disagreements unfold and are approached by the claimants/ disputants.

Complementary land-use practices

In some instances, herder and farmer understandings of normative resource use can concur. For example, farmers' tenurial rights over their fields are respected and enforced through popular sanction during wet season agricultural growing period. However, once a field is harvested, a herder may secure grazing rights for crop residue from the farmer during the late wet season and or in the early dry season. The grazing rights for a field are normally exclusive and are negotiated between farmer and herder for a payment usually in cash but sometimes in kind. Despite the repeated iteration by District authorities that such practices are now illegal, farmers voluntarily enter into grazing agreements with herders as they may often form part of a wider client-patron relationship, which may also encompass labour and drinking relations. These agreements also continue despite farmers maintaining that cattle may damage soil fertility[256] (see Chapters Four and Five). Farmers also complain about the incidence of incursions in neighbouring dryland fields, which may or may not be resolved quickly between herder and farmer (see below).

Although dry season field grazing can constitute a common negotiated and accepted land-use practice for pastoralists, it has also become a source of conflict in some villages in recent years. Sometimes a herder may assume rights to graze a field without the consent of its owner, and if detected in time, this may lead to a dispute, depending on the type of field and whether the farmer perceives it worthwhile or possible to pursue the dispute (see Section 7.4.3). Farmers associate this practice most with pastoralists - particularly the Barabaig - some of whom who seasonally arrive in the Idodi rangelands with their herds during the dry season to graze their stock on farmers' fields. Idodi is only one of several dry season grazing areas that these transhumant herders may use. Thus these herders may pursue a more opportunistic strategy in which fields may be grazed without the prior consent of the right holder. Since these herders are not ordinarily members of the village, they may stand to loose relatively little by breaking normative expectations, which lead to poor social relations with farming communities. Resident herders tend to conduct their gazing strategies in an

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[256] As discussed in Chapter Five, farmers did not perceive the manure left by cattle grazing fields as important or significant for improving soil fertility.

opposite fashion, paying greater deference to normative field grazing practices, as the maintenance of good social relations with their farming neighbours and associates is key for their livelihoods.

Conflicting land-use practices

There are other instances in which herder and farmer understandings of normative resource use do not concur. Perhaps the most significant example of discordant landscape use in the Idodi rangelands, aside from field grazing, is that of fire management[257]. Hehe farmers typically set fire to the grassed areas of the rangelands in the early dry season for a number of reasons. Fire use has strong roots in declining and perhaps previously more important uses of the landscape, such as wildlife hunting and honey gathering. Setting fire to the undergrowth of the *Acacia-Commiphora* bushlands is perceived as enabling hunters to more easily track and hunt down their quarry. Also, for honey gatherers, the smoke from the 'green' fires may drive bees away from their wild hives, often located in baobab trees. Early dry season fires tend to be cooler fires (than those later in the year) as much of the vegetation still has residual moisture, and therefore woody plants, which are often fire-hardy, survive without damage. However, for pastoralists, these early dry season fires are often a nuisance as they result in substantial areas of early dry season grazing being burnt and rendered useless for their livestock. Pastoralists are then forced to move their herds elsewhere. The early fires lit by farmers represent an element of range insecurity for herders. In addition, these early cooler fires may result in the maintenance of a more wooded landscape, as young trees especially are less susceptible to fire-based mortality from these events. For pastoralists later burning of the already grazed range, although depending on climatic conditions, may be more preferable. Later burning may not only conserve the early dry season range, but it also can open out the landscape, limiting tree recruitment and therefore improving and expanding the rangeland's grasslands.

The divergent fire management interests of herder and farmer create underlying tensions, with pastoralists perceiving farmers as wilfully mismanaging fire so as to ruin grazing areas as a pretext for discouraging a herder presence. Because fire management does not constitute a readily recognised basis for dispute among the Hehe, there are few avenues of recourse available, or precedents set, for pastoralists to contest the use of fire in grazing areas, in which they also have no recognised formal permanent tenurial rights. While village governments will sometimes arrange collective fire-fighting initiatives for large and out-of-control fires, particularly those close to settlement, these initiatives tend to be predicated on the normative perceptions of district extension officers and other educated district council employees who tend to perceive most fire as being undesirable and destructive. Thus these fire fighting initiatives, when they occur, are not specifically carried out for pastoralist benefit, although herders may sometimes benefit from them.

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[257] See Laris (2002) for an insightful paper on mosaic burning in Mali, which stresses the need for understanding not only when and where fires occur, but why they are lit, what they are lit for and who lights them. Far from being a solely destructive agent, fire may be crucial for rangeland management. It is often used at different stages of the dry season by local farmers and herders to create a mosaic and diversity of different vegetation types maximising the utility of a rangeland (although this is not to say there may be conflicting interests over fire management – as exist in Idodi).

Changing land-use priorities

In addition to specific overlapping land-uses, such as grazing and fire which may or may not lead to conflict, there is a further dimension to the coexistence of alternative forms of production and understandings of landscape that farming and herding represent. In particular, the expanding farmlands of Idodi are beginning to impact on the way herders use the landscape and on how the remaining landscape can be used. There are long-term farmer hopes that the area under irrigation in Idodi will be further expanded. These expectations are reflected in national policy which sets out objectives to expand agricultural productivity and improve national food security particularly through rice production (Agriculture and Livestock Policy 1997, 48 - 51; National Irrigation Development Policy 1997) [258]. Thus the lack of access to irrigated wetland agriculture, particularly for many poorer farmers in the lower reaches of the Ikwavila Valley, has been the recent focus of a World Bank funded irrigation development project (World Bank 1996, MAFS 2002). The project's aim was to more efficiently tap the flow of the Mazombe River, and through infrastructural development, further expand the area under irrigation.

There are a number of implications arising from the expansion of irrigation in the landscape that, although not directly expressed by herders or farmers, can be identified through the analysis of field data. The description that follows is not necessarily based on herder and farmer descriptions, but it fits in and supports other farmer and herder narratives discussed later on in this chapter.

While herders and farmers have benefited from negotiating seasonal dryland field grazing agreements, the expansion of wetland irrigated agriculture presents a different situation. For example, during the early dry season of 2001, herder field grazing was tracked by randomly sampling post-harvest field grazing. Post-harvest dryland field grazing was found to constitute 76 per cent of all field grazing of fields sampled (241 fields) in that year[259]. Although only 24 percent of fields sampled were wetland fields, nearly all these fields were grazed by Barabaig herders, who that year were also involved in violent conflict with farmers specifically over wetland field grazing (see Table 7.1). Court cases heard by the *Baraza la Mahkama ya Kata* in Idodi between the years 2000 and 2001 show that the Barabaig were relatively heavily prosecuted - they were defendants in 36 per cent of all court cases[260]. In contrast, no *Ilparakuyo* came before the court as defendants.

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[258] The Agricultural and Livestock Policy (1997, 48) states, '...irrigation seems to hold the key in stabilizing agricultural and animal production'. Expanding the area under irrigation has been realised to a certain extent in the Idodi villages through a World Bank funded smallholder irrigation project in Mapogoro and Nyamahana villages which was started after field work had been completed (URT 2002) – see Chapter Three.

[259] A list of households in Idodi village was compiled and every fourth household was visited and asked about the details of any fields they had rented out for grazing.

[260] In one case alone, a Barabaig herder was penalised TShs 255,000 in fines and TShs 49,000 in court charges (a total of TShs 304,000 or about USD$380 at the time).

Table 7.1: An inventory of court cases heard by the *Baraza la Mahkama ya Kata* for 2000 and 2001

Type of Case	Number	Percentage
Farmer-herder (Barabaig) dispute	16	18%
Robbery/theft	10	11%
Environmental degradation and/or water pollution (Barabaig)	8	9%
Illegal incursion into village area (Barabaig)	8	9%
Gross bodily harm	8	9%
Slander	6	7%
Farmer-farmer land dispute	5	6%
Domestic dispute (Farmer)	5	6%
Divorce (Farmer)	4	4%
Debt	3	3%
Farmer-herder (*Ilparakuyo*) dispute	0	0%
Total	89	

In contrast, no conflict occurred in the dryland areas, which for the most part were grazed by *Ilparakuyo* herders, although this is not to say that claims and disputes do not occur over dryland field grazing. The data suggest an underlying trend as follows. Dryland field grazing constitutes a temporally and spatially delimited use of the landscape over which herder and farmer can have common interest; wetland agriculture instead constitutes an increasingly exclusive zone for farmers in which herders' access is likely to be much diminished.

The phased expansion (realised and anticipated) of wetland fields and the area in and around which herders' potential for access is being challenged, has precipitated pressure by village councils, popularly supported by much of the farming village assembly, for pastoralists to move out of the upper river valley reaches of some of the Idodi villages. In other Idodi villages, pastoralists occupy rangeland that is not suitable for irrigation and therefore they are not as subject to this pressure. Thus, through overt pressure in village council meetings, from which pastoralists are often absent (see Chapter Four) but at which their removal is often called for, pastoralists are being slowly compelled to move down into the drier rangelands that form part of the LMGCA, despite substantial resistance on their part. The withdrawal of pastoralists to the periphery is being formalised through land-use planning facilitated and initiated by the district council and partner institutions, in response to land-use conflict and incidences of violence. These more extreme conflict events that have occurred in Idodi, and which form a central part of the rationale behind district sponsored land-use planning, are those which are nearly all centred around wetland field grazing dispute. In addition, the separation of

herder and farmer domains is part of a wider policy initiative by the government in its reaction to preventing and solving protracted and sometimes violent land-use conflict between herders and farmers that has occurred elsewhere in the country (e.g. Rural Development Strategy 2001, 32; Agricultural and Livestock Policy 1997, 62-68).

Summary

As production intensifies and land-use in the more productive areas of the landscape becomes more exclusively reserved for irrigated agriculture, so the potential for divergent understandings of the landscape between herder for herding and farmer for farming continues to grow. Farmer-based understandings of the landscape and control over its use stem from overlapping local power centres both of locally powerful lineages and village councils. This power base which underpins prevailing landscape meanings and understandings has substantial support from the government in its drive for improved agricultural production. As farmers are well aware of the considerable increase in productivity and reliability that wetland farming can constitute over dryland, their understandable hopes for the continued expansion of intensive wetland production are supported by national government and global institutions - such as the World Bank - through irrigation expansion programmes. It is therefore of little surprise, that in the face of locally prevailing farmer-based meanings of landscape supported by national agendas, that pastoralists find themselves retreating to the spatial periphery of the landscape and their understandings of landscape management marginalised[261].

7.3 Social affiliations, land-use and conflict

7.3.1 Law and social process

The new land law of Tanzania potentially provides a legal framework for engendering equitable rights over land for all at village level, but it is clear that the law in itself is insufficient to guarantee these rights. There are two reasons for this. Firstly, as discussed in Chapter Three, the State continues to heavily control and define the lie of the landscape and retains the power to appropriate land from villages. Secondly, the underlying socio-political processes at village level are as important, if not more so, in defining people's access to resources on village land. Different socio-political

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[261] This is not to say that that the government does not view herders as potentially important producers. The government has identified livestock as a nationally important yet under performing sector. In short, the State currently plans that the livestock sector will grow from contributing 2.7 per cent to 5 percent of Gross Domestic Product by 2005 (RDS 2001, 32). Several strategies are identified including the creation of Disease Free Zones and the demarcation of permanent grazing lands to put an end (in effect) to pastoralist transhumance and mobility. These permanent grazing lands are supposed to have set carrying capacities (Agriculture and Livestock Policy 1997, 55). An underlying rationale is to promote the (commercial) production of export beef, in line with export-orientated macro-economic policies. Insufficient attention has been given to supporting pastoral livelihoods based on a milk-producing economy, where livestock may be accumulated for a range of reasons including long-term household livelihood security (given frequent droughts) and as an alternative form of savings.

affiliations and interests use and interpret the law (when the law is known and applicable) for their own ends, and may often fill the legal vacuum that the lack of application of formal state law often leaves with their own customary and socio-cultural interpretations of how the land should be used, and who should benefit.

The social affiliations that modulate land-use and its control in the Idodi rangelands are, as might be expected, locally diverse, complex and fluid. Attempting to provide a comprehensive ethnography of these social affiliations would be hardly possible in a single field study, especially given the polyethnic nature of society in the Idodi rangelands. However, it is possible to provide a selection of cross-cutting case examples about the on-going social affiliations and processes that have led to different farmer-herder outcomes in the landscape. I have chosen here to focus on farmer-herder land-use relations, as herders are a significant minority group who remain marginalised, but who have varyingly negotiated access to key landed resources.

There is a noticeable degree of variation in land-use relations and land-use control between herder and farmer in the Idodi villages. In some villages, herders and farmers have negotiated an understanding of how the landscape can be used. These understandings have evolved over time, remain fluid and are still prone to underlying tensions and conflicts of interest over land-use in these villages. Yet, dispute is often purposefully avoided and when it occurs, it is usually resolved relatively quickly. Violent conflict very rarely occurs, if at all, in these villages.

In other villages, herders and farmers are engaged in a more acute and prolonged struggle over land-use and access rights, and disputes are often more frequent. In one village in particular, Idodi, there have been repeated outbreaks of violent conflict, which are likely to be reflective of peoples' low expectations of sufficiently resolving their underlying conflicts of interest through local jural institutions or, in the longer term, through social relations. While the different physical geographies of the villages are in part a contributory factor, it is the underlying matrix of social affiliations and production relations between herder and farmer that arguably accounts most for these different outcomes.

I present and use two sets of extended case studies to illustrate and discuss the very different herder and farmer land-use outcomes in different parts of the Idodi rangelands.

7.3.2 Social affiliations and negotiated outcomes between herder and farmer

The following two case studies show how herding and farming groups have negotiated a rights-based land-use agreement regulating access to key resources and the management of the landscape. I use the term 'rights-based' to mean that farmers or herders are allocated specific use-rights (including settlement) over an area of land or zones - whether for grazing or farming. In public discourse, these land-use zones often infer exclusivity for one or other land-user - particularly from the standpoint of the state. In this regard, herders may re-negotiate access to key resources from which they have been formally precluded in the rights-based land-use agreement through using their own individual networks.

Group: herder - farmer and land-use agreements in Mahuninga ward

Mahuninga ward consists of two villages - Makifu and Mahuninga (see Chapter Four). Makifu village has among some of the richest and most fertile cropland in the Ikwavila valley. There are three major agro-ecological zones: the irrigated wetland fields, the dryland fields and the non-cultivated bushland used for grazing. Several seasonal tributaries of the Tungamalenga River that are seasonally used to irrigate rice paddy run through the village area. One of these tributaries forms part of the boundary between the relatively intensively cropped fields to the west and north and the higher ground to the south east where, in addition to some dryland farming, the Mahove bushland begins. The village has four sub-villages: Isanga in the northeast; Makambalala to the northwest; Makifu to the west and; Mkanisoka to the south-west - beneath the foot of Mkanisoka hill. A longitudinal ridge of hills in the west forms a physical boundary between farmland to the east and the village's wilderness area to the west that also forms part of the Mkupule section of the LMGCA (see Figure 4.2).

Mahuninga village lies south of Makifu, stretching to the end of the Ikwavila valley. It is bounded on three sides by hills, with the Mahove bushlands forming the north-eastern periphery of the village. The village has six sub-villages, of which Uyamba and Majengo in the north border with the Mahove area. Mahove has an inexact boundary to the west and to the south follows the course of a tributary of the Tungamalenga River.

In comparison to other villages in the Ikwavila Valley, a relatively large number of Bena, Wanji and Kinga farmers live in the Makifu sub-villages, especially Makambalala. While farming is the major livelihood occupation in the village, a number of these families also keep livestock, particularly in Makambalala, where there are twelve agro-pastoralist households.

Ilparakuyo herders have had a presence in Mahuninga Ward since the late 1960s and currently live outside the farmer settlements in scattered enclosures on the western and southern margins of the Mahove bushland area. There are up to eight *Ilparakuyo* enclosure clusters in the Mahove area[262], which are organised on the basis of clan affiliation as shown in Table 7.2. Some of the families and clans - such as the *Ilmarumai* and *Inkelingishu* - were the first to arrive in the area and have retained a presence ever since. Today, a majority of the enclosure heads are of the *Ildareto* age set, many of whom grew up together in the area as *ilaiyok* and *ilmurran*. The other enclosure heads are comprised of the younger *Ilkimnya* age set and are mostly from newer families in the area. As many of the older heads of enclosures have known each other for many years, often living quite close to each other, there is a greater degree of trust and cooperation among these combined families than might be the case elsewhere in the Idodi rangelands.

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[262] During field work, one enclosure head died and one other moved away to Ruaha Mbuyuni about 150kms to the east.

Table 7.2: Ilparakuyo enclosures in Mahuninga Ward in 2000-2002

Enclosure Cluster	Division	Enclosure Head	Clan	Age Set[a]
1	*Odo Mong'i* (Red bullock)	Ismaeli Katei	*Inkelingishu*	*Ildareto - Errokorr*
		Suberi Katei	*Inkelingishu*	*Ildareto - Errokorr*
		Rashidi Katei	*Inkelingishu*	*Ildareto - Errokorr*
		Sendeu Katei	*Inkelingishu*	*Ilkimnya - Errokorr*
2	*Ola Kiteng* (Black bullock)	Salum Lebere	*Ilmarumai*	*Ildareto - Ikelimboti*
		Mbungjai Mshoka	*Ilmarumai*	*Ilmedoti - Errokorr*
3	*Ola Kiteng*	Ndagoala Sumaeli	*Ilorborkishu*	*Ildareto - Errokorr*
4	*Odo Mong'i*	Ismelwa Palinoo	*Inkelingishu*	*Ilkimnya - Errokorr*
5	*Odo Mong'i*	Kombeti Palinoo	*Imosiyekuu*	*Ildareto - Errokorr*
		Rashidi Palinoo	*Imosiyekuu*	*Ilkimnya - Errokorr*
		Kifutu Palinoo	*Imosiyekuu*	*Ilkimnya - Errokorr*
6	*Ola Kiteng*	Kanaiya Mataali	*Ilmarumai*	*Ildareto - Ikelimboti*
		Salimu Lebere	*Ilmarumai*	*Ildareto - Ilpalingotwa*
		Kangai Lebere	*Ilmarumai*	*Ildareto - Errokorr*
7	No data	Rasta Sejengo	No data	*Ilkimnya - Errokorr*
8	*Ola Kiteng*	Sangwea Makaluma	*Ilatayo*	*Ilkimnya - Errokorr*

[a] See the appendices for further information on the opening and closing of age sets in Idodi.

In recent years, as the farming population has grown and the area under farmland has been expanded, the *Ilparakuyo*[263] say that they have found themselves increasingly surrounded by fields, which have become a source of disagreement. Both herders and farmers identify a particular number of years during the 1990s when tensions between farmers and herders were running particularly high. Disagreement centred on dry-season grazing with the *Ilparakuyo* tending not to always seek the permission of farmers to graze their field crop residue, despite their claims to the contrary. There were also incidents of cattle being grazed on un-harvested crops that may or may not have been accidental. While *Ilparakuyo* pastoralists were often successfully prosecuted by the village government and farmer plaintiffs, paying fees and compensatory fines, these incursions led to increasingly high tensions both in regard to farmers (particularly in Isanga) angry at the repeated incursions by cattle into their fields without their prior consent, and also *Ilparakuyo*, who felt that their grazing area was constantly being encroached upon by expanding fields. The *Ilparakuyo* claimed

[263] The *Ilparakuyo* are referred to here as a single unified entity with a single set of narratives. This is of course not the case, for either *Ilparakuyo* society or for their many and diverse narratives. However, in the context of the case study, and in regard to the collective action taken on the part of the *Ilparakuyo* families in Mahove, the treatment of the *Ilparakuyo* as a collective whole can be seen as being justifiable here.

that as long term inhabitants of the area, they had a right to have their own grazing land. The tensions were underpinned by farmer narratives of destructive pastoralists wantonly invading fields and destroying soil fertility (see Chapters Three and Five). Pastoralists claimed farmers wanted them to leave the area, that they were *de facto* second-class citizens with no land rights, and that they were given little opportunity to participate in village government to represent their interests (see Chapter Four). The *Ilparakuyo* also claimed that the recently arrived Barabaig were making farmer - herder relations worse. The *Ilparakuyo* alleged that the Barabaig were committing many more field incursion offences than the *Ilparakuyo*, but as herders, the *Ilparakuyo* were being held equally responsible by farmers for the incursions committed by the Barabaig. Irrespective of the veracity of these allegations made by the *Ilparakuyo* about the Barabaig, again the underlying reason for these narratives on the part of the *Ilparakuyo* can be explained by a sense of range insecurity and a shortage of dry season grazing compounded by newly arriving Barabaig pastoralists. Farmers' narratives of herders as being a destructive and an unwanted presence in the landscape were also often expressed simultaneously with narratives of fertility decline, a shortage of irrigable and arable land, adverse changes in the climate and a general decline in their overall fortunes (see Chapter Five).

The disagreement about land-use practices had taken on its own inertia as accusations and counter-accusations bounced back and forth (see Nader and Todd 1978, 15 cited in Hagberg 1998, 68) among and between herders and farmers, often with acrimony and little attempt to engage in a process of negotiation about how the landscape could and should be used. Although these accusations and counter-accusations continue to occur, of late they have become less acrimonious and less meaningful than previously. An important reason for this is that the *Ilparakuyo*, through collective action, sought to reduce tensions by coming to closer agreement with the village governments of Makifu and Mahuninga over how to modulate farmer - herder relations.

The *Ilparakuyo* first began to negotiate with Mahuninga Ward over the status of Mahove bushlands in 1994[264] during a period in which farmer-herder relations were becoming increasingly tense. A meeting was called by the village governments of Makifu and Mahuninga to which both farmers and herders were summoned. A farmer-herder committee was subsequently set up to investigate and agree the boundaries of the new pastoralist grazing area which they agreed should be created. It was agreed that Mahove would be reserved for pastoralists in an effort to reduce conflict and that the minutes of the meeting at which this had been agreed would serve as a record of this. The boundaries of Mahove were described definitively in some areas, especially those close to farmers' fields, but in other areas where conflict had not occurred, less so. In order to create an indisputable boundary in a zone where the grazing area and farmer's fields bordered each other, it was agreed that a tributary of the Tungamalenga River would form the southern part of the border. In return for the allocation of the pastoralist area, no further grazing of livestock was to occur in the wetland fields

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[264] This information is pieced together from minutes of meetings retained in Idodi's divisional office, as well as from interviews with *Ilparakuyo* pastoralists, some village government officials and farmers.

and those apprehended would be liable for a penalty of TShs 50,000 (about US$100 in 1994 - a significant sum). In addition all dry-season grazing on dryland fields was to stop so as to prevent further herder-farmer conflict. All pastoralists were to move into this area forthwith.

Leaving a rights-based dispute unresolved - Mahuninga village

Unfortunately, the southern border of the Mahove grazing area as had been agreed included some farmer's fields on the northern river bank. Although it was agreed that these farmers would be allocated fields elsewhere, this never happened, perhaps since it would have been politically difficult for the village government to be seen evicting farmers for the benefit of pastoralists. Evicting farmers from land that they could lay rightful claim to (given that they had cleared the land they were farming and were part of the autochthonous community) would have been controversial among the wider Hehe farming community and damaged the political credibility of village and ward leaders. In short, many Hehe farmers would have viewed the evictions as illegitimate, particularly in the context of previous state-perpetrated evictions in the wider landscape. The continued presence of farmers farming their fields, and even re-opening some older fields was a continued source of irritation for the *Ilparakuyo*, who saw the continued presence of farming in their reserved grazing area as undermining their land-use rights as had been agreed. They viewed the continued presence of some farmers in the village commonage assigned to them as being reflective of their inferior collective status in relation to the farming majority. An effort was made by Makifu and Mahuninga village governments in 1998 to prevent further encroachment of farmers into the southern section of Mahove, and despite some forceful language employed in the letters that were written by the Idodi *Katibu Tarafa* (Swahili: Divisional Secretary), and which were copied to the District Commissioner, the Mahuninga village government has not stopped farmers from continuing to farm in parts of what are designated the Mahove grazing area reserved for herders.

It is clear that there was an overt dispute between *Ilparakuyo* pastoralists and farmers over the use of the Mahove rangelands. Although the *Ilparakuyo* had lobbied the local government at different levels to make the farmers move elsewhere, the farmers were viewed by the wider farming community - and thus the village government - as having sufficient legitimacy to continue their use of the Mahove rangelands. The *Ilparakuyo* could have attempted to take their dispute to court, but it is likely that the adjudication would have remained unimplemented, and their social relations with the wider farming community would have likely suffered. The *Ilparakuyo* had considered obtaining title to the land, but their efforts at village level had been frustrated by the village government, which was reluctant to give formal land tenure (as opposed to occupancy) rights to the *Ilparakuyo* in the village commonage. An underlying reason for this was that the wider Hehe farming community did not view the *Ilparakuyo* as legitimate owners of the land, merely its occupants. While pursuing a rights-based approach to its conclusion might have been the most obvious choice for an observer or external actor, such an approach would have led to heightened tensions between all parties and to deteriorating social relations.

Resolving disagreement through negotiation - Makifu village

Despite the framework land-use agreement which designated the Mahove area in 1994 as a pastoralist land-use zone, disputes over dry-season field grazing had continued to occur - particularly in parts of Makifu village (see above). In 2000, the *Ilparakuyo* and village agreed that Mahove would be more strictly reserved for pastoralist grazing (i.e. no more dryland fields cleared), although other village uses such as firewood collection would still be allowed to continue. Significantly, no further transhumant pastoralists would be allowed into the area. The underlying significance was that Barabaig families currently living in the west of the village, who had occasionally encamped in the Mahove area, would be prevented from moving again into the Mahove rangeland. In return, the *Ilparakuyo* agreed that they would not graze their livestock in some parts of their village - particularly a relatively extensive area of fields farmed by Bena agro-pastoralists who wanted to reserve the fields for their own livestock grazing during the dry season. The most important outcome for the *Ilparakuyo* as they saw the unfolding situation was that, with Barabaig herders less present in the immediate landscape, they would be able to better control and modulate relations with farmers. A further advantage was that there would be less competition for dry season grazing - both within the Mahove rangeland as well as in farmer's fields.

Significantly, during the same period the *Ilparakuyo* also acquired *de facto* recognition from the village government that they could act as a sub-village and would have their own chairman. This development was a pragmatic move on the part of Mahuninga and Makifu villages and the *Ilparakuyo*. In the past the creation of a separate administrative unit on the basis of ethnicity would have been arguably controversial since the State has nationally heavily suppressed political expression of ethnic identity. However, although the *kitongoji* in Mahuninga Ward was informally created on the basis of ethnic identity, its justification was seen by those involved to lie in improving land-use and administrative relations between different categories of land-user. As discussed previously, national policies support land-use planning and the delineation of land zones according to herding and farming categories - a far less politically charged approach to dealing with an issue that may often include but avoid expression of an underlying dimension of ethnicity. In addition to being recognised by the local village governments as running their own internal affairs, it was agreed in return that the *Ilparakuyo* would cooperate in collecting their own taxes (the district development levy and livestock head tax) thereby helping the village governments more easily accomplish an often tense and unpopular tax collection process.

The process of collective action on the part of the *Ilparakuyo* pastoralists in Mahove can be seen as having tangibly improved farmer-herder relations and having reduced conflict through the re-negotiation and reaffirmation of boundaries (which nevertheless remain porous). While the land-use outcome in Mahuninga ward has been agreed and framed in terms of a rights-based land-use planning approach, critically the agreement has been negotiated as a result of evolving relations between herders and farmers. It is also clear that the land-use agreement in itself does not presently guarantee herders formal tenurial rights over the Mahove rangelands. Instead, herders continue to build legitimacy through their growing and evolving relations with farmers and local government. It may be the case in the future that herders will be able to secure formal tenurial rights over the

Mahove rangelands as a result of their continued investment in social relations with farmers - a development which on its own and in the absence of this investment in social relations, would not be legitimate in the view of many farmers and thus the village government.

Networks: individual herder-farmer relations and land-use outcomes

The land-use (rights-based) agreement in Mahuninga Ward may be viewed as a public expression of how people perceive the landscape should be normatively used. Yet the agreements negotiated at a collective level between herder and farmer can be viewed as accounting for only part of the land-use outcomes that have developed in Mahuninga Ward. In reality, the rights-based land-use agreement may be less definite and strictly adhered to than people imply. An underlying reason is that the socio-economic and production relations of herding and farming households cut across boundaries. A useful way of demonstrating this is through examining the impact and importance of networks in re-defining land-use outcomes.

Thus the following example demonstrates how networks can cut across rights-based rules and boundaries that have been agreed at a collective level and which form the socio-political backdrop within which people use the landscape.

Ismaeli Katei lives on the northern edge of the Mahove bushlands, having initially lived with his late father and brother in this area from the late 1970s onwards. In the late 1980s after having married his first wife Nailole, they established their own homestead, and have since lived in close proximity to Ismaeli's three brothers. Ismaeli together with his four wives are now perhaps the most successful pastoralist family of his age-set (he is a junior elder) in the Ikwavila valley (see Box 6.3).

In order to obtain sufficient grazing and nutritional security for their herd through the year, Ismaeli seasonally secures access to different range areas, mostly through the networks that he has built up in different localities. During the late wet season, much of the family herd is taken to Mlowa where the herd is lodged with relatives (his fourth wife's father) to avoid the seasonally elevated level of tick-borne disease that the livestock are exposed to in Mahove. When the herd returns to Mahove in the early dry season, it increasingly relies on field grazing as the range dries out and is grazed down.

Ismaeli has developed two sets of networks in Mahove that enable him to secure sufficient field grazing: The first network focuses on Hehe farmers in Mkanisoka sub-village with whom he maintains a client-patron relationship, strategically donating small stock for village and other social events. He often frequents the *kilabu* and buys beer for his associates, particularly prior to the onset of the dry-season field grazing period. During this process, he also agrees prices for the grazing rights for the crop-residue of farmer's fields in Mkanisoka. As his patronage has grown among farmers in recent years, so he has found it necessary to build a satellite enclosure closer to the fields which are seasonally used by the family to reduce the amount of trekking his stock have to do between his enclosure and the field grazing area. The investment Ismaeli has made in relations with Hehe farmers has meant that he has gained increasingly secure access to an important dry-season grazing resource for his herd, despite a continuing policy by the district that dry season field grazing is not permissible.

Although access to farmers' fields in Mkanisoka is an important part of Ismaeli's annual grazing strategy, the family has also managed to acquire access to fields in another sub-village that they are supposed not to be able to graze as they are owned by agro-pastoralist (Bena) farmers who reserve them for their livestock. Ismaeli gains access to some of these fields close by their enclosure through loaning stock to a poor yet skilled Bena stock associate who then grazes his stock on these fields through agreement. The family gains further access to this area of fields through occasionally renting one or more of these fields from Makambalala agro-pastoralists farmers to farm at the beginning of the wet season, a tenancy which also engenders the right for his livestock to graze the crop residue of these fields after harvest. In addition, by lending his plough and training the bullocks of the Bena agro-pastoralist farmers at other times of the year, he maintains a sufficiently strong network of relations with these farmers for them to ignore his flexible interpretations and circumnavigations of the boundaries and rules that have been agreed at a collective level.

Groups and networks: 'on-stage' and 'off-stage' discourses

The process of developing land-use agreements between collective herder and farmer groups as described in the previous section can be seen as part of an 'onstage' discourse (Feierman, 1990). In contrast to this 'onstage' discourse, there has also been a parallel 'offstage' process, sometimes contradicting the 'on-stage' discourse. Thus Ismaeli Katei was able to use his personal - offstage - networks to gain access to disallowed grazing resources. In this regard, the offstage reinterpretation of a rules-based framework was beneficial for some (Ismaeli and his associates), and likely to have been benign for others (other herders and farmers).

However, offstage practices can cut both ways and the offstage renegotiation of a rules-based framework may sometimes be harmful. For example, in Mahuninga village, pastoralists were summoned to a village meeting convened to address some recent incursions of livestock onto farmers' fields. The *Ilparakuyo* were accused of carelessly herding their stock through the fields, an accusation that they vociferously denied. Instead, they argued that it was some immigrant Barabaig pastoralists (in contradistinction to other Barabaig who are more permanently resident and registered as village members) who had recently arrived and had been allowed to temporarily stay in the village. The *Ilparakuyo* asked why these Barabaig had been allowed temporary access to the village when transhumant pastoralism (in contradistinction to seasonal rangeland mobility by locally resident pastoralists which retains a degree of local legitimacy) had been banned in the district. The village government was unable to answer this question. The *Ilparakuyo* alleged, and farmers have likewise accepted at other candid moments, that key village government officials often allowed transhumant pastoralists access to village rangeland in order to derive illicit cash payments from the migrant pastoralists. The *Ilparakuyo* saw the illicit and 'off-stage' allocation of their rangelands by members of the village government, together with the perceived elevated level of farmer-herder conflict, as a significant reason why they would continue to be unable to achieve sufficient tenure security of their rangelands, and why herder-farmer tensions would continue to occur. Village government officials were re-interpreting - or to the *Ilparakuyo*, breaking - the agreed land-use framework that had been

negotiated, but with little regard as to the implications of their actions for the maintenance of good social relations between herders and farmers.

While this was an understandable viewpoint for the *Ilparakuyo*, this perspective can be contrasted with that of transhumant Barabaig herders'. The Barabaig suffer most from rangeland insecurity since they often do not have as developed a set of social networks with farmers or with resident herders, yet they employ opportunistic herding strategies with considerable skill and effectiveness, and personal networks with particular village government officials can be key for securing rangeland-use.

Finally, in relation to contemporary developments in Tanzanian local government reform (see Chapters Two and Three), this example also demonstrates how continuing issues of accountability and poor governance at village level may sometimes adversely impact on herder and farmer land-use agreements and relations. This theme is taken up further in the next section.

Summary

Growing social and economic relations have created a sufficient basis and commonality of interest between herder and farmer within different parts of Mahuninga ward (not least helped by a modulating [Bena] agro-pastoralist presence), to address long-standing disagreements on how the landscape should be used. Group negotiations have created a simple set of rights-based rules and boundaries as a means for regulating landscape use by different categories of land-user and as a public expression of how farmers and herders should use the land. These simple 'onstage' rights-based rules and boundaries have remained flexible and porous as they are re-interpreted and re-negotiated 'offstage' within a complex network of social affiliations between herder and farmer. Thus it is the dynamic interplay between more formal group agreements and their informal play-out in individual social networks that has led to the particular land-use outcomes that we see today in Mahuninga Ward. Growing social relations have been the catalyst for the creation of formal rights-based land-use agreements, and they have remained as important in modulating how these agreements are played out in reality. Finally, growing social relations between farmer and herder may be viewed as serving to increase the legitimacy of access to land and the rights claims of otherwise marginalised herding groups, who are viewed as 'strangers' by an autochthonous farming group.

7.3.3 Conflict and the undermining of social affiliations

In direct contrast to the relative success of negotiated agreements in Mahuninga and Makifu villages between herder and farmer, there has been a protracted and on-going conflict between farmers and herders in Idodi village over the last six or more years. The drawn-out nature of the conflict has resulted in the polarisation of different parts of the community along lines of ethnic affiliation. Much of the conflict has centred on access to farmers' wetland fields by Barabaig pastoralists for dry season grazing, and the use of fire in the landscape by farmers to control pastoralist land-use. The case of Idodi village presents a useful opportunity for examining why, in contrast to Makifu and Mahuninga villages, farmer - herder conflict has continued despite the intervention of the state. Collective groups, although ostensibly agreeing to resolve conflicts of understanding in public (on

stage) through a rights-based land-use agreement, continue off-stage to resist and evade imposed solutions which they perceive as being, at least in part, contrary to their underlying interests. In Idodi, the state has pressured farmers and herders into creating a land-use agreement, almost in an adjudicatory fashion. Thus far, the land-use agreement has been still-borne and the process has unravelled as it has been characterised by a lack of extended negotiation between the conflicting parties, in large part due to the poor social relations that exist between some (not all) herders and farmers.

The context to conflict: resource use pressure

Idodi village has an extensive area of wetland agriculture fed by reliable streams flowing off the well wooded highland scarps immediately to the south of the main village settlement. Idodi's wetland farmlands are not only a centre of agricultural productivity which has been exploited over the years by an increasing number of farmers, but they also are an invaluable dry season grazing area for herders. In particular, Barabaig herders have been drawn to graze their livestock in these wetland fields at the onset of the dry season. Although there are a number of Barabaig families who have been resident in Idodi village since 1984 (see Chapter Six), there are also a relatively substantial, although unknown, number of Barabaig pastoralists who opportunistically use the wetland farmlands during the dry season for grazing, before moving away again, often north to Pawaga. As the numbers of both farmer and herder using the wetland farmlands have increased, so the likelihood and frequency of conflict has grown. Conflict between Barabaig herders and farmers in the wetland farmlands has been made all the more likely due to different and conflicting landscape use practices and separate jural systems (see Chapters Three and Five) compounded by poor social relations.

Explaining Barabaig - *farmer dispute*

An important question arises as to why many of the Barabaig - in contradistinction to the *Ilparakuyo* - have often not avoided dispute or violent conflict with farmers and, indeed, why they have not sought to more proactively attempt conflict resolution, particularly as a collective group. Any explanation attempted here is necessarily likely to be incomplete, especially since only a limited amount of interaction with the Barabaig was possible during field work. However, an attempt at an explanation is necessary in order to better develop the context and case analysis of land-use conflict in Idodi. Before continuing, it is also important to underline the fact, in contradistinction to Barabaig, that some Barabaig maintain stronger social and economic relations with farmers.

The Barabaig have a saying, 'cattle graze themselves' Lane (1996: 45)[265] and it is likely that young Barabaig men have not been too particular as to where they allow their cattle to graze within a locality - a tendency borne out by numerous complaints from farmers. Moreover, when Barabaig cattle have damaged farmer's fields and crops, the farmers have had little or no recourse to Barabaig jural institutions which would be the most effective means of sanctioning the young men responsible. Barabaig elders - who are often heads of households and overall responsible for making

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[265]See also Chapter Six, Section 6.2.3.

stock grazing decisions - have perhaps seen little cause to control or sanction their herdsmen as to where and how they graze their livestock in relation to farmers' fields and standing crops. This may particularly be the case since no Barabaig in Idodi were known to farm wetland fields (with only a minority farming dryland fields). Even if Barabaig elders were concerned with controlling the grazing practices of their herders in and around farmers' fields, it is uncertain whether Barabaig jural institutions function to the extent they might be expected to. Customarily, Barabaig land relations are mediated at the clan level (Klima 1970, 84; Lane 1996, 142; see Chapter Six). However, in Idodi, there are no clan lands (since the Barabaig are not autochthonous), and this institution cannot be used for resolving land-based disputes. Another institution that might be more appropriate for modulating land-use practices by Barabaig in Idodi is the 'council of neighbours' (Lane 1996, 143; see Chapter Six). This institution plays an important role in mediating matters of public concern, and may come to the fore in enabling collective decision-making in Idodi by the Barabaig. However, decisions made by the 'council of neighbours' may be little known and remain unobserved by more itinerant Barabaig herders who seasonally visit the Idodi rangelands in search of grazing. Moreover, the ability of farmers who are not Barabaig to effectively participate and bring their grievances before a 'council of neighbours' would be minimal.

Farmers have therefore necessarily only had recourse to the village government and the government jural system (see Chapter Four) to attempt resolution of their disputes with Barabaig herders. In order for a farmer to successfully pursue a dispute, and other factors not withstanding, it has been the norm that the farmer has had to indisputably identify the herd owner and provide evidence of field damage. Where the livestock owner is not immediately known, then the livestock have had to be rounded up by the farmer and taken to the village office as evidence. There have been incidents where groups of Barabaig men have intercepted their cattle being driven to the village office, and then made off with them, leaving the farmer without the evidence with which to pursue his/her dispute. The Barabaig in turn have claimed that farmers have sometimes purposefully driven cattle into their fields in order to try and be awarded large compensatory sums by the village and ward courts.

As with the villages of Makifu and Mahuninga, there have been allegations of village government officials receiving illicit payments from Barabaig families wanting to use the Idodi rangelands and farmlands for their dry season grazing. It is further alleged by farmers and *Ilparakuyo* herders that village government officials have also regularly taken payments from some Barabaig herders apprehended by farmers and under prosecution by the village and ward courts. The Barabaig herders are thus able to avoid the larger payments that they would have to make in terms of compensation to farmers, fines and court fees (the latter two items often equal the compensation due to the farmer[s]). Indeed, it was well known during 2000/2001 in Idodi village that one Barabaig herder boasted that he could graze his stock in any field he wished as he would be able to out-bribe any farmer and that he had a particular village official under his patronage. Poor governance, particularly within Idodi village government, was implicitly recognised by the District Commissioner, when in October 2001 she ordered that all herder - farmer disputes were no longer to be heard by

the village and ward courts and should instead be heard by the primary (but see Chapter Four) and higher courts.

Thus overtime, repeated field incursions by Barabaig herders and the difficulty experienced by farmers in successfully pursuing their cases through the village and ward courts led to a build-up of frustration by farmers. There were several reasons for this frustration. Firstly, the adjudication of dispute in village and ward tribunals was not always impartial (due to back-deals struck between herder defendants and tribunal officials). Secondly, farmers did not always feel that they had been adequately compensated. However, thirdly and most importantly, the adjudication of individual disputes had not addressed the continuing - and unresolved - problem of field incursions and wider land-use conflict between Barabaig herders and farmers. This had led to a situation in which even relatively minor disputes began to rapidly escalate towards violent conflict - an articulation of the wider unresolved and underlying land-use conflict and of farmers' frustration and anger at being unable to stop the field incursions. On a number of occasions the Field Force Unit (paramilitary police) had to be dispatched from Iringa (the district headquarters) to prevent any further violence and to make arrests. Violent conflict broke out during field work in 2001, and also according to divisional records, in 1998.

Crisis and beginning the negotiation of landscape use

In 2001, the early dry season months had seen multiple herder - farmer disputes over field grazing, several of which had led to flair-ups in violent conflict. Herder - farmer tensions were brought to a head in late September when a dispute over field grazing between Barabaig and Hehe farmers escalated into violent confrontation. Cattle were lacerated and half a field of crops were up-rooted in retaliatory reactions after the first confrontations. The village then dispatched a messenger to Iringa (the district headquarters) to call the police. The messenger allegedly claimed that 200 Barabaig herders were about to 'invade' Idodi and graze their livestock in farmers' fields. A Field Force Unit (FFU) was promptly dispatched to investigate and arrest both the herders and farmers involved in the dispute. The presence of the FFU suppressed any further outbreaks of violence, but tensions between herder and farmer remained high.

A previous meeting in June, that had been initiated by the Divisional Secretary at the behest of the District Commissioner[266], brought farmers and herders (both Barabaig and *Ilparakuyo*) together to discuss land-use conflict and to begin a land-use planning process. During the meeting, the participating farmers and herders agreed that the village should be divided into farming and herding areas so as to help reduce land-use conflict through providing pastoralists with their own

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[266] The District Commissioner for Iringa, Mrs Tatu Ruta, was newly appointed in 2001 and made a point of trying to ensure that farmer - herder conflicts were resolved as equitably as possible in the district. In an introductory meeting to Idodi Division in July 2001, she firmly warned the meeting that, 'Certain ethnic groups could not and would not be discriminated against – this was Tanzania! Why should a whole community suffer at the behest of a few errant individuals? Instead firm steps would be taken against those individuals who erred and not communities'.

rangeland areas, in which no farmers would be allocated fields. Each particular pastoralist area within the village would have to elect its own *kitongoji* chairman who would be responsible for his hamlet and its relations with their farming neighbours. It was agreed that the grazing of livestock in farmers' fields could not occur without the consent of their farmers. Furthermore, it was agreed that newly arriving pastoralists should inform the village of their presence and that pastoralists wishing to seasonally move between rangeland areas (particularly between villages) should first attain the permission of the relevant village authorities. The following day this overall agreement was put to the wider village assembly in a public meeting at which only five pastoralists were present (*pers obs.*) out of about 150 people attending[267]. The meeting was remarkable for the degree of active participation by the village assembly who are often reticent in such meetings to air their views publicly. The contributions to the meeting as they were made by the members of the village assembly are presented in Box 7.1. These comments are generally representative of the range of opinions and attitudes held by farmers in regard to pastoralists. The opinions in particular show the open degree of hostility felt by farmers towards the Barabaig, and some of the underlying conflicts of interest over future range use.

After the confrontations of late September, in mid-October the District Security Committee[268] travelled to Idodi to meet and discuss the recent herder-farmer conflict and to assert their authority over providing a solution and end to the conflict. During the meeting, different parts of the village were identified and exclusively allocated for herding areas and farming areas with an order that herders move immediately to herder areas and farmers to farming areas. It was further declared that field grazing was to be banned forthwith despite some farmers expressing their dissent - saying that field grazing was a useful source of income. All further registration of immigrant pastoralists (mostly Barabaig) was to be stopped not least because of herder networks leading to pastoralists inviting in their kin and also lodging their kin's stock in their own herds. Livestock tax records would be henceforth monitored to ensure no extraordinary increases in numbers of livestock occurred. The issue of maintaining herders' long established seasonal range-use patterns within the Idodi rangelands was not mentioned or discussed. Since Idodi's grazing range was identified as being 'full', de-stocking was put forward as a means to coping with perceived (on the part of the security committee) range depletion problems. The Idodi village government supervised by the Divisional Secretary was to carry out and implement the provisions as soon as possible. The measures put forward by the District Security Committee - zoning, sedentarisation and destocking - directly reflected the more widely held vision and approach of government administrators for managing herder-farmer relations and herders' livelihood practices.

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[267] The village government interestingly mentioned '453' people as having attended the meeting in their report to the District Commissioner.

[268] Including the District Commissioner, the Police Officer Commanding the District (OCD), the District Chairman of Prisons, the District Chama Cha Mapinduzi (CCM) party chairman as well as the District Agriculture and Livestock Officer (DALO).

Box 7.1: Farmer opinions about pastoralists and herder-farmer land-use conflict

· I say turf the Barabaig out of the village completely!
· Rice paddy crop residue grazing in particular should be banned as it destroys the irrigation system!
· A team of villagers should be created which should establish the exact numbers and whereabouts of the Barabaig!
· All herders should move from higher up in the drainage basin to lower down to protect water sources and river flows.
· Even crop residue grazing on dryland fields should be banned as it is not compatible with perennial cashew nut crops! (the individual was a cashew nut farmer)
· Ihehero (a rangeland area designated as a grazing zone and which has had a long association with pastoralists - especially *Ilparakuyo*) should be evacuated by herders as it is too close to cultivation!
· The Barabaig should leave because of their tendency to aggression - they are a nuisance and instead the Maasai should remain - at least they are no problem!
· The Barabaig should leave! The Maasai can stay as they are generally beneficial to the community providing meat and milk.
· There's no point discussing all this if the law doesn't help or isn't implemented - especially when those responsible for doing so - the village leaders - disregard the law!
· The pastoralists should leave - even though we have got used to them, because they are always inviting in their relatives to join them and then they take what is ours!
· I say all pastoralists out!
· Why are the problem pastoralists allowed to stay when only the good ones should be allowed to?
· If the law is broken, what steps will be taken?
· When Barabaig are caught grazing illicitly in the fields, they are often very aggressive - how should these situations be handled?
· Crop residue grazing should be stopped as it conflicts with crop residue incorporation! (when preparing land for planting - a fertility measure)
· There's enough grazing for 10,000 head of cattle in Kibikimuno (a rangeland area to the north east of the village settlement extending deep in the LMGCA) - so let them graze there! We border the park anyway and there's a lot of grazing available! (this is an overstatement)
· What about the future and our children and their children? Surely we farmers need expansion areas?
· In the event of a farmer being beaten up (by herders) and the perpetrator running into the bush (away), what should we do? It seems to me as though the village militia and the MBOMIPA scouts are often reluctant to follow the matter up!
· I agree that Ihehero was undoubtedly a livestock area, but we farmers have increased in numbers and need to expand our cultivation areas. I recommend that the herders de-stock in order that they have sufficient grazing (and farmers sufficient farmland).
· I'm against Barabaig sheltering each other! Often when one of them has done something wrong, his friends or relatives hide them and then represent the accused on their behalf. I think this should be discouraged!
· I think we should pay the village militia to ensure security in the fields!
· Who's going to help anyone when the accused is fined 40,000/- (approximately USD $40) and those who helped to round up the cattle and bring in the accused get nothing? People just won't help if this is the case!
· Why aren't there any Barabaig here? (Unfortunately, a young Barabaig child had gone missing the day before and many of the Barabaig were out searching - their absence was seen as having ulterior significance)

After the meeting no further action was taken by the village government - as had happened before after similar meetings held in June. Farmer-herder conflict broke out again two weeks later when fifteen farmers sent complaints to the village government about herder incursions into their fields. An emergency meeting was convened to discuss the new round of herder-farmer dispute and to reflect on the continued lack of action to carry out the orders of the District Commissioner and District Security Committee. This further outburst of conflict (although not violent, enough to make the village and ward governments apprehensive about the reaction of the District Commissioner should she learn of their inaction) was sufficient to provoke a hurried demarcation in the following days of Idodi village area as had been ordered. Members of the village and ward committees together with the farmer-herder committee and the Divisional Secretary chose trees and other physical landmarks as land-use zone boundaries which were recorded in a set of meeting minutes. Particular farmers living in the newly exclusive pastoralist areas were identified for eviction and vice versa for herders.

Two months later, when I left the field, farmers and herders had still not moved into their land-use zones, and with the onset of the farming season could no longer do so effectively for another 5-6 months. Indeed, despite the delineation of land-use zones, it is understood that farmer-herder conflict broke out again during 2002 resulting in the eventual transfer of the Divisional Secretary to another part of the District on the orders of the District Commissioner, due to his failure to ensure farmer and herder compliance with the now irate District Commissioner's orders. Most difficult of these, was preventing the continued dry season field grazing by pastoralists, as many farmers were reluctant to miss out on the opportunity of generating further income from herders grazing their fields.

The case of the Ilparakuyo: undermined social affiliations and landscape occupancy

The protracted conflict between Barabaig and farmers had already had an adverse impact on the *Ilparakuyo* who had built up strong labour and exchange relations with farmers over the 50 years that they had been in Idodi. In this time, the *Ilparakuyo* have developed conflict aversion practices - for example, purposefully avoiding grazing their herds in wetland fields, and have generally sought to resolve disagreement quickly[269]. Yet their social relations and status within the village, as perceived by farmers, as a benign and sometimes beneficial presence (see Box 7.1), has been increasingly overshadowed by the acrimony associated with the Barabaig. Previously, the *Ilparakuyo* had been able to continue landscape use practices - such as placing their enclosures upstream of the village settlement and grazing their stock in dryland fields - that had been technically proscribed one way or the other but which the village government had continued to allow and farmers to tolerate or even co-operate with. As relations between categories of landscape users - farmers and herders - have continued to deteriorate, these practices have now increasingly come into question.

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[269] Although there are one or two cases in which particular *Ilparakuyo* herders have evaded paying compensation to farmers through delay tactics, eventually leading to the farmer giving up after repeated court hearings.

The elevated and prolonged levels of conflict in Idodi have resulted in several *Ilparakuyo* families being forced to give up their positions in the landscape and to move to areas allocated to them as part of the land-use planning process but not of their choice. Salum, a senior *Ilparakuyo* elder, explained with reserved anger and frustration how he saw these imposed changes to their landscape occupancy as being particularly symbolic of the *Ilparakuyo's* marginalisation and their feeling of second class citizenship as a collective group within the village. He pondered how it was that he and his family, although having arrived in Idodi 50 years previously and before the great majority of the farmers now living Idodi, were regarded as outsiders. Whereas previously the *Ilparakuyo* had managed to retain access to rangeland areas they had long used by continuing to live in these localities despite farmland expansion, he blamed the Barabaig for having polarised and damaged herder - farmer relations to the extent that the previously porous boundaries and flexible rules governing the use of the landscape were becoming increasingly - and unnecessarily in his view - enforced. Although the senior elder's personal network and relations remained strong with individual farmers, he worried about the nutritional security of his and his associates' herds and their personal networks with farmers related to field grazing agreements. If during the dry season he was not to be allowed to graze his stock on dryland fields, where could they be grazed?

Conclusions

In contrast to Makifu and Mahuninga where categories of land-users - herders and farmers - have reached a growing understanding of how the landscape is to be occupied and used through formal 'on-stage' agreements played out in an informal 'off-stage' matrix of networks, in Idodi, the situation has been markedly different. Here, relations between groups - Hehe farmers and Barabaig herders have become increasingly polarised due to the absence of appropriate or sufficiently functioning dispute resolution forums, in part due to nascent collective group relations between a number of Barabaig herders and farmers, undermined by poor village governance. The *Ilparakuyo*, out numbered by the Barabaig, have been unable to negotiate or otherwise sufficiently influence the deteriorating relationship between the Barabaig and farmers - which has overshadowed their well established presence in the landscape and their strong relations with farmers. Despite heavily sponsored attempts by the state to coerce agreements between categories of resource users over land-use and the demarcation of the landscape, compliance has been poor and conflict has continued. This situation can be analysed from three different yet complementary perspectives.

Firstly, despite the polarisation of relations and rhetoric, herders and farmers have varyingly resisted the onstage demarcation of the landscape, and particularly the enforcement of rules that cut across off-stage and growing herder - farmer socio-economic relationships including, ironically, consensual field-grazing. In short, rights-based landscape demarcation and the attempted strict implementation of exclusive land-use areas has thus far failed since it is not consistent with underlying and growing herder - farmer relations and networks.

Secondly, a higher level of concord between herder and farmer over acceptable land-use practices is realisable in Idodi. Indeed, despite the worsening conflict situation over land-use practices between Barabaig herders and farmers, the *Ilparakuyo* had largely achieved a fluid agreement over land-use

mediated through their social relations with farmers and the village government. The level of dispute in Idodi can be viewed as having escalated to violent conflict because the underlying conflicts of interest over land-use between Barabaig herders and farmers had not been addressed and resolved. The village and ward courts had only served to adjudicate disputes, not resolve the wider and underlying land-use conflict issue. In short, there was an absence of sufficiently effective dispute resolution mechanisms in Idodi, particularly between Barabaig herders and farmers. Although a combined and potentially helpful farmer and herder conflict resolution committee had been set-up by the local government as a result of the growing levels of tension, it is not clear that the creation of the committee by itself was necessarily a sufficient approach to addressing the conflict. Firstly, artificially created institutions take time to evolve (if they do at all) towards socially-embedded and effectively functioning structures that are seen to be sufficiently legitimate by the communities that they serve and represent. Conflict resolution mechanisms cannot materialise instantaneously, but may be seen as evolving over time, through social process. This is particularly the case when highly indignant disputing parties are brought together to begin a dialogue from which an almost immediate solution is expected by others (e.g. the State). Secondly, additional approaches may be necessary for bringing disputing parties to agreement, since it is unlikely that all individuals will respect or heed the agreements struck by new institutions which have yet to gain legitimacy. For example, it may often be appropriate that an impartial third party intervenes to facilitate a negotiation process between particular disputing parties - or individuals - who are perhaps at the centre of the wider dispute. In this way an interim agreement and solution may be developed with the objective of building trust and better relations between the disputing parties.

Finally, a group of farmers - particularly in one part of Idodi - considered the continued arrival of more herders - particularly Barabaig herders - as undesirable. While their complaints over field incursions may have been entirely justified, they had begun to use these field incursion disputes and out-breaks of violent conflict to politically mobilise (see below) against the continued and increasing herder presence in the village. It was in their interests that the more overt conflict of interests over access to land be maintained until it was resolved in their favour.

7.3.4 Controlling the terminology

Thus far, certain terms and labels have been used to classify particular groups or categories of people and interests - for example, we have 'farmers', 'herders', 'the state' 'village government'. While I have attempted to use these labels to dispassionately describe and analyse people's livelihoods and land-use relations in the Idodi rangelands, the (emic and etic) terms I have employed are based on my field data of the different socio-economic production strategies and socio-political processes that I observed in Idodi. In describing and analysing the nature of people's livelihoods and land-use relations, I have controlled the terminology and attempted to use it to construct and convey a certain set of perspectives and meanings. Thus my choice of terminology has framed the reader's understanding and perception of people's livelihoods and land-use relations in Idodi.

In a similar vein, land-use outcomes in Idodi can be seen as having been heavily modulated by people's use of terminology - particularly in three ways: Firstly, in the way a range of different terms

and meanings were employed for different groups of people and types of land (see this and previous chapters); secondly, in the way certain people's definitions counted the most and; thirdly, in the way different terms and meanings were deployed (or not) in particular situations in preference to others. The first point has been woven into much of this discussion and that of preceding chapters. However I have yet to bring in the latter two considerations, which are helpful for better understanding the underlying dynamics of land-use outcomes in Idodi. I discuss each in turn as follows:

During fieldwork, it became evident to me that although the Idodi rangelands formed what might be termed a 'frontier', in the sense that the rangelands continued to be a destination for in-migrant farmers searching for fertile farmland and herders seeking pasture (including field grazing), the Hehe considered themselves as being the only autochthonous group. Certainly, as the largest collective group, they were hegemonic and controlled village government. Their understandings of how the land should be used were dominant and they controlled (other factors not withstanding) who was allocated land and where. Herders, as a minority group, were therefore dependent on their socio-political relations with the Hehe for legitimately securing access to the land[270] and resources they needed for grazing their livestock and building their homesteads. Over an extended period, herders had had to negotiate with village governments and Hehe farmers to secure and maintain their position in the landscape. In other words, herders now occupied and used village commonage not by right, but as a result of their negotiation with Hehe understandings and perceptions of how the landscape should be used, and in relation to what level of herder access to the land the Hehe considered acceptable. While negotiated land-use outcomes had many advantages for both farmer and herder, herders remained dependant on the good will and disposition of the autochthonous Hehe farming community for their continued legitimate access to land and resources. However, herders have recently had to increasingly resist changing Hehe land-use priorities (particularly in Idodi, Mapogoro and Tungamalenga villages) which overtly and covertly seek to eject and move them elsewhere in the landscape - 'out of the way'. For example, Salum, the senior *Ilparakuyo* elder, described how his access to a rangeland area - Ihehero - that he and his associates had long used was being increasingly challenged by the Hehe. At the time he wryly noted the symbolic significance of another rangeland area in Idodi having its name changed - once known widely by villagers as 'Kibikimuno' - after an *Ilparakuyo* pastoralist who had lived there many years ago, it was now to be known as 'Lianziwa' - a Hehe name.

Many of the terms used during public meetings convened to discuss land-use conflict emphasised the distinction between: different land-use zones - '*maeneo ya wakulima*' (Swahili: farmers' areas) and '*maeneo ya wafugaji*' (Swahili: herders' areas); different land users - '*wakulima*' (Swahili: farmers) and '*wafugaji*' (Swahili: herders); different ethnic groups - '*hawa Wamaasai*' (Swahili: those Maasai [*Ilparakuyo*]), '*hawa Wabarabaig*' (Swahili: those Barabaig), and even sometimes, '*hawa Wahehe*' (Swahili: those Hehe). These distinctions did not always reflect reality and were often employed for

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[270] However, herders have as much right to gain access to farmland as autochthonous farmers – in that they can legitimately purchase, rent and borrow farmland.

public posturing and political manoeuvring in public meetings (see below). It was evident that these distinctions varyingly broke down the minute people left the meeting and as everyday social and economic relations recommenced. The terminology in public meetings largely emphasised the differences between people living in the Idodi rangelands, and not their commonalities. In reality many herders were farmers, and some farmers were herders. Very many Hehe, Barabaig and *Ilparakuyo* were friends, clients, patrons, stock associates, employers, employees, landlords, tenants, herbalists, butchers, mid-wives and so on. Yet these terms of commonality were rarely, if ever, part of the public debate over land and land-use relations. The use of terms articulating difference in public meetings was being used by some farmers (in particular) as a political strategy to set out their claims to land and landed resources for the future. In this context, the everyday terminology of commonality was conveniently discarded and momentarily forgotten.

7.4 Conclusion: Landscape and livelihood outcomes

Conflict over access to land and its use has become a frequent occurrence in the Idodi landscape in recent years, as the human population grows and as competition for access to resources and control over their use increases. Historically, and as much today, land-use planning has been viewed both locally and more widely by the government as a key tool for regulating landscape occupancy, resource use practices and as a means for reducing land-use conflict. Unfortunately, the record of land-use planning in Idodi (see Chapters Five & Six) in its various guises - from the evictions of people and the extension and creation of protected areas in the 1950s & 1960s, the villagisation of the *Ujamaa* period of the 1970s, to the creation of LMGCA in the 1980s and the latter evictions of pastoralists that occurred in the 1990s - can be seen as having had a largely deleterious impact on people's access to resources. If anything, previous land-use planning has precipitated the levels of tension and conflict over land-use that exist today in Idodi. People now live hemmed in by large expanses of wildlife estate, once theirs and from which they currently derive a derisory benefit. It is in this remaining and relatively restricted area of landscape which herders and farmers must interact with each other to secure their livelihoods, and varyingly contest and negotiate their different understandings of land and its use.

As the wetland farmlands of Idodi expand, supported by national policy priorities, pastoralism is becoming increasingly marginalised as a livelihood strategy. In Idodi pastoralists have adopted two different strategies to cope with the increasing threats to the pastoralist way of life and their access to rangeland resources. Many of the *Ilparakuyo* and some Barabaig have increasingly diversified and invested in agricultural production and in labour and exchange relations with their farming associates, to enable them to access resources and to exert influence in local centres of power. An unknown number of Barabaig herders remain heavily pastoralist following highly mobile landscape use patterns, which enable them to have temporary access to spatial and temporal variations in rangeland productivity at the expense of investing in stronger spatially tied socio-economic relations with local farming communities. The case studies in this chapter demonstrate that the former strategy of long-term investment in social networks may lead to more equitable and socially sanctioned (legitimate) access to resources for all. However, the latter strategy of high mobility has been

increasingly resisted by locally resident resource users and is now much discouraged (if not made varyingly illegal) through the state's policies of zoning, sedentarisation and destocking.

While more formally agreed land-use and landscape demarcation can be seen as having had an important framework role to play within herder - farmer relations, socio-political relations and socio-economic networks can be seen as being key to the process of negotiating land-use outcomes. In Makifu and Mahuninga the *Ilparakuyo*, through their numerical predominance and long-term relationships with the farming community, have successfully negotiated a flexible set of understandings over land-use and access. In comparison, in Idodi, the nascence of social process between many herders (Barabaig) and the farming majority has meant that 'on-stage' (albeit somewhat state-coerced) agreements have failed 'off-stage'.

Largely state-imposed - and 'onstage' - formal rights-based land-use planning solutions aimed at reducing land-use conflict may currently, at best, only constitute a framework within which different resource users, through developing social networks and affiliations, flexibly renegotiate and gain informal 'offstage' access to different resources in the landscape. The development of socio-political networks and the negotiation of how the landscape can be used, particularly in a polyethnic setting, may necessarily occur over an extended period of time, be recursive and involve re-occurring dispute. To date, emphasis has been given by district and central government to 'quick-fix' solutions that focus on land-use planning, often unrealistically discounting on-going and socially-grounded land-use practices and relations in an all-out rush to stop conflict. Instead, conflict might be better recognised as being part of a wider unfolding social process, one in which the development of social networks and locally appropriate jural institutions and other fora are key to enabling resource users to flexibly negotiate and achieve more equitable land-use and livelihood outcomes.

Yet at the same time, it is clear that herders continue to have inferior land rights in the Idodi villages - particularly in regard to their occupancy of what is currently village commonage. According to state law and as village members, herders' legal entitlement to secure land tenure for their herding livelihoods has not been sufficiently recognised by village governments. Although herders have negotiated their position in the landscape and their access to village rangelands, it is clear that this access is heavily dependent on the disposition of the hegemonic Hehe farming community. It is also clear that while locally negotiated understandings of land-use practices have served herders' (and farmers') interests relatively well, these understandings remain at risk from being rather transitory, particularly as farmers clamour for more land for their livelihoods. Herders may need to gain secure tenure to the Idodi rangelands using state law, since prevailing interpretations of customary law and practice are unlikely to sufficiently facilitate this. Yet formal rights-based herder tenure of the rangelands must have - or quickly acquire - local legitimacy if land-use conflict is not to increase. *De jure* rights to resources (according to state law) may not automatically engender local social legitimacy - i.e. rights and social legitimacy may not necessarily equate - particularly when prevailing customary understandings of land-use and land tenure differ from those set out by state law.

It may be the case that the facility for 'group'[271] customary rights to village land as afforded by the new Village Land Act (1999) is, in theory, a potentially innovative instrument for enabling pastoralists to secure equitable rights to land and landed resources. However, the comparative examples from Mahuninga Ward and Idodi village indicate that careful navigation of the underlying politics of land will be necessary if herder 'group rights' are to be established and become locally legitimate. Recent experiences of the *Ilparakuyo* in Tungamalenga are a case in point. They have thus far unsuccessfully attempted to secure group rights to land and their claims have met with overt resistance from village government. As with land-use planning, it will be the nature of political affiliations and networks within the social landscape which will substantially determine how the new law is applied. The playing-out of these socio-political processes will determine whether marginalised resource users - such as pastoralists, will have sufficient social capital and political support to legitimately mobilise and employ the innovative parts of the Village Land Act to secure their rights and 'entitlements'[272] to village land resources.

As herders have gradually come to realise (see Chapter Four), local fora for collective action - in the guise of pastoralist associations in Idodi - may be an increasingly important means for building their political power base for negotiating, and importantly retaining, their access to key rangeland resources. In this regard, the State - through the Ministry of Livestock - can be credited with having catalysed the creation of these associations. However, the underlying motive for their creation has been more for developing incentives for better livestock marketing than for supporting pastoralist livelihoods and resource rights. Although livestock marketing is an important part of pastoralist management - after all, male stock may be sold to maintain a predominantly milking herd - the focus on marketing was too narrow an approach which discounted other major constraints to pastoralist livelihoods and production. Furthermore, and perhaps unsurprisingly, there has been very little follow-up in providing support (for example, in terms of capacity and skills training) to these associations for improving land-user relations and developing simple and sustainable demand-driven range and livestock management improvements in support of livelihoods. Scoones (1995, 31) states that pastoralist organisations should start small and focus on forging collective action around common interests - particularly socio-economic issues such as livestock healthcare or marketing, before developing their capacity to tackle more complex issues such as range management. True, but this approach may not always be sufficient, particularly when land-use conflict between herders and

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[271] The village Land Act (1999) allows for group registration of land holding such that, for example, a family or association can lawfully secure collective rights of customary occupancy over an area of village land. The law ascribes grazing land equal status as that of farmland and makes it possible for pastoralists and agriculturalists to hold different rights in the same land through 'land sharing agreements'. Importantly, the law provides for collective pastoralist land rights across different villages.

[272] The use of 'entitlements' does not refer here to people's rights in a normative sense – what people *should* have – but rather the range of possibilities that people *can* have (Leach *et al.* 1999, 232). Thus entitlements may be viewed as representing, 'the set of alternative commodity bundles that a person can command in a society using the totality of rights and opportunities that he or she faces' (Sen 1984, 497 cited in Leach *et al.* 1999, 232).

farmers leads to growing levels of tension and distrust in a polyethnic pastoralist association as one group of herders is seen by the other as being the culprits for a deterioration in key land-user relations with farmers - as has occurred in Idodi.

Experience from elsewhere in Africa, as reviewed by Sylla (1995, 135-149), points towards the need for pastoralist organisations to develop flexibly - both in terms of structure, membership and size; that starting small is wise; that across an ecosystem or large range area, smaller organisations working together are better than one large organisation; that wider herder inclusiveness - both in terms of (poorer) socio-economic and (weaker) socio-political status is important; that the strengths and weaknesses of traditional systems and their structures need to be taken fully into account; that planning must be iterative, adaptive and flexible; that neither privatisation nor collectivisation may provide appropriate range tenurial frameworks; that subsidiarity should be an underlying principle, and; although not easy to achieve, long-term dependency on external support (particularly financial and technical) should be avoided (Sylla 1995, 149-152).

In Idodi, the development of pastoralist associations is likely to be all the more difficult given the polyethnic nature of the herding community, their relatively poor social cohesion and their marginalised status. If these associations continue to remain weak, in the absence of social and political support by village assemblies and within local government, the new land laws will remain outwith the grasp and benefit of these marginalised resource users.

8 Conclusion

> *Enkiterunoto* oo *'lMaasai* o *'lMeek:* The beginning of the Maasai and the Cultivators[273]
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> When Leeyo (the first Maasai man) became a great elder, he called his children and said, 'My children, I am now an elder of many days and I want to instruct you". He then asked his eldest son, "What is it that you want from my treasures?" And the eldest son replies, "I want everything in this country". And the old man said, "Since you want everything, take a few head of cattle, a few goats and sheep, and some food of the earth, since there are a large number of things". The eldest son replied, "Very well." Then Leeyo called his youngest son and said, "And what is it that you want?" And he said, Father, I wish that I should be given that fly-whisk in your hand". And his father said, "My child, because you have chosen only this fly whisk, may God give you prosperity, so that you will have control among your brothers." And so the one who wanted everything became a cultivator, and he who took the flywhisk became the father of all the Maasai.

In this chapter I relate the major findings of my field study to the central theoretical questions that I raised at the beginning of the thesis. I then discuss the relevance of the insights drawn from this thesis for the land-tenure reform process and land management outcomes in the dryland-wetlands of Tanzania.

8.1 Disaggregating trends in access to land in Idodi

In Chapter Two, I asked three questions. The first question was,

> What are the major wider factors that have influenced increasing socio-economic differentiation and unequal access to land and landed resources at local level?

Using selected examples, my underlying intent was to investigate the extent to which local land-use practices and systems have been impacted by the state and what impacts these developments have had on people's livelihoods in the Idodi rangelands.

It is clear that land-use relations in the Idodi rangelands have been heavily shaped and impacted by the state. Local people's occupation and use of the landscape has been transformed over a 50 year period through state-mediated landscape demarcation and land resettlement, principally as a result

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[273] Translation taken from Rigby (1992, 195).

of protected area creation, *Ujamaa* villagisation and appropriations of land elsewhere in the country. In-migrant farmers and herders continue to move into the rangelands of Idodi and Pawaga, often attracted by the possibility of rice farming and field grazing. Thus the once relatively sparsely populated rangelands of Idodi are now relatively densely settled, and increasingly characterised by competition (particularly between herder and farmer) over access to key resources. The concentration of a growing population of farmers and herders in a relatively small proportion of the former extent of the Idodi rangelands has exerted increasing strains on people's land-use relations and access to land.

As Peters (2004, 304) states, relations around land are not just socially embedded, but are embedded in unequal social relationships. One way of examining the unequal nature of these relationships is to investigate some of the socio-economic factors underpinning people's local access to various different types of land at village level. Thus in Chapter Five I showed for farmers that, for less valuable and more widely available dryland, access was relatively equitable, although there was an emerging class of landless farmers. Contrastingly, for higher value and much more productive wetland, access was far less equitable, and was strongly skewed towards a relative minority of wealthier farmers. This trend strongly points towards an ongoing process of land accumulation and social-differentiation, supporting Peters' concerns about growing inequality in access to land at local level. In Idodi, wealthier farmers have generally legitimately increased their holdings of wetland fields through a strategy of gradually purchasing fields, although perhaps more insidiously, processes of debt entrapment (as described in Chapter Five) accelerate wealth differentiation and may have indirectly expedited land accumulation. Yet at the same time there are some exceptions to the trend. Some marginalised and poor farmers have been purposefully extended access to relatively high value riverine gardens by village governments for ensuring their food-security. By no means have all poor farmers been allocated riverine gardens, but the data gathered indicate that wealthier households do not own disproportionately larger amounts of this category of land. In summary, socio-economic differentiation is definitely occurring in the Idodi rangelands, driven by access to a restricted amount of highly productive land. However, overall access to the remaining dryland continues to be relatively equitable between farmers, although there is an emerging class of landless people.

In Chapter Six, I concluded that there was almost certainly a trend towards increasing socio-economic differentiation among the *Ilparakuyo*, despite the on-going traditional practice of wealthier households providing (milch) stock loans to support poorer households. This reflects a wider trend documented by, for example Ellis (2000) and Bryceson (2002)[274], income diversification is a major factor in enabling households to become better-off. Although national and local political economy has led to all *Ilparakuyo* pastoralists in Idodi becoming more sedentary, owning less livestock and being increasingly reliant on agriculture, some pastoralist households have adapted well to this

[274] Although both Ellis and Bryceson focus on off-farm income diversification, given the limited opportunities for off-farm income earnings for people living in Idodi, on-farm income diversification can be seen to be an important factor underlying increasing socio-economic differentiation among the *Ilparakuyo*.

transformation and others less so. The reasons for this difference are not understood, although I would suggest that they may lie more within households and extended families rather than with external factors. Certainly there is a multiplier effect at work as households that have sufficient livestock to sell, may temporarily invest the proceeds in rice farming before re-investing the profits back in livestock or other forms of accumulation - such as wetland fields. Those households without sufficient livestock are unable to farm rice, and therefore miss out on the accumulation opportunity. Dryland farming rarely, if ever, is a means for wealth accumulation and only serves to provide household grain provisioning needs. At a collective level, *Ilparakuyo* and Barabaig herders have been able to acquire sufficiently secure tenure to farm fields, and to similarly benefit from agriculture as the farming community. However, they have been far less able to sufficiently obtain secure tenure to village commonage for grazing their livestock. Extensive grazing systems, in effect, are not perceived by farmers as comprising a sufficiently legitimate use of the land, particularly since only a very small minority of the autochthonous farming community keeps livestock. Moreover the farming community is apprehensive of permanently making-over areas of village commonage to herders for grazing as this would be seen as endangering farmers' longer term interests and their need for expanding the area under cultivation. In this regard then, herders' access to grazing land is embedded in an unequal social relationship with the majority farming community.

In drawing conclusions about the increasing inequality, competitiveness and conflict over access to land, it is important that I not make over-simplifying assumptions about the complexity of land-use relations. Thus at a local level, I have not been able to examine in detail, for example, intra-household inequalities in access to land that may impact on, for example, youth and women in particular. Nor have I been able to examine local patterns of inheritance or land distribution within kin groups, which in the patrilineal societies of Idodi, may discriminate against vulnerable groups - such as widows or divorced women. With regard to the state, I have largely treated the government as a black-box and I have not examined - except in passing - the impact of other key state policies, for example, the legacy of twenty years of structural adjustment on herders and farmers. Instead, at the beginning of the study I chose lines of inquiry which I considered would most effectively provide some incisive insights into key changes in people's access to land, their livelihoods and land-use relations in the Idodi rangelands. Thus despite the above caveats it is clear that the state has had a very significant impact on people's land use and livelihoods in the Idodi rangelands. The State's legacy has been compounded, perhaps increasingly in recent years, by growing inequality in access to the most productive land - a result of local processes of accumulation and social differentiation. Thus, while highly productive land is slowly being accumulated in the hands of wealthier farmers, herders are struggling to maintain sufficient access to the rangeland resources they need for their pastoralist livelihoods. Undoubtedly, people's access to land has been heavily structured - or constrained - by state land-use policies, and their livelihoods have been adversely impacted by national macro-economic policies (for example, the withdrawal of crop marketing support, agricultural inputs subsidies and livestock health services). Yet within this context, I argue that people's land use-relations in Idodi are today increasingly modulated by local level politics and socio-economic relations between different land-users - in this case, herders and farmers. This is the focus of my second question.

8.2 Negotiated land-use agreements: too much flexibility?

The increasing importance of local-level power relations provides the context to the second question,

> When and how does local social flexibility and negotiation over land lead to inclusion or exclusion at a local level between different resource-users? How does this take place?

In asking this question, I set out to examine some of the underlying socio-political processes behind land-use relations between farmers and herders that have been characterised by increasing competition and conflict in recent years. Herder's rights to the Idodi rangelands - or village commonage, as compared to their access to farmland, may be described from a legalistic standpoint as comprising rights little better than those of squatters. In this context in Chapter Seven, using extended case studies, I found that in some villages in Idodi, socially negotiated land use outcomes achieved by herders with local village governments and the autochthonous farming community remain key for maintaining herders' locally legitimate access to land. Where socially negotiated land-use practices are still developing, or have been eschewed by one or other parties, pronounced levels of competition and conflict of interest have occurred. I found that hastily constructed and imposed land-use plans cut across production relations and had, at least for the time-being, quickly unravelled. These plans were developed without an extended process of social negotiation necessary for their wider legitimacy. Neither herder nor farmer fully accepted them, and village governments and local courts did not have sufficient legitimacy, incentive or resources to enforce them. Furthermore, imposed land-use solutions, which are carried out with the intent of effecting swift control of land-use conflict and also sometimes safeguarding minority user rights, may only serve to mask the underlying conflicts of interest over land-use, not resolve them. Yet at the same time, the flexible nature of negotiated outcomes is as much a disadvantage as an advantage for marginalised groups such as herders, as their access to resources remains at risk from the changing priorities of more powerful resource users. When herders have attempted to negotiate more formal rights to land and to secure certificates of occupancy, they have been frustrated as village governments have manoeuvred to evade or delay their requests. This outcome in Idodi holds strong parallels with the observations of other researchers who have drawn attention to the considerable social inequality in many customary systems (Platteau 1996, 2000; Ribot 2000; Carney and Farrington 1998; Woodhouse *et al.* 2000 and Amanor 2001 cited in Peters 2004, 277). In summary, while social negotiation between marginalised resource users and more powerful autochthonous farming communities has been crucial for the formers' continued access to key landed resources in Idodi, negotiated land-use outcomes remain insufficient for herders' long term land tenure security in the context of an expanding farming population.

8.3 Looking to the future: the case of herders in Idodi

I now turn to considering the third question which asks,

> Scholarship has shown that past and continuing efforts to reinvent, subsume and/or extinguish customary law within national law throughout sub-Saharan have

> contributed to growing social differentiation and landlessness. In this context, to what extent does an alternative approach recognising the legitimacy of customary land tenure practices reinforce the growing trend of social differentiation and the increasing numbers of landless and resource poor observed across Africa? Under what circumstances might such an approach limit or reverse the trend?

In posing this final question, I set out to investigate whether the new - but varying - emphasis on recognising customary land tenure will merely reinforce the growing trend of social differentiation and the increasing numbers of landless and resourceless poor observed across Africa. The new Village Land Act of Tanzania devolves substantial control over land management to the village level – and in this regard may, at least to a certain extent, be seen to be evolutionary in intent. Although the law attempts to improve the equitability and accountability of village land management, and pays deference to the rights of vulnerable and marginal categories of people, it does so through a necessarily legalistic and heavily bureaucratic approach. The approach focuses on formalising local or customary land rights and procedures, sometimes to the extreme, in attempt to sufficiently regulate local land management. An underlying assumption is that the formalisation of land tenure and land-use relations will lead to more efficient and equitable land management. This is hardly likely to be the case. The law as it stands cannot stipulate, far less control, the underlying social relationships between land-users which comprise and embody people's rights in reality. Two immediate implications follow:

Firstly, it is clear then that if the law is to facilitate more equitable and accountable village land management, less focus needs to be given to the bureaucratisation and formalisation of local land tenure practices, and far more consideration given to facilitating the interplay between formal and informal systems of land tenure management. Variably pluralistic jural institutions do exist at local level (village, ward and primary courts), but they remain weak, are vulnerable to manipulation by elites and litigants and are often not the most appropriate institutions for modulating equitable land-use relations and safeguarding the land entitlements of vulnerable and marginalised people. Although the new land laws set out the creation of dispute resolution institutions (village land councils, ward tribunals and district land and housing tribunals), these institutions have not started to operate in Idodi. The new land laws also provide for village land adjudication committees overseen by village adjudication advisors. The emphasis of the law heavily lies with legalistic processes of adjudication (albeit with some form of consultation between parties being stipulated) and the assumption that these institutions will operate impartially and competently. Given that these institutions currently do not exist, it is not clear as to how they will work (or not) to equitably mediate between complex state land laws and increasingly varied interpretations of local or customary law (given the polyethnic nature of rangelands such as Idodi). It is also not clear what priority the entitlements of minority, vulnerable and marginalised groups will receive, particularly in polyethnic rangelands. It is one thing for land courts and adjudication committees to adjudicate disputes fairly between, for example, two relatively wealthy farmers, and entirely another to ensure the wider development of equitable yet flexible land management systems that safeguard the interests of vulnerable and marginalised groups.

Secondly, the reality of unequal socio-political and socio-economic relations between different land-users - particularly in relation to vulnerable and marginalised groups - is hardly liable to be changed by the law. In Idodi, herders as a marginalised socio-political category had recently started to organise collectively, partly in response to land-use conflict and partly as a result of the potential prospect of attracting livestock development funds from the state. I argue here that these associations comprise an opportunity for herders to build their socio-political status as a group and to collectively develop the legitimacy of pastoral range tenure and range-use practices. As I discussed in Chapter Seven, the challenges faced by these associations are considerable. They are characterised by low-levels of credibility and legitimacy among the pastoralists who they are supposed to represent and support, and they are currently prone to varying levels of mistrust between members, particularly since the associations are comprised of *Ilparakuyo* and Barabaig factions. In trying to improve the socio-political status of pastoralists at different levels of local government, the associations will also have to start to contend with conflicts of interest among their own members - for example, in persuading individual herding households to accept some restrictions on seasonally accommodating the livestock of stock associates and kin so as to reduce the incidence of farmer-herder land-use conflict and local pressure on key resources in the landscape. Balancing the interests of individual herder households against the wider collective herding community through the flexible development of new norms will necessarily take time and be subject to recurring dispute and dissent.

The local development of range-use norms and practices will necessarily depend on integrating different customary range-use practices of different herding groups and simultaneously negotiating with formal government range-use policies and interests. This strongly suggests that the pastoralist associations in Idodi, as is likely to be the case for other polyethnic herding groups in other rangelands in Tanzania, will need to develop into 'hybrid' formations of a formal institution and informal organisation. The distinction between formal institution and less formal organisation may seem merely conceptual here, but it is important and Swift (1995, 154) draws attention to the difference. Institutions can be seen as a structure or set of rules that set out how people should interact. Contrastingly, organisations may be viewed as groups of people bound by some common purpose in order to achieve a set of objectives (North 1990, 5 cited in Swift 1995, 154). Organisations can thus be viewed as operating within the framework - the structure and rules - provided by institutions (Swift 1995, 154).

As hybrid formations, herder associations may benefit from being recognised as formal institutions by local and central government, yet as informal organisations they may derive their local legitimacy through the support of different groups of herders who are able to find commonality in their diverse interests. Thus these 'hybrid' formations may be an important component for achieving the interplay needed (for example, see Maganga 2003 and Swift 1995) between formal state laws and structures, the informal matrix of social relations that embody people's rights and frame people's livelihoods.

8.4 Business as usual?

In returning to Peter's central concern over increasingly competitive and conflictual relations over land, it is clear that the new evolutionary approach to land is double-edged. On the one hand the principle of subsidiarity and deferring management to a local level presents a very important opportunity for re-investing in long-marginalised customary or local land management institutions and practices. Arguably such an approach is the most appropriate for the development of locally legitimate, responsive and equitable land management systems. On the other hand, if at least some elements of the new Village Land Act embody the new evolutionary approach to land tenure law, then there is a substantial risk that the devolution of land tenure will reinforce growing social differentiation and landlessness, and increasing competition and conflict over land that we have seen, for example, in Idodi. This is because the new Tanzanian land laws make *inter alia* highly unrealistic assumptions about local administrative capacities (Sundet 2005, 16) and the likely equitability of local administrative processes. Enabling rural Tanzanians to benefit from the Village Land Act while minimising its substantial risks, will demand a high level of new skills, well allocated and managed resources and a different level of commitment on the part of the state and other third parties focussed at village and district level.

Ironically, where rural villages have taken advantage of the Village Land Act (1999) and have independently strengthened their land management systems with the support of nongovernmental organisations, the State has sometimes sort to undermine their achievements. Thus many of the pastoralist villages in Loliondo Division in Ngorongoro District in northern Tanzania have developed and are implementing their own communal land use management plans. These land-use plans are based on well-established range-use patterns, and accommodate the interests of private tourist operations that pay the villages for their access to particular areas of village land. The State – through the auspices of the Wildlife Division – has attempted and failed to impose restrictions on village land-use which would have resulted in the State re-asserting its control over village lands and the business agreements struck between the villages and the tourism industry.

Finally, a sober reflection of reality suggests that currently neither the new skills, nor real priority on the part of the State, nor well allocated and managed resources currently exist for addressing the growing inequality and competition over access to land in Tanzania at village level. A key (draft) strategy document for implementing the new land laws (MLHSD 2005) has adopted a highly technocratic, formulaic and interventionist approach focussed on formalising and constructing new land management processes and systems in Tanzania - at great projected cost. The Strategy is correct to identify village lands as a priority area for implementing and applying the new land laws, but the strategy as it is laid out is much less than satisfactory. For example, the strategy goes so far as to set-out the need for a National Village Resettlement Scheme that amounts to a blue-print land reform reminiscent of *Ujamaa* (the creation of new separate 'farmer' and 'pastoralist' villages) for resettling 'landless' people (URT 2005, 28). The strategy again returns to the old chestnuts of targeting 'nomadic cultures' and 'excessive stock holdings' as the underlying causes of land-use conflict, yet also identifies the violation of land rights (quite correctly) as a fundamental issue. Overall the strategy is hopelessly optimistic about the pace of projected implementation of parts of the new

Village Land Act (most of the actions identified in the strategy, it would seem, are supposed to be realisable in three years for the whole country). Far more attention and projected expenditure is given in the strategy towards building state institutions and technical processes and relatively very little to supporting village-based institutions and village-based land management capacity and systems. Given the findings of this thesis, and the insights of others (e.g. Shivji 1998; Sundet 1997 & 2005), such an approach to developing land management in Tanzania given the long process it has entailed thus far, leads one to 'not a cheerful conclusion' Sundet (2005, 16). It appears that rural Tanzanians have again come last in line as the State pre-occupies itself with an expensive, hardly affordable and centrally controlling system of land administration. It is likely that the highly technocratic land administration system will largely benefit the (urban) wealthy and the elite at the expense of the majority of Tanzanians, and particularly the poor. Instead, and with regard to the central questions of this thesis, a well focussed and resourced initiative at village level targeted at enabling marginalised and vulnerable groups in society to safeguard their entitlements would be have been a good start to opening up and more constructively addressing critical land and resource issues for many rural people across Tanzania.

Appendices

A1: A short overview of Local government in Tanzania

Village government and administration, was formally begun in 1975[275]. Before this time, villages were not legally recognised entities. For many years, from the late 1970s until the mid 1990s, village government was an instrument of central government, in practice allowed little autonomy and expected to implement and/or fully cooperate with central government policies and programmes. This has gradually changed over a period of 20 years, as village councils have been allowed more autonomy, and as attempts have been made to improve their democratic functioning (see Table A1). However, despite steps taken towards strengthening village councils, village government remains weak and plagued by revenue shortages, major issues of accountability, and low administrative competence - particularly in the remoter and poorer areas of Tanzania such as Idodi.

Table A1: Key developments in village-level government and administration - modified from Shivji and Peter (2000, 46-53)

1975	**Villages and *Ujamaa* Villages Act of 1975 - and subsequent supporting legislation** ▪ Villages were legally recognised after the villagisation campaign from 1971-1975, which created many new villages. ▪ A process of village registration for those villages with defined boundaries was begun - now over 10,000 registered villages. ▪ Institutions of village administration were established but under the auspices of the central single ruling party (CCM): (i) A village council with five committees - finance and planning; production and marketing; education, culture and social welfare; works and transport; security and defence; (ii) A village assembly consisting of all the members of the village above 18 years of age. ▪ The main role of the newly recognised village assembly is to elect the Village Council. In turn village councils had the power to call a village assembly consultative meeting as needed. ▪ The main role of the new village councils was to manage and coordinate the development affairs of the village for social and economic development. ▪ Village councils were conferred corporate status (with the right to sue and be sued). ▪ Village councils did not have any government powers except for those necessary to implement decisions made at higher party and governmental levels. ▪ The village was thus considered a site of autocratically carried out development administration rather than a locus of devolved government.
1982	**Local Government (District Authorities) Act of 1982 - and supporting legislation** ▪ The village assembly was recognised as the supreme policy-making body in relation to village affairs and was now able to remove any or all the members of the council - although its powers remained theoretical and were never really realised.

[275] With the passage of the Villages and *Ujamaa* Villages Act of 1975.

- Village councils were enabled to make bylaws in consultation with the village assembly, but subject to the overriding powers of the Minister. The respective District Council had to approve the village bylaws for them to take effect.
- Executive and legislative powers are therefore formally merged into one body - that of the Village Council. In addition, village councils often played a *de facto* 'judicial' role, particularly when primary courts were not locally available.
- Divisional and ward secretaries were given powers to enforce all bylaws within their areas of jurisdiction - both district and village bylaws.
- Village councils were permitted to raise revenue through licenses, permits, fees etc subject to the directions of central government and district council authorities. Previous more liberal revenue-raising powers introduced in 1979 were rescinded.
- Overall, the power of the village council was subordinate to that of the Minister and corresponding district council, and thus village councils remain devoid of any significant autonomy.
- Other minor changes included: (i) Extending the tenure of office for village councillors from one to three years; (ii) The election of one village chairman (within the District) to sit on the District Council, and; (iii) A statutory requirement that the village assembly hold at least three ordinary meetings per year.

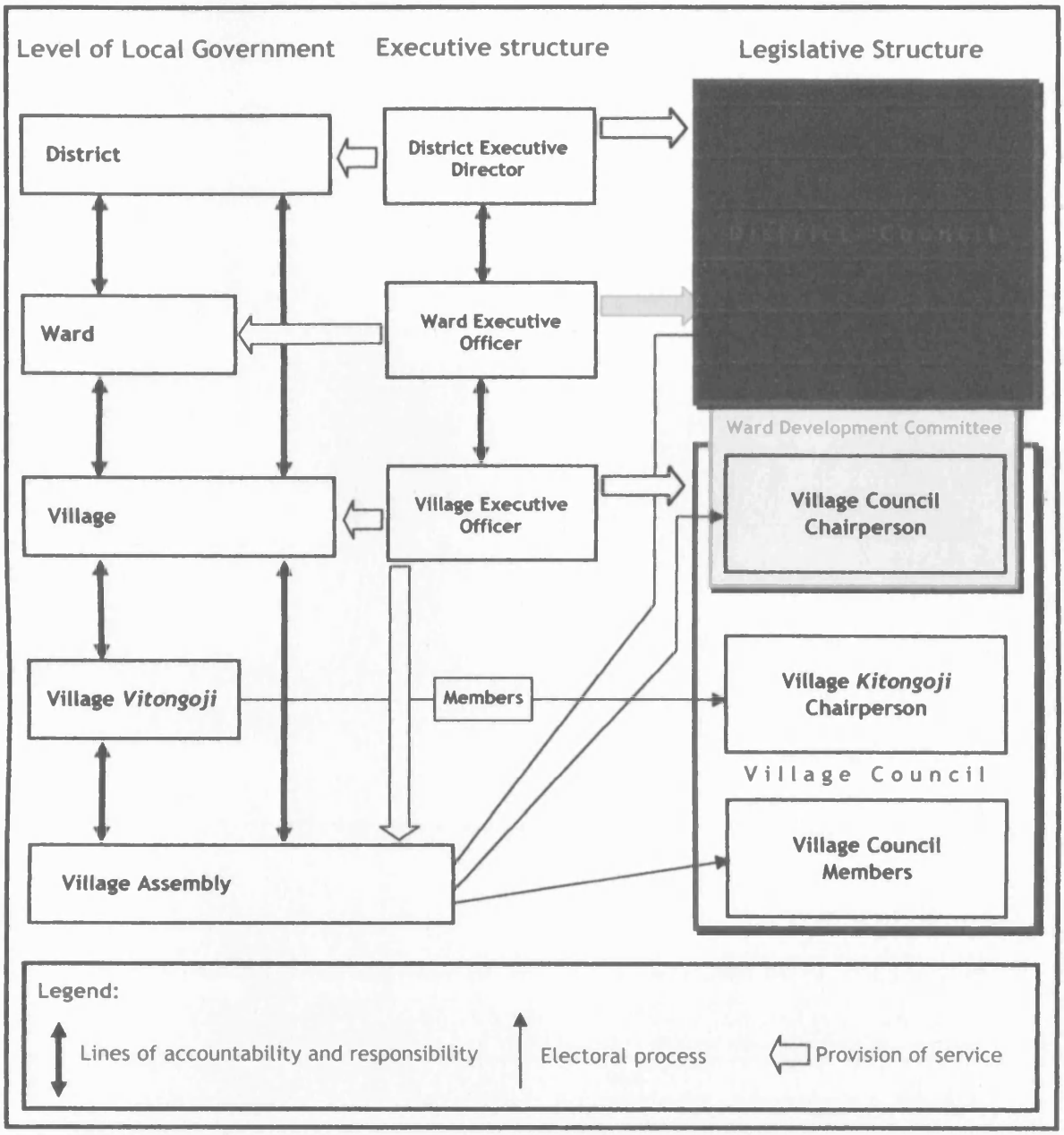
1992/5 **Eighth Constitutional Amendment of 1992 - leading to Local Government Laws (Amendment) Acts of 1992, 1993 (twice), 1994 and 1999**

- Eighth Constitutional Amendment introduced multi-party politics to Tanzania.
- Each village is now sub-divided into to a maximum of five *vitongoji* as decided by each village council and approved by its respective district council.
- *Vitongoji* chairpersons are now to be elected by each *kitongoji's* members. Literacy, tax clearance and party affiliation were made qualifications for election eligibility in addition to existing adult age and Tanzanian citizenship requirements.
- *Vitongoji* chairpersons are to be automatically appointed *ex officio* members of the Village Council.
- Village councils now consist of no less than 15 and not more than 25 members (although the latter is now usually taken as the norm).
- Periods of office for village council members have been extended from three to five years.
- A village chairperson must now be elected by the village assembly and, in theory, need not necessarily be a member of the ruling CCM party.
- Other council members are to be elected by the village, and not less than one quarter of the total complement of council members are to be women.
- Village council chairpersons are now removable by a two-thirds majority vote of the village council although the village assembly was not given similar power.
- *Vitongoji* chairpersons are now removable through a simple majority vote of a *kitongoji's* residents.
- The 1999 amendment places an emphasis on decentralising and devolving power not only form central to local government, but 'within the local government system, from district council levels to lower levels of local government' - i.e. the village level (Shivji and Peter 2000, 53).

Local government is today structured in three tiers - district, ward and village level, the most important of which are arguably the district and village levels (see Figure A1). In addition to the three levels of local governance, there is an administrative divisional level. In contrast to elected local government, the 'division' is part of a different top-down administrative system that is not accountable to the electorate. Although a legacy of the colonial past, this system - consisting of regional and district commissioners and their subordinates - has been retained as it facilitates direct high-level government control and intervention at a local level. On administrative maps, divisions fall under districts, wards fall into divisions, and villages fall under wards.

Figure A1: The normative structure and functioning of local government in the Tanzanian mainland

[Adapted from Shivji and Maina Peter 2000]

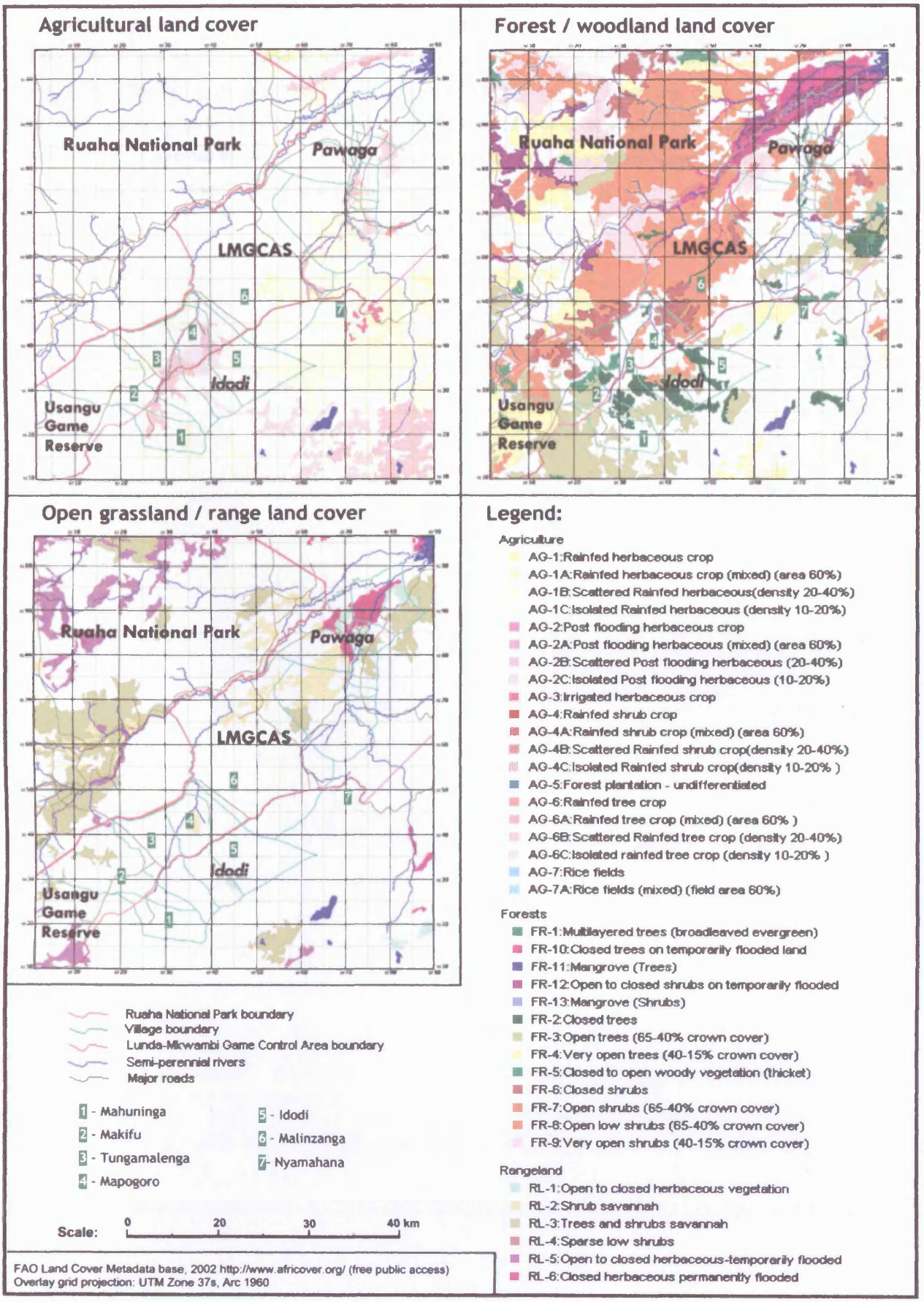


The village assembly is now ostensibly considered the foundation of local government (Shivji and Maina Peter 2000, 35-36). The village assembly directly elects a village council, a village

chairperson and, with other village assemblies in its ward, a ward councillor, who is the chairperson of the ward development committee (WDC). The ward councillor is a member of the district council, and together with ward councillors from other wards, elects the district council chairperson. The district executive consists of a district executive director (DED) and district department heads for agriculture and livestock, natural resources, lands, water, health, education, and other services. In theory, the district council now employs its entire executive staff on a competitive basis, and it is only the regional and district commissioners, and their administrative and divisional secretaries who are presidential appointees. This underpins the difference between the two administrative and governance systems: local authorities are, at least in theory, increasingly democratic whereas commissioners and their respective staffs are agents of the central state and continue to fulfil an authoritarian role.

A2: A FAO land cover scheme for the Idodi and Pawaga rangelands

Figure A2: A FAO land cover scheme for Idodi and Pawaga villages (FAO land cover data 2002)



The FAO data, which only became available after fieldwork was completed, is remarkably representative although not entirely accurate. Some areas of agriculture have been well captured by remote sensing (such as in Idodi), other areas - such as the more extensive rice paddy in Pawaga, appear to be less well portrayed. In this regard, rangeland category RL6 (closed herbaceous permanently flooded grassland) appears to be incorrect in that the corresponding area denoted on the map largely comprises rice paddy fields. Also, the agricultural categories AG1A-C need to be qualified by the proviso that most of these areas are only sporadically farmed, and instead in many places consist of a variety of tree-grassland mosaics.

A3: A Provisional Gazetteer of the Idodi and Pawaga Villages

During field work, as part of tracing some of the past events of the Idodi and Pawaga rangelands, a gazetteer of former settlements in the Ruaha River valley in what is now the Lunda-Mkwambi Game Control Area and the southern extent of the Ruaha National Park was developed with the aid of key informants. The gazetteer is not intended to be a definitive historical record, but rather mostly a description of changes that occurred in the 1940s - 1970s as a result of protected area creation and villagisation during *Ujamaa*. The gazetteer is a work-in-progress.

Table A2: A provisional gazetteer of former settlements in the Ruaha River valley in what is now the Lunda-Mkwambi Game Control Area and the southern extent of the Ruaha National Park

[See Figure 5.1 for the corresponding map]

Settlement Number	Coordinates	Name	Description
Abbreviations: NFD = No further details; MDA = More details available.			
Notes: 1. The names of particular patrilineages given are not necessarily exclusive to each settlement as there was some movement of people between different settlements over the years. 2. Grid references are estimates - derived through discussion of landscape features and the number of hours taken to walk between settlements where no defining landscape references were available. There is a reasonable amount of confidence associated with them unless otherwise indicated. 3. Informants: The descriptions are largely based on those given by: Saleh Petwa (Tungamalenga 1-48); George Mtati and Mikelo Ndindile (Mahuninga; 50-56; 58-61; 86-90); Andreas Nganylika, Wazee Nyemile, Kihunye, Kaundama (Tungamalenga and Kitisi 49;57; 86-90).			
1	7 21 91 93	Kwa Mlele	An old 19th century settlement which by the early 20th had been abandoned due to drought. The inhabitants moved to Igawa and Ilolo in Pawaga. NFD
2	7 24 91 85	Chemchem ya Magombwa	A series of natural seepages/springs that were used/frequented by elephant
3	7 31 91 84	Magombwe	An old settlement in a low lying area between two watercourses that was swampy. The inhabitants left sometime in the mid 1940s (1946) during the *Njaa ya Ihambwa* due to the drought
4	7 36 91 81	Makutupa	A settlement by a hill overlooking the *Mbuga ya Chamguite* which was abandoned during the 1940s (1946?).
5	7 35 91 73	Chamguite	Inhabited until 1955. The drought of 1949 resulted in most people seeking refuge south of the river at Igawa. Post 1949 there were about 3 households left. Names of families remembered are *Mkonongo* and *Mwagiyumbile*.
6	7 33 91 70	Mdeya	Inhabited up until the 1974 *Uhamisho*, it had previously taken in evictees from the north bank of the Ruaha. Livestock were kept - especially goats. Cattle described as dying off post 1955 from tsetse fly invasion. About 20 households in the late 1950s/early 1960s. The major lineage was that of *Nyambarazi*

Settlement Number	Coordinates		Name	Description
7	7 37	91 71	Igawa	Inhabited until the 1974 *uhamisho*. Received a substantial number of people from the north bank/area of the Ruaha post 1955. In 1949 a substantial number temporarily (some permanently?) moved to Idodi area to farm the Vynungu, returning the following late dry season to farm again. There was at one time a substantial number of stock - perhaps a '1000' (*sic*) pre 1949 which were grazed in the *Chamguite* grasslands on the northern bank among other places (MDA). This village belonged to the *Kayela* and *Petwa* patrilineages who were the local elite - both administratively and culturally. The term *nchi ya Kayela* was used. At its zenith, the settlement had between 30-50 households - after the 1955 Ruaha evictions and before the 1974 *uhamisho*. Another patrilineage name mentioned was *Nyambarazi*. Post 1955 cattle numbers are described as having declined due to the invasion of tsetse fly and sleeping sickness.
8	7 39	91 74	Mwaliganzi	Post 1949, abandoned due to drought and famine. Inhabitants moved to Pawaga and Idodi and subsequently did not move back once rain had returned. A notable patrilineage which moved to Isanga (Makifu) was that of *Mayanga*.
9	7 37	91 72	Nyirenge	Abandoned post 1949, inhabitants moved to Igawa, Ilusi and Idodi. Apparently a large settlement of *Kosisamba*. Consisted of about 20 households and notable patrilineage names included: *Ngabala**, *Mterere* and *Wanzalilo*. * Descendants live and work in Msembe for TANAPA
10	7 45	91 74	Ikelekembe	Abandoned post 1949 due to famine, the inhabitants moved to Ikorongo, Pawaga and Idodi. Pre-abandonment there were about 5 households with substantial cattle holdings. The major patrilineage was *Mwisangu*.
11	7 46	91 76	Uzimoto	Abandoned and not resettled after the 1949 famine. Identified as exclusively a 'Hehe' settlement of about 20 households. 2 major patrilineages were *Mwisangu* and *Mnemba*.
12	7 42	91 83	Chauumu	Settled by one old man and his family and descendants - Mzee Kuwalunda Kinula. A 'substantial' number of cattle were kept which were seasonally grazed in the dry season on the banks of the Ruaha River and moved to pasture in the vicinity of Urungu hill during the wet season. The foloboto famine of 1949 forced the whole extended family to move to Ikolongo whence they never returned.
13	7 21	91 62	Mwagusi	These settlements were inhabited until the late 1940s, people then moved to Pawaga and Idodi and across the river to Makuluga. There were about 30 households on the north bank of the Mwagusi at Ifugulu, not far from the confluence some of which kept cattle. Notable patrilineages included *Kayela, Mhegele, Mwivhiga, Mwasimba* as well as *Chaka* in the hill settlement of Ididimo. Cattle were grazed up on the escarpment during the wet, being moved down to the river during the dry.
14	7 23	91 62	Ifugulu	
15a	7 23	91 67	Ididimo(a)* and Kikoga (b)*	
15b	7 24	91 72	*Exact location uncertain - but both on the north escarpment, Ididimo lying 6-7kms south of Kikoga.	

Settlement Number	Coordinates	Name	Description
16	7 30 91 63	Mkwata	A hamlet that was established post the 1955 evictions from the north bank, it was only occupied until 1958 before people gave up and moved to other villages such as Igawa. Originally the inhabitants came from Makuluga (principally). The reason for abandoning the hamlet was wildlife depredation of crops. Notable patrilineage was *Mwisamba*.
17	7 23 91 61	Makuluga	An important farming area with riverine shambas. Formerly stocked with cattle, with increasing tsetse infestation, the cattle were superseded by small stock (goats). The main crop remembered as being maize but also finger millet. Two events - the 1949 famine together with the 1952/3 flood resulted in most people moving to Kiganga. Mdeya, Igawa and Ilusi. Patrilineages remembered are: (Hehe) *Mwilwa, Kidunya, Kisinga Mwasimba;* (Kimbu) *Matoweskola, Matidole.*
18	7 20 91 60	Ilala Simba	A peripheral settlement to Makuluga - abandoned sometime in 1949 as a result of drought. Maize and peanuts were grown and some finger millet. May have had approaching 20 households. Patrilineage names remembered are *Matoshola* and *Kidunye.*
19	7 42 91 65	Ilusi	A major settlement extant until the 1974 *uhamisho* and then moved out by lorry. Principally an agricultural area with maize and a lesser amount of finger millet grown in *Mipogoro (Acacia albida)* farmland. At its most populous, perhaps towards the late 1950s, about 50 households. Goats came to replace cattle as the latter declined due to tsetse fly and sleeping sickness. Flood irrigation was practiced in between the confluence of the Ilusi and Tungamalenga rivers as well along the outer banks. People were identified as being Hehe descended from *Nyambarazi* and *Kosisamba.* Patrilineages noted included (there were 'many') *Kaundama, Mulimbwa and Kigelelo* as well as *Ngabala* (who latterly) moved from Igawa.
20	7 42 91 63	Nyawagulu (grid ref uncertain)	Wet season cultivation area along a narrow riverine flood-plain. Maize principally grown. Farmers returned to Ilusi during each dry season.
21	7 50 91 70	Wheluka	Not far from a swampy area, an area where finger millet was cultivated, with drinking water having to be fetched as far as from the Ruaha. During the 1949 famine, the majority of the settlement (about 10 households large) moved to Ikolongo and Ilunda - especially for water. While some people appear to have returned or remained behind in Wheluka, all eventually moved to Ikolongo and thereafter in 1974 to Mlowa during the *uhamisho.* Inhabitants identified as being Hehe and Kosisamba, patrilineage names remembered as: *Malinga, Mulumbwa* and *Mbwawa.*
22	7 58 91 75	Uwalinzota	A small hamlet which farmed maize and some finger millet. The inhabitants were moved out in the 1974 *uhamisho* and during the 1946 and 1949 famines, people temporarily sought refuge in Ilusi and Ikorongo before returning. Patrilineages remembered as *Mlimbwa* and *Muyovela.*

Settlement Number	Coordinates	Name	Description
23	7 63 91 77	Kihanga	A wet season farming area. Farmers used to come from the Pawaga villages to cultivate (especially from Kisoloka and Kisanga).
24	7 69 91 81	Kisoloka	A mixed farming settlement with goats and cattle. The settlement remained post the 1974 *uhamisho*. Predominantly a Hehe settlement. Patrilineages: *Lulawa, Mbimbi and Lulinga.*
NB: The current villages of Pawaga - Kisanga, Itunundu, Mboliboli, Isele and the post *Ujamaa* settlements are not included here.			
25	7 64 91 85	Cheleganza	A settlement that was started by and received a substantial number of refugees from the hamlets in Igawa and environs affected by the 1949 famine. Subsequently used as a drought refuge in subsequent years. The patrilineage graves of *Petwa* and *Kayela* lie here.
26	7 65 91 87	Kikulwe	A small agricultural clearing in the then extensive groundwater forest - NFD
27	7 60 91 83	Mgonadele	Settlement established in the mid 1960s for livestock keeping and dominated by the *'Wanyamkuya'* who moved to Pawaga from the Kilombero early in the 20th century(?). They are identified as being responsible for having brought rice farming to Pawaga. Patrilineage name of *Matimbo* identified.
28	7 58 91 83	Kimaling'oko	The site of two large baobab trees, one of which has since died, both of which marked the boundary between Kayela and Ilolo jumbeates. This area and that on the northern bank were especially frequented by Maasai who had a long-established presence in the area. Names of particular Maasai remembered are *Sikona, Kisota* and *'Manuelo'*.
29	7 54 91 80	Ikorongo	Settlement fell derelict after the 1974 *Uhamisho*. Identified as largely a Hehe and Kosisamba hamlet, millet was farmed in the 'korongo'. About 30 households before the 1949 famine, thereafter, the settlement declined to about 12 households. Cattle were noted as being formerly kept by the inhabitants.
30	7 48 91 74	Ilunda	Prior to the 1949 *foloboto* famine, a hamlet of about 10 households mostly consisting of Kosisamba but some Hehe. Thereafter it largely fell derelict. Maize was farmed in riverine shambas with millet on the upland areas. There also were a 'substantial' number of cattle prior to 1949 but not thereafter. One old mzee, *Chambilele Chalo*, described as hanging on there right up until the 1974 *Ujamaa uhamisho*.
31	7 55 91 85	Mugaga	Incorporated as part of the new game reserve in 1955, people moved to Mlowa and Pawaga. Maize was farmed on the riverine inlet and millet on the upland. Consisting of about 10 Kosisamba households when it was abandoned, the hamlet suffered a long term decline in its stock holdings - described as arising from the combined effect of tsetse incursion and re-occurring drought. Nevertheless, 200 head of stock estimated in 1949. Homesteads were spread out towards Nyamapalula and Nytalele.

Settlement Number	Coordinates	Name	Description
32	7 56 91 86	Nytalele	A small Kosisamba settlement of 4 households, On the boundary between the Kayela and Ilolo jumbeates. Largely an agricultural community, people farmed maize along the river inlet (Ruaha) and kept livestock. Evicted in 1955 - *Msengesi* moved to Ilolo and *Mkomola* to Ikolongo.
33	7 56 91 87	Ihwani	Not included in the 1955 gazettement of the Ruaha Game Reserve, nevertheless the settlement declined largely as a result of the 1949 famine when many families moved away to Ilolo. Hamlet's cattle declined and were replaced by goats. Patrilineages remembered include *Muhegele* (Kosisamba), *Wasasa* (Sangu) and *Ndondole*. Post 1949 the settlement is described as consisting of about 20 households.
34	7 53 91 92	Makutupa	A settlement that post 1949 was gradually abandoned with people moving to Mpangile due to a shortage of potable water - either having to be carried from the Ruaha River or fetched from seasonal wells dug in the River Igembe during the dry seaon. The fields lay in a nearby area called Ilale. Unlike many other hamlets, very few people are described as leaving during the 1949 famine as they managed to survive on famine foods as well as food aid carried in by foot from Kimande. Cattle also described as having helped food security considerably. The Ilale shambas were primarily cultivated for millet together with peanuts but with very little maize. Pre 1949, the hamlet is described as consisting of about 30 households, and notable patrilineages are remembered as being: *Ngiliama, Wasasa and Waliongole*. These families were described as being of recent (one generation) origin from the (U)sangu - old men of the 1950s having been born in the Usangu.
35	7 59 91 92	Ilolo	The hamlet from which the Ilolo jumbeate was administered by (at one point) Jumbe 'Chai' (sic). In 1964, many surrounding hamlets were compelled to move to Ilolo in an effort to provide better services. Thus Ilolo became a larger more eclectic collection of people. A school and hospital (clinic) were built, the former at Talangwe. Up to 1 in 3 households are described as having kept livestock. Millet was the major crop and even eucalypti are reported as having been planted at one point. The whole settlement was moved in 1974 and taken over by Ruaha National Park. Formerly, a mixture of Kosisamba (eg Mbwati) and Hehe (eg Kayugwa, Ndindile).
36	7 59 91 95	Talangwe	A small hamlet to the north of Ilolo consisting of about 6 households, which farmed finger millet and kept some cattle. *Nyutupa* (Kosisamba) *Mtemle* (Hehe).
37	7 56 91 96	Udindamisi	Close to the River Igembe, about 30 households which farmed finger millet and held 'substantial' numbers of livestock. A mixture of peoples eg Kayugwa and Nyamoga (Kosisamba); Msingalata (Safwa) and; Chavala (Hehe).
38	7 63 91 96	Ny'angai	A hamlet of about 30 households where finger millet was farmed together with some cattle. Abandoned in the 1974 *uhamisho*. Perhaps largely Gogo eg Nzinzile

Settlement Number	Coordinates	Name	Description
39	7 69 91 96	Mkombilenga	A Gogo settlement which is reported as growing some finger millet but relying predominantly on hunting using spears and dogs, although some bow/arrow hunting too. The grasslands in the Mpangile area were hunted in. Livestock were also kept. NFD
40	7 71 91 95	Unynyamala	Described as a settlement in which many livestock were kept pre1949, subsequently the herd declined. During the 1949 famine, the inhabitants moved to hamlets further south but returned in 1961. Maize was grown along the river banks with finger millet planted in fields further upland. Largely a Kosisamba settlement but some Hehe too. Patrilineages remembered include: *Kinula, Bamba and Ngendo* (all Kosisamba).
41	7 50 91 95	Mpangile	Situated on the Igembe River, received drought refugees from Makutupa. Water supply described as being relatively predictable as dry season river bed wells yielded sufficient water. The settlement was spread along both the north and south banks and was about 50 households in all The settlement was a mixture of Kosisamba - *Chai and Muhegele* - and Sangu - *Wasasa and Wangaza*
42	7 14 91 62	Unylinga	A very small hamlet which was abandoned before 1949. The only artefacts remaining are grind stones. NFD
43	7 7 91 59	Ibagi	Described as a very small hamlet which fell derelict sometime before 1949 (possibly pre 1940). Riverine maize and upland millet grown. Cattle were also apparently kept. Inhabitants all moved to either Makuluga or Igawa. Remembered as a Kosisamba settlement eg Mgesi
44	7 19 91 55	Mtumbulikwakwa	Fell derelict sometime pre 1940 but previously the hamlet had grown riverine maize, some millet and herded some cattle. Kosisamba - *Chaka* and *Mbwikuwangi*. NFD
45a	7 18 91 52	Nyamakala	An area with large tamarind and Misagati trees on the upland (Nyamakala) and fields on the river plain below. There were also fields at Fihwawi on the river banks. People came from Kiganga to farm these
45b	7 19 91 52	Fihwawi	
46	7 17 91 51	Kiganga	A large village in which Jumbe Kayela (d.~1940) is buried. An area of maize farming with previously, a large number of cattle latterly replaced by goats. At its largest, perhaps 30 households all told. Other patrilineages remembered *Mwandole* (Kimbu), *Kadelega* and *Nyongo* (Kosisamba).
47	7 13 91 48	Matinga	A hamlet which overlooked a grassland and which depended largely on riverine maize fields and goats - perhaps around 15 households. *Mbugeni* (Kosisamba) and *Kihwele* (Hehe) both from Msembe. NFD
48	7 13 91 50	Msembe	Formerly quite a large hamlet of about 30 households, riverine maize was grown together with some millet. The settlement was evicted in 1955.

Settlement Number	Coordinates	Name	Description
49	7 2 91 50	Mdonya NB The location	A largely Hehe settlement with some Sangu and Gogo. Settled by a substantial number (relatively) of people from highland Uhehe who were attracted by reports of easy hunting and good harvests. Described as being heavily wooded in the 1940s/1950s (indicating a local absence of elephant?) but being infested with tsetse where not cleared for agriculture and therefore precluding livestock keeping except that of goats. The south bank of the Ruaha was much more open and suitable for livestock keeping eg Kiganga, Igawa and Makuluga. The north bank was wetter with more predictable rainfall than the south. A system of trade between the north and south bank villages for livestock for the former and grain for the latter - especially during years of drought. Also a trade with the highlands - dried (game/fish - increasingly?) meat for highland grain. Agriculture consisted of mainly maize and peanut farming with small amounts of banana and cassava. The settlement was evicted in 1956, a year after that of Njongomeru. Names of families remembered include: *Madomi, Ngaila, Mukwaga* and *Kabonyela.*
50	7 22 90 39	Nyamtupa	The area now known as 'Mudweka' lying to the south of the Tungamalenga-Msembe road. Previously unsettled, a number of Bena families moved there from Makifu in the early 1980s (?) to farm but subsequently evicted by TANAPA in the late 1980s.
51	7 14 90 21	Nyaluhanga	A hamlet that primarily relied on honey gathering but farmed peanuts and some maize. Was moved to Makifu in the *Uhamisho* of 1974. Patrilineages remembered are: *Makoga, Kahomba* and *Mpulule.*
52	7 12 90 11	Waga	A hamlet that received substantial number of evictees from Mdonya post 1955, it's economy was based on maize and peanut farming, together with seasonal fishing. Rice was initially farmed in 1971 opportunistically. The settlement was evicted in 1974 but by 1980 had been successfully re-established. (Reputedly a centre of witchcraft - more info required and the guardian of the tambiko site at Mdonya, an elderly woman, resides here)
53	6 98 90 21	Kitagasa	The site of a large valley reputedly excellent for farming and rice was at one stage grown here. The economy was largely dependent on maize farming with peanuts and honey grown as something akin to cash crops. To the north were the forests of Nyamkola and Nyamgungu.
54	6 94 90 20	Sanzala	Economy based on honey collecting, fishing and peanut growing. The hamlet was relatively little impacted in terms of in-migration from Mdonya. Families remembered are: *Mbeti* (Kosisamba) *Mtulu* (Gogo) and *Njiwa* (Sangu).
55	6 93 90 33	Kinyangesi	The boundary point between Iringa and Mbeya Regions, lying on the Ruaha River. Kinyangesi itself paid taxes to Kiponzelo and was subject to substantial in-migration post 1955 from Game Reserve evictees. During the *uhamisho*, people largely moved to Tungamalenga and Makifu with some going to Madibira.

Settlement Number	Coordinates	Name	Description
56	6 73 90 23	Mkupule	A hamlet that was much enlarged post 1955 with evictees. A similar economy to the surrounding hamlets of fishing, honey gathering and peanut and maize growing. During the *uhamisho*, evictees moved to Mapogoro and others to Madibira. Families included *Nyahulo* (Kimbu), *Mwaiyege*, *Mjola* and *Ngolotima* (Kosisamba) the latter of who lived in Ilolo a little hamlet further downstream.
NB: Grid refs estimated (About a 10km east-west up-stream spread of settlements)			An extended area of settlements of up to about 400 largely Sangu and some Kimbu people (guesstimate) stretching along the banks of the river flowing from the west. Small shambas farmed but no livestock due to the presence of tsetse fly. A limited number of specialist hunters who owed their own weaponary and hunted as a major part of their livelihood. Others, less specialist, hunted when the need arose - largely thru pit-hunting. There was some trade with other villages. People were evicted in 1955 (after the rains when a vehicle could get thru), and the settlements burnt. Many elected to move to the Usangu but others moved to the Mkupule hamlets. A rough indication of the size of each hamlet in the late 1940s/early 1950s) is given in adjacent brackets.
57a	6 73 90 27	Mahango (11)	
57b		Muvilinge (7)	
57c		Ufikiro (9)	
57d		Wimbwa (Njongomeru) (15)	
57e		Kibidimilla (22)	
57f		Ihombelwa (6)	
57g	6 73 89 27	Masapi (13)	
58	6 77 90 19	Mpama	A hamlet established by evictees post 1955, primarily consisting of one family (*Lungwa* - Sangu) which moved to Tungamalenga in 1974.
59	6 86 90 20	Lwani	Many people described as arriving here after 1955 from Mdonya. Major families remembered are *Mwambete*, *Mbepwa and Nganylika* (all Kosisamba)
60	7 15 90 14	Wota	Primarily a farming area with some hunting and fishing carried out. The settlement was moved in 1974 people going to Mahuninga and Nyamakuyu (Mbeya). People passing through this area post eviction noticed that tsetse fly densities had increased markedly. Key families remembered are *Lukova* and *Lyangoya*.
61	7 16 90 24	Mudweka	This hamlet was situated next to what was considered an extremely fertile cultivation bonde. However, due to the relatively low numbers of people living in this settlement, in 1970/71 they decided to move to Makifu before the 1974 *uhamisho*. Families remembered include *Chafuwawi*, *Malagi* (Sangu) and *Kayoka* (Bena).

Settlement Number	Coordinates	Name	Description
The following settlements have been taken from a colonial regional map and remain to be followed up and their details investigated.			
62 -		Mpanga	
63 -		Lungwa	
64 -		Igula	
65 -		Kangaro	
66 -		Mandwa	
67 -		Mtovelisusi	
68 -		Makutupa	
69 -		Ilusi (N)	
70 -		Mukombe	
71 -		Itunundu	
72 -		Igohungula	
73 -		Mbagi	
75 -		Kimande	
76 -		Ndolela	
77 -		Mlengi	
78 -		Chimamba	
79 -		Magangamatitu	
80 -		Magoya	
81 -		Sasamambo	
82 -		Mloa	
83 -		Msimbi	
84 -		Idodi	
85 -		Nyangano	
Further details are available for these settlements, but for the moment are not provided:			
86 -		Kitisi	
87 -		Mapogoro	
88 -		Kidangwe	
89 -		Tungamalenga	
90 -		Isanga	
91 -		Makifu	
92 -		Ikwavila	
93 -		Nykapembe	
94 -		Mwitikira	

A4: The reported incidence of disease in the Idodi livestock herd

The data below are provided to illustrate the relative incidence of disease that is reported to have occurred in the past in the Idodi livestock herd.

Table A3: The reported incidence of different diseases in the Idodi livestock herd in 1991

[Source: Annual veterinary report to Divisional Secretary 1991 File RA/LDC/MLOWA/01]

	Number Checked	Percent infected with			
		Trypanosomaisis	East Coast Fever	*Liver Fluke*	*Brucellosis*
Cows	5,678	37.0%	0.5%	30.9%	1.8%
Goats	3,400	-	-	11.9%	-
Sheep	2963	-	-	13.2%	-

Note: These data were collected by the divisional veterinary officer based in Malinzanga village for Idodi Division.

A5: Age grades and age sets of the *Ilparakuyo* in Idodi

The following age-sets are still in existence in Idodi. Although the age-sets correspond to the northern sections of Maasai, the opening and closing of age sets and divisions is delayed by a varying number of years.

Age Grade	Age Set Name	Date Opened/Closed	Division	Date Opened/Closed
Junior Moran		2002 -	*Ikelimboti*	2002 -
Senior Moran	*Ilandisi*	1987 - 2000	*Ikelimboti*	1994 - 2000
	(Emuatua e tateene)		*Ipalingotwa*	1991 - 1993
			Inkereyani	1987 - 1990
Elders	*Ildaleto*	1972 - 1987		
Senior Elders	*Ilmedoti*	1956 - 1974/5		
Retired Elders	*Ilkiduto*	1940 - 1956		

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