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IDS Working Paper No.542

**Land Use and Tenure Entitlement
Rights for Community-based Wildlife and
Forest Conservation in Taita Taveta,
Kenya**

by

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Abstract

This paper, discusses land use and tenure in terms of entitlement rights. Land is viewed as the basic resource through which other biological resources – in this case, wildlife and forests – are owned, used, managed and contested. In this regard, key issues in the concept of entitlement rights are highlighted. In this context, the paper then discusses briefly land, land use and tenure in Kenya. It narrows down to analyse land use and tenure in Taita Taveta District, describing the present tenure status with the aim of identifying 'who owns which land and what use they make of it'. The rationale for the establishment and subsequent demarcation of the conservation areas (Tsavo National Park, existing and planned sanctuaries and various forest reserves) is also reviewed, with a focus on entitlement rights. Finally, the paper demonstrates that there is competition for land between the local communities, and between them and wildlife and forest conservation. This competition is viewed as the main reason for biodiversity loss and human-wildlife conflict. Therefore, clear entitlement rights to land – ownership, use and interventionism – would lead to fewer contestations and competition, ameliorate loss of biodiversity, human-wildlife conflict and facilitate socio-economic development.

Abstract

This paper discusses land use and tenure in the context of conservation. It starts with a review of the basic resource rights which often determine resource allocation and control in the rural sector. It then discusses the impact of land use change on land tenure, and the impact of land tenure on land use change. It then discusses the impact of land tenure on forest conservation, and the impact of forest conservation on land tenure. It concludes with a discussion of the need for land tenure reform in the context of conservation.

Land Use and Tenure Encumbrance Rights for Community-based Wildlife and Forest Conservation in Taita Taveta, Kenya

By
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This paper is part of a special issue on Wildlife and Forest Conservation in Kenya, Vol. 15, No. 2, The Journal of Environment & Development.

Introduction

Land encompasses a range of resources the scope and influence of which transcends private property boundaries. Indeed, some legal scholars, public officials, community development practitioners, donor agencies (Klaus and Binswanger 1999) and environmental activists now believe that cleaving ownership into 'public' and 'private' is neither useful nor accurate. They contend that presently, more than ever before, private rights are no longer exclusively private or public (Geisler and Daneker 2000; Amman and Duraiappah, 2001). Singer (1996) contends that in many parts of the world, land tenure is a mosaic of legal interests, conditional rather than absolute. Thus land as a property and its tenure, more than being a bundle of rights residing in a single owner, is a series of separable rights often held by a 'bundle of owners'. Certainly, this is not a new arrangement; it existed among many traditional communities (Tumushabe 1999; Barrow 1996; Juma and Ojwang 1996). However, some anthropologists and colonial administrators, as well as some local ideologists have often misrepresented this (Mandivamba 1999). In wildlife and forest conservation in Kenya, the result has been emphasis on protectionism approach – total exclusion of all forms of right to resources in conservation areas for the forest and wild animals irrespective of where they occur. However, in the wake of conservationism approach, some form of human use of specific resources – in this case forest resources and wildlife, are implied. Conservation is the management of human use of the biosphere so that it may yield the greatest sustainable benefit to present generations, while maintaining its potential to meet the needs and aspirations of future generations. Thus conservation is positive, embracing preservation, maintenance, sustainable utilization, restoration, *and* enhancement of the natural environment (WRI 1992 p 228).

Study area and methodology

The case of Taita Taveta district presents a unique setting for wildlife and forest biodiversity conservation. First, the Tsavo national park is the largest in Kenya accounting for about 40% of the total protected area in the country. It covers about 62% of Taita Taveta district. The area left for human occupation is only 38% of which 24% is lowland (mainly ranches and large-scale sisal estates), 11%

agricultural land and 3% water and rocky surfaces. Most of it, particularly the Taita' area, is like a bay which is almost completely surrounded by the park (Map 1). While the park is on the lowland areas of low, marginal to medium agricultural potential, the human habitation areas are mainly on the hills of high agricultural potential where forest conservation areas are. However, the forest only covers 0.4% of the total district land. Due to land shortage on the highlands and the flanks, people have been moving to the lowlands, which traditionally were used mainly for grazing and hunting. The results have been an increase in land-use conflict, particularly with wildlife. At the same time, it has been realised that conservation of wildlife and forest biodiversity within protected areas is on peril if the local communities in the neighbourhoods are not involved. In any case, wild animals are not confined to the parks. From a global environmental perspective, the whole concept of conservation has also changed. This requires well-thought innovative incentives that will lead to a balance between development and conservation of wildlife and the forest.

The methodological approach adopted in this study recognises the complexity of analysing and understanding environmental problems particularly those related to land. Methods of data collection and data analysis for environmental problems in general, and for African wildlife and forest conservation problems in particular, have been criticised for being inadequate for the analysis of complex policy issues (Omondi 1994). Furthermore, problems are commonly analysed with a narrow disciplinary framework, which predetermines the nature of conclusions and leads to professionally biased proposals (Abel and Blaikie 1986). Various methods together provide different sets of information, which are mutually enriching. Therefore, this study adopted an interdisciplinary approach with selected techniques that are complementary in that they provide crosschecks and new information. This approach is regarded as a 'multi-data approach' (Fowler and Fowler 2002), 'multiple-subject survey' (Casley and Lury 1987) and 'triangulation approach' (Campbell 1963). According to Casley and Lury (1987), such an approach is suited for studies at district or a region level with the number of respondents ranging between 100 and 1,000. The specific method of data collection included

asking questions – including structured and semi-structured questionnaire, focussed group discussions-, observations and search for literature and existing data.

Households were the basic sample units and the heads of the household the main respondents, but with specific attention for spouses and other adults in the household. Sampling and the number of interviewees were based mainly on general topography and the proximity to the protected wildlife and forest areas. The number of interviewees for the three main areas – Kishushe/Maktau, Kasigau and Ngangao/Mbololo – was 58, 56 and 55, respectively, totalling 169. Table 1 below summarises the numbers of interviewees and their respective locations.

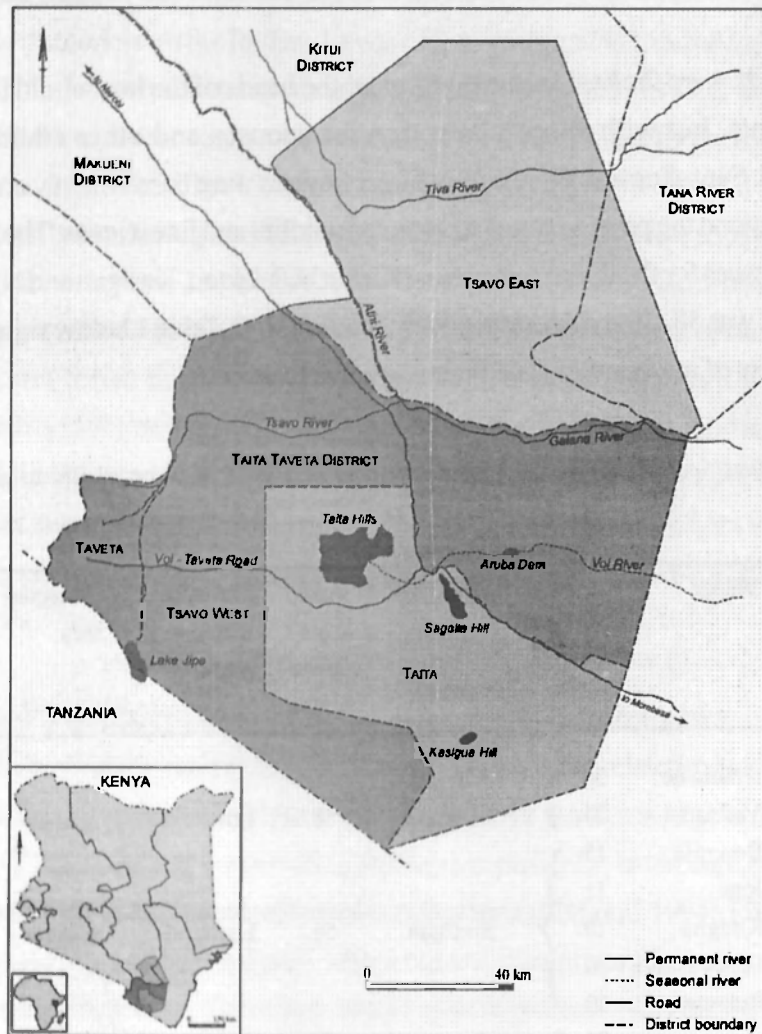
Table 1: Classification of research sites based on eco-zone and proximity to protected areas

Sampled area	Village	Number of interviewees	Analysis area	Area inter-viewee Number	Eco-zone (topography)	Protected area
Kishushe	Kishushe	34	Kishushe/ Maktau	58	Lowland	Wildlife
Maktau	Maktau	24				
Kasigau	Bungule	15	Kasigau	56	Lowland	Wildlife
	Jora	11				
	Kiteghe	10				
	Makwasinyi	10				
Ngangao Mbololo		25	Ngangao/ Mbololo	55	Upland	Forest
		30				

The concept of entitlement

Under natural resource management regimes, full exercise of private property rights is considered as being virtually impossible in an ecosystem setting. Air, water and organic substances and biota simply cannot be prevented from moving onto, off or across one's property, as is the case with roaming wild animals. Ecological 'neighbours', some as far as thousand kilometres away, adversely affect what is

Map 1: Location of Taita Taveta District



ostensibly private property in some locale. Therefore, the more intense and/or numerous such adverse systemic interconnections, the less complete will be the package of property rights in practice. Thus, the 'dimensionality' of the domain of private property/closed access is caused to shrink with ecosystem degradation. At the same time, the class of resources that may be construed as entirely ownerless is shrinking rapidly and may soon become non-existent throughout the biosphere. In this perspective, felons and poachers who make illegal use of others' property

are subject to punishment and/or payment of restitution when apprehended. Due to the interactions within an ecosystem, which is dynamic in nature, it would be unusual for unlawful use to leave the resource unaffected.² It might happen by chance that some extra-legal use would benefit an owner's practical interest in the property, but the opposite is usually the case. The intensity and ubiquity of control by centralised bureaucracies is also waning. Party plutocracy³ and state capitalism operating under the guise of socialism are gradually being reformed. In the same vein, closed simple and idealistic communities now occur less commonly than was once the case. In this context, humanities' complexity and ecosystem processes, coupled with the expanding and intensifying impact of humans on ecosystems, reduce the incidence of 'regimes' that fall towards the edge of the matrix in Figure 1a (which shows administrative and governance regimes according to dominant norms with respect to ownership and access to natural phenomena).⁴

Figure 1a : Reforming the use of natural resources

<i>Ownerless</i>	Non-legal autarchy, squatters	Protectorate, imperialistic or through UN decision	Free anarchy, explorers of uninhabited areas
<i>State owned</i>	Party plutocracy, state capitalism	Democratic socialism and communism	None known
<i>Community owned</i>	Monastic and idealistic communal movements	Tribal traditions, communitarian groups	None known
<i>Privately owned</i>	Aristocratic autarchy	Liberal capitalistic democracy	Illegal anarchy poachers
	<i>Closed access</i>	<i>Limited access</i>	<i>Open access</i>

Modified from Regier, Mason and Berkes (1989).

In terms of resource ownership and access, 'reform the use of natural resources' approach identifies five dominant types of social mechanisms used in allocative decisions, including *laissez-faire*, administrative regulation, organised bargaining, community self-regulation and the free market. These social mechanisms can be

distributed conveniently over the full ownership-by-access domains (Figure 1b). However, these are viewed in a systemic and relativistic way, with a primary type being complemented in practice by a secondary and perhaps a tertiary type. For instance, if community self-regulation is the dominant mechanism, a free market may exist for the allocation of some other resources. This clearly implies co-existence and interaction between the various actors in the context of multiple legal orders (legal pluralism) such as state, customary, religious, project and local laws, all of which provide bases for claiming entitlement rights. This complicates the management of an ecosystem, hence the need to understand the stakeholders in space and time.

Figure 1b: Reforming the use of natural resources-1

<i>Ownerless</i>	Legal action			Laissez-faire
<i>State owned</i>			Administrative regulation	
		Organised bargain		
<i>Communally owned</i>	Community self regulation			
	Free market		Legal action	
<i>Privately owned</i>				
	<i>Closed access</i>		<i>Limited access</i>	<i>Open access</i>

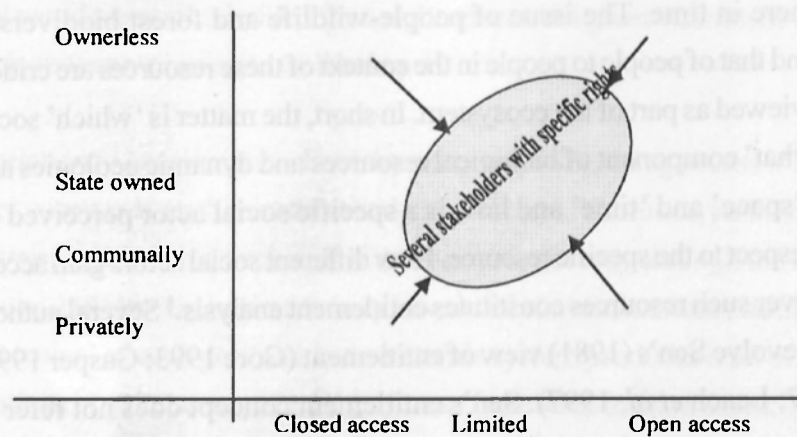
Modified from Regier, Mason and Berkes (1989).

Generally, this approach observes that the currently thriving regime tends to cluster around the diagonal in favour of community self-regulation, which is complimented by other forms of management. This can be seen in Figure 1c, which illustrates the general loci or domains within which natural resources can be managed with the aim of resolving resource conflict. This tends to involve a number of stakeholders - 'bundle of owners' with a series of separable rights.

The most critical issues that can be raised here are on *allocative disorder* (resource allocation) as in the *tragedy of the commons*,⁵ such as poaching or illegal land transfers. In this respect, three main issues can be raised: pseudo-open access conditions and a demand greater than the usual sustainable harvesting level; poorly defined use rights; and a breakdown in the system of enforcement of either limits to access or the right to use. These allocative disorders raise the question of who has the right to own, use and intervene and how the stakeholders interact with respect to the specific resources. These are addressed by the concept of entitlement.

In the 1990s there was a dramatic expansion in the language of 'rights' or entitlements in negotiations between individuals and social groups, on the one hand, and national states or supra-national bodies, on the other. Processes of globalisation have led to rights discourses being widely adopted by local social actors across the world, and rights talk transformed the parameters of discourse in new domains of political struggle, such as ecological rights (Wilson and Mitchell 2001).⁶

Figure 1c: Reforming the use of natural resources-II



Under the circumstances of *allocative disorder*, the views of Regier, Mason, Berkes and Grima (1989) and Grima and Berkes (1989) on 'reforming the use of natural resource' and the entitlement rights as discussed by Dietz (1996), become critical.

Dietz defines entitlement rights as to include the right to own and use resources, and to intervene in resources situations. According to Dietz, these rights are dynamic and not exclusive. This view is shared by Singer (2000), who argues against the conventional understanding that owners have the right to control their property as they see fit, with few limitations by the government. Instead, '*property should be understood as a mode of organising social relations*' (Singer 2000: 257). Singer's views are based on social relationships, contending that property is a matter not of right but of entitlement, where entitlement is a complex accommodation of mutual claims in the context of legal pluralism. Property requires regulation, as it is a system and not just an individual entitlement. As a system, it must support a form of social life that spreads wealth, promotes liberty, avoids undue concentration of power, and furthers justice.⁷ Singer further argues that owners have not only rights but also obligations to other owners, to non-owners and to the community as a whole, all constituting stakeholders. These obligations ensure that property rights function to shape social relationships in ways that are both just and defensible.

For the purpose of entitlement analysis, the contention at this juncture is that wildlife and forest biodiversity conservation and management is a subject of which, what, who and where in time. The issue of people-wildlife and forest biodiversity interaction and that of people to people in the context of these resources are critical and may be viewed as part of the ecosystem. In short, the matter is 'which' social actors see 'what' component of biological resources and dynamic ecologies as a resource in 'space' and 'time' and how is a specific social actor perceived by others with respect to the specific resource. How different social actors gain access and control over such resources constitutes entitlement analysis.⁸ Several authors have tried to evolve Sen's (1981) view of entitlement (Gore 1993; Gasper 1993; Jenkins 1997; Leach *et al.* 1997). Sen's entitlement concept does not refer to people's rights in a normative way of what people *should* have but it refers to the range of possibilities that people *can* have. That is, a set of alternative commodity bundles that a person can command in the society using the totality of rights and opportunities that he or she faces (Sen 1984: 497). A further argument by Sen is that entitlements arise through a process of 'mapping' endowments, defined as a

person's 'initial ownership'. Land or labour powers, for instance, are transformed into a set of entitlements. This relates to how different people derive entitlements from their endowment (Leach *et al.* 1999).

The evolved view of entitlements covers the whole range of socially sanctioned as well as formal-legal institutional mechanisms for gaining resource access and control (Gore 1993). In this context, Leach *et al.* (1999), adopts the following definitions of key terms. First, endowment refers to the rights and resources that social actors have, such as land, labour and skills. Second, entitlement refers to legitimate effective command over alternative commodity bundles (Gasper 1993). To be more specific (Leach *et al.* 1999: 233), 'environmental entitlement' refers to an alternative set of utilities derived from environmental goods and services over which social actors have legitimate effective command and which are instrumental in achieving well being. The alternative set of utilities that comprise environmental entitlement may include direct use in the form of commodities, such as food, water or fuel; the market value of such resources and the utilities derived from environmental services. According to Leach *et al.* (1999), entitlement enhances people's capabilities, which are what they can do or be with their entitlements. For example, command over fuel wood resources derived from rights over trees gives warmth or the ability to cook, thus contributing to well being.

In relation to entitlements, there are many ways of gaining access to, and control over, resources, such as market and kin networks. There are, furthermore, many ways of legitimising such access and control, not only through the formal legal system, but also through customary law, social conventions and norms. The nature and 'rules' of each political and economic system produces a set of entitlement relations or structures, governing who can have what in that system. The nature of entitlement of a person would thus depend on the legal, political, economic and social conditions in society and the person's position in it. Entitlement therefore is a matter of both rights and power, and is concerned with the actual process of how people gain access to resources. Resources, however, are limited and the distribution of these resources can be understood as the outcome of a process of negotiation

and/or contestation between social actors with different priorities and interests (Verstegen 2001: 12). Therefore, entitlement analysis involves the identification of the main sources of entitlement of various groups.

Land, land use and tenure

Land and entitlement rights

In general, 'land' is used to describe all natural resources over which people have specific rights and which may be used to yield an income. It includes farmland and building space, forests, pastures, mineral deposits, fisheries, wild animals, rivers and lakes as well as all resources freely supplied by nature which help to produce what is required to meet human needs and aspirations (Bruce 1994). Under statutory laws, land is regarded as a single resource to which there may be various rights. These laws tend to emphasise individual rights, thus private ownership. On the other hand, customary law regards land and resources on it separately and tends to confer greater recognition on group rights over these resources (Bruce 1994).

Land is geographically fixed in terms of location and quantity; it cannot easily be adjusted to varying demands. However, it is true, of course, that coastal erosion decreases the supply of land and reclamation from the sea increases supply, but this occurs to a limited extent. Land for specific uses can be increased or decreased simply by transferring it from one use to the other, but these transfers are limited by the fact that each piece of land has a unique set of natural characteristics that makes it suitable for limited types and nature of use. Land-use types are also determined by ownership regimes and/or access arrangements. Discords related to land use have been incisive at all levels ranging from the family to the state where they are at war over territories. At community level, land 'scarcity'⁹ has in most cases led to serious social, economic and environmental problems. Scarcity can be caused by changes in climatic conditions, nature of land, population increase and other social and economic changes, particularly those hinged on policy, legal and institutional structures of the existing governance system. These are central as far as entitlement rights are concerned.

Land tenure is a matter of rights that are held on land and some resources on it. The word tenure is derived from the Latin word *tenere*, which means 'to hold'. Thus, tenure can be 'ownership' or 'usufruct' in the case of Western tenure (Bruce 1996; Juma and Ojwang 1996), or 'leasehold'. In essence, it defines the social relations between people in respect of the objects of tenure, in this case land. Thus, in general, the study of land tenure examines the nature and origin of rights, how they operate and how they relate to a multitude of resources on that land, such as plants, wild animals and water. Therefore, tenure defines the methods by which individuals or groups acquire, hold, transfer or transmit land or specific rights over certain resources on it. In this case, land tenure may include a variety of different rights in different combinations depending on the type of tenure. In a nutshell, tenure is a set of rights, commonly referred to as a 'bundle of rights' held by a person or private or public entity in land and/or the resources on it. These rights may be transferred or transmitted either together or separately at the discretion of the holder with or without limitations, depending on the rules of the specific type of tenure. Therefore, formal (both traditional/tribal and current) rules of tenure define the nature and content of property rights and determine how and under what conditions society will allow individuals or groups to hold property rights on land and other resources (Ogolla and Mugabe 1996). Consequently, land tenure is a matter of entitlement rights operating under legal pluralism. In this context, statutory laws in independent Kenya, which are based on colonial ideology, ought to support and complement the customary laws and not vanquish them. Moreover, land tenure is culture-specific and dynamic.

Traditional land tenure is culture-specific because it is based on the social organisation, production and consumption patterns of a given community, which reflect, among other things, the ecological characteristics of the region (Bruce 1989). For instance, traditional pre-colonial Taita and many other African societies characterised by kinship-bound socio-political organisation, practised shifting cultivation and pastoralism. Thus, the traditional tenure systems' focus was to guarantee rights of access to individuals or families and to invest relevant political entities with rights of control over allocation and use. These systems were dynamic in the sense that they responded to changing situations,

particularly socio-economic and environmental changes. However, the incursions by the European colonialists occasioned drastic changes through the introduction of a centralised governance system. This was followed by burgeoning population pressure on limited arable land and the development of new land-use patterns. All these gave way to new land tenure systems, which are not clearly defined and are likely to be equated to the Tanzanian situation, which has been described by Bergin, (1998: 161) as 'a legal quagmire'. Indeed, Kenya's land tenure system is a complicated legacy combining traditional, British colonial and capitalistic-inspired laws.

In the context of tenure dynamism and cultural specificity, it has become imperative to review the impact of tenure arrangements on sustainable use. In essence, entitlement rights that relate to natural resources need to be clearly defined to avoid land-related conflicts. The disposition is that the public and private divide has been narrowing down, giving way to a hybrid of the two, which is analogous to communal land use and tenure (Grima and Berkes 1989). This tendency reflects the fact that land encompasses a range of resources the scope and influence of which transcend private property boundaries.

Land tenure in Kenya

It is clear that the formerly communal traditional/indigenous land-use and tenure systems have been eroded and replaced with the colonial versions following the incursions by the European colonialists. It can also be argued that the traditional tenure systems evolved dynamically with changing social, economic and political circumstances and tended towards more inalienable individual rights as population pressure increased and agriculture became more commercialised (Mandivamba 1999). Moreover, a critical analysis of the traditional tenure system indicates that this was a composite system, with clear freehold rights¹⁰ usually for arable and residential land, as well as group rights for pastures, forests, mountain areas, waterways and sacred places, as is the case for the Taita people.

In most African countries and Kenya in particular, the contemporary post-colonial governments inherited and maintained the colonial legacy of inadvertently

undermining indigenous customary tenure systems. During the colonial era in Kenya (1888-1963) several changes in land use and tenure were witnessed. The most momentous was the implementation of the Kenya Land Commission's recommendations of 1932 and later the land tenure reform based on Swynnerton's Plan of 1954 (Carter 1934; Swynnerton, 1954).

In an attempt to solve some problems related to land tenure following the incursions and subsequent settlement of colonialists in Kenya, the British colonial administration set up an official commission to determine once and for all what land belonged to whom. Under the chairmanship of a judge, Sir Morris Carter, the commission travelled all over the country collecting evidence on land use and tenure from as wide a variety of sources as possible. Its findings, published in 1934 (the Kenya Land Commission Report, (Carter 1934), laid the foundation to what may be regarded as a formal pattern of land ownership, which persists until the present day.

On the basis of the findings of the Kenya Land Commission report, the colonial government delineated boundaries of land ownership and tenure across the colony. On the basis of historical precedence, use and residence, it determined which areas clearly belonged to particular tribes or groups. Most of these areas were set aside as 'Native Reserves' for the exclusive and perpetual use of the group or tribe, while some portions – particularly the well-watered areas – were annexed for the European settlers. The commission did not acknowledge ownership by a tribe if the land was thinly populated or unoccupied in the sense of not observably being in use for settlements or farming, as is often the case with most pastoralists' land. Such land was designated as 'state property' or 'Crown land'. However, the Commission made it clear in many cases, that the designation of an area as 'Crown land' did not automatically dispossess those who were living on it of their right to continue living there and that this should have primacy over other rights.

About twenty years later, the Swynnerton Plan of 1954 introduced land tenure reform in Kenya with the political objective of counter-insurgency following a state

of emergency between 1952 and 1956.¹¹ The idea was to create an emergent class of farmers amongst the Kikuyu, to help foster political stability. Therefore, a class-based land reform model centred on the progressive or commercial farmer was opted for. Indeed, the implementation of the low-density scheme in the mid to late 1950s, followed by the high-density or 'million-acre' scheme in the 1960s, was a political ploy to pacify rural unrest by creating a landed gentry and subsequently reconcile the competing and conflicting needs of the constituents involved in Kenya's transition to independence. It contained a strategy for the development of a class of progressive farmers. The dual reasons were the institution of freehold land tenure and the selective loosening of restrictions on African cultivation of high-value crops such as coffee and tea.

The plan aimed to provide individualised tenure security and to stimulate farm investment, agricultural growth and the emergence of a land market. The programme was maintained after independence and expanded nation-wide. Kenyan nationals were granted individual titles to portions of former colonial settler estates and fragmented customary holdings were subject to compulsory consolidation. Further consolidation was expected because of market transactions in land, while administrative benefits were anticipated from the creation of an organised record of property rights. The titling and registration process remained incomplete, however, and, in principle, continues. The programme has had a wide variety of unanticipated effects (Box 1), now widely recognised because of extensive documentation and analysis of the results of micro-level studies in various parts of the country (Okoth-Ogendo 1991, Quan 2000; Soludo 2000; Kariuki 2000).

Notwithstanding the Swynnerton plan, which was politically motivated, both the colonial and postcolonial governments believed that indigenous/ traditional tenure systems were incompatible with western or current systems of government and the associated economic institutions (Mandivamba 1999). This led to the endeavour of replacing them with the state-imposed individual property rights to land-based resources through land adjudication. Individualisation of land has been assumed to be more compatible with the intensification and commercialisation of

agriculture and to give more incentive for investment and improved resource management. However, the general experience in Africa and in Kenya in particular, has been that land titling and registration programmes have generally yielded neither positive benefits nor increased tenure security, due to the weakness of government institutions.¹²¹² Good examples in Taita, in addition to small-scale farms, are the ranches, which were established for livestock ranching. Huge loans through the Agricultural Finance Corporation (AFC) under the Kenya Livestock Development Project (KLDP) Phase I and II, funded by international donors, were disbursed for livestock production. However, the project did not anticipate droughts, livestock diseases, cattle rustling, depredation and competition with wildlife and poor management. The result is that all the operations of the ranches collapsed and many are still indebted.

In some cases where private property rights were not viewed as legitimate or not enforced adequately, *de jure* private property and government land has become *de facto* open access land.

In pre-colonial times, all land was under customary law and it is not likely that there was any land in Kenya free from tribal occupation by residence or use, whether seasonally or throughout the year. Although there was no uniformity in traditional/tribal land use and tenure, customary land embraced most of what is regarded as trust lands. There were sections for communal use and even for private or individual use at family level. During the colonial period, the customary land was reduced to include only the so-called 'native land'. The rest were either the settler's reserves alienated from core areas of some tribal customary land or the crown land, which was mainly pastoralism land. Later, in the post-colonial period, the division of land tenure categories were regrouped into three main types, which includes trust lands, government or public land and private or individual land (Tables 2 and 3).

Customary/trust land

Trust land includes former native reserves and customary/communal land. The customary land tenure is based on indigenous property rights under the customary laws, which tended to recognise a bundle of aggregated rights to the many natural

resources associated with land. These rights are both spatial (or resource)-specific and temporal. This means that rights can apply to a particular area or to specific resources such as plants providing materials for construction and tilling, forage, trees species and ground water and that they can vary according to seasons and a wide range of conditions. In the past, different communities had access to specific areas and smaller social units (social and political organisations) within the community had access to specific land and resources. These social units that share an area may be kinship groups (as is the case among the Taita), a clan (which applies to the Samburu) or a sub-tribe (Maasai).

Table 2: Land use and tenure in Kenya

Tenure type	Size (x 1,000 ha)	Tenure type	Size (x 1,000 ha)
<i>Government land</i>	116,088	<i>Trust land (not for registration)</i>	59,625
Forest reserve	9,116	Forest	7,084
Other government reserves	1,970	Government reserves	492
Township	2,831	Townships	1,812
Alienated land	38,546	Alienated land	33,397
Un-alienated land	28,598	Game reserves	13,691
National park	24,067	National park	3,149
Open water	10,960		
<i>Freehold Land</i>	8,731	<i>Trust land (available for small-holder registration)</i>	398,816
Small-holder schemes	6,615	Already registered	27,729
Others	2,116	Not yet registered	370,087
		Total Trust Land	457,449
Total area of water			11,930
Total area of land and water			582,646

Source: RoK (2002a).

Following the incursions by the European colonialists, this system of land tenure was distorted. The fundamental factor even under contemporary governance is the clash between the customary laws governing tenure *vis-à-vis* statutory laws that are based on capitalistic and European colonial principles. The tendency in customary law to confer greater recognition on group rights was subjugated by western law, which emphasised individual rights. Moreover, the Western development initiatives viewed customary tenure as open access regimes and a hindrance to development and conservation, since it tends to discourage individual initiatives to invest in land and manage it properly. Nonetheless, it is now being recognised that where state-based tenure has replaced customary tenure systems, the flexibility of rights that can promote sustainable resource management and equity are lost (Mandivamba 1999).

At independence, the native reserves, which were the main portions of customary land, became trust lands administered by the local government. Under Section 115 of the Constitution, all trust land is vested in the county council within their areas of jurisdiction and is to be held:

'for the benefit of the persons ordinarily resident on that land and shall give effect to such rights, interests or other benefits in respect of the land as may, under the African customary law for the time being in force and applicable thereto, be vested in any tribe, group, family or individual: provided that no right, interest or other benefit under African customary law shall have effect for the purposes of this subsection so far as it is repugnant to any written law' (the Constitution of Kenya, Chapter IX, Section 115(2), RoK 1998).

However, some of these lands have since been privatised through land registration and adjudication. Some of the remaining un-privatised areas of trust land have been set aside as wildlife and/or forest conservation reserves under the local government, while others have been gazetted as reserves under state land. Under Section 117 of the Constitution, parliament may empower the county council to set

apart an area of trust land for use and occupation, 'by a public body or authority for public purpose' or by any person for a purpose which in the opinion of the council is likely to benefit the persons ordinarily resident in that area (the Constitution of Kenya, Chapter IX, Section 117). This provision extinguishes customary laws and has been used to establish national parks and reserves. Under Section 118 of the Constitution, the President may vest a portion of trust land in the central government if such land is needed for:

- the government to set up a corporate body for a public purpose;
- an enterprise the shares of which are held by or on behalf of the government; or
- prospecting for or extracting minerals or mineral oil.

It is clear that in the process of conversion of trust land to state and or private land, customary laws and thus customary rights are finally diminished.

Table 3: Basic category of land in Kenya based on ownership and use

Land category	Ownership	Type	Use	Legislation
Government land	Government on behalf of the public	- Utilised	Government use	Government Land Act Cap. 280
		- Unutilised - Unlanted - Reserved	General public use	Administered by the Commissioner of Lands
Trust land (communal)	Trusteeship under county councils (customary laws and rights)	-Utilised - Unutilised	Local residents, various uses, e.g. agriculture, pastoral, etc.	Trust Land Act Cap. 288, Constitution of Kenya
Private land	Private individuals	Freehold and leasehold tenure	Registered individuals and organisations, various uses	Registered Land Act Cap. 300

Source: RoK (2002a).

The Trust Land Act (Cap. 288) recognises that certain occupation rights under customary law are applicable to trust land. Where such land has been occupied under customary law, subsequent acquisition is subject to compensation to the occupants. The Act also recognises customary law and rights of tribes, groups, families and individuals to occupy, use, control, inherit, succeed to and dispose of trust land that is subject to the Act or any other law presently being in force. However, in the context of customary law, the Trust Land Act merely grants customary rights the juridical extent of which is questionable. Moreover, statute law supersedes customary law and in most cases there are no compensations once such land is taken away. When the land is adjudicated, consolidated and registered to individuals, it ceases to be Trust land.

Public land

All the land that the Land Commission of 1932 designated as public land was proclaimed as 'State property' or 'Crown land' through an ordinance dating from 1902. This land falls under government/public land tenure and the government has the prerogative to decide on the most appropriate use, and by and for whom such use could be undertaken. On the discretion of the government, some of these areas were set aside under exclusive public tenure and designated as wildlife and/or forest conservation areas, while some were left under the government. A substantial portion of this government land has been settled since, while others have been subdivided as ranches. The implication is that all seemingly unoccupied land under customary law was alienated and given in leasehold or even granted in freehold to newcomers, even if it was only temporarily abandoned or even still in use by locals who mainly occupied native reserves.

Private land

Private or individual land tenure is an 'absolute' proprietorship of land by individuals. In essence, private land is all land that is owned, held or occupied under freehold or leasehold title, certificate or claim of land, which is registered as private land under a registered Land Act. This tenure system has been increasing mainly because of Kenya's economic goals, *i.e.* to intensify the use of the country's agricultural resources and ensure economic growth. It is assumed that land individualisation by

converting public or communal tenure into private tenure would increase agricultural production. For the arid and semi-arid areas, mainly occupied by pastoralists, the government opted for a tenure mode that would promote commercial livestock production (Nunow 2000). Subsequently, the 1968 Land (Group Representative) Act (Cap. 287) was enacted. This enabled the formation of groups which registered blocks of land with fixed boundaries, but viable for commercial livestock ranching. This form of ownership is a bred between individual, communal and public ownership meant to ensure access to large tracts of land and it confers corporate rights to the group. The registered members hold a group title deed, giving entitlements to the exclusive use of the ranch resources. Nonetheless, most of these group ranches are faced with the problem of giving power to their representatives and the Registrar of Group Representative, and not to the members. Other problems faced by the group ranches¹³ relate to the Kenya Livestock Development Project (KLDP). Rutten (1992: 286) cites five main problems faced by the KLDP and the group ranches. These include delayed and problematic implementation; investment and loan repayment problems; boundary maintenance, stock quotas imposition and range conservation problems; failure of the group ranch to commercialise livestock; and internal administrative problems. In the context of these problems and the lack of trust, group members have been pressurising for individualisation through subdivision, a move that the government has acceded to.¹⁴

The land individualisation/privatisation/capitalisation process in Kenya has led to a decrease of customary or trust lands and public lands. It has failed with regard to the aim on which it was based, that is, to increase agricultural production hence economic growth, and to stimulate good land stewardship. The resulting problems include landlessness or near landlessness (Leonard 1989: 13)¹⁵ and poverty for people who already have been marginalized since independence. Some of the factors that have led to landlessness and poverty include land speculation and the resulting land deconsolidation¹⁶ and 'absent landlordism'. Other factors include population growth and poor governance, riddled with unfavourable economic policies and corruption. In particular, pastoralists and hunter-gatherers such as the Ogiek community, illiterate and female agriculturists and younger generations are the main

victims of land capitalisation, a true recipe for intra- and inter-generation inequity and unsustainable development. These deprived groups cannot compete with the vested interests of a few powerful groups of politicians, rich farmers, ranchers and multinationals. Competition sometimes evolves into open conflict¹⁷ between groups, including the deprived groups, and this is expected to be more intense in future.

Taita Taveta land use and tenure

Most studies on land use and tenure in Taita Taveta District focus on the lowlands, particularly the areas around the park (Ngure 1992; RoK MoTW 1982; Corfield 1974). In brief, the nomadic pastoralists – the Maasai in the west and the Galla in the east – inhabited the low-lying areas. These groups of people have changed their spatial and temporal patterns and are becoming more sedentary because of land scarcity and changes in land use and tenure systems. Before the advent of the colonialists, pastoralists, raiders and hunters used most of the lowlands in the area seasonally and sparingly. The Taita and Wakamba people lived in the hills and hunted in the lowlands. They lived in the hills either because of the good climate for farming or because of fear of Maasai raiding parties. Ten years after the park was established in 1948, a small tribe known as Waliangulu was found living in Tsavo East National Park in low densities along Voi River where they subsisted by hunting elephants and other animals (Njogu 1997). The cultural links with the elephants of these and other hunters, such as the Waata, ended as a result of the banning of any sort of hunting and its enforcement by anti-poaching patrols. However, illegal hunting of wildlife continues to date, as well as illegal charcoal burning. Currently, the lowlands are used for settlement, small-scale farming, pastoral grazing, large-scale sisal farming, commercial ranching and wildlife sanctuaries. The highlands are mainly used for settlement, small-scale farming and forest conservation. Due to high population density in the highlands, people are moving to the lowland. However, soil studies (van Wijngaarden and van Engelen 1985) and analyses of rainfall patterns in the area (Cobb 1976; Phillipson 1975: 171-201) indicate that the most suitable land use in the lowlands is wildlife conservation, tourism and probably some ranching.

Table 4a: Taita Taveta District land use and tenure

Use	Size (ha)	Percentage	Tenure
Tsavo National Park	1,053,900.00	62	State
Rangelands	405,700.00	24	Mostly state
Agricultural land	192,300.00	11	Local government
Water surface and rocks	45,600.00	3	Local government
Taita Taveta District (Total)	1,697,500.00	100	

Sources: Taita Taveta District Development Report (1993); Farm Management Handbook of Kenya (1985)¹ Vol. II; RoK (2002a).

In terms of land-use cover, the Tsavo National Park (TNP) occupies 10,539 km², which is about 62% of the total area of the district (Table 3a). Therefore, the land left for other uses is 6,435 km² (38%). Out of this, the rangeland occupies 4,057 km², which represents 24% of the district's total area. This land was initially under state ownership and comprises mainly the ranches. Agricultural land, which was initially trust land, is about 1,930 km² (11% of the total area), much of which is currently under private ownership. The bare land and water surfaces cover between 400-500 km²; about 3% of the district's total area. Sisal estates, the only large-scale farming activity in Taita Taveta District apart from ranching, covers 31.4% of the privately owned land, while the remaining 68.6% is used for small-scale farming with an average size of 1.78 acres per holding (RoK 1976; 1978).¹⁹ In total, sisal estates cover 3.6% of the district's total area.

Table 4b: Specific land-use types in Taita Taveta District

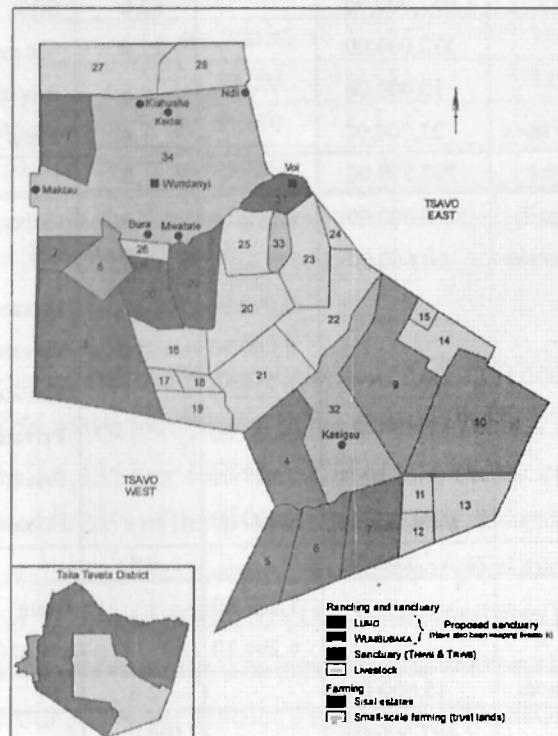
Land use	Size (ha)		Percentage	Tenure (%)
1 Rangeland	1,459,600.00		86.0	
<i>Tsavo National Park</i>	1,053,900.00		62.0	State
<i>Ranches</i>	372,000.00		22.0	See ranches
<i>Sanctuary</i>	10,000.00		0.6	Private
<i>Communal grazing land</i>	23,700.00		1.4	State/Trust land
2 Agriculture and forest	192,300.00		11.0	
<i>Small-scale holdings</i>	119,600.00		7.0	Private
<i>Large-scale sisal estates</i>	60,660.00		3.6	
Taita/Mwatate		12,000.00		Private
Voi/Msinga		8,000.00		Private
Taveta		10,479.00		Private
Jipe		11,338.00		Private
Ziwani		14,843.00		Private
Kidai/Paranga		4,000.00		Private
3 <i>Forest reserves</i>	7,518.40		0.4	
Gazetted		1,227.30		State
Ungazetted		6,291.10		Local Government
4 Bare and water surfaces	45,600.00		2.6	
Total	1,697,500.00		100.0	

Sources: Author's compilation from the Taita Taveta District Development Report (1993), the Farm Management Handbook of Kenya, Vol. II (1985) and interviews with DLAO/TT (District Land Adjudication Officer Taita Taveta) Mr F.K. Orioki (March 2000) and Senior Taita Taveta District Surveyor, Mr M. Muikiria, (March 2000).

The Tsavo National Park

Tsavo National Park (TNP) is the largest in Africa with an area of about 20,766 km² – about half the size of the Netherlands (41,532 km²). Only a few wildlife sanctuaries such as the Selous game reserve in Tanzania are larger. The TNP covers 3.6% of the total landmass of Kenya, 56% of total land under parks and game reserves and about 40% of the total protected area in Kenya. The park occupies about 62% of Taita Taveta district, 20% of Kitui district, 9% of Tana River district and 3% of Makueni district.

Map 2: Taita land use



- | | | |
|----------------------------------|--------------|--------------------------------|
| 1 Oza | 13 Kambaga | 25 Teri |
| 2 Mramba | 14 Bachuma | 26 Isangaiwishi |
| 3 Lualenyi | 15 Wagala | 27 Kishushe |
| 4 Kasigau | 16 Choke | 28 Mbulia |
| 5 Mbale | 17 Mkuki | 29 Mwatate sisal estate |
| 6 Bura | 18 Mwasui | 30 Taita sisal estate |
| 7 Wushumbu | 19 Wananchi | 31 Voi sisal estate |
| 8 Taita Hills Wildlife Sanctuary | 20 Mgeno | 32 Kasigau small scale farming |
| 9 Rukinga | 21 Maungu | 34 Dabida -small scale farming |
| 10 Taita ranch | 22 Sagalla | |
| 11 Amaka | 23 Ndara 'B' | |
| 12 Dabida | 24 Ndara | |

Table 5: District contribution to Tsavo National Park

District	Total area (ha)	Area in park (ha)	%
Makueni	14,183	461	3
Kitui	31,099	6,309	20
Tana River	38,694	3,457	9
Taita	16,959	10,539	62
Total		20,766	

The origins of the boundaries of the present TNP can be traced back to the 1934 Kenya Land Commission Report. As indicated earlier, any area that appeared unoccupied or sparsely populated was designated as State or Crown land. The commission made it clear that such land did not dispossess those who were living on it of their right to continue living there. However, the government preserved the right to decide on the most appropriate use and on who could undertake such use. In particular, the Commission recognised the clear and unequivocal right of the Orma/Galla and the Kamba to some portions of the TNP. The Waata, who were hunters and widely acknowledged to be the original inhabitants of much of the Taita area, presented the Commission with peculiar problems over land tenure. First, their population was low compared to the large tract of land and secondly their way of life as hunters was contrary to game laws. Due to this, the Commission could not reconcile their way of life as hunters with permanent tenure. Subsequently, they were not allocated any rights to land and were expected to integrate peacefully with their neighbours.

At the time of the Kenya Land Commission, the concept of 'national parks' was widely debated and the country's Game Warden testified at length before the commission. However, no reference was made to Tsavo area as a potential park until 1948. More than a decade later after the Land Commission's report, the Royal National Park Ordinance became law Cap. 377 on 26 June 1945. Three years later, under legal notice Cap. 215 of 6 April 1948, TNP became second to be gazetted after Nairobi National Park, which was gazetted in 1946. It was set aside as national park for being unsuitable for agriculture and human settlement due to aridity, presence of Trypanosomiasis and wildlife. It was thought that the Tsavo was

relatively free and useless for other purposes other than wildlife conservation (Njogu 1997). Indeed, earlier explorers and later contemporaries described the area as a flat, featureless expanse of dry commiphora bushes (Harris and Harris 1953). The only factor of conservation planning in the delineation of the boundaries was the southern part of Tsavo West, which was to match with the Mkomasi National Park in Tanzania, a park that was never established until three years later after TNP (RoK 1982).²⁰

Following the gazettement as a park, nobody was expected or allowed to use the park area, even the Orma and Galla pastoralists. Before the gazettement in 1933, the Game Warden had conceded to the 1932 Kenya Land Commission that national parks could contain people. However, this attitude had changed by the time the first national park was gazetted. Thus, despite the commission's assertion that designation of land as crown or government land would not dispossess those who were living on it of their right to continue living there, the government executed the right to decide on the most appropriate use. It was made national park, hence excluding any other forms of land use.

The value of Tsavo as a home of elephant and many other species of wild animals since its gazettement cannot be underestimated. The elephant's population in the TNP was about 17,500 heads by the time of its gazettement and they were the dominant large herbivores in terms of total large mammals' biomass (Njogu 1997). These elephants were under heavy poaching pressure, especially in the post-world war years up to 1957, when very successful para-military anti-poaching operations virtually eliminated this as an ecological factor in the area. The removal of this predation was followed by rapid increase of elephants. Coupled with the contraction of the range due to competition with other forms of land use outside the national park, overpopulation ensued and resulted in severe destruction of habitat. Indeed, several studies indicate that elephants are agents of habitat alteration probably second to human beings (Njogu 1997; Lock 1993).

Wildlife sanctuaries

Wildlife sanctuaries as a form of land use are highly encouraged in areas neighbouring or in the vicinity of national parks and reserves or on migratory routes, particularly in areas where land parcels are large and suitable for wildlife and tourism such as ranches. It is a way of encouraging non-consumptive utilisation of wildlife by the local communities. However, in most cases foreigners own such sanctuaries with limited benefits to the local communities. In Taita, there are two private sanctuaries: the Taita Hill Wildlife Sanctuary (THWS) and the Taita-Rukinga Wildlife Sanctuary (TRWS). There are also proposals by several ranches to unite and form sanctuaries.

The Taita Hill Wildlife Sanctuary (THWS)

The THWS was started in 1970 on Bura block along the Mwatate-Taveta road, covering an area of about 11,000 ha. Initially, Bura block was leased to a private company, African Pandarosa, for the purpose of game viewing by tourists. Instead of game viewing however, it was used as a hunting ground. The local community protested over hunting and the government asked the company out. When it went into receivership, the Hilton bought the land together with the lodge, which was built around 1914 by Germans. The Hilton renovated it and developed the sanctuary by making it attractive to wildlife and tourists alike. However, it took about eight years for the sanctuary to start making profits. Despite its relatively small size, the sanctuary received more tourists than many other well-known wildlife destinations such as Maasai Mara in the early 1990s: of every ten tourists in Kenya, one visited the sanctuary. Over 100,000 tourists visited the sanctuary in 1992 and 1993.²¹ The sanctuary provides luxurious accommodation at two lodges – Taita and Salt Lick lodges and Safari Hilton Camp – all of which can accommodate over 350 visitors per night.

The sanctuary is well managed with the application of ecological management tools such as controlled fires and selective removal of woody species. Through these and other conservation efforts, the sanctuary has attracted a higher diversity of large mammals, many of which remain within the unfenced sanctuary throughout the year. Current records indicate that there are more than 50 species of large

mammals and 300 bird species within the sanctuary. These large numbers have also been attributed to the continual presence of water in the sanctuary throughout the year. However, serious problems have emerged over the years following the increase of wildlife within the sanctuary and increased numbers of tourists and human population in the neighbourhood. As a result, very careful and rigorous management skills are required. In 1993, a fulltime wildlife ecologist, Dr Tim Allen-Rowlandson was recruited to advise the Hilton on future policies and management in order to guarantee the long-term viability of the sanctuary.

Encroachment is the major tenure problem in the sanctuary, especially at the eastern border neighbouring Alia community, also referred to as Wumari-Sechu community. This community has claimed a section of the sanctuary as theirs to the extent of laying their own boundary, which cuts across the sanctuary excising over 100 ha of land. While the matter is being handled at the law court, the community burned the forest and hunted wildlife from the area. For instance, about 150 snares were disengaged from the contested area between November 1999 and March 2000. These snares were set for different animals of which 10 were for giraffes, 50 for buffaloes and 90 for gazelles and other small antelopes such as dikdiks. Nobody was caught during that period, but a number of people were sited running away after sensing the presence of sanctuary rangers on patrols. The southern boundary bordering Lualenyi ranch has no problem, while on the western border some subsistence poaching is practised. In the period between November 1999 and March 2000, about 20 snares were collected mostly for small antelopes. This border neighbours Maktau location, Godoma sub-location, Benji village and a section of Mramba ranch. The northern border neighbouring part of Benji village through to Mwashuma and up to Alia area is fenced²² and no serious problem is experienced though people enter through the fence to collect firewood. They practise hunting on a limited scale.²¹

The problem of high numbers of tourists and wildlife is also serious as it leads to environmental degradation. In their daily activities, the sanctuary personnel spend about 60% of their effort on managing tourists. The main problem caused by tourists

is formed by off-road drives to view and photograph or film wild animals in close proximity. This greatly affects the survival of the animals and may be manifested in various behavioural anomalies. Dr Tim Allen-Rowlandson asserts that off-road driving control is the largest conservation achievement of the sanctuary. Increased numbers of wildlife is the only problem that the sanctuary has not attempted to ameliorate mainly because culling is not allowed in Kenya and there is no way the wild animals can be kept away from the sanctuary unless there are no more food and water resources. Probably the solution lies in expanding the Taita Hill sanctuary management to other areas, including the park. Indeed, the Hilton supports the idea of neighbouring ranches coming together to form a sanctuary with wide area coverage.

In the context of land-use conflicts, human population around the sanctuary is the most critical. This increases the chances of direct conflicts between humans and wildlife. In most cases, this is translated into more crop destruction, livestock predation, competition and human injury and/or death, among others. To reduce the negative attitude towards wildlife among the neighbouring communities, the sanctuary participates in local development. It also teams up with the park management in endeavours to appease the neighbouring local communities.

Conflicts also occur between the sanctuary management and the ranches, the local people and the park management. The interests and management approaches of the sanctuary management and KWS sometimes conflict. For instance, the KWS shot five lions outside the fence along the sanctuary in 1999 without consulting the management of the sanctuary where the lions were residing. The THWS management argued that they only missed the lions for two days, but the KWS report indicates that the lions were outside the sanctuary for two weeks during which they killed 42 heads of cattle and therefore had to be eliminated by the Problem Animal Control (PAC) unit. The management of the sanctuary also argues that KWS raises the expectations of the people in terms of financial benefits through promises it could not meet, thus making them have a bad attitude towards KWS and wildlife and therefore towards the sanctuary. The retrenchment of KWS staff and stoppage of

donor and government financial support in the late 1990s demoralised the staff and weakened the teamwork with the sanctuary, argues Allen-Rowlandson.²³ A number of activities such as fence maintenance dwindled, while motivation among its partners went down.²³

Taita-Rukinga Wildlife Sanctuary (TRWS)

The Taita-Rukinga Wildlife Sanctuary (TRWS)²⁴ was established in the 1990s and has not yet rationalised sanctuary activities that include ecological management and development of tourist facilities. However, Savannah Camp and Lodges have established Taita Discovery Centre (TDC) and Galla camp within Taita ranch. The Centre is involved in environmental education for foreigners and Kenyans. It also endeavours to establish a variety of environmentally based enterprises. A company, Wildlife Works Inc, has been established in Rukinga and deals with eco-products.

The TRWS constitutes the Taita/Rukinga Wildlife Conservancy located within the Tsavo ecosystem. It is part of a wildlife migratory corridor through which wildlife seasonally moves between Tsavo East and Tsavo West. The sanctuary covers both Taita (about 41,000 ha) and Rukinga (about 34,425 ha) ranches with a total area of about 75,425 ha. Taita ranch is a Private Company run by the Gallana Cattle Company, which is also a shareholder. Rukinga is also a Private Company Ranch and has been purchased by the Gallana Cattle Company. The TRWS combines both wildlife and livestock management. By the end of 1997, the ranches together had 14,000 heads of cattle. Their performance in livestock is good. Wildlife management and tourism is yet to be demonstrated. Nonetheless, the combined management of these two activities will require prudent management skills to avoid land-use related conflicts. For instance, Taita ranch claims that lions kill over 400 head of cattle annually, while elephants drink several thousands of gallons of water.

Like THWS, TRWS experiences the problem of encroachment, particularly on the side of Rukinga, which has squatters. Other problems include subsistence poaching and charcoal burning, especially in the neighbourhood ranches between Kasigau and Rukinga hills.²⁵

Table 6: Ranches proposing to form sanctuaries

Ranch and tenure	Size (ha)	Remark
<i>Lumo</i> (Lualenyi, Mramba and Oza ranches)		
Lualenyi PCR	43,000	- Have livestock though declining- Leadership wrangles are common - Leaders have been trained by KWS on sanctuary activities and its value
Mramba GR	4,600	- No ranching activities - Members resolved to form sanctuary in the 1970s when the ranch was founded as a community sanctuary
Oza GR	11,737	- No central herd but individual members keep livestock in the ranch - Is overgrazed and water is limited - Members have resolved to form a sanctuary
<i>Wumbubaka</i> (Wushumbu, Mbale, Bura and Kasigau ranches)		
Wushumbu DACR	16,159	- No ranching activities due to serious water problems - Member contributing funds to restart cattle ranch together with sanctuary
Mbale DACR	16,100	- No ranching activities, but intention to restart cattle ranch together with wildlife sanctuary
Bura DACR	16,104	- No ranching activities, used to operate but livestock were stolen. Intend to restart together with sanctuary - Illegal mining of and lack of water are serious problems
Kasigau DACR	20,920	- Under-stocked - AFC debt of about 10 million Kenya shillings and intention to sell a portion of land to pay off the debt. - Illegal mining is a problem.

Key: DACR = Directed Agriculture Company Ranch; PCR = Private Company Ranch; GR = Group Ranch.

Source: Taita Taveta District Development Report (1993).

Nonetheless, the sanctuary is seeking alignment and integration with the local community in order to provide an income through future joint ventures. This could allow a revenue-sharing opportunity through sustainable environmental utilisation and tourism/education-based projects which rely on the healthy woodlands in the area.

Proposed sanctuaries

Proposed sanctuaries include Lumo and Wumbubaka, which are to be composed of several ranches initially engaged in livestock production. The Lumo comprises of *Lualenyi*, *Mramba* and *Oza* ranches, while Wumbubaka is composed of *Wushumbu*, *Mbale*, *Bura* and *Kasigau* ranches (Map 1).

The idea of Lualenyi ranch being involved in tourism was hatched by the THWS after serious protracted land-use conflicts between the two. Lualenyi, which has a highly organised Board of Directors, once demanded compensation for use of their land by THWS tourists viewing wildlife across the border. The Lualenyi management also demanded KSh. 10,000 (US\$ 130) after a balloon pilot landed on their land. These demands were not met, as THWS management argued that the tourists did not belong to the Hilton. However, the THWS management discourage tour drivers from driving into Lualenyi land. The tour drivers, on the other hand, argue with the management on grounds that the Lualenyi land does not belong to the sanctuary. The solution was reached by charging the driver entrance fee on behalf of Lualenyi.

Under the auspices of some environmental NGOs and KWS, several meetings were held in the early 1990s, involving the representatives of Lualenyi, Mramba and Oza ranches and the THWS. A proposal was made to link the three ranches to form Lumo sanctuary. Although Mramba ranch, which was registered as group ranch in the 1970s, was founded as a community sanctuary, it has never operated and may not do so until ownership is clearly established. However, the formation of Lumo will take advantage of a larger area, including adjacent corridor, which is government land.

Subsequent meetings for negotiations that also involved the Provincial Administration, lawyers and the stakeholders of the Lumo ranches have been held. According to Allen-Rowlandson, the stakeholders unfortunately never made any further progress, but keep on repeating issues. Anyhow, the THWS wishes to partner with the community and intends to undertake the ecological management of the Lumo with the same regulations as used in its sanctuary, in order to ensure uniformity. They further intend to share revenue by giving US\$ 2 per bed occupancy to Lumo. Lualenyi ranch does not accede to the desired uniformity and wishes to continue with livestock keeping, particularly on the eastern side of the ranch. It also wishes to retain a camp in the ranch being leased to an Italian entrepreneur. To the THWS, developing a camp in the ranch would dilute its Salt Lick lodge and therefore it does not support it.²⁶

It is doubtful whether the proposed sanctuaries will ever materialise as most of the constituent ranches have ownership problems and leadership wrangles. For instance, the Lumo proposal is long overdue and the idea seems to originate mainly from the THWS with backup from KWS and some wildlife conservation NGOs such as the African Conservation Centre (ACC).²⁷ This endeavour is riddled with suspicion and fear at all levels starting with members of individual ranches, between ranches themselves and between the ranches and the THWS. Indeed, as mentioned earlier, the local communities do not own or run the THWS or the TRWS. The proprietors have well-established connections with tour agencies and operators who assist in marketing. In this regard, Lumo and Wumbubaka may not succeed unless they develop ties with the existing sanctuaries or with other key players in tourism.

Taita Hills forest reserves

Taita Hills forest reserves cover about 0.4% of the total district land mass and include gazetted and non-gazetted or proposed forest reserves. They are located on the three main massifs; Sagalla, Dabida and Kasigau in Taita. The tops of these hills, apart from Kasigau, comprise the high potential agricultural lands, which are also heavily settled. As a result of the high human pressure on land, the forest only remains as scattered fragments on the hilltops and ridges, which are in most cases unsuitable for human settlements (RoK 1970b). These forests are under different tenure arrangements. Those that are gazetted are under the jurisdiction of the Forest

Department, while the rest are under the Taita Taveta County Council. The forest reserve as a form of land-use is faced with a number of problems, the most critical of which is encroachment. Historically, the hills were covered by montane forests which was cleared over time to give way to settlements and agriculture. This is still taking place despite the changes in the tenure system under which the remaining patches are being protected by the government through the Forest Department in the Ministry of Environment and Natural Resources. This is because of unclear tenure arrangements and is made worse by lack of coordination between various government departments and the inability to control usage of forest resources. For instance, the precise sizes of the Taita hill forests, especially the non-gazetted are not known. However, from various reports and documents the list in Table 7 was compiled.

Large-scale farms

The large-scale farms include the sisal estates and the ranches, all of which are located in the lowland areas of low to medium agricultural potential.

Sisal estates

Apart from the ranches, sisal estates represent large-scale farming in Taita Taveta District and cover about 3.6% of the total district land (Table 6.3b). There are six sisal estates, which include Taita/Mwatate (12,000 ha), Voi/Msinga (8,000), Taveta (10,479 ha), Jipe (11,338 ha), Ziwani (14,843 ha) and Kidai/Paranga (4,000 ha). The first two are in Taita while the rest are in Taveta division.

Initially, the sisal estates were exclusively engaged in sisal production. Due to increased use of cheaper synthetic fibres, sisal production became less profitable. As a result, some of the sisal estates in Taita started diversifying while others abandoned sections of the estates. For instance, Mwatate sisal estate started livestock keeping. By the end of 1997, the estate had 2,500 beef cattle, 220 dairy cattle, 60 dairy and 180 Galla goats. The estate established a milk packaging plant, which has a milk production capacity of about 740,200 litres.

Table 7: Taita Hills forest reserves

Gazetted forests				Non-gazetted forests			
Name	Tenure	LN*	Year	Size (ha)	Name	Tenure	Size (ha)
01. Kasigau	Trust	102	1941	202.30	01. Bura nursery	Trust	10.00
02. Ngangao	State	235	1991	137.20	02. Chawia	Trust	86.00
03. Choke		State	235	1991	73.50	03. Fighi juu Mkumu Trust	
							1,000.00
04. Figi	State	235	1991	0.40	04. Igho Mkundu	Trust	200.00
05. Fururu	State	235	1991	14.12	05. Kalanga	Trust	200.00
06. Goye *	State	235	1991	8.23	06. Igi Ikumu	Trust	100.00
07. Kilulunyi	State	235	1991	0.25	07. Kigala	Trust	200.00
08. Kinyesha Mvua	State	235	1991	49.50	08. Kasigau nursery	Trust	3.0
09. Kulundu	State	235	1991	0.08	09. Kitobo	Trust	160.70
10. Mwandongo	State	235	1991	688.00	10. Latema	Trust	40.50
11. Mwachora	State	235	1991	6.40	11. Mbololo Juu	Trust	688.00
12. Mwakamu	State	235	1991	0.90	12. Mwambirwa	Trust	18.20
13. Mwakamu B	State	235	1991	0.60	13. Irizi Trust		476.00
14. Mchungunyi	State	235	1991	8.00	14. Jaycee	Trust	10.00
15. Macha	State	235	1991	14.57	15. Mwakinyambu	Trust	404.70
16. Mdegu	State	235	1991	0.36	16. Mraru	Trust	200.00
17. Mbili	State	235	1991	10.23	17. Mwaganini	Trust	35.61
18. Ngomenyi	State	235	1991	0.20	18. Mwarunga	Trust	200.00
19. Ndiwenyi	State	235	1991	5.60	19. Mgambwa	Trust	
							1,000.00
20. Susu	State	235	1991	1.70	20. Ronge		Trust
							318.00
21. Weni Mbogho	State	235	1991	2.00	21. Sagalla	Trust	70.00
22. Weni Mwana	State	235	1991	5.26	22. Sungululu	Trust	50.00
23. Modagache	State	235	1991	3.40	23. Wesu	Trust	50.00
24. Mtege		State	235	1991	0.28	24. Mwarungu	Trust
							400.00
25. Iyale	State	235	1991	22.33	25. Goye*		Trust
							5.77
26. Mgangenyika	State	235	1991	0.16			
Total				1,255.57			5,926.48
Gross total							7,182.05

Key: LN= Legal Notice

Sources: Forest Department (1998); Annual Report 6/10; Mwangombe J. and Mwanyumba D. (1999); Taita Taveta District Specific Environmental Action Plan (March 1996); CC/FOR 1/VOL. VII/60; Resolution 36/84 of 23 December 1984; List of Forests for DANIDA, CC/FOR 1/VOL. VII/285 made on 3 December 1984; CC/FOR 1/VOL. VI/267; Resolution Number 16/73 of the Full Council Meeting held on 29 June 1973. Most of these sources give different figures. The most repeated figures were considered for this thesis. The District Forest Office has no precise data on the size of the forest.

Note:

1. Some forest may have a gazetted section while the rest is not. Such is the case with Goye forest, among others. This is not clear.
2. The sizes of gazetted and ungazetted forest areas are shown to be 1,227 ha and 6,291 ha, respectively in Table 6.3b. Although the difference is not significant, the main reason may be attributed to some non-forested areas under county council authority that are classified under forest reserves and include bare land (Mwangombe and Mwanyumba 1999).

Ranches

About 22% of the rangeland in Taita initially designated as state and/or trust land, following the recommendations of the 1932 Kenya Land Commission, was converted into ranches. It was adjudicated and registered under different tenure arrangements for ranch operations. In total, there are 28 ranches in Taita, five of which are group ranches covering an area of 44,982 ha. This area was initially under customary land or trust land. The other 23 ranches and some unregistered patches left for communal grazing occupy the land that was designated as state land. Based on the household survey done for this study, about 74% (n = 169) of the households do not know whether or not they are members of any ranch. Only 26.0% are members and among these 70.0% are members of Kasigau ranch, 13.6% Kishushe, 4.6% Maktau and 2.36% to each of the rest (Kishamba, Lualenyi, Mwasui, Isangaiwishi and Mbulia ranch).

Ranching activities cover about 400,000 ha²⁸, which is about 97.5% of the rangeland, excluding the park or about 24% of district's total land mass.²⁹ On the basis of ownership arrangements, there are four types of ranches in Taita Taveta district:

1. Company ranches including
 - Directed Agricultural Company Ranches (DACR), of which there are eleven and
 - Private Company Ranches (PCR), of which there are five.
2. Partnership and individual ranches (P/IR), of which there are six.
3. Group ranches (GR), of which there are five.
4. Cooperative Ranches (CR), of which is the only one.

Directed agricultural company ranches, group ranches and the cooperative ranch are governed through monthly management committee meetings.

The committees are elected annually during the annual general meeting. The owners themselves administer the private and individually owned ranches. However, all ranches receive guidance from respective government departments through the Range Management Department (RoK 1991).

Table 8: Ranches in Taita

Name	Area (ha)	Ownership	Date registered	Status
Taita	38,000	PCR	1964	***** S, L
Rukinga	34,425	PCR	1971	*****S
Lualenyi	43,096	PCR	1965	**** S
Sagalla	18,515	PCR	1967	* L
Mkuki	2,025	PCR	1975	*****
<i>Sub-total</i>				
Ndara	2,060	Individual	1968	*****T
Wagala	2,025	Individual	1968	*****
Amaka	4,050	Individual	1977	*-
Mwasui	2,025	Individual	1975	- M
Choke	10,000			
Choke	4,500	Partnership	1990	*****
Kutima	5,500	Individual	1990	*****
<i>Sub-total</i>				
Kishushe	24,000	Cooperative	1968	-PH
<i>Sub-total</i>				
Mgeno	21,232	DACR	1971	*- L
Maungu	21,232	DACR	1970	*/2
Kasigau	20,120	DACR	1971	** L
Wananchi	8,496	DACR	1974	-
Mbale	16,100	DACR	1975	- M
Bura	16,104	DACR	1975	-
Dabida	4,500	DACR	1974	-
Wushumbu	16,159	DACR	1974	-
Kambaga	14,250	DACR	1974	- S
Bachuma	4,000	DACR	1982	-
Mramba	4,600	DACR	1970	S
<i>Sub-total</i>				
Oza	11,500	GR	1980	-PH S
Mbulia	34,000	GR	1980	-PH
Kishamba	10,000	GR	1982	-PH
Ndara 'B'	7,000	GR	1982	-PH
Isangaiwishi	2,482	GR	1983	-PH
<i>Sub-total</i>				
Total	371,996			

Source: Compiled from District Livestock Production Report, Taita Taveta District, 30th May 1998 (RoK 1998) and the District Development Plan 1994-1998 (RoK 1994b).

Key: Status: PCR = Private Company Ranch; DACR = Directed Agricultural Company Ranch; GR = Group Ranch. ***** = 100% Operational; * = 10% Operational; *- = Used to operate; - = Never operated; T = Tourist resort; PH = Personal herding; M = Mining; S = Intention to be or is a sanctuary; L = Outstanding loan.

There have been 13 active ranches since 1972, when loans from the donor community were disbursed through the Agriculture Finance Corporation (AFC) under Phase I and II of the Kenya Livestock Development Project (KLDP).³⁰ However, most of these ranches have either collapsed or are on the verge of collapsing. The cooperative ranch and all group ranches are not operational as units, but individual members herd and keep their livestock within the ranch, a situation that is described as illegal grazing for Kishushe Cooperative Ranch. Some of these ranches are overgrazed, such as Oza and Mbulia, whose members live outside the ranch. However, members of Ndara 'B' and Isangaiwishi live within the ranch. In case of Isangaiwishi Ranch, there is a serious tenure conflict, with some people from Mgange area claiming ownership, while those already residing within are defending their residency and claim of ownership.³¹

Table 8 provides a list of the ranches, their respective sizes, year of registration, tenure and operational status.

It is clear that ownership has a bearing on the management and operation of the ranches. For instance, analysis of operational status indicates that, on average, private company ranches are operating at 52% productivity, individual ranches at 40%, DACR at 2%, while the cooperative and group ranches are not operational as a unit (RoK 1996). On average, all the ranches are operating at 20% productivity.³² However, it is worthy noting that the group and cooperative ranches are doing well comparatively, with members taking care of their own livestock individually, but grazing them communally. Initially, these ranches as corporate units had a central herd owned by the respective members. Based on livestock density and assuming uniformity in pastures and water availability in all ranches, individual/partnership ranches lead with 3.67 heads of cattle per hectare and a total of 74,000 heads of cattle. Group ranches with 72,000 head of cattle follow with 1.6 heads per hectare. The private company ranches with 19,000 heads of cattle have a density of 0.14 heads per hectare, while DACRs (800 heads of cattle in Maungu and Kasigau Ranch and 300 goats in Mgeno Ranch)³³ have a density of 0.005 heads per hectare (RoK 1998). In this analysis, sheep and goats have not been

considered, though there are about 223,000 shoats both in ranches and in the unregistered communal grazing areas.

Most of these ranches experience several problems ranging from environmental to management problems. Environmental problems include water shortage, frequent droughts, unplanned fires, and thick woody bushes. Predation, competition and destruction of infrastructure by wildlife is very common and in some situations injuring or killing the herders. Theft of livestock is also a problem especially in ranches far from the main settlement areas. For instance, Bura and Kasigau ranches quite often lose their livestock to cattle rustlers from across the Kenya-Tanzania border.

However, management-related problems seem to be the main cause of the decline and near collapse of ranching activities. When these ranches were gazetted, ranching activities were encouraged through livestock extension services. To enable ranching operations and acquisition of loans, the ranches were registered as corporate bodies. Several ranches acquired loans from AFC, some of which were unable to repay and are still heavily indebted. For instance, Kasigau owed AFC KSh. 10 million (US\$ 130,000) by the end of 1997. To clear the debt, its members planned to sell all cattle and lease or sell a portion of the ranch. Sagalla ranch owed KSh. 8 million (US\$ 105,000), while Mgeno ranch owed KSh. 10 million (US\$ 130,000). Both intended to sell or lease part of the ranch to repay the debts. Currently, most of these ranches have not cleared their debt, apart from Taita ranch run by the Gallana Cattle Company whose repayment of the loan is satisfactory (RoK 1998). Poor management of the indebted ranches has not only resulted in the failure to service their loans, but also in other livestock production problems. Some ranches hire unqualified staff or have no managers, as is the case with Maungu, and are managed by the unqualified owners or directors who lack initiative and entrepreneurial skills. Nevertheless, ranches that have collapsed intend to restart ranching activities alone or combined with a wildlife sanctuary. However, most of these ranches cannot raise the required capital and in most cases are embroiled in leadership wrangles.

There are several areas where communal grazing is practised. These include Mgeno, Mramba, Kishushe, Kisimani/Rukanga, Jipe, Mwachabo, Kishamba, Njukini and Kitobo areas. More or less these areas are like the group ranches and are mostly utilised by neighbouring ranches or communities.

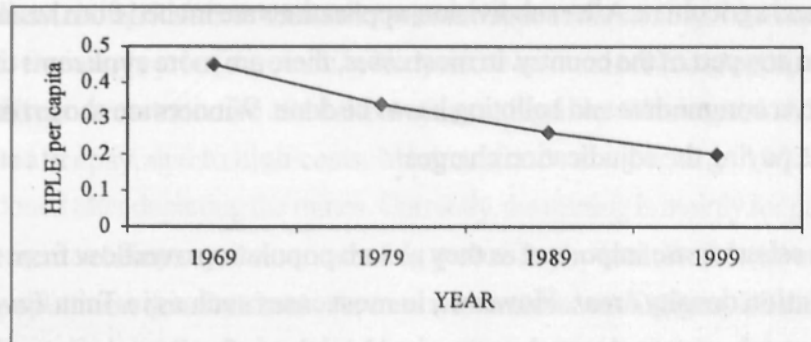
Small-scale farm and smallholdings

Smallholdings comprise the main agricultural area, which is about 7% (119,600 ha) of the total land mass of the district (Table 4b). This area covers mainly the high and medium potential zones. The main economic activities in the high potential zone include farming of maize, coffee and vegetables and zero grazing. Medium potential areas are used for, among others, maize, beans, sorghum, cowpeas and cassava farming. These areas are also used for settlements, with a population of about 250,000. Due to high population pressure and land scarcity in these areas, people are moving to the trading centres and, where possible, to major towns in search of jobs.³⁴ However, the majority are moving to the 'high potential' areas in the lowland. In some cases, migrants to the lowlands lobby and pressurise for the sub-division of group ranches by actually settling there, while others encroach on the forest reserves, dams and even private land. These encroachments are not only by the people neighbouring the respective areas, but also by people from several kilometres away. Some of the most recent settlements include Mwachabo, Maktau, Mgeno, Kasigau, Mbulia and Kishushe.

Agriculture as a land use in the smallholding areas is constrained by several factors, which include decreasing size of land holdings, rugged terrain, droughts, traditional beliefs, wildlife menace, unclear land tenure in the newly settled areas and other human resource problems. The sizes of the holdings are decreasing with increasing population. The size of the holdings vary tremendously. About 63% of total smallholding farms in the hills are less than 1.5 acres. In some situations, the farm size is extremely small, to an extent that they cannot support the respective households under current farming methods. Leonard (1989) describes such a situation as 'near landlessness' and uses a high-potential land equivalent (HPLE) per capital measure to illustrate this. Thus, analysis of the HPLE in Taita Taveta

District for the years 1969, 1979, 1989 and 1999 indicates that for Taita Taveta District, the HPLE per capita has been decreasing from 0.45 in 1969, to 0.34 in 1979, then to 0.26 in 1989 and 0.20 in 1999, a decrease of 55.6% (Figure 2).³⁵

Figure 2: Taita Taveta high-potential land equivalent (HPLE) per capita



In addition to the decrease of the HPLE per capita, small-scale holdings are further constrained by the terrain, which is rugged with steep slopes. It exposes the soil to erosion, leading to poor soils, lower yields and silting of dams and wetlands. Droughts are also common and occasionally devastate the district which in the first place is not self-sufficient, particularly in maize, which is the main staple food. Some of the local communities also cling to some of the traditional beliefs, which limit agricultural production. For instance, farmers in the hills often do not utilise the long rains in the belief that there are more pests and diseases during the long rains. The agricultural extension services have in the past campaigned to change this belief, but with little success.³⁶ Wildlife menace is not a major problem in the hills, though there are hogs (bush pigs), monkeys, baboons and porcupines, which sometimes are terrible pests, particularly in areas adjacent to the forest reserves. The problem of wildlife is intense in the newly settled areas in the lowlands, particularly in those areas nearest to the park or along wildlife migratory routes. These areas also experience land tenure-related conflicts, particularly in some ranches where people have settled or are squatters. Other factors constraining farming relate to lack of knowledge, capital and marketing infrastructure.

Settlement schemes

Settlement schemes are mainly located on government land, but could also be located on trust land or land acquired by the government from private ownership. They are set under Agriculture Act Cap. 318. The department of Land Adjudication identifies suitable state or trust land, which is then subdivided into viable plots for settlement and agriculture. After subdivision, applications are invited from landless people from any part of the country. In most cases, there are more applicants than the land can accommodate and balloting has to be done. Winners are shown their parcels after paying the adjudication charges.

Settlement schemes are important as they absorb population overflow from the high population density areas. However, in most cases such as in Taita Taveta District, these schemes are located on marginal land that is fragile and susceptible to ecological perturbations.

<i>Scheme</i>	<i>Size (ha)</i>	<i>Remark</i>
Lake Jipe	11,716	- is in Taveta division - land bought from private owner - demarcated and registered
Maungu-Buguta	23,786	- is in Voi division - located on government land - demarcation going on
Mwachabo	11,979	- is in Mwatate division - located on government land/squatter - demarcation going on
Wananchi	9,070	- is in Mwatate division - located on land bought from ranch - demarcation is complete
Total	56,551	
<i>Proposed schemes</i>		
Ikanga	Unknown	- is in Voi division - government land
Bomani	Unknown	- is in Voi division - located on government land - there are people already

Source: District Land Adjudication map (DLAO/TT office) and interviews with DLAO/TT Mr Orioki (March 2000).

Mining

Geological surveys (Saggerson 1962; Sanders 1963) indicate that the district is rich in various types of minerals such as asbestos, graphite, kaolin, clay and gemstones. Mining is an important land use in the district, though it has not been well developed and is riddled with tenure conflicts. It is also argued that the mineral occurrence in most sites is too low to warrant large-scale mining. The exploitation of these minerals is largely done by the private sector, including companies and individuals. It started in the 1940s when the mining of kyanite began in Murka and stopped in 1961 due to high costs. Mining of asbestos began in 1952 and was abandoned after depleting the mines. Currently, the mining is mainly for gemstones in Kasigau and Kapanga areas, including part of Tsavo West. Both legal and illegal small-scale mining is also done in several ranches, such as Kasigau, Choke, Mkuki, Kambaga, Kutima, Lualenyi and Maungu. The main types of gemstones include green garnet, ruby, red garnets, tanzanite and green tourmaline.

Human-wildlife/forest competition for land

Local communities compete with wildlife for space. Destruction of wildlife habitat, including protected forests, is considered as one of the major causes of biodiversity loss, both flora and fauna. Encroachment on protected forest areas and movement of people from the densely populated Taita hills to the lowlands, clearly demonstrate this problem. As Cobb (1976) indicates, this results in compression of wildlife into limited areas. Coupled with fencing of private land and or the park, it limits the movement of wild animals and instigates other problems, such as reduced genetic variability through inbreeding (Baur *et al.* 1995), habitat degradation by wild animals (especially elephants) due to high densities, and behavioural changes (Njogu 1997a). In this regard, this section demonstrates that competition for land between local communities and wildlife including forest conservation is a reality. Local communities tend to occupy and settle permanently on land originally utilised by wild animals or under natural vegetation cover, in order to cater for an increasing population and their increasing needs. The local communities traditionally used these lands sparingly for grazing and as hunting grounds. The section demonstrates this by analysing the number of parcels of land owned by households, their sizes and their location with

respect to the hills and the lowland. Land-use types and fencing are also discussed. Land-cover changes and degradation are discussed on the basis of the length of residency of a household in a specific area.

Land parcels under private tenure (family and individual tenure)

Private land ownership can be differentiated into family and individual lands.³⁷ About 24% (n = 169) of the households own one parcel, 37% two parcels, 25% three parcels and the other 14% own four parcels or more (Table 10) The highest number of parcels recorded is six, owned by about 2% of the households. About 53% of all residential parcels³⁸ of land are under family ownership, while the other 47% are under individual private ownership. For the second, third, fourth and fifth parcels, 55%, 50% 49% and 14%, respectively, are under individual ownership. All the sixth parcels of land are under family ownership.

Table 10: *Parcels of land held per households (%)*; n = 169)

Number of Land parcels	Specific areas			
	Kishushe/Maktau	Kasigau	Ngangao/Mbololo	Overall
1	25.9	12.5	34.6	24.2
2	41.4	41.1	27.3	36.7
3	24.1	33.9	16.4	24.8
4	6.9	10.7	12.7	10.1
5	0.0	1.8	5.5	2.4
6	1.7	0.0	3.5	1.8
Total	100.0	100.0	100.0	100.00

People living in the highlands (Ngangao and Mbololo) tend to have one parcel of land, whereas people in the lowlands (Kishushe, Maktau and Kasigau) mostly have two parcels of land in the place where they reside. This land is generally in the category of individual land, while they own family land in the highlands where they came from. This indicates that inhabitants of the lowland moved from the hill where they have claims over family land, particularly in case of deceased parents.

Households with more than three parcels of land are generally from the hills, where comparatively well-to-do people reside. Some of these parcels are in the lowlands and may include shares in ranches. In general, land parcels in the hills are under family ownership with people in the lowlands being part of these families. In the lowlands, individuals rather than families own the parcels. However, based on Cramer's V symmetric measure, the relationship between the number of parcels of land held per household and location is weak (Table 11).

Table 11: Relationship between number of parcels of land held per household and location

	Value	Approx. sig.
Nominal by nominal		
Phi	.325	.058
Cramer's V ^a	.230	.058
Number of valid cases	169	

a Not assuming the null hypothesis.

b ^{*}Using the asymptotic standard error assuming the null hypothesis.

Size of parcels

On average, the size of the land parcels in both the hills and the lowlands is about 7.5 acres (3.4 ha) with an average household size of six persons (Table 12). If each member or heir³⁹ of the 53% land parcels currently under family ownership would claim his land, it would be about one acre (0.40 ha), on average.

Table 12: Percentages of land size classes under private individual and family ownership

Size (acres)*	Parcels of land						Overall
	1 st	2 nd	3 rd	4 th	5 th	6 th	
<3	29.6	41.4	53.7	41.7	50.0	66.7	47.2
3-5	26.6	27.3	19.4	12.5	33.3	33.3	25.4
6-8	20.7	21.1	14.9	25.0	16.7	-	16.4
9-11	8.9	4.7	4.5	12.5	-	-	5.1
12-14	3.6	0.8	3.0	-	-	-	1.2
15-17	2.9	0.8	1.5	-	-	-	0.9
18-20	2.9	2.3	1.5	8.3	-	-	2.5
21-23	-	-	-	-	-	-	-
24-26	1.8	0.8	-	-	-	-	0.4
27-30	1.2	-	-	-	-	-	0.2
>30	1.8	0.8	1.5	-	-	-	0.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

* 1 acre = 0,40 ha.

If land under family ownership with a size less than 5 acres (about 56% of the land) would be subdivided among the heirs, each member's claim would be less than one acre. Under such ownership structures and present technological levels and production systems, the desire for more land is intense, the more so in cases in which family-related households own part of their land in the hills and part in the lowlands.

The location of land parcels

The first parcel of land is the residential area from where the location of the other parcels is described. In the lowlands, 81% of the second parcels are located within the residential area, while this percentage amounts to 65% for the hills. All the other parcels (the third, fourth, fifth and sixth for those who have) are located elsewhere, within the district. The residential area is regarded as the village or administrative sub-location.

Land-use type

Most land parcels are used for mixed farming, which includes crop farming and livestock keeping (Table 13). Of the residential parcels, 95% are used for mixed farming, 4% for grazing without any crop farming and 1% is destined for leasing. The residential parcel is typically used for settlement with several houses making the homestead, a kraal for livestock and cropland.

Table 13: Percentage of land parcels under specific use

Use	Parcels of land						Overall
	1 st	2 nd	3 rd	4 th	5 th	6 th	
Mixed farming	95.3	89.1	94.0	95.8	85.7	66.7	87.8
Grazing	4.1	6.3	3.0	-	-	-	2.2
Fallow ⁴⁰	-	2.3	1.5	4.2	14.3	33.3	9.3
Lease	0.6	2.3	1.5	-	-	-	0.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table 14: Relationship between fencing and location of land parcel (lowland and hills)

		Parcels of land											
		1 st		2 nd		3 rd		4 th		5 th		6 th	
		Value	Approx. sig.	Value	Approx. sig.	Value	Approx. sig.	Value	Approx. sig.	Value	Approx. sig.	Value	Approx. sig.
Nominal by nominal	Phi	0.472	.000	0.417	.000	0.336	.001	0.239	0.008	0.214	0.021	0.098	0.203
	Cramer's V	0.472	.000	0.417	.000	0.336	.001	0.239	0.008	0.214	0.021	0.098	0.203
Number of valid cases		169		169		169		169		169		169	

a N_t assuming the null hypothesis

b Using the asymptotic standard error assuming the null hypothesis.

Keeping wildlife away from farms

There are several methods of guarding farms against wildlife. These include, among other, fencing and scaring wild animal using various means such as smoke, scare crows and noise. However, the common one is fencing. Of all parcels of land ($n = 397$), 44% are fenced. There are several reasons for fencing private land, guarding against the menace of wildlife being the main reason in both the lowlands and the hills.⁴¹ Based on Phi and Cramer's V symmetric measure, the relationship between fencing and location (the lowlands or hills) is not very strong and tends to decrease from the first parcel to the sixth (Table 14). More residential parcels (46%) and second parcels (47%) of land are fenced than third (39%), fourth (29%), fifth (14%) and sixth parcels (none), respectively.

Fence type

The main types of fence include barbed wire, twigs and hedges. Others include the use of trenches to prevent wild animals from entering the farms, a combination of barbed wire and/or twigs, and the planting of trees along the borders of the farms. Of the 44% land parcels that are fenced, the dominant fence is mainly made of twigs. This is mostly common in the lowlands.

Land-cover changes and degradation

Land-cover change and degradation caused by local communities leads to loss of biodiversity, both *flora* and *fauna*. Burgi and Rusel (2001) propose an integrative approach of studying landscape changes. This approach attempts to integrate methods and knowledge from history as well as ecology to study landscape dynamics. Comparing the present situation of farming land and its surroundings in Taita with the situation when households started using the farms and surrounding areas indicates several changes. We made this comparison taking people's length of stay in a particular locality as a starting point. About 73% of the interviewed households ($n = 169$) have lived in their current site of residence for over 21 years. The mean length of stay is 38 years, with a minimum length of stay of 1 year and a maximum of 74 years. Table 15 summarises some of the changes that have taken place in the last 40 years.

Generally, the responses indicate a change from a natural landscape to a human-dominated one in which the natural vegetation is replaced with agricultural crops and settlements, and in which wild animals are replaced with livestock. In some cases, all natural vegetation on the land parcels has been cleared for agriculture, while in other cases certain species are removed selectively for specific uses.

Table 15: Evaluation of land and resource availability based on length of stay (%; n = 169)

Changes	Not applicable	Increasing	Decreasing	Nochange	Total
Distance to collect firewood	2.4	74.6	5.9	17.2	100.0
Natural plant and animal diversity	4.1	37.3	43.2	15.4	100.0
Crop yield	1.8	8.9	76.9	12.4	100.0
Forage availability	2.9	13.0	62.7	21.3	100.0
Spring water	12.4	1.8	60.4	25.4	100.0
Unpalatable plant species	7.7	32.5	21.9	37.9	100.0
Dustbowls/bare land	10.6	53.9	17.2	18.3	100.0

Where overgrazing occurs, unpalatable species thrive and bare land may increase. Decreasing spring water may indicate effects of human activities on hydrological cycles, particularly through the clearing of hill forests. Increasing distance to the sources of fuel wood indicates overuse without replacement and may motivate protected forest and park encroachment. Decreasing plant and wildlife diversity has also been noted. Indeed, habitat destruction and fragmentation constitute the major causes of loss of both plant and wildlife diversity.

In conclusion, there is intense competition for land among the local people and between them and the wildlife. This leads to landscape alteration and subsequent loss of biodiversity and depreciation of natural resources and environmental services. This is depicted in the analysis of land owned by local communities, which includes the number of parcels owned per household, a comparison between the lowland

and the hills in terms of number of parcels owned per household, land parcels under family and individual ownership, sizes of parcels, location of non-residential parcels and fencing. In particular, the number of parcels per household, the sizes of parcels and ownership in terms of family and individual ownership indicate a state of landlessness or near landlessness. The relationship between the hills and lowlands in terms of land indicates a movement to the lowlands where land is considered to be available. Much of this land has been subdivided now and none is without claim. Meanwhile, there is pressure to subdivide the ranches that are under group ownership. There are conflicts over ranches the ownership of which is not clear, such as Isangaiwishi, or the ownership of which is contested, such as Ndara ranch. This is mainly because of the quest for land. There are also conflicts between owners of sisal estates and squatters who demand part of the estates. Conflicts are also rife as local people encroach forest reserves and the national park, while others pressurise for their excision.⁴² This serve as pointers to the need for more land and the subsequent competition and conflicts over land that may be construed as ownerless or unjustifiably owned.

Conclusion

Land tenure reform involving titling or individualisation of land has been based mainly on the economic argument that giving security of tenure would enable the landowners to pledge their land as collateral for acquisition of development capital. Thus, the owners will have incentives to make long-term investments either in appropriate management or direct investment on land, as there is assurance of commensurate returns on that investment. This orthodoxy has been the organising framework for land reforms. Despite nearly a century of attempts to push towards the individualisation of land, the traditional institutions still dominate, especially in the rural areas. Different gradations of formal and traditional institutions characterise land-use and tenure in Kenya. Autochthonous communal land tenure, private property and state property now coexist, overlap and often contradict each other, especially for wildlife management, since wild animals (which are state property) know no boundaries.

There are three main tenure arrangements in Kenya, namely customary, public and private. In Taita and most parts of Kenya, customary tenure arrangements have been obliterated in favour of public and private arrangements. Public land has been diminishing in favour of private land. The management arrangements of public land – the protected areas, in particular – are ‘private’, the government or local government being the ‘private owner’. This is so under the exclusionary management practice of protectionism. Nonetheless, land use and tenure in Taita presents a unique phenomenon. The Tsavo National Park covers over 62% of the district and no direct benefits are accruing to the local people as the park is government ‘property’. Much of the remaining land in the lowlands covering over 24% of the district is also utilised by wild animals, which are also regarded as government ‘property’. It is within this area where wildlife-human conflict is rife with some pockets of intense conflicts.

The notion of land tenure triggers anxiety among most Kenyans. Land in contemporary Kenya is highly valued in the context of private ownership, even by the pastoralists who traditionally viewed land as a common resource along clan lines or kinship groups. The drift towards land individualisation has generated unanticipated outcomes in Taita, especially in the case of ranches and small-scale holdings. Most ranches in Taita failed to perform under various tenure arrangements. These ranches are currently indebted and are not able to generate income for servicing the loans. Droughts, livestock depredation, management problems, cattle rustling and ownership wrangles are the main hurdles. The limited high potential agricultural land is densely populated with about 63% of the land holdings being less than 1.5 acres per household. Through customary laws, this land has been passed on from generation to generation with reduction of the high-potential land equivalent (HPLE) per capita from 0.45 in 1969 to about 0.2 in 1999. Major outcomes of this are contestations and competition for land between the local communities and between them and wildlife and forest conservation. Occupation of areas utilized by wildlife as dispersal areas or migratory routes have resulted in serious human wildlife conflicts and loss of biodiversity in general.

In this paper we note that loss of biodiversity continues unabated due to the current nature of land use and tenure. Since land is the basic resource through which other biological resources – in this case, wildlife and forests – are owned, used, managed and contested, solving land related problems would help ameliorate biodiversity loss. The concept of entitlement rights provide a basis for strong institutional framework for conservation and development particularly in the current debate on community-based conservation. This debate is hinged on three arguments. First is the argument of the ecosystem management approach which propounds that bounded spaces for nature can neither be preserved in isolation from the surrounding landscape nor can the assemblage of species constituting an ecosystem be safeguarded indefinitely in the same place in view of ecological and socio-economic dynamics. The second position is the propagation of the paradigm of ‘protectionism’ in current conservation ideology which is considered as the eviction and exclusion of local and indigenous communities, criminalisation of traditional land uses and the emptying of cultural landscapes to realise some unattainable ideal of wildlife and forest conservation. Third is the scepticism among the stakeholders in wildlife and forest biodiversity conservation. In this view clear entitlement rights to land – ownership, use and interventionism – would lead to fewer contestations and competition for land, facilitate conservation of biodiversity and socio-economic development.

End Notes

- ¹ The Taita Taveta district is named after two major groups of people occupying the district. These are the Taita and the Taveta. As will be discussed in Chapter 5 ('The Taita people and their traditional entitlement structures') the Taita occupy the three massifs: Dabida, Sagalla and Kasigau. The Taveta occupy a strip of land West of Tsavo West. The specific study area is that occupied by the Taita.
- ² Illegal hunting and collection of plants has in most cases resulted in the decimation of some species. Poaching for rhinoceros horn and elephant tusk has adversely reduced the number of the respective species.
- ³ Party plutocracy, generally refers to the rule of wealth.
- ⁴ The terms autarchy, plutocracy and anarchy here relates primarily to property rights and not necessarily to all phenomena over which authority may be exercised. Property in this case relates to renewable living resources and the natural environment and especially the living, but non-human part of the environment.
- ⁵ The argument owed much to Garrett Hardin's 'tragedy of the commons' (Hardin, 1968), in which it was held that herdsmen would inevitably overgraze a commons because each captured the benefits of introducing an additional animal, while the costs were spread across all herdsmen. Hardin's argument subsequently attracted a great deal of criticism. Essentially, it was argued that Hardin had based his conclusion on a commons that was an open access regime rather than a common property regime. The former was prone to the tragedy predicted by Hardin, but the latter could be grazed sustainably because common property institutions limited the use by commoners and excluded use by outsiders. Many of the instances of overgrazed 'commons' in developing countries were shown to have been the consequence of the collapse of indigenous institutions in the face of colonialism or government-sponsored privatisation, rather than the consequence of the nature of the resource or its common property institutions.
- ⁶ In a conference on Anthropological Perspectives on Rights, Claims and Entitlements at the University of Sussex held from 30 March till 2 April 2001, conference organisers Richard Wilson and Jon Mitchell of the University of Sussex argue that the hegemonic status of the model of rights has had complex and contradictory implications for groups who articulate their claims in these terms. Notions of rights and entitlement have become a key site of contestation and reinterpretation of meanings, and are not adopted or resisted (or just ignored) in a uniform manner. This gives rise to such questions as: How are political claims transformed through their interaction with the technocratic consciousness and legal rationalities of state or international bureaucracies? Has the neo-liberal language of individual and choice replaced more social science-informed notions of 'personhood' and 'agency'? How do social movements seek to alter the direction of social change through their rhetorical invocations of civil society, citizenship, or human rights? What are the unintended consequences of articulating claims, which previously may have had a more politically ideological tone, in the technical and legalist language of rights and entitlements? How are more established political identities (such as social class) refashioned, and by what processes have more recent

identities – such as indigenous peoples – emerged **alongside** reformulations of ‘group rights’ or ‘minority rights’? These and other **questions** were addressed at the aforementioned seminar (<http://www.sussex.ac.uk/Units/anthrop/asa2001/> July 2002).

- 7 Breakdown of entitlement structures and **negative** environmental changes lead to conflicts, particularly in developing countries (Okidi **1994**). Thomas Homer-Dixon’s view that negative environmental changes lead to **conflict** is contested on the basis that the argument focuses mainly on aggregate population **size** and density, and homogenises diverse regions with their own unique histories and **cultures**. Fairhead (2000) and Salih (2002) contest that Homer-Dixon’s conceptualisation of environmental scarcity is deeply misleading and confuses distinct environmental **variables**. They caution against the casual ascription of conflict to environmental **factors**. The concept of entitlement is hinged on environmental and cultural heterogeneity and complexity, they argue.
- 8 ‘Entitlements analysis’, was first developed by Amartya Sen to explain how it is that people can starve in the midst of food plenty as a **result** of a collapse in their means of command over food (Sen 1981). Undue emphasis **on** aggregate food availability, Sen argues, diverts attention from the more fundamental **issue** of how particular individuals and groups of people gain access to, and **control** over food. Thus ‘scarcity is the characteristic of people not having enough... it is **not** the characteristic of there not being enough. While the latter can be the cause of **the** former, it is one of many causes’ (Sen 1981: 1).
- 9 Scarcity in this case does not necessarily mean **shortage** or lack of land by virtue of it being a fixed or degradable resource, but also **deprivation** because of whatever prevailing social and economic conditions.
- 10 There are two categories of land titling. These include **leasehold** and freehold, the latter also referred to as absolute registration. Leasehold **is** land allocated for a limited period, which must be renewed on expiry of lease. If this **is** not done, the land reverts to the government. Sometimes, there may be interests for **reversion** of land to the government or to the county council. Other conditions for **leasehold** include annual payment of rent and controlled development (Government Land Act **Cap. 280**). The titling of leasehold may be in the form of a government or county **council** grant for which a grant certificate is issued under the Registrar of Titles Act, **Cap. 281**. The grant certificate must have a deed plan reflecting, among others, the size and **shape** of the plot. Usually such grants are for land within urban centres and towns. The **other** form is lease, which is issued under the Registrar of Land Act **Cap. 300**. In this **case**, lease and certificate of lease are issued. However, title deeds are issued for all **rural** areas. In case of a freehold, the owner of the land has absolute rights, no limitations **on** time or use, unless the use is for business such as the construction of an industry **or** a shop (discussions with Mr M. Muikiria, Senior Taita Taveta District Surveyor and **Mr F.K. Orioki**, Taita Taveta District Land Officer, March 2000).
- 11 The 1952-1956 state of emergency in Kenya was **because** of natives who did not cherish the idea of staying under British colonial rule **and** held a great resentment caused primarily by appropriation of land by the colonial **settlers**.

- ¹² Good examples in Taita, in addition to small-scale farms, are the ranches, which were established for livestock ranching. Huge loans through the Agricultural Finance Corporation (AFC) under the Kenya Livestock Development Project (KLDP) Phase I and II, funded by international donors, were disbursed for livestock production. However, the project did not anticipate droughts, livestock diseases, cattle rustling, depredation and competition with wildlife and poor management. The result is that all the operations of the ranches collapsed and many are still indebted.
- ¹³ The concept of group ranch, according to Rutten (1992: 269) is placed in time between the East Africa Royal Commission of 1955, which favoured individual tenure in the whole of Kenya, and the Lawrence Mission in 1965-66, which preferred the establishment and registration of group ranches in the semi-arid regions. He notes that for Kajiado district, a range management advisor of the United States Agency for International Development (USAID) for the Kenya Government Ministry of Agriculture and Animal Husbandry, Leland Fallon, also played a major role in the group ranch formation. With the birth of the concept of group ranch, the Range Management Division (RMD) laid the ground for the Kenya Livestock Development Project that run from 1963 to 1968.
- ¹⁴ The subdivision of group ranches has been a controversial issue among stakeholders ranging from members, relevant government department and agencies, non-governmental organisations and conservationists. In Kajiado and parts of Narok, some leaders and powerful people were accused of selling and others of grabbing some portions of the ranches. Rutten (1992: 300), who meticulously describes the process that finally led to group ranch subdivision, cites numerous cases of abuse.
- ¹⁵ Near landlessness is defined by Leonard (1989) as access to plots of land which are too small to provide a minimal livelihood under existing land-use patterns and technical capabilities.
- ¹⁶ Land consolidation endeavours to amalgamate all land owned by one individual into one parcel. Speculation has led to deconsolidation, where individuals are buying scattered pieces of land which are sometimes even not suitable for agricultural use.
- ¹⁷ A case in point in Taita Taveta District is the one between Hon. Basil Criticos, former Member of Parliament for the Taveta constituency, and the local communities. Hon. Criticos owns about 72,000 acres of sisal estate, which straddles across the Kenya Tanzania border (*'He owns over half of the sub-district'*, Sunday Nation, 20 May 2001). He inherited this land from his father, George Criticos, who settled in Taveta in 1957. By then, the size of land was 92,000 acres, but later he sold part of it to the late President Kenyatta's family. Criticos claims that there are squatters on his land who have destroyed part of his sisal farm and he wants to evict them. The local communities, on the other hand, claim that the land belongs to them. During a meeting held at the Wundanyi County Council Hall, the Commission of Inquiry into the Land Law System in Kenya, led by Mr Charles Njonjo, received views from the local people on 4 July 2000 (see also Sunday Nation, 20 May 2001, p. 8, -what made Criticos quit his Taveta seat). A former Member of Parliament, Wundanyi, told the charged meeting, which was attended by local politicians, civil leaders and common people, that *'while Hon. Criticos owned thousands of acres, some indigenous people were living as squatters on their ancestral land.'* Nonetheless, the affected people have vowed to try to bar him from selling or

renewing the leasehold of the sisal estate. The situation is serious to an extent that utterances by Hon. Criticos led to his demotion from an assistant minister in the KANU (Kenya African National Union) government and later in May 2001, he resigned his post as Member of Parliament for Taita Taveta constituency. This and other cases are discussed in the next section on Taita Taveta land use and tenure.

- 18 Some figures are not the same in different reports and development plans. For instance, the size of the district has been shown to be 16,975 km² (RoK 1982: 31, Table 2.5.1), 16,981 km² (Farm Management Handbook of Kenya, Vol. II, 1985, Table 1.18 on land-use pattern) and 16,959 km² (Taita Taveta District Development Plan, 1994b). Table 1.17 on agro-ecological zones in the Farm Management Handbook of Kenya indicates an area of 6,420s km² outside the park and 10,539 km² in the park, totalling 16,959 km² for the whole district. For this paper, the area considered is 16,975 km².
- 19 Due to population increase, the average size of the farms is extremely small and 63% of total farms in the hills are less than 1.5 acres (RoK 1974). Discussions with DLAO/TT indicate that this figure of 1.5 acres per holding is only for the registered land parcels. If the unregistered subdivisions for inheritance under customary law would be considered, then the parcels would be a fraction of an acre.
- 20 Mkomazi Game Reserve, covering about 3,269 km² was established in 1951, three years after the establishment of Tsavo National Park in 1948.
- 21 Interviews with Dr Tim Allen-Rowlandson (3 March 2000), Philip (June 1999) and observation during a field drive in the sanctuary guided by Wilson Mkala (Ranger).
- 22 This is the KWS electric fence, which runs along the northern border of the sanctuary to Maktau for about 30 km.
- 23 Discussions with Dr Tim Allen-Rowlandson on Friday 3 March 2000.
- 24 American investor Mike Korchinsky, Chief Executive of Wildlife Works International, owns the sanctuary.
- 25 Field observation and Daily Nation, Horizon, Thursday 2 March 2000 and Daily Nation on the web, nationaudio.com, 'Spotlight' Wednesday, 21 August 2002.
- 26 Discussions with Councillor Richard Mwambili (Chairman of Lumo Community Sanctuary) and Chrispus Mwakamba, (Lumo Manager) in March 2000.
- 27 Discussions with Leny Mwangola of the African Conservation Centre (ACC); Dr Tim Allen-Rowlandson, the Manager of THWS and Lualenyi ranch leader, Richard Mwambili, Councillor and Chairman of the Lumo Community Sanctuary (June 1999 and March 2000).
- 28 This includes ranches (372,000ha) and communal grazing land (25,700ha). See Table 3b.
- 29 See Table 3a.

- ³⁰ The KLDP was initiated in 1968 to enhance development of livestock production in Kenya, through implementation of the so-called 'group-ranch' policy. The main objectives were to increase meat production, enhance employment in the livestock sector and ensure conservation. Funding came from the World Bank (IBRD), USAID (United States Agency for International Development), IDA (International Development Association), SIDA (Sweden), CIDA (Canada) and ODA (United Kingdom-Overseas Development Agency). The major aim was to implement strict grazing management in combination with infrastructural development like boreholes, dips, firebreaks and water-dams. The product (fattened steers) was to be sold at a profit in major towns, in particular Nairobi. However, the drought of 1970-1971 and the poor design and management of the ranches, notably lack of involvement of local people and lack of acceptance and support stifled the first phase. The second phase started in 1974 with little enthusiasm. Not much was achieved by the approximately 200 beef ranches, which got the loans out of the 450-500 ranches countrywide (Wales *et al.* 1979).
- ³¹ The principal researcher of this study, through the Range Management Officer (Mr Mwenjewe), planned to attend a conflict resolution meeting at Isangaiwishi. Due to the nature of the meeting and expected tension, it was necessary to get clearance from the District Commission. Permission was denied. However, the meeting did not take place.
- ³² Taita Taveta District Specific Environment Action Plan, March 1996, p. 10, estimated the operational status of all the ranches at 20% productivity.
- ³³ Among the DACR only Maungu and Kasigau are operational in terms of cattle ranching.
- ³⁴ There is limited immigration into the district. Net lifetime migration for Taita Taveta district was negative 7,759 people in 1979 (Lifetime Migration by District and Province in 1979 in RoK/CBS undated Table 5.3).
- ³⁵ HPLE per capita is calculated using land size based on agricultural potential and population size, where 1 ha of high potential is equivalent to 5 ha of medium potential and 100 ha of low potential land (see also Rutten 1992: 77, Table 2.2). In case of Taita Taveta District, the park is excluded in these calculations.
- ³⁶ Interviews with J.N. Mwanjewe, Range Officer, 22 February 2000.
- ³⁷ The difference between family and individual private land in the hills is mainly related to the time factor. In the hills, land has been passed on from generation to generation with or without change of title under statutory law. This has resulted in a size reduction each time the land is inherited by sons. Where it is not subdivided or too small to share or subdivided, but not registered, the residing sons or daughters do not own the land individually, but claim it as family land. Family ownership in this case is under customary law, as the title remains in the name of the original owner at the time of demarcation and registration. Non-resident heirs also claim ownership of family land.
- ³⁸ The residential parcel is the land where the owners reside on a permanent basis.

- 39 Amongst the Taita and many communities in Kenya, sons and not daughters inherit land.
- 40 Fallow land in this analysis is also not used for grazing.
- 41 Other methods used to keep wild animals from the farms include use of scarecrows, dogs, bonfires and night vigilance.
- 42 The Voi Member of Parliament, Basil Mwakiringo (1997-2002) indicated that he was conducting research to find out which parts of the Tsavo National Park could be excised for community wildlife management (East Africa Standard, Saturday, 4 May 2002). Although this may be politically motivated, it is an indication that the local people have a desire for the land or want to have access and benefits from the park.

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Appendix

Box 1: The unanticipated effects of land tenure reform in Kenya

The Swynnerton Plan of 1954 (Swynnerton 1954) and the subsequent land reform programme in Kenya, has had a wide variety of unanticipated effects. These include sub-division of holdings and destruction of customary patterns of land allocation and inheritance (which, despite registration, have persisted) with the result that:

- the expected free market in land has not materialised;
- the availability of agricultural credit has not significantly increased; and
- land registers are becoming outdated, as heirs or lessees fail to renew registration.

In addition, land registration has been accompanied by intra and intergeneration inequity through:

- increased concentration of land ownership, especially among the recipients of former settler land and those influential enough to manipulate the registration process in the interests of themselves, their lineage or clan and for political patronage -a situation currently described as 'land grabbing'.
- the extinction of prior customary rights within households and of reciprocal rights to resource use between different social groups, resulting in diminished security of tenure for non-title holders, notably wives, children and landless farmers who can no longer rely on established secondary rights or kinship ties to guarantee land access;
- increased insecurity amongst women, especially widows, women without off-farm incomes, and women without male heirs;
- increased inequalities in land ownership and agricultural incomes, leading to increased landlessness through land transactions, higher tenancy rates and rural-urban migration;
- landlessness and unemployment, caused by reduced opportunities for share-cropping and tenancy opportunities provided by widespread fragmented land holdings;
- diminished food security and increased vulnerability to drought amongst groups whose access to land has been diminished by the titling process;
- increased level of disputes as a result of the superimposition of systems of individual rights onto pre-existing systems of multiple rights under legal plurality in traditional entitlement structures;
- increased vulnerability to political incitement and land clashes;
- increased encroachment, squatters and demand for excisions of protected conservation areas;
- costs of obtaining land titles that are greater than the benefits for many farmers.

For the direct beneficiaries, land titling provided very secure tenurial rights and the early phases of the programme were indeed accompanied by increases in beneficiary farm income. However, it is impossible to disaggregate the impacts of tenure reform from those of other programmes aimed at promoting growth in the post-independence period. The academic debate about the impacts of land registration and titling continues, but the policy implications of Kenya's long experience of tenure individualisation are relatively clear:

- The results of the enormously costly registration process, in terms of agricultural productivity and incomes are ambiguous, to say the least.
- Tenure reform alone is not likely to succeed in enhancing smallholder production or livestock production in pastoralist land.
- Land titling has a negative impact on the poor.

In the context of these challenges, a need to further reform the tenure system in order to accommodate some of the persistent realities of customary land transactions has been identified. Thus, a Presidential Commission of Inquiry into the Land Law System of Kenya was commissioned on 17th November 1999 to undertake a broad review of land issues in Kenya and to recommend the main principles of a land policy framework which would foster an economically efficient, socially equitable and environmentally sustainable land tenure and land-use system. The report by the Commission has been completed and submitted to the government but not yet accessible to the public.

Box 2: Some important cases of customary land claims from indigenous communities in Kenya

The Trust Land Act Cap. 288, Forest Act Cap. 385 and Government Lands Act Cap. 280 do not regard the Ogiek as a forest-dwelling community. The courts also shy away from addressing the indigenous rights issue. In April 2002, the High Court sitting in Nakuru failed to recognise the Dorobos' land rights and award them any benefits from the Lake Bogoria National Reserve. The court simply told them off, saying, '*the law does not allow individuals to benefit from such a resource simply because they happen to be born close to the resource*'. A similar view had been advanced in 2000 when a case filed by the Ogiek of Tinet was thrown out on the same basis by Mr Justice Samuel Oguk and Mr Justice Richard Kuloba who ruled that '*there is no reason why the Ogiek should be the only favoured community to own and exploit natural resource, a privilege not enjoyed or extended to other communities*'.

In April 2002, Narok District Commissioner Joseph Kiminyi ordered the Ogiek and Maasai communities residing in Enoosopukia in Narok District to leave. The administrator was later supported by the Rift Valley Provincial Commissioner, Peter Raburu, who said that Enoosopukia was a water catchment area that should not be inhabited. The elders of the two communities said that Enoosopukia is their ancestral land and vowed not to leave. The Maasai clans of Pulko, Ildamat and Keekinyoki inhabit the area. The same argument was used in the land clashes of 1992 to evict immigrants from Enoosopukia, sparing the Ogiek and Maasai communities (*Daily Nation on the Web, Nationaudio.com, Thursday 30 May 2002*). The Enoosopukia case during the infamous 1993 tribal land clashes in Kenya is discussed in details in Dietz (1996).

The issue of indigenous rights is worldwide and touches on resource exploitation and capitalistic tendencies that discriminate against small, marginalised communities either sitting on wooded land, gold reserves or land where diamonds have been discovered. For instance, the Khoisan of Botswana are being kicked out of the Kalahari Desert to pave the way for the mining of diamonds. To chase them away, the Botswana Government has cut off piped water to their villages. When the United Nations Permanent Forum on Indigenous Issues was inaugurated in May 2002 and held its first-ever session, UN Secretary-General Kofi Annan hailed the move as a 'historic' initial step towards meeting future challenges. He said that soon indigenous issues would assume a higher profile on the international agenda than ever before.

Worldwide, the indigenous groups add up to some 300 million people across five continents, and they all face similar problems: obstacles to land ownership, desire for self-governance, treaty violations by governments and human rights abuses. Poverty, illiteracy, unemployment and soaring health problems plague many of these communities such as the Ogiek in Kenya.

Box 3: Land and inequality in Kenya: a time bomb waiting for radical reform

Estimates indicate that Kenya in 1993 had about 240 urban centres with a total population of approximately 5.6 million, up from 4.6 million in 1990. Currently, Nairobi (the capital) has close to two million people, 55% of whom occupy 4% of the total residential land, making the demand for land very high. According to experts, the crisis is caused by the combined effects of unsustainable demographic patterns, especially rapid urbanisation, objective limits to available land resources, limited application of scientific knowledge in facilitating sustainable land use, increasing social injustice through unlimited appetite for land, and a blend of incompetence and corruption on the part of Government officials in land allocation.

Land ownership, according to public officials and politicians, is a true sign of power and wealth, and they will do all they can to influence its allocation. Discretionary allocation of publicly owned land to individuals has become a means of dispensing political patronage. The law empowers the President, for instance, to allocate public lands to individuals, groups or organisations. The allocation system is so flawed that even the Minister of Lands and Settlement admitted that, 'the Boards, together with district land tribunals, are not well run and should be streamlined'. So far, no one in government has explained to the landless in Coast Province why they are squatters on their own native lands, whereas a few politicians and their allies have been allocated huge chunks of land and have even been issued with title deeds.

The consequence of the extreme inequality engendered by the discretionary allocated land market in Kenya (government allocation of public lands and unlimited private acquisition) leads to frequent and violent land disputes which often cause deaths, court battles and destruction. In a recent clash between traders and Muslim youths over a plot in Nairobi's South B estate (comparable only to the 1992 and 1997 infamous land issues), the traders showed they could do anything when it comes to land matters. The fracas led to the destruction of business enterprises and a mosque razed to the ground.

Why do land issues generate so much heat and tension in Kenya? According to a University lecturer at the University of Nairobi (Washington Olima) 'land is the lifeline of every living organism. Man needs it to exist socially, economically and politically. They can till it, give it out as a present, build on it or use it as collateral. That is why when it comes to land, nobody reasons'. Culturally and socially, land is a status symbol, and to some it offers a diverse source of power, wealth and prestige. 'Unfortunately, some of these attachments are reflected nowhere in Kenya's land laws. Thus, land in the country is a time bomb ticking away'. According to a university of Nairobi lecturer Tom Konyimbih, 'it is now necessary to redesign our land laws to conform to Kenya's socio-economic circumstances which the British law we inherited did not take into account'.

Konyimbih cautions that the newly established Commission to undertake a broad review of land issues and to recommend the main principles of a land policy framework in Kenya is not a panacea for ending disputes since no Act of Parliament is fully implementable.

Source: Daily Nation, Kenya, Friday 8 December 2000, p. 8.

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